

**Decolonizing the Earview of Design:  
Listening Anxieties and the Apparatus of Auditory Governance**

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April 2017

1. **Gutachterin:** Prof. Dr. Gesche Joost
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**Tag der Disputation:** 27. November 2017

## Declaration of Authorship

I, Pedro J S Vieira de Oliveira, hereby declare that this dissertation "**Decolonizing the Earview of Design: Listening Anxieties and the Apparatus of Auditory Governance**", and the work presented herein are result of my own original research, and unless otherwise stated, written by me without external help from others. I also confirm:

- I. that the published work of others, consulted and quoted by me for this work, is always clearly attributed;
- II. that I have acknowledged all main sources of help;
- III. where the dissertation is based on work done by myself with others, or have been published elsewhere before submission, these are always clearly identified within the text.

With the exception of such quotations and attributions, this dissertation is entirely my own work.

Berlin, 10 April 2017.

## Acknowledgements

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Obrigado!

" *We want punks in the palace*  
*'Cause punks got the loveliest dreams.* "  
(*Thee Silver Mt. Zion Memorial Orchestra – Blindblindblind*)

## Abstract

This dissertation attends to the intersection of sound, material culture, racism, and police violence in Brazil from a decolonizing perspective. With a focus on theories informed by cultural and sound studies, it unravels the contingent arrangements through which certain designed objects and practices function as material-discursive nodes for the normalization and perpetuation of racialized violences. To explore these ideas, it reads design—a field of knowledge and a set of practices—as a material-discursive apparatus, accountable for not only the results but also the conditions of possibility for any research endeavor.

The main driving force of this work is the identification and evincing of ‘listening anxieties.’ These emerge through enactments of political consensus, policing, and compliance; the articulation of these three in institutional, designerly, as well as everyday practices is what this research identifies as the Apparatus of Auditory Governance (or AAG). More specifically, I look at three manifestations of these auditory governances in contemporary Brazil—from the early 2000s to the judiciary Coup d’Etat of late 2016. These range from the criminalization of jukeboxes by a Military Police acting outside the scope of written law in so-called ‘pacified’ neighborhoods in Rio de Janeiro, to the construction of a seven kilometer-long acoustic barrier in the city as a device for urban segregation, to the deployment of sound bombs as devices for the enforcement of silence by the same police force in São Paulo.

The articulation of auditory governances, however, is not fixed; rather, it shifts and mutates to account for distinct and diverse experiences of listening. These shifts are what this work calls *earviews*: a conceptual orientation which determines the “listening point” where narratives and perceptions of auditory reality unfold from. The AAG, articulated and deconstructed at the intersection of distinct and conflicting *earviews*, forms the main method of this dissertation, and is of particular interest for sound and design studies. By understanding the *earview* as an asset of and for designing, it is possible to interrogate the role of design in the enforcement, reproduction, and normalization of sonic violences, and the erasure of other(ed) narratives of listening. Rather than simply evincing the hegemony of normative—qua racialized—*earviews*, I intervene by reading them through first-person accounts and storytelling stemming from fieldwork with artists and activists in Brazil, as well as from two movies by Brazilian directors—*O Som ao Redor* (2012) and *Branco Sai, Preto Fica* (2014). These intersections are further complemented by a semi-fictional narrative created throughout five collective pedagogical sessions fusing designing and fabulation. This format, named “Yarn Sessions,” is my methodological proposition for design research in this work.

This research started out by posing three broad questions relating to the connection between auditory practices—i.e. sounds and their social, cultural, and political engagements—and the design of listening devices. It asked: what is the contribution of design to the politics of mediated listening and its devices? What might be the possible, probable and/or preferable enactments of the political agency of designed listening devices? These initial

questions are all addressed by this work, and have shifted from their initial form as a general investigation on the entanglement of design and listening, to offer an inquiry and an intervention on violences enacted with and through sound.

This work thus participates in a re-historicization of the colonial underpinnings of design, while at the same time offering a decolonizing methodological proposition for design research and design studies with a sound and listening-oriented locus. It demonstrates that the material conditions of sonic violence—from architectural planning to transitional/illegalized sound objects to the development of weaponry—are a form of ontological design (cf. Anne-Marie Willis) which succeeds by making its own colonial and racialized ethos discursively and materially invisible. This ontological enunciation demands the accountability of the designer as both producer and reproducer of racialized/colonial phenomena in the making of their own practices.

Yet this research does not align itself completely with discourses from the “ontological turn” or “new materialisms” in philosophy (cf. Karen Barad), insofar as these often undermine and erase the role played by coloniality and “racialized assemblages” (cf. Alexander Weheliye) to the constitution of its own ontologies and epistemologies. My proposition for design understands the field to constitute in itself an ontoepistemology (cf. Willis, Gloria Anzaldúa), albeit reading such ontological alignments through decolonial and critical race studies. In so doing, it opens up a new field of inquiry in which sound studies and decolonial thought inform designerly inquiries into material culture not only for the evincing of specific material-discursive phenomena (e.g. sonic violences), but also for intervening on them with intersectional and decolonizing frameworks.

## Zusammenfassung

Das Dissertationsprojekt untersucht das Zusammenspiel von Klängen, materieller Kultur, Rassismus und Polizeigewalt in Brasilien aus dekolonialer Perspektive. Dazu nutzt diese Arbeit Theorien aus den Kulturwissenschaften beziehungsweise den Sound Studies, um kontingente Auseinandersetzungen zu analysieren, bei denen Designobjekte und -verfahren als materiell-diskursive Knotenpunkte für die Normalisierung und Fortschreibung rassifizierter Gewalt dienen. Um sich mit den Bedingungen dafür zu befassen, wird Design – sowohl als wissenschaftliches Feld als auch Praxis – in dieser Arbeit als ein materiell-diskursiver Apparat betrachtet, der nicht nur die Ergebnisse eines Forschungsprojektes, sondern auch seine Voraussetzungen einbezieht.

Der Schwerpunkt dieser Dissertation ist die Auseinandersetzung mit „listening anxieties“ (Hörängsten). Ein solcher Begriff taucht mit den Aspekten von politischem Konsens, Überwachung und Regelverhalten auf. Die Zusammenfügung dieser drei Begriffe in institutionellen, designerisch gestalteten wie auch alltäglichen Verfahren wird hier mit „Apparatus of Auditory Governance“ (Apparat der akustischen Machtführung) bezeichnet. Im engeren Sinne werden akustische Machtführungen an drei Beispielen aus dem 21. Jahrhundert Brasiliens in den Blick genommen: als Erstes wird die von der staatlichen Parallelmacht der Militärpolizei geführte Kriminalisierung von Jukeboxes in einer der sogenannten pazifizierten Favelas in Rio de Janeiro untersucht; anschließend, wie der Aufbau einer sieben Kilometer langen akustischen Mauer in Rio als ein Stadt- und Rassentrennungsmittel betrachtet werden muss. In der letzten Fallstudie wird analysiert, wie der polizeiliche Einsatz von Knallgranaten zur Erzeugung von Nachtruhe in den benachteiligten Nachbarschaften in São Paulo Rassengewalt erzeugt.

Dabei leistet diese Arbeit auch einen Beitrag zum designhistorischen Diskurs, indem die kolonialen Grundvoraussetzungen des Designfeldes untersucht werden, wobei gleichzeitig eine dekolonisierende und klangorientierte Methodik für Designforschung und Sound Studies genutzt/entwickelt wird. So kann nachgewiesen, wie materielle Bedingungen der Klanggewalt, beispielsweise durch Architekturgestaltung, temporäre Klangobjekte bis hin zur Entwicklung von speziellen Soundwaffen, einer Art von ontologischem Design (Anne-Marie Willis) zuarbeiten, auch wenn das koloniale und rassifizierte Ethos der designten Klanggewalt sowohl diskursiv als auch materiell weitgehend unsichtbar gemacht wird. Um eine solche ontologische Verfasstheit letztlich überhaupt zu erkennen, wird gefordert, dass sich Designer\_innen als Produzent\_innen rassifizierter, kolonialer Phänomene in ihrer Praxis betrachten.



**Keywords**

design studies;

sound studies;

design research;

decolonial thought;

police violence;

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## Introduction

Como forma de auxiliar no convencimento à desocupação, autorizo expressamente que a Polícia Militar utilize meios de restrição à habitabilidade do imóvel, tal como suspenda o corte do fornecimento de água, energia e gás. Da mesma forma, autorizo que restrinja o acesso de terceiros, em especial parentes e conhecidos dos ocupantes, até que a ordem seja cumprida. Autorizo também que impeça a entrada de alimentos. **Autorizo, ainda, o uso de instrumentos sonoros contínuos, direcionados ao local da ocupação, para impedir o período de sono.** Tais autorizações ficam mantidas independentemente da presença de menores ocupantes no local, os quais, a bem da verdade, não podem lá permanecer desacompanhados de seus responsáveis legais. [...] Dê-se força de MANDADO. CUMpra-SE. (de Oliveira cited in Coutinho 2016, emphasis added)<sup>1, 2</sup>

The above statement was issued in October 30, 2016, by judge Alex Costa de Oliveira, responsible for the Children and Juvenile Court of the Federal District in Brazil (*Vara da Infância e da Juventude do Distrito Federal*) (Coutinho, 2016; Huffpost 2016). This interlocutory order granted the Military Police enough leverage for the use of violence, direct or otherwise, towards high school students. These youngsters, the absolute majority of them underage, were occupying the *Centro de Ensino Asa Branca (Cemab)*, a public school in the city of Taguatinga, a few kilometers away from the country's own capital, Brasília. Their occupation was but one among many other public schools which were overtaken by students in political demonstrations against austerity measures which are to be implemented, from 2017 on, in the country; considered to be the most severe austerity program of the last decades, the program put forward by the illegitimate Brazilian government, in power after a Coup d'Etat consolidated in August 2016, determines that public funding for education and healthcare are not to be adjusted in consonance with the country's inflation for the next twenty years. (Alleem, 2016; Watts, 2016)

The occupation was evacuated before the Police had the chance to enact the judge's orders. Yet the threat of violence, present in the possible curbing of resources, as well as in the deployment of an undisclosed apparatus of sonic violence, triggered a state of general anxiety

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<sup>1</sup> As a measure for persuading the students to abandon the occupation, I hereby expressly authorize the Military Police to employ the means to restrict the property's habitability, such as the suspension of water, energy, and gas supplies. Concomitantly, I authorize the curbing of other people's access [to the school], in particular occupant's own relatives and friends, until the order is carried out. I also prohibit the distribution of food [inside the school]. **Moreover, I also hereby approve the deployment of continuous sonic apparatuses, targeted at the occupation, in order to disrupt sleeping hours.** Such authorizations are to be enforced regardless of the presence of underage occupants at the property, who, truth be told, should not remain there without being properly accompanied by their legal guardians. [...] This order has the effect of a WARRANT. LET IT BE COMPLIED WITH.

<sup>2</sup> To avoid word-cluttering, a disclaimer: all non-English quotes and transcriptions in this dissertation were translated by me, unless otherwise stated. Whereas I directly translated short quotes that go within the text, I decided to leave block quotes in their original Portuguese, providing adequate English translations as footnotes.

— present also in the soundscape of the school. Such a menacing behavior, supported and enacted by the State and its armed wing — the Military Police — comes in a long thread of political, discursive, and inflicted violences orchestrated and perpetrated by the Brazilian State against black and brown bodies, disenfranchised populations of the *favelas*, women, underprivileged students from elementary schools, high schools, universities, and so on. These violences come ingrained in the media discourse, in decrees and judicial orders, but also in family conversations, pub discussions, and, more importantly, in everyday interactions on the streets. In the case presented above, violence was not necessarily constrained to the sonic apparatus itself, but rather on the employment of an auditory threat as a marker of a possible violent act sanctioned by the State. Such an attitude requires one to ask what are the discourses that enable such violent methods to be employed against peaceful occupiers of spaces that should be welcoming — and not menacing — for them in the first place. More importantly, it makes us wonder why the deployment of violence — enacted or hinted at — is met with adamant support by both the media and the public opinion.

This research started out by posing three broad questions relating to the connection between auditory practices — i.e. sounds and their social, cultural, and political engagements — and the design of listening devices. It asked a) *what is the contribution of design to the politics of mediated listening and its devices?* and b) *what might be the possible, probable and/or preferable enactments of the political agency of designed listening devices?* While my investigation has started by looking at the use of acoustic weaponry in war zones and within the "prison-industrial complex", the ongoing political situation back home was turning into something impossible to look away — or to shy away — from.<sup>3</sup> In a sense, these initial questions are all addressed in the analyses, projects and exegeses thereof that follow; yet they had to slowly adjust themselves towards the urgency of the political moment in Brazilian society — in which listening practices and their devices play a significant, yet mostly invisible role.<sup>4</sup> These questions unfolded organically towards a stronger focus on specific political and discursive violences happening in contemporary Brazil with and through sound. In short, the main driving force of this work is the identification and evincing of listening anxieties — a clear example of which is demonstrated above.

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<sup>3</sup> Scholar and activist Angela Y. Davis defines the prison-industrial complex as a term "introduced by activists and scholars to contest prevailing beliefs that increased levels of crime were the root cause of mounting prison populations. Instead, they argued, prison construction and the attendant drive to fill these new structures with human bodies have been driven by ideologies of racism and the pursuit of profit." (2003, p.84) In her book on prison abolitionism, she identifies and denounces the close ties between major corporations in the United States and their role in sustaining the prison system as a profitable endeavor.

<sup>4</sup> A long-term research project was initiated in early 2014 as a response to the political demonstrations of June 2013 in Brazil, and more importantly the sheer amount of violence that followed these movements. Together with Luiza Prado de O. Martins we have documented and written about this in our "Design in Times of Crisis" project — <http://designintimesofcrisis.tumblr.com> (accessed March 10, 2017). This research gave way to the projects discussed in this dissertation, and a brief overview of it can be found in chapter four.



## Sound and violence, sound as violence

The deployment of sound as a violent mechanism is a fruitful research topic within sound studies. Music scholar Susanne G. Cusick (2006, 2008a, 2008b, 2013), for instance, has dedicated a substantial amount of research to the workings and consequences of music as torture within the imperialist project by the US government in Guantanamo and Abu Ghraib prisons. Carolyn Birdsall (2012), on the other hand, has written extensively on the instrumentalization of sonic media — radio and cinema, for instance — by the Nazi regime in Germany as a tool for enacting violence and generating anxiety about an invisible enemy. Similarly, Bruce Johnson and Martin Cloonan (2009) have written about the power of popular music to incite, convey, perform, and resist violence in Western history, at times intersecting with Cusick and Birdsall in their own specific objects of study. Encapsulating somehow all of these studies is cultural scholar and musician Steve Goodman (2010), who has theorized upon the affect of vibration in different bodies, of which the deliberate use of sound as violence, — physically and as 'vibrational affect' — represents the ultimate installment of the military-industrial complex and the pervasiveness of capitalism in contemporary Western society.

Employing methods of sonic violence much akin to those reported by war zone accounts comes then not as an exclusivity of judge de Oliveira's ruling. Rather, it represents a long thread of techniques for "non-touch torture" which are deliberately employed by the US Military as of today, and was passed along by officers within the CIA and the British Army to the Brazilian Military during the dictatorship years in Brazil, from 1964 to 1985. In 2014, a long and excruciating report was published by the *Comissão Nacional da Verdade* ("National Truth Commission," 2014); in this report, the torture methods employed in the basements of the dictatorship's militarized facilities were described in graphic detail. The document also fully discloses the names of several political prisoners who were abducted and tortured by military officers, many of them murdered or "disappeared with." Among those who endured months of non-stop torture and had to live on with the consequences of such inhumane treatment was former and illegally deposed Brazilian President, Dilma Vana Rousseff. In the chapter dedicated to the history and description of the torture techniques, the report from the CNV claims that the "Brazilian military was sent to the United Kingdom [in the early 1970s] to learn the British interrogation system." (2014, p.334) Journalist Emily Buchanan describes the British "Five Techniques" method, consisting of keeping prisoners standing up or hooded, depriving them of water, food, sleep, and submitting them to loud noises (*ibid.*, p.335). According to Brazilian journalist Antonio Carlos Fon, however, the "fridge" was the dictatorship's preferred method. Political prisoners submitted to this torturing technique describe the use of sound material blasting from loudspeakers, which could go on for days or weeks without pause, as a "form of mental torture, even worse than physical torture." (*ibid.*, p. 339, 372) This "fridge" consisted of a

[...] cela de aproximadamente 1,5 m x 1,5 m de altura, baixa, de forma a impedir que se fique de pé. A porta interna é de metal e as paredes são forradas com placas isolantes. Não há orifício por onde penetre luz ou som externos. Um sistema de re-

frigeração alterna temperaturas baixas com temperaturas altas fornecidas por um outro, de aquecimento. A cela fica totalmente escura na maior parte do tempo. No teto, acendem-se às vezes, em ritmo rápido e intermitente, pequenas luzes coloridas, ao mesmo tempo que um alto-falante instalado dentro da cela emite sons de gritos, buzinas e outros, em altíssimo volume. A vítima, despida, permanece aí por períodos que variam de horas até dias, muitas vezes sem qualquer alimentação ou água.<sup>5</sup> (*ibid.*, p.372)

The Brazilian Military rule was installed with the direct help and intervention of the United States of America, who through *Operation Condor* orchestrated a series of Coups all over Latin America during the ninety-sixties and seventies, in fear of the revolutionary mentality triggered by the Cuban revolution. The invisible "communist threat" is a ghost that haunts the elites of Latin America well until today; it is not uncommon to see signs in demonstrations, or to hear mean-spirited jokes whenever someone displays any hint of a left-wing political alignment. This idea around a 'threat' allowed the Military Police of the dictatorship to act with disproportionate violence against journalists, students, and other political figures. These are the ones which populate the overall imagery of the "subversive," but they are by no means the sole victims of Police violence. Rather, the militarized regime installed a permanent state of exception in black and brown populations of Brazil, under the false premise that their struggles, in fact, *enabled* the creation of racism. What excused the deployment of the violent Police apparatus in these bodies was the misguided notion that a racial struggle would lead to political disorder in an otherwise 'well-established racial democracy' (Pedretti 2017).

In that sense, the *carte blanche* given by a federal judge for the Military Police to employ methods bearing strong resemblance to the torture inflicted on political prisoners by a sadistic and authoritarian rule is anything but mere coincidence. It shows a re-enactment of past violences as a form of asserting and re-establishing relationships of power and oppression, of absolute governance upon racialized and dissenting bodies perceived to be menacing, to be the *other*. As it will be demonstrated throughout this work, the Military Police has a direct responsibility on the maintenance of institutional racism in Brazil; its body count, besides being in itself of an alarming number, is visibly and undeniably of brown and black color (Sinhoretto et al. 2014). Hence the use of "continuous sonic apparatuses" from the military zones of exception to occupied public schools against underage youngsters comes intermingled with other discourses enacted by and within everyday listening practices which shape different forms of violences enacted through or with sound. It is a form of ontological design.

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<sup>5</sup> [...] a low-ceiling prison cell of approximately 1,5 m by 1,5 m, built in such a way so as to prevent one from standing up. The internal door is built out of metal and the walls are lined with isolating blocks. There is no orifice through which light or external sounds can pass. Refrigeration and heating systems alternate between low and high temperatures. The cell remains fully dark the absolute majority of time. From the ceiling intermittent and fast-blinking colored lights are turned on randomly, while a loudspeaker installed inside the cell blasts with screams, horns and other sounds, all of which in extremely loud volume. The victim, naked, has to remain there for periods that span from hours to days without receiving any water or food.

### The ontological design of sonic violence<sup>6</sup>

This work contributes to a bridging of fields whose connections are seldom explored together: design research, design studies, and sound studies. The growing interest in sound studies as an academic field is a direct consequence not only of social and technological development, but also of the ubiquity of these technologies in everyday life. (Pinch and Bijsterveld, 2004; Sterne 2012) In audio culture—that is, in the study of sound, listening, and its practices—it is a given that one can understand much about any social or political situation by looking at the sounds that populate it. Within these disciplines, music is examined to its very core, taken apart and scrutinized under philosophy, sociology, politics, media theory, and many other practices of scholarly knowing. Sound is observed in its aesthetic and functional qualities, its effects and affects, its distribution and archiving; all these sonic discourses and epistemologies inform the constitution of an auditory culture. The environment of sound studies is hence a trans-disciplinary one—an “open field of desiderata, arranged and understood differently from more traditional disciplines in the strict sense.”<sup>7</sup> (Schulze 2008, p.11) Sterne remarks that what differentiates a “sound studies approach” from other scientific, sociological, or artistic practices on sound is a strong critical bias toward the subject. (Sterne 2012)

While there is a legitimate interest in sound from a design perspective, a concern with the *materiality of these sounds* — that is, its effects and ramifications within a material culture — and more importantly, the listening practices they design and are designed by, are concerns almost always delegated elsewhere. In other words, while sound culture is a concern for sound studies, the same cannot be said for the field of design research or design studies. Tahiroglu et al. have recently argued for a closer relationship between sound studies and design studies, claiming that sound as design might “spread the cognitive load between sensory modalities, thus reducing the amount of information required on screen for visual processing.” (Tahiroglu et al. 2014, p.59) Similarly, Franinovic and Serafin point out the lack of attention paid to how artifacts sound, and hence propose a sound-based approach to interaction design—that is, to interaction paradigms conveyed through auditory rather than visual cues.(Franinovic and Serafin, 2013) Both of these approaches, while in themselves necessary and very fruitful, mostly concern design of sound at the frequency level—that is, design of proper sound waves and their affordances.

Instead, my main concern in this dissertation is with this very materiality of sound. I propose a look at the 'invisible' practices of everyday that are instrumentalized by design to enact forms of violence which orbit around the same spectrum of the use of sound as a more direct form of brutality. In other words, this work argues that design is an active agent in the reproduction and perpetuation of a broad range of discourses which sustain

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<sup>6</sup> Parts of this section were published previously in Vieira de Oliveira (2016).

<sup>7</sup> Original quote in German: "Sound Studies [sehen sich auch] als ein offenes Feld von Desideraten, die sich anders verstehen und anders angelegt sind als traditionelle Disziplinen im engeren Sinne"

and enable the political systems that put these violences into motion. In this dissertation I intend to demonstrate that design — as a field — and designing — a set of material practices — are complicit in their ignorance towards the contingency of these material practices, as well as their reproduction of colonial, racist, gendered narratives in society. Design and the act of designing are languages with which to speak with and about sonic discourses and their violences. Direct and inflicted sonic violence, on the other hand, are the end of a long tail of delegated interactions among humans, things, and practices, all of which starting from the assumption that certain bodies are more valuable than others and as such have more right to occupy space — physical and auditory.

To that extent, it is important that I begin this work by defining what I understand design and designing to be, and how I intend to unpack their ramifications with and within my research subject. Broadly speaking, in this dissertation design is to be understood as an inherent condition of being human and as such interacting — in different forms and with different agencies — with *matter*. In that sense my thinking cannot be anything but aligned with the theories of Tony Fry and Anne-Marie Willis, who have both argued for an understanding of design as an ontological force (Fry 2011, Willis 2006). For Willis, design inevitably engages with four different aspects of mattering, that is, a) the object itself; b) the process through which this material object comes into being; c) the agency of those implicated in this endeavor; and d) the consequences of said endeavor to society (Willis 2006). "There is never a beginning or end of design", Willis contends, because "once the comfortable fiction of an originary human agent evaporates, the inscriptive power of the designed is revealed and stands naked." (*ibid.*, p.95) Thus design is a set of ontological actions which may, but not necessarily must, include designing as it is usually understood; as such, this ontological force is inextricably implicated on configuring the world, and this configuring extends well beyond and much before the industrial production of artifacts. In other words, *design* is implicated in what informs our human condition as such, and cannot be anything but product and producer of contingent practices of matter. I will expand and inquire these conditions more thoroughly in chapter two of this document, proposing a shift on the understanding of design to be an apparatus with which to set, among other practices, the ontological and epistemological conditions for designing. Thus the broad definition given here should be taken as both a starting point and a provocation for further reading.

Sound is a mechanical oscillation whose propagation is intrinsically dependent on a medium. In other words, sounds can only manifest themselves when there is *matter* through and with which it can vibrate; air, bodies, things, places, environments — anything and everything might be a potential medium for sonic propagation. Being in the presence of sound means dwelling in and participating on the creation of a listening culture. Alas, sound events are also contingent, yet listening practices are a constant negotiation of these contingencies and distribution of agencies amongst its actors (Kassabian 2013). I thus position this research at the center of a triangulation: a need of inquiring the contingencies of listening practices makes me look at the works being discussed within sound studies; historicizing and inquiring the material conditions for these contingencies of listening aligns my

work towards design studies; lastly, by supporting a direct engagement, intervention, re-organization, and re-purposing of these practices so dependent on both their materiality as well as their contingencies, I turn my attention towards methods found in design research.

### **Musical narratives of Brazilian otherness: a brief context for *funk carioca***

A recurring theme of this dissertation revolves around the production, performance, and reception of a specific Brazilian musical practice stemming from the *favelas* of Rio de Janeiro: *funk carioca*.<sup>8</sup> This section outlines a brief — and by no means exhaustive — history of the genre, as well as its perception in the eyes and ears of the Brazilian middle-class, the media, and the Police. Particular aspects of the cultural practices surrounding and stemming from *funk carioca* will be discussed later on in this work, in chapters which deal directly with the articulations of this cultural manifestation that might pertain to the subjects being studied.

Despite its name, *funk carioca* does not derive from US American soul and funk but rather from "an intense process of appropriation, transformation, and nationalization of hip-hop culture." (Lopes 2009, p.372) Similar to *reggaeton* in most of Latin America or *raggamuffin* in the Caribbean, *funk carioca* is a form of re-signifying the sounds of African diaspora (Lopes 2011, p.29). The genre bears 'funk' in its name due to the context in which these songs were played; during the ninety-seventies in the southern part of Rio, DJs would assemble massive sound systems and hold big parties playing mostly Motown classics and disco cuts. These parties were known as *bailes black*, and later on, as *bailes funk*. With the emergence of competing *equipes de som* (sound teams), these parties moved from the southern zone to the peripheries, and slowly hip-hop and Miami bass replaced soul and funk. Even as the genre created its own identity, the name, connected to the origins of *bailes black*, stuck. (Palombini 2011, p.99, original emphasis)

According to the pioneering study of Brazilian anthropologist Hermano Vianna, *funk carioca* emerges as a genre in 1989, with the release of the LP *DJ Marlboro apresenta funk Brasil*; the record was the first to present compositions based primarily on *Miami bass* songs, with one or two MCs performing a "rhymed declamation" over a beat, "frequently the track '808 Volt Mix' by DJ Battery Brain." (Palombini 2014, p.219)<sup>9</sup> These songs were, for the most part, what came to be known as *melôs*: due to a lack of proficiency in English – and therefore unaware of the lyrical content of the original songs — MCs improvised lyrics in Portuguese which had a similar sounding characteristic but often completely distinct meanings (de Sá 2007, p.9). Later on, the genre coined its own sonic imprint with the introduction of the *tamborzão*, a leitmotiv loosely based on a drum sequence from Can-

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<sup>8</sup> Internationally, *funk carioca* is commonly known as *baile funk*, or, less often, *favela funk*.

<sup>9</sup> <https://www.youtube.com/watch?v=fLJnxV3RuHY> (accessed November 10, 2016).

dombélé rituals.<sup>10</sup> The beat was created in 1998 by DJ Luciano de Bangu, who used a Roland R-8 drum machine to craft the original sequence (Palombini 2014, p.219).<sup>11</sup> *Tamborzão* is nowadays the main shape of funk, which has been aesthetically explored by all sorts of sampling techniques from voice to foley, from organic drums to digitally manipulated sounds. Contemporary funk carioca has given rise to its own sub-genres, each with its own *ethos*; some of them will be discussed in context in the next chapters. Ethnomusicologist Carlos Palombini has roughly sketched these sub-genres as being

*funk de raiz* (roots funk) for the founding artists; *funk consciente* (socially-conscious funk) for the social criticism; *putaria* (kinky) for the oneiric sexuality; *melody* for the heartfelt situations; *montagem* (collage) for sample manipulation; *proibidão* (forbidden) for indoctrination. (Palombini 2014, p.219)

During its inception phase, the discourse present both in the media as well as in academia seemed to struggle to understand how the popularization of these musics had, somehow, avoided the 'traditional' way of the industry. As Vianna remarks, "the consumption of funk in Rio cannot, by any means, be considered to be an imposition from the mass media." (Vianna 1990, p.246); similarly, Adriana Carvalho Lopes comments that

nos anos de 1980, as poucas matérias sobre funk veiculadas nos jornais de circulação local e nacional apresentavam, invariavelmente, essa mesma indagação [...] como poderia uma manifestação cultural completamente fora dos modismos burgueses, supostamente brancos, determinados pelo eixo Rio-São Paulo [...], transformar-se em uma das preferências de grande parte dos jovens favelados e suburbanos (negros em sua grande maioria) da cidade carioca? (Lopes 2011, p.24)<sup>12</sup>

It is its popularization amongst black and poor youth of Rio, and therefore outside of the practices validated by the media and the middle-class, the reason which endorses its immediate rejection by the Brazilian elites. The genre is perhaps the most popular rhythm of Brazilian music in the past decades; its beats have been used in advertisement, radio-friendly pop, and mixed with other rhythms attending to other niches and listeners. Similarly, *Bailes funk* are almost ubiquitous sonic markers of Rio de Janeiro; all week long, heavy, bassy beats can be heard from anywhere, competing but also blending in with the sound-

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<sup>10</sup> Candomblé is an afro-brazilian religion, resultant from an amalgamation of rituals from different ethnicities – Yorubá, Bantu and Ewe, to name a few — that were abducted from their nations in the African continent to be sold as slaves in Brazil by the Portuguese empire. Thus the association of *tamborzão* with Candomblé engenders another aspect of the criminalization of funk, insofar as afro-brazilian religions are constantly portrayed by the public discourse as violent, sacrificial, and demonic practices (da Silva 2007).

<sup>11</sup> A musical breakdown of *tamborzão* can be listened to at <https://soundcloud.com/carlos-palombini/sets/o-tamborcao-parte-por-parte-por-guillermo-caceres> (accessed November 20, 2016).

<sup>12</sup> "in the 1980s, the few media reports, both local and national, on funk [...] asked themselves: how could [US American hip-hop], a cultural manifestation falling outside the bourgeoisie fads of the time, supposedly white, and constrained to Rio [de Janeiro] and São Paulo [...] end up becoming the major preference amongst the (predominantly black) *favelados* and residents of the outskirts of Rio?"

scape of the city. Yet funk carioca has been, historically, largely stigmatized by the media, police, and public opinion, largely perceived in Brazil to be a music of 'bad taste', often associated with criminality, poverty, and lack of education, as well as "unrestrained sex and violence" (de Sá and Miranda 2013, p.9) — assigned to both those performing the music and those listening to it. Hence its artists have been often co-opted by these same outlets and whitewashed, so as to create a dichotomy between "good funk" and "bad funk" (Lopes 2011).

In the beginning of the nineties, a massive wave of repression and public rejection to the genre, as well as to the non-white, poor, and underprivileged bodies associated with it, was created. Funk then ceases to be this mysterious genre associated with the *favela* population as a marker of 'bad taste' in music, to give way to what Carvalho Lopes has named an "despicable racism in the shape of musical prejudice." (Lopes 2011, p.34) The catalyzing event for this happened in October 1992 and became known as the *arrastão* — or a "looting rampage" (Yúdice 1994, p.200); youngsters from different *favelas* and therefore sworn to different factions clashed with one another in the touristy beaches of the southern part of Rio, causing an overall panic amongst beach-goers. News pieces and TV reports were flooded with images of bare-chested, dark-skinned kids running amok against one another, invading the busy streets, going over sunbathers; the biggest Brazilian media conglomerate *Rede Globo* picked up on the news, and it was quick to ally with the police in sentencing those responsible for creating mass panic on an otherwise 'peaceful Sunday': the *funkeiros*, or those who listen to funk, produce it, or attend the *baile funk* — black and brown kids from *favelas* and other poor neighborhoods. As George Yúdice describes, the reports "carried statements made by middle-class beach-goers who remarked on the dark skin, poverty and dirty clothing of the kids, some of whom were also interviewed, if for no other reason than to sensationalize them and add to the panic." (*ibid.*, p.201)

What followed was an immediate and strong connection drawn between the *bailes funk* and violence. The image of the *funkeiro* as the perpetrator of violence was often present on the narratives by both media and the police, and therefore ingrained in the minds of the middle class as the marker of a 'revolting and hopeless youth' (de Sá 2007, p.12, Lopes 2011, p.34). Adriana Carvalho Lopes does a comprehensive unpacking of the media narratives following the *arrastão* incident, in which a strong sense of segregation is fostered and repeated by the textual and visual language of the reports. The pieces teach the middle-class how to identify the 'danger zones' of the beaches nearest to a *favela*, or feature profiles on the image of the *funkeiro*. The latter, she remarks, is described as the unemployed, uneducated, dark-skinned youngster, who shows a strong preference for 'horror movies and violent blockbusters', has amongst his idols local funk MCs and drug lords, and projects little to no political ideology (Lopes 2011, pp.37–8). For her, such a profiling racializes the *favela* resident exactly by distinguishing them from the hegemonic discourse, thus situating them as an "alien and barbaric" body to be feared (*ibid.*, p.38). Yúdice complements by arguing that

*Funkeiros* have now become part of a new urban lore, projected as a polluting menace. Television and the press show them as have-nots seeking to take what belongs to the elite and middle classes in exchange for a fear that 'justifies' their repression [...] Images of violence have demonized and thus to a degree controlled them, making funk productive of the culture at large, a productivity that it sought to opt out of. (Yúdice 1994, p.209, original emphasis)

Thus the general opinion, endorsed by the media and the police, is that *funk carioca*, *baile funk*, and criminality cannot be disassociated from one another. In other words, an entire musical genre and its events are granted the agency of being, in and by themselves, harbingers of crime and violence. *Baile funk* becomes the general container for everything that might menace the social order constructed by the racial and economic inequalities of Brazil. Similarly, its listeners and partygoers inevitably fall into the same category and are increasingly racialized as belonging to a different political order in which promiscuity, violence, and 'questionable moral values' are its main dogmas. Hence these racialized others and their practices cannot occupy the spaces secured for the elites in the "social cartographies" of Rio; they are 'allowed in' insofar as they fit a "determinate social order, in which their position is always that of the subaltern." (Lopes 2011, p.40) Any attempt to break with those impositions, be it through the massive movement of black and brown youth from the *favela* to the beachfront, or from underprivileged neighborhoods to shopping malls, will be immediately perceived as a vector of violence, and thus trigger the 'invisible menace' already established in the minds of the middle class, leading to moral panic. As such, these social practices should be reframed and renamed as criminal activities — *arrastão*, *rolêzinho*, *pancadão*, and so on — segregated and evicted from these spaces.<sup>13</sup>

### **Ethics and accountability: thinking at intersections**

This research deals with questions of ethics and accountability in direct and multifaceted ways; it is a topic that will constantly be referred to throughout this text. The reasons for doing so are also manifold: for one, while other scholarship and praxis have engaged and dealt extensively with decolonial and feminist thinking, the engagement of the design field with this body of work is still marginal. Much of the work in sound studies is being directed towards 'backfilling' stories and listening cultures which were erased by the systems put in place by colonialism (see e.g. Attali, 1985; Gautier 2006a, 2006b, 2014; Goodman, 2010; Stoeber, 2015; Agawu, 2016). Within design, on the other hand, such a discussion is rare. Design scholarship still heavily relies on a very narrow perspective on the accountability of the researcher as part of the research. In a positivist and objectivist fashion, it assumes the designer's position to be disconnected from the research, and as such 'neutral' and 'ob-

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<sup>13</sup> In 2013 and 2014, a situation similar to that of the *arrastão* was picked up by the media in São Paulo and spread all over the country. Kids from underprivileged neighborhoods in the city were scheduling massive events in social media in order to meet at shopping malls to eat, drink, flirt, and listen to funk. These *rolêzinhos*, as they came to be known for, generated panic amongst the middle classes. They feared that the kids were there to rob and threaten the 'secure and private' spaces of the white elites of São Paulo. (McCaul, 2014)



jective.' In the past few years the discussion around design and its engagement with other theories outside the Eurocentric and Northern canon has been progressively — albeit slowly — appearing in the community, thanks to the work of design researchers inquiring on issues of design and its colonial relations to global history, modernity/postmodernity, gender, and geopolitical mobility, only to name a few — see e.g. the work initiated in and around the platform Decolonising Design.<sup>14</sup> Still, it is only the beginning of a much needed conversation.

This work inquires the lack of a body of scholarship that effectively explores the contribution of design to colonial and violent listening practices. On the other hand, this research is also limited by a focus on the possibility of listening, an ability that is not shared by all human beings at the same level. In that sense, the use of terms such as "listening practices" or constraining the scope of this effort to an auditory culture creates a marker which, if not approached with care, may contribute to the ongoing marginalization of Deaf culture and hard-of-hearing people. This reflects a need not only for inquiring the agency of material culture in listening practices — its *devices* — but also to tackle an endemic problem in the field: the lack of accountability of design and design research in addressing its contributions to systemic oppression, and the perpetuation of assumptions about the normative body which limit it to the white, male, cis- and heterosexual, and in this case, hearing body. In this dissertation, themes of Deaf culture have not been tackled by me, for I do not possess the experience nor the expertise to perform such an endeavor. Contributions to an expansion of how Deaf culture is implicated in Sound Studies have been made by other researchers in the field.<sup>15</sup> In here, I understand design to be a field which affords not only a historicizing of these cultures through a material perspective, but also enables a direct intervention on them, prefiguring or configuring them otherwise. In that sense, this research concerns itself with listening as essentially an entanglement among vibrating bodies and the social practices engendered by responses to this vibration — whether or not identified as listening. Hence "listening practices" here also contain, but are not limited to, hearing as such; as it will be demonstrated throughout this work, the lack of accountability for the contingencies of material practices of listening has implications that extend well beyond the ability of certain bodies to hear.

Moreover, stories and histories of listening cannot be other than idiosyncratic. This is also the reason why I equate voices coming from different perspectives about the world to the same level: academic thought, personal narrative, fabulation. My own position as a researcher is too limited and constrained by my own identity and performances of said identity: while I do occupy a position of being able to investigate the forms of sonic violence I deal with in this research, I am at the same time physically and socially distant from some of them. I cannot therefore speak *for* others or attempt to have the final voice in theorizing upon them. Rather, the very narrative of this work seeks to evince many other voices than

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<sup>14</sup> <http://decolonisingdesign.com> (accessed November 10, 2016).

<sup>15</sup> See e.g. the work of Sara Novic or Christine Sun-Kim.

my own, expressed in a multitude of ways. They are the ones creating theories — my task as a design researcher is merely to identify and give them center stage.

I understand my approach to design research as fundamentally intersectional, even if not exactly directly dealing with the fields of intersectionality or gender studies. In that regard, Cho et al. (*ibid.*) argue that if

intersectionality is an analytic disposition, a way of thinking about and conducting analyses, then what makes an analysis intersectional is not its use of the term 'intersectionality,' nor its being situated in a familiar genealogy, nor its drawing on lists of standard citations. Rather, what makes an analysis intersectional—whatever terms it deploys, whatever its iteration, whatever its field or discipline—is its adoption of an intersectional way of thinking about the problem of sameness and difference and its relation to power.

Intersectional theory, as initially proposed by Kimberlé Crenshaw in the late 1980s, demands from researchers working with analyzing power structures that they take into consideration the "patterns of subordination" that occur *across* "preexisting vulnerabilities" of race, gender, class, ethnicity, ability, and so on (Crenshaw 1994, pp.97–98). Initially developed with a stronger focus on court cases of domestic violence against women of color in the US – thus positioning her proposition at the intersection of race, gender, and migration –, Crenshaw's theorization is one that avoids conflating structural oppressions to a flattened linearity in which one aspect denies the validity of others. Rather, an intersectional framework "offers a way of mediating the tension between assertions of multiple identity and the ongoing necessity of group politics." (*ibid.*, p.111) It demands from any research to speak from a standpoint in which the social construction of categories of oppression is acknowledged in their differences – as a bilateral process of subordination and resistance – rather than generalized and subsequently erased. It also requires an understanding of the power imbalances among these processes of categorization concerning their material consequences to vulnerable populations (*ibid.*, p.113).

The place within which this research speaks is, thus, a transitional space; an "intersectional way of thinking" that does not take categories for granted but rather reads and intervenes across them, acknowledging the power relations that constitute them as a fluid set of boundaries (Cho et al. 2013, p.795). This requires me to negotiate my own position and where I speak from; while being a Brazilian researcher living in Europe does put me in a place of perceived *otherness*, this temporary condition is much far removed from the permanent position I occupy back home as a white(passing), educated cis male from the southeastern part of the country. It is important to emphasize from the very beginning of this work that I do not attempt, at any point of this research, to occupy a place of "invisibility" or "neutrality" in my writing or intervening; rather, I negotiate my biases by attempting to equate my process of theory-finding or theory-producing with others whose struggles are much closer to the subject of this work than my own.

This dissertation is thus in itself an idiosyncratic narration, exploring how an entanglement among objects, practices, discourses, and systems, placed within a context where the exception means the everyday, enable, reproduce, and perpetuate violences that are expressed in and through, though not exclusively by, the auditory space. Due to their expression in the shape of listening practices or sonic discourses, an inquiry into these material-discursive entanglements of design offer a distinct manner of understanding articulations that are, for the most part, ingrained in the current social, cultural, and political order. These violences, while not enacted exclusively through sound, are present within listening practices — that is, how society engages with auditory events — that respond to political arrangements fostering these violences in the first place. In other words, they start from and are enforced by institutional politics, yet their sphere of influence spills over to everyday practices and encounters. At the same time, the omnipresence of these violences for those directly affected by it engenders counter-hegemonic practices of resistance that attempt to re-frame listening and sonic affordances into a different political order. Such contingent practices tell a different story, thereby generating different listening practices than those usually supported by design. In that regard, the displacement of hegemonic listening onto a different political order should be understood as much as a work of design as other practices do.

### **Structure of this dissertation**

This work is structured in two parts, plus introduction and final remarks. In the first part, composed of four chapters, I delineate the portion of knowledge this research deals with, and constrain my topic of investigation onto a methodological proposition. The second part presents analyses and exegeses of the projects undertaken during this investigation, and is therefore divided into three somewhat longer chapters. The first chapter of this dissertation presents the reader to the context in which this research positions itself. It does so first by expanding the scope of specific terminologies employed along this dissertation, but also inquiring the reasons why I choose certain terms over others. It then provides a brief account of different listening practices and introduces the reader to one of the main ideas in this research — the theory of the *earview*. In broad terms, I use this term as an auditory replacement for the *gaze*; the scope in which I regard the *earview* as a preoccupation of design is further detailed by presenting a material example of the enactment of a very specific *earview* and its promotion by design. The chapter concludes with a few open questions as to the possible paths a design research endeavor, such as the one in this dissertation, could take, and therefore calls for the development of a novel method in order to perform this task.

I start to outline this method by suggesting, in chapter two, a shift in the understanding of design towards regarding the field as an apparatus that produces a set of contingent material-discursive practices which should not be taken as a separate entity from the act of designing. In order to do so, I turn my attention to the concept of apparatus (*dispositif*), first outlined by Michel Foucault, and then considerably expanded, reassembled, and criticized

by other theorists such as Giorgio Agamben, Donna Haraway, and Karen Barad, to name a few. My focus in here is more aligned with Barad's outlining of apparatuses as intrinsically performative networks of relationships, agencies, phenomena, interactions (what she calls *intra-actions*), subjects and objects — an approach she calls *performative agential realism*. However, I also identify in Barad's agential realism a lack of understanding apparatuses as intrinsically racialized and as such imbricated within the discourse of coloniality; therefore, it is not enough for this research just to apply Barad's agential realism to design, but rather read her apparatus through theories of race and decoloniality in order to expand the scope of design's own accountability.

Chapter three introduces what I understand as auditory governances. It begins by contextualizing the role of the "listener" as an entity contributing to the political discourse of the auditory space. It discusses then specific modes of listening which emerge in militarized situations, albeit shifting the perspective from a state of exception oftentimes geographically and politically delegated elsewhere to a situation in which encounters with these listening practices are, in fact, part of the everyday. From this shift, I outline three different articulations of auditory governances which are not constrained to, but also are produced and reproduced by design discourse. These governances are enforced and articulated by the movements of political and social discourse towards policing and consensus — what Tony Fry (2011) calls "pluralism" as opposed to "plurality"; the enactment of colonial violences, which translate and are perpetuated by political discourses which support the construction of an inherently hostile auditory space; and lastly, the instrumentalization of these violences by design, which is an active agent on the disconnection and therefore the normalization of violent (sonic) practices in everyday discourse. The chapter ends by sketching out the Apparatus of Auditory Governance, which is the locus of study as well as the method which will be unravelled by the design work and the analyses present in part two.

Concluding the first part, in chapter four I present how I fuse three different perceptions of *storytelling* as a form of reading, listening, and intervening into these practices of everyday listening by and through design. The analyses and exegeses present in part two of this document enact this method by inquiring how design articulates certain forms of politics of listening, that is, how design instrumentalizes listening for different ends, and thus enforce and create a taxonomy of listeners which are granted different agencies over the auditory space. The analyses also explore how subjects which are usually neglected by the discourse of designerly practices articulate themselves in the fringes of politics, by listening otherwise and re-framing their auditory spaces into a different political order. The design work then intervenes on the tensions that emerge from an interplay of the two previous analyses, and inquires the forms by which these practices outside the political normal are re-instrumentalized by design — in discourses that range from many so-called socially-oriented design practices to "design as social dreaming" (Dunne and Raby 2014) — to adapt to hegemonic discourses of listening, thus becoming another authoritative articulation which configures the soundscape as an ever-violent space. The chapter unravels these connections further, and also describes the projects I developed in order to probe on these tensions; in creating a

parallel scenario that runs "near reality", it was possible to gather a good number of insights as to how design and auditory governances come entangled with one another. Lastly, I spend a significant part of this chapter describing a novel method for speculative and critical design which fuses ideas found in participatory design, but offers a critical eye to them by coming closer to radical and counter-hegemonic pedagogies. This approach, named "Yarn Sessions," is the main design method employed in this work.

Part two is divided in three chapters, each one depicting a different articulation of design and auditory governances. These articulations do not come separately, but rather spill over one another in multiple ways; yet for the sake of clarity they were 'clustered' in three different narratives. Each chapter of part two presents an entanglement of distinct practices: media discourses, first person accounts, "sonic fictions", and the articulation of these ideas in the research projects developed during this investigation. main reason for this pertains to the fact that throughout my journey in this research, it became increasingly difficult to be able pinpoint a specific *category* of objects that could encapsulate the complexity of relations I am interested in investigating. It turned out to be that objects in and by themselves were not sufficient to unravel the material-discursive practices I intended to highlight and tackle in my research; rather, they needed to become their own "nodal points" (Barad, 2007) or "balls of yarn" (Haraway, 2004), which in turn are able to unravel and attract other agents — humans, non-humans, and *less-humans*, as I will explain later — to its own transitional, loosely-coupled orbit.

Chapter five discusses how the militarization of silence happens by and through design. Rather than focusing on the Police apparatus as the sole enforcer of silence, or constraining the enforcement of silence to the scope of law, I probe into how designed artifacts enact the policing and silencing of racialized bodies. As it will be argued, designed artifacts create and reproduce mechanisms with which to create and enforce physical and sonic distance between the perceived 'loud' body and its 'silent' counterpart, thus sustaining the narrative that certain bodies have more right to occupy the auditory space than others. To do so, I start from the violent strategies employed by the Military Police of São Paulo to enforce silence in lower-class neighborhoods in the city, and slowly move towards similar manifestations of sound policing in the practice-based part of this research. Lastly, I offer a re-framing of the narrative of distance by examining propositions for disrupting the enforcement of silence not towards noise, but rather by offering a shift in the perception of distance, noise, and silence itself.

In chapter six, I examine the role of design in fostering the practices and systems which sustain violence as a permanent threat, while at the same time attract violence as the mechanism with which to address this perception of threat. The techniques of filtering certain sounds out of the soundscape in order to render their very absence as a threatening feature of the auditory space, thus working directly in this apparent contradiction of rendering certain sounds silent in order to make they hyper-audible. How design might work towards shifting certain sonic objects but maintaining their affordances intact, and thus sustaining

this process of filtering that sustain the permanent impression of violence as a constant threat, or endorsing the threat of violence as a coercion mechanism. Conducting the narrative of this chapter is a very specific object — a jukebox — which belongs to the fringes of legality, illegality, and a third state of "imposed" illegality, which is articulated via the listening practices it affords. I mix the story of this object with a portrait of the Brazilian middle-class in a movie narrative in which sounds — or the absence thereof — is a key element into designing a permanent state of violence.

Finally, chapter seven probes into different forms of bordering performed by and through sound and listening practices. I argue that this form of auditory governance is enacted by processes of not only physically designing the borders which delimit certain acoustic practices, but also by transposing the character of these physical borders to listening practices, effectively turning the auditory borders into transient, mobile, and porous entities. Moreover, it will be argued that the performance of these actions of clustering acoustic borders is what validates the commodification and systematization of vernacular listening practices into politics at the institutional level. In other words, throughout this specific chapter I intend to demonstrate how a) certain objects delimit acoustic borders that are, in themselves, manifestations of auditory governances; b) the active engagement with these objects 'spill over' everyday practices of listening in which these borders become mobile, transient, and clustered, and c) how an entanglement of these objects, and the practices they convey and are assigned to, is used as motivation and/or excuse for the creation of systems that negate dissenting stories and histories of listening, thereby validating and enforcing the materiality of auditory borders.

### **Sonic narratives in the mix**

In being on, through, and about sound, this dissertation cannot be complete without providing audio examples of the topics and ideas described here in textual form. More than that, music and field recordings are by themselves powerful media with which to expand the limitations of language — and academic language, for that matter — when attempting to demonstrate, denounce, or even make certain struggles visible. This is why, together with hyperlinks which point to specific references mentioned throughout this work, I have also crafted a roughly hour-and-half-long mixtape to be listened to while reading the dissertation.<sup>16</sup>

The mixtape is to be listened to not as a 'soundtrack,' but as yet another narrative layer for the chapters that follow, and in particular for part two of this dissertation. In mixing these songs, I have carefully chosen works by not only artists mentioned in the text, but also other musicians and producers from the same region, or from the same time, or whose narratives somehow complement the point I am trying to make with each chapter. In addition to that, I have also deliberately put a few songs I was listening to while writing this text; in

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<sup>16</sup> Listen to the mixtape here: <https://www.mixcloud.com/pedrooliveira/decolonizing-the-earview-a-dissertations-mixtape-or-the-other-way-round/> (accessed April 3, 2017).

that, I would like to invite the reader to inhabit the same fictional auditory space as mine, and in doing so navigate a similar universe of sounds to those that have aided me in my research journey. These chapters would not be complete without their sonic manifestations and accompanying narratives, and I felt that I could not hide my own sources of motivation, insights, and artistic inspiration.

Notwithstanding, the mixtape is also punctuated by some of my own field recordings, presented already edited as part of the 'Algerinha Vive Mixtape,' the semi-fictional soundscape created for this research. In presenting these recordings, I also would like the reader to immerse in the sounds that populate this scenario, whose sonic narratives stem from the real sounds of everyday life in Brazil. At the same time, these soundscapes become a sonic patchwork that extrapolates from their own locality to become hybrid sonic portraits of a place so effervescent as my home country.

In short, I would like for this dissertation to have more voices than my own and my interviewees, and to do that I found the best practice to be to invite the reader to switch their auditory perspective between sounding words in their head by silent reading, and listening to a non-verbal and non-academic narrative that, in its enunciation, aims to convey the same ideas being discussed by the text. With that I hope to expand, even if a little bit, the boundaries of what an academic dissertation should be, and I plan to turn this into a tradition of my own in future endeavors.

**PART I**

*The Apparatus of Auditory Governance*



## Chapter One

### The *earview* of design: Modern and colonial narratives of the auditory space

Narratives of sound inform our experience of the world as intensely and as precisely as visually-centered paradigms, usually employed by designerly language, do. How the world is acquiesced through the body, that is, how we interpret changes in the air pressure as being (or becoming) information, and thus how we navigate through and make sense of vibrations, or, in other words, the "materiality of sound" (Eshun 1998, p. 179, 183) in order to turn them into cognitive, objective and subjective data, is as of interest for design as any other types of codification and de-codification of stimuli might be. More than that, a designerly reading of acoustic phenomena might consider not only how vibrations are felt by the body to be *sound*, but also the material conditions within which they are perceived, and how this materiality is manifested in-use. In other words, not only how vibrations come into perception as sound, but also how they are manipulated, repurposed, re-configured, reproduced, remixed, and misused; and how they are distributed amongst different agents of a system, be they human and non-human, sentient or non-sentient. Thus, a designerly inquiry into the *auditory space* may reveal the emergent narratives from these vibrational manifestations, and which politics they convey, sustain, or enforce.

In this research, I use the term *auditory space* to refer not only to the space of audible vibrations and their coming-into-being via listening practices, but also the different realities that are created by different histories and stories of audition. These forms of storytelling, conversely, also help delimit what a given society understand as "the listener," that is, the subject and object of those histories of audition, as well as the range of techniques, performances, and engagements with sonic phenomena. The "listener" — as the subject who performs listening — enacts a series of contingent engagements on the in-between of sonic phenomena and the materiality of sound; or, in other words, listening is understood as that which only happens in the presence of a listener, who is able to perform the codification of sonic phenomena into auditory events. While seemingly trivial, such an assumption needs to move beyond the often-heard cliché that goes "if a tree falls in a forest devoid of listeners, does it make a sound?" It must so because (a) understanding where and when this process of mediation comes into being helps us grasp the level of agency granted to this performer of sonic practices, as well as which kinds of practices are enabled, validated, and supported by social, cultural, and political discourses; and (b) this (rather boring) cliché ignores the very agency of, for instance, Deaf and hard-of-hearing people, and/or non-living beings as actors of and within any given system. This chapter demonstrates how the idea of 'the listener' can be traced back to a long tradition of instrumentalization of contingent practices of audition towards conforming them to a notion of 'rationality,' therefore supported by a modern and colonial discourse tied to ideas of listening as technique and labor. This in turn creates hierarchical dichotomies of listening and its practices which, in themselves, become a matter of design and in turn a concern of this very research.

### Acoustic space and audile techniques: a modern history of listening

While the English language understands both *auditory* and *acoustic* to be related to phenomena "of or about hearing" (Cambridge English Dictionary, n.d.), their circularity and interchangeability in language begs for a careful distinction when applied to research terminologies. I will not, however, rely on language definitions to explain my choice of *auditory* space rather than *acoustic* space; this pertains, in the case of this research, more to a question of *agency* and *performativity*. The design of an auditory space implies delegating, assigning, and codifying of different agencies over sonic phenomena. I understand the auditory space to be a transient space, constituted by different engagements and levels of said engagements among audible and non-audible vibrations, living and non-living beings, and their performances within said space. Such an understanding requires, first and foremost, a break with Eurocentric – and hence colonial/modern — notions of listening as the idealized and quasi-spiritual counterpoint to seeing.

A telling example of this can be found on Marshall McLuhan's famous essay on the "acoustic space." One of the canonical Western media theorists of the twentieth century, McLuhan argues that while the space of vision is "an artifact of Western civilization [...] perceived by the eyes when separated or abstracted from all other senses [...] a construct of the mind," the acoustic space is conversely "the natural space of nature-in-raw inhabited by non-literate people." (McLuhan 2004, p.71) McLuhan hence understands listening to be 'pure' apprehension of the senses and thus connected to more 'primitive' views of the world, in contrast to the enlightened subject of "Greek phonetic literacy" (*ibid.*). Similar to much of the Western-centric scholarship in praise of a logocentric and positivist modernity, McLuhan understands the acoustic space as that which is free from human designs, a field of possibilities which his 'literate subject' has not so far dared to apply his scientific thinking in order to classify, rank, list, map, and take control and ownership of those spaces. With that, he traces a clear distinction between not only the qualities of the senses themselves, but also to the actors and agents of those sensing qualities.

The acoustic space is thus portrayed as a place of and for *otherness*, of subjectivity, of non-rationality; those who dwell on the acoustic space more than they do in the visual are, thus, those devoid of literacy, subaltern bodies. Thus the acoustic space, taken from a McLuhanesque perspective is, in its poetic and colonized *otherness*, the immediate opposite of the visual space; not a product of human agency – in fact a producer of non-agencies, a feature of nature in all its 'primitiveness'.

Sound scholar Jonathan Sterne argues that such a canonical and almost dogmatic separation of the aural from the visual, ear from eye, as well as their dichotomous, binary oppositional framework configures a form of ideology that constrains studies into aural culture to the position of the 'other' of the visual. In other words, the diametrical opposition between a *visual* and an *acoustic* space positions the ear as being nothing but the alterity of the eye. Sterne calls this framework the "audiovisual litany," and in his book *Audible Past: Cultural Origins of Sound Reproduction* he offers a short list of criteria for this; according to him,

the litany relies on physical and psychological oppositions to build "a cultural theory of the senses" (2003, p.15). These are, amongst others, the notion that "hearing is spherical [and] vision is directional"; or that hearing is subjective and vision is objective; or the association of hearing with temporality and vision with spatiality, and so on (*ibid.*). Sterne argues that such a framework romanticizes hearing as being a poetic and ever-subjective sense; the enforcement of this dichotomy understands listening as a discrete activity whose main capability is that of highlighting what is not evident to other senses. While for Sterne such a "pervasive narrative" inevitably casts the eye as the pinnacle organ of modernity, his analysis and demonstration of listening as a very rationalized set of techniques aims to show the reader that "there is more than a map for the same territory", that is, listening is as crucial as seeing in order to understand forms of knowledge and culture introduced with the discourse of modernity (*ibid.*, pp.2–3).

Moreover, within Sterne's "audiovisual litany," the separation between the ear and the eye as sensory dichotomies flattens the understanding of listening and hearing as being similar practices — an assumption that, he maintains, is erroneous at best. For him, while *hearing* is the perception of differences in the vibration of air molecules, *listening* is "a directed, learned activity [...] not simply reducible to hearing." (2003, p.19) From the moment the ear is trained into rationalizing acoustic phenomena, listening becomes a *technique of hearing*, a "set of practical orientations" (*ibid.*, p.93) that manage and instrumentalize the acoustic space. In that regard, the appropriation and transformation of the acoustic space transforms it into a set of commodities to be manipulated at will; this in turn affords the development of technologies to act directly into the control of auditory events, and to enact the techniques with which to harness hearing. In other words, *to listen* always assume *to listen for* something; instrumentalizing listening in order to categorize, rank, and functionalize acoustic phenomena is an expression of the modern/rational ideal of emancipation through enlightenment and reason. The aural is technicized and effectively designed to separate signal from noise, to create the devices with which to subtract its subject from the soundscape — by means of interiorizing *and* exteriorizing subjectivities. These devices are producers and products of a project of modernity that privileges scientific reason and virtuosity, and affords "the separation and idealization of technicized hearing; the construction of a private acoustic space; and the subsequent commodification and collectivization of individuated listening." (*ibid.*, p.155)

For Sterne, then, listening, as a set of *audile techniques*, is both product and producer of modernity. In being so, it assumes the acoustic space to be, first and foremost, a privatized space (*ibid.*, p.95). In order for one to "own" the right to claim their private acoustic space, a *training of the ear* is of utmost necessity, one that orients listening towards a form of technicizing — or designing — hearing to isolate signal from noise and loud from quiet, while at the same time intensifying objectivity in detriment of subjectivity. In order to enact these designs, Sterne argues, mediation, i.e. physical distance, is necessary, and it is achieved through technological means. Only by selecting and privileging auditory events that express a modern notion of reason that the acoustic space becomes fruitful with possibilities for its

stratification, commodification, and capitalization (*ibid.*, p.155). Or put differently, from the moment listening is understood as a *device of hearing*, and as such is instrumentalized for technical-scientific purposes, the acoustic space defines its borders, and these borders are enforced and enacted in everyday life by and through design.

However, Sterne's delimitation of the acoustic space, while significantly departing from idealized and theological notions of listening, still undermines the agency granted to certain bodies to enact the audile techniques that constitute the acoustic space. In so doing, Sterne delegates the production of sound and listening *strata* to an enclosed, Eurocentric modernity, not accounting for other possible agencies and materialities of sound and its practices. As Veit Erlmann contends, "while [the figure of the listener] has been and continues to be defined in predominantly 'neutral,' nongendered, and non-racial terms, the Western aural self is deeply caught up with the history and politics of difference." (Erlmann 2016) Moreover, Sterne constrains the scope of this technicization to be intrinsically bound to the demands of an industrial, capitalist, social order; listening thus becomes not only a technique of hearing, but also only becomes a set skill when performed as labor. Sterne thus neglects that while modernity allowed, via technological delegation, for listening practices to become educated and enlightened techniques of hearing, it also assigned the ability to enact these "audile techniques" to specific bodies performing specific labor. These bodies, as he states in the introduction to his study, are the "hearing elites" who are able to produce enough historical (i.e. technical-scientific) documentation to sustain his research (2003, p. 28). In that sense, Sterne inevitably sanctions certain practices of listening — and the bodies that convey them — in detriment of other bodies that inevitably fall outside these [white, male-centric, Anglo/European] elites; in understanding that such technological "audile techniques" are enacted solely within the confines of the colonial/modern framework, Sterne limits the very notion of what audile techniques might in fact be to the privatization and capitalization of the acoustic space *qua* narratives of development and progress.

Sterne thus provides a compelling argument as to the shortcomings observed with McLuhan's understanding of visual and acoustic spaces. Yet similar to McLuhan, Sterne also relies on an understanding of listening to be intrinsically connected to a specific point of departure which has European modernity as its geo-political locus, and its imposition of normative practices of listening – e.g. *techniques* – as a vector thereof. While McLuhan still regards the realm of listening to be 'somewhere else' in a place of distant otherness, Sterne attempts to draw these spaces closer together — one even might say entangled — insofar as the sense of *hearing* becomes an asset of labor within a capitalist framework. Thus the acoustic space, so understood, is a limited space inasmuch as it dismisses listening practices that fall outside the colonial/modern logocentrism, and consequently limit 'audile techniques' to be a set of practices bound to modernity. Other listening practices are, conversely, yet again relegated to pertain to a 'traditional knowledge' which is seen to be "closer to nature" than its European counterpart — and therefore primitive and uncultured (Quijano 2000; Howes 2006). Such a narrative permeates much of the discourses which assign certain sensorial practices — as extensions of the senses themselves — to a state of 'savagery'

and 'animality' (Howes 2006, pp.4–5; Gautier 2014). In doing so, Sterne delimits listening as that which is enacted under a specific set of constraints and criteria responding directly to the modern/colonial narrative, which authors in the field of decolonial studies would call the "colonial matrix of power," or "coloniality" for short (Quijano, 2000; Mignolo, 2007b). More importantly, in privileging a narrative whose point of departure is localized in time and space but at the same time "universalized," normative histories of listening fail to acknowledge and engage with *other modernities* happening elsewhere.

#### Epistemological colonization: coloniality and/of knowledge<sup>17</sup>

The term "coloniality" refers to an ongoing project that starts with, but is not constrained to territorial colonization. While the invasion of land, exploitation of resources, and the genocide and enslavement of amerindian and african peoples in centuries past might be its most obvious facets, the consequences of the colonial project extend to the very way human beings relate to the contemporary world, ontologically and epistemologically. This project of violent dominance undertaken by Western Europe in the fourteenth and fifteenth centuries worked to eliminate difference and homogenize systems of hierarchies, knowledge, and culture, originating a set of interrelated practices that Quijano (2000) describes as the "colonial matrix of power," or its abbreviation, coloniality. These practices situate the Western European male body as the sole narrator of history; all others are relegated to a state of "uncivilization," which validates their serfdom, assimilation and obliteration.

Colonial relations are at the core of European social sciences and philosophy. Enrique Dussel (1993) demonstrates how Hegel, for instance, saw "development" as a linear ontological movement, which has a clear direction from East to West, with Europe as the "absolute end of Universal History" (cited in Dussel 1993, p.69). This, Dussel argues, erases Latin America, Asia, and Africa from his idea of World History, for these populations dwell in a devalued state of "immaturity". In addition to that, Raewyn Connell (2007, p.10) demonstrates how the social sciences were institutionalized in the nineteenth century by resting their importance on debating the interpretation of an alleged "contrast" between metropolises and colonies, "whether through physical evolution from lower to higher human types, or an evolution of mind and social forms; whether competition or cooperation was the motor of progress." Indeed, this is likely the case much in course today: former colonies, now confined within the politically- and socio-economically-driven term "Global South," remain predominantly seen as research objects rather than researcher subjects. Similarly, their theories are confined to their ethnographic locatedness — as it will be discussed later — rather than into cogent ontologies and epistemologies. Data is still mined, produced and collected in the former colonies — but the debates they yield and the theory they produce remain largely concentrated in Northern institutions, and hegemonically led by northern theorists and scholars. As Quijano (2000, p.541) explains:

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<sup>17</sup> This section contains parts of "Designer/Shapeshifter: A decolonial redirection for Speculative and Critical Design," written in collaboration with Luiza Prado de O. Martins and to be published as a chapter for the book *Tricky Design: The Ethics of Things*.

[...] in different ways in each case, [the colonizers] forced the colonized to learn the dominant culture in any way that would be useful to the reproduction of domination, whether in the field of technology and material activity or subjectivity, especially Judeo-Christian religiosity. All of those turbulent processes involved a long period of the colonization of cognitive perspectives, modes of producing and giving meaning, the results of material existence, the imaginary, the universe of intersubjective relations with the world: in short, the culture.

This discourse of acculturation follows ideas of “civilization” through cultural domination; “progress” and “development” through technology and industrialization; and “salvation” through Christianity. This is, simply put, the “point of reference” the Western[ized] world acknowledges as History – what Santiago Castro-Gómez (2005) calls *la hybris del punto cero*, or the “hubris of the zero point”: Europe as the hegemonic identity, the “neutral” enunciator of History, and the Americas as its subaltern others.<sup>18</sup> Latin America is, then, Europe’s periphery, modernity’s other side – its very *alterity* (Dussel 1993). Granted, the indigenous civilizations that inhabited America before its invasion — for instance the *Incas* or the *Aztecas* – were as technologically, philosophically, scientifically, and militarily advanced as what the Spanish colonizers understood as constitutive of “modernity” (Quijano 2000, p.534). The idea of “modernity” is a new, imposed configuration of space and time, dictated by the sovereignty of certain [constructed] identities and subjectivities over a [generalized] subaltern other.

Coloniality also plays a pivotal role in defining the heteronormative and patriarchal gender system of most Western and Westernized societies; according to María Lugones, “colonial/modern Eurocentered capitalism imposed [social changes] through slow, discontinuous, and heterogeneous processes that violently inferiorized colonized women. The gender system introduced was one thoroughly informed through the coloniality of power.” (Lugones 2006, p.201) This imposition of a gender system that was alien to most of the colonized bodies was also influential to the establishment of labor relations both in colonizers and colonized, inasmuch as there was a visible difference in the discourse referring to white women and non-white women. The former were portrayed as docile and fragile, while the latter as resilient, sexually perverted, and uncivilized. Thus for Lugones, the heteronormativity enforced by what she calls the modern/colonial gender system cannot be understood as separate from the discourse of development, “as heterosexuality permeates racialized patriarchal control over production, including knowledge production, and over collective authority.” (*ibid.*, p.206)

Among the many unfoldings of the coloniality of power, as briefly discussed above, lies also the idea that human knowledges are homogeneous, globally transferable and, most importantly, ‘universal truths’. This does not happen through other means than that of intellectual

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<sup>18</sup> Throughout this work I will employ the term “Western[ized]” to refer to not only Western countries but also to former colonies which have inevitably been subjected to a process of cultural, social, and political Westernization – Brazil being one of them.

imposition and erasure of difference, and slowly develops itself in hidden processes that legitimize certain schools of thought in detriment of others. As Connell (2007, p.44) argues, with the claim of universality, "it is assumed that all societies are knowable, and they are knowable in the same way and from the same point of view." In other words, this project of "normalization" undertaken by Enlightenment postulates that Western, scientific-technical rationality is "the only valid episteme [...] capable of generating real knowledge about nature, the economy, society, morality and people's happiness." (Castro-Goméz 2007, p. 428) A continuous erasure of the production and the denial of participation in establishing ontologies of knowledge in the colonies is what Connell identifies as the omission of "the theoretical stage of science" (Connell 2007, p.104). Indeed, there is a sheer predominance of philosophical ideas that remain "universal abstracts" coming from European and northern schools thought, while at the same time being applied by scholars that do not come from these places as the only valid episteme of research. Hence, a decolonizing approach to knowledge seeks to actively challenge hegemonic discourses and offer *other modernities*, or other modes of sensing and knowing the world (cf. Mignolo 2007b, 2011) around and across Eurocentric knowledge.

### **Other modernities, other modes of listening**

While for Sterne listening should be considered as much a fundamental constitutive of modernity as vision, his consideration relies on the discourse of a technicized, rational objectivity. In that sense, Lydia French's "differential listening" (2014) offers a methodological proposition to re-frame listening as a subjective, yet cogent mode of attending to the world. Her writing calls for distinct accounts of listening — those that move beyond instrumental hearing and as such refrain from a direct connection with the supposed empirical materialism of auditory phenomena. Drawing tangentially from Chela Sandoval's "differential oppositional consciousness", French argues for a positioned and situated research endeavor that is able to encompass alternative, plural modes of listening; these modes reconfigure the scope of what we acknowledge as "real," for they are a form of a "border epistemology that understands temporal movement differently" (2014), one which displaces memory and affect by making use of sound reproduction technologies. In other words, she calls for a decolonizing mode of listening that embraces the ambiguity of sound reproduction, and its capability of disconnecting time and event, thus positioned at the constant becoming of the present. A subjective and interiorized method of listening — clairaudience — is a method for breaking with the "interior/exterior" separation fostered by traditional histories of listening constrained to the artifacts they enact and are enacted from — in other words, Sterne's "audile techniques" (2003).

The methodology proposed by French acknowledges sound reproduction technologies to possess the ability to cast memories that are intrinsically bound to their political and cultural *loci*. More than that, she argues that from the moment these technologies actualize said memories in the *now* of the listening experience, they also displace them in time. Past and future are re-constructed from the present by clairaudient hearings of *othered* voices,

or, in her words, by "alternative histories [which] live in the transitive play between sounds clairaudiently remembered and those reproduced through sonic media." (2014) In applying a differential listening approach one is able to pinpoint differences and dissonances between one's own positionality and that which is actualized in the materiality of listening (*ibid.*). This mode of listening is thus constantly re-configuring sonic reality as a space inherently plural and ambiguous, one which accommodates both dominant practices — albeit stripping them down from their dominative aspect — and their "outcast" counterparts, equating both to the same discursive and epistemological relevance. Yet differently from McLuhan, French's subjectivities possess, perform, and negotiate distinct agencies within sonic phenomena rather than conforming to a place of silent (or silenced) otherness.

In regarding Sterne's histories of *listening-for* as being histories of highly specialized techniques, French directly interrogates contemporary practices of 'pure listening' or 'better hearing' by technological delegation. These practices, she maintains, seek to "render the machine's noise as ancillary and exterior to faithful sonic reproduction" (*ibid.*) with the desire to accommodate to normative soundscapes, and thus authorizes certain practices in detriment of others. For her, the search for familiarity (an expanded notion of fidelity) in listening is also reproduced in social relations that emerge out of these practices, as a way to cast out the "peripheral noise" of otherness. She contends that Sterne's history of listening in modernity is but *a* history among many, and a practice that is oppositional and transformative should *listen-for* non-universalizing ways of hearing that challenges dominant discourses of *what is said to be heard*. Thus, a "differential listening" practice seeks to identify these prevalent discourses of listening and dismantle them; or, in her words, to "[denaturalize] the historical trajectory of the ideological premises on which fidelity is founded, suggesting that there may exist alternative histories of audition in the age of sonic reproduction." (*ibid.*) French's call for a "differential listening," thus, calls for other histories stemming from other modernities.

Colombian sound scholar Ana María Ochoa Gautier provides an insight on some of these alternative histories of audition. Focusing on nineteenth-century, colonial Colombia, she thoroughly engages with entangled yet oftentimes conflicting listening modes across different modernities. For her, aurality "is central to the constitution of ideas about Latin American nature and culture [and] also imply different ecologies of acoustics." (Gautier 2014, p. 75) In one of her case studies, she compares different historical testimonies of the sounds produced by the bogas — boat rowers that transported contraband along the Magdalena River. For European 'explorers'<sup>19</sup> such as Alexander von Humboldt, colonial/modern audile techniques were used to privilege sounds understood as 'from the nature,' and in turn dismiss the conversations from his (racialized) subalterns. However, he would waive such auditory techniques when certain conversations could potentially offer him insights into 'tradi-

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<sup>19</sup> I deliberately use the word 'explorer' with quotes here; 'exploration' of what was perceived to be 'untamed land' by European travellers laid grounds for the understanding of indigenous peoples and cultures to be in a state of 'primitiveness' which needed to be properly catalogued, described, and sanctioned by the curious 'explorer.' Santiago Castro-Gómez (2007) provides a more thorough account of this process.



tional knowledge.' (2014, p.68) In writing about the bogas, he would describe their sounds as "barbarous, lustful, ululating and angry shouting, which is sometimes like a lament and sometimes joyful" (von Humboldt cited in Gautier 2014, p.32), or to resemble the howling of dogs (ibid., p.37). Similarly, other colonial travellers were seemingly 'shocked' by the bogas' 'lack of civilization' and 'blasphemous' practices of praying simultaneously to Catholic saints, Afro-Caribbean entities, and "many more of their own invention" (Cochrane cited in Gautier 2014, p. 38) in a mishmash of Spanish, Latin, "Lengua Franca" and other indigenous languages (Holton cited in Gautier 2014, p.39).

Often engaging in such a syncretism that is as religious as it is linguistic, the sounds of the bogas, Ochoa Gautier argues, are "a remix practice that also involve[s] vocables and the acoustic incorporation of the sounds of natural entities around them, all in the rhythmic regularity of vocalization for labor that involve[s] repetitive movement." (2014, p.41) In understanding the bogas' chantings and vocalizations as structured, learned techniques of (aural) navigation and communication with both human and non-human entities, Ochoa Gautier subverts the dehumanizing logic of the colonial European ear to reposition the bogas as the center of an "audile technique" that has in "envoicing [...] multiplicity", that is, mimicking and speaking different languages, both human and nonhuman, a powerful mode of "transformational [...] becoming" (ibid., p.65). In other words, she envisions this form of non-human embodiment to be a conscious, objective technique, a mode of social/inter-species communication, which understands every human and animal language and voice to be a potentiality in and by itself rather than the reductionist, racialized view of a "lower condition of animality" (ibid., p.63). It is a form of redistribution of acoustic perception to different corporealities and materialities of sound which defy and often negate the hegemonic, colonial/modern ear (ibid., p.67).

### **Design and articulations of coloniality**

Walter Dignolo argues that *time* is one of the most powerful devices of coloniality; it is a cultural device for defining a point of departure which sets the conditions for measuring the other. With the British empire in the nineteenth century, this notion of time was employed as way to determine the "present" moment into the standard of progress and development, and in turn constrain the "past" — i.e. whatever preceded colonization — to a state of barbarism (2011, pp.151–2). Such a "translation of geography into chronology" (ibid., p.152) sets the stage for Design – with a capital D – to define its point of departure, its own "zero point" (Castro-Gómez, 2005). With the Industrial Revolution and the appropriation of time as that which is measured by [industrial] labor, Design becomes one of the processes with which to carry out the demands of the new paradigms of Western civilization, that is, to *propel society forward* through industrial development. Granted, every other material practice pre-existing industrialization is understood by most of Design scholarship well until today as being behind, in a state of "non-design". Authors in Design literature often attempt to distance the field from any "bucolic [and] simplistic technologies stemming from old traditions" (Bonsiepe 1997, pp.107–8); others link the act of designing exclusively to

modern/capitalist understandings of progress, as “the impulse to innovate [and to respond] to different circumstances” (Attfield 2000, p.16). Statements like these aim to draw clear borders between “vernacular” and “industrial,” “tradition” and “expertise,” or put differently, they seek to determine what Design *is* by defining what *it is not*. Such an attitude is a strong reflection and perpetuation of the coloniality of knowledge, a continued erasure of any non-European, non-Western, non-Modern modes of being in the world, in favor of a centralized history of making.

With the assumption of Design as being a set of practices coming from a supposedly universal (i.e. Eurocentric) perspective, and with historical ties to colonial institutions in Europe, the ethos of coloniality is assimilated and reproduced. In other words, it becomes a specific set of knowledges in making and doing that allegedly *did not exist* in the colonies, until the discourse of modernization through industrial development arrived — and with it design education as such. Indeed, technological development and industrialization are propelled by and through design into the newly independent colonies, and as such become the very rhetoric with which to maintain the power relationships that were tentatively breached with the end of part of the colonial rule, particularly in Latin America.<sup>20</sup> In most Latin American colonies, for instance, Design education was promoted first and foremost as a way to teach both technical and artistic skills to a creole society that had previously relied on slave labor, and needed to overcome a “lack of labor force” to move towards modernization and development (Cardoso 1999, p.76).

Hegemonic design discourse thus enforces coloniality by understanding the material practices of the colonized to be primitive, and therefore undeveloped. Moreover, by assigning these practices to a space of not design, these narratives define design’s own “legitimate heirs of a tradition” (Cardoso 1999, p.14). This process, however, should not be understood as a mere matter of correlation/causation. Rather, it is necessary to develop a profound reflection on the agency of design within a much more complex web of relationships, among them the erasure of other ontologies and epistemologies that challenge dominant preconceptions about the world. As Fry et al. (2015, p.8) argue, “Design discourse [...] strives to secure its ‘coherence’ by exclusion.”

### Sketching the *earview*

One of the main ideas this research seeks to advance is that design — as a field of study and a set of practices — privileges certain histories and stories of listening over others. This privileging, embedded in the affordances of designed artifacts, validates and perpetuates the hierarchization of bodies as well as the relegation of certain bodies to a state of *otherness* within and beyond the auditory space. As discussed in the beginning of this chapter, the auditory space is designed not only by the artifacts that convey or mediate the act of listening, but also the contingent practices and “audile techniques” that emerge from an entan-

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<sup>20</sup> Of course this is not the case of the British and Dutch colonies in Asia and Africa, which have taken much longer to set themselves free from the colonial rule.

glement of bodies, objects, agencies, and performativities with and within auditory phenomena. Design thus acts on the tension between different stories of listening, of bodily and material engagements with sound; the coalescing of these engagements is what will be called in this dissertation, from now on, the *earview*.

I began a rough outline of the *earview* in a past publication (Vieira de Oliveira 2016); yet it is in this text that this idea is further unravelled to encompass how and what design designs back into the auditory space. The coalescing of a visual marker — *view* — with an apparatus that performs hearing — the ear — is not arbitrary; rather, it takes inspiration from the theory of the *gaze*, much discussed both in race studies and feminist scholarship. For instance, Laura Mulvey's essay *Visual Pleasure and Narrative Cinema* positions the language of cinema in depicting women as a producer of images for spectacle and pleasure, projected towards an 'invisible' subject who controls the view of the spectator — men (Mulvey 1975, p.10). Similarly, in her analysis of the "human zoos" not only of the early twentieth century but also of its more recent, racist installment in Augsburg, Germany in 2005, Obioma Nnaemeka describes how the separation between colonizers and colonized — slave owners and african enslaved peoples — was deliberately fostered by the European subject so as to afford enough distance for a "view" of the black body as alien, deprived of humanity. "The Europeans", she writes, "are not interested in what the Africans 'think' (they are not credited with the capacity to think/reason) but 'on what they do' and 'how they look'." (Nnaemeka 2005, p.95). The European gaze, for Nnaemeka, directly evokes the coloniality of looking, the notion that certain bodies are made to be looked at from a distance that vouches for their dehumanization.

The idea of the *gaze* makes it clear that *who looks* matter. Yet it seems that for the design of things that produce sound or mediate listening experiences, *who listens* and *who defines* what and how is to be listened seems not to matter much. Instead of *the gaze*, then, I use the term *earview* to demonstrate the narratives conveyed and sustained by an engagement with and around designed listening devices — that is, its *sonic affordances*. The *earview* understands sonic affordances as a process of listening forward as well as backward, projected to the listened phenomena and towards the enunciator of the listening act. This multidirectional process highlights the co-constitutive aspect of sonic affordances – and thus configures *earviews*. My idea for the *earview* is not to be confused with Seth Kim-Cohen's *Ohrenblick* (2009) – even though one would amount to a translation of the other in linguistic terms. Kim-Cohen's idea of an *Ohrenblick* relates much more to the *gaze* in film; for him, the *Ohrenblick* evinces how a work of art produces a certain oriented act of listening, which is informed in turn by the identities performing said act (ibid.). My choice for the term, instead, was first inspired by cultural theorist Kodwo Eshun's "[r]earview hearing" (1998 pp. 78–79, 186), albeit not with the same meaning as he conveys in his book. Earlier on I defined the *earview* as "stories that orbit around design language but that start, evolve, and end at the ear [which help to] craft narratives that theorize and produce new knowledge through listening practices." (Vieira de Oliveira 2016, p.51) Hence I already positioned the *earview* as a rough form of a locus of auditory enunciation – a propo-

sition which will be expanded in and by this research. In rough terms, the *earview* should be understood as a form of storytelling, not constrained to fabulation and speculation only, but also assuming that these modern/colonial techniques of hearing, as well as the differential listening modes above discussed also weave a specific narrative with a specific point of listening. What I argue throughout this research is that design privileges certain narratives constrained by designed sonic affordances, enabling the modern/colonial *earview* and erasing or obliterating others.

In addition, my *earview* understands this locus of auditory enunciation as a site of confrontational orientations; on the one hand, the predominance of an auditory culture embedded in material-discursive practices of designing (which will be outlined in chapter two of this document), and on the other hand, practices of misusing, insolent listening, and relocating auditory practices that enunciate different *earviews* which complicate the boundaries of any form of normative listening practice. To understand how design articulates the *earview* becomes, then, a question of understanding *orientation*; of listening to certain things rather than others (Ahmed 2010). In casting my research attention to how these agencies, performativities and things may connect, they are regarded as orbiting around a same "gravitational center," which might not be observable in the first place but reveals its connections when it is "pulled up" by my pinpointing of it. As feminist scholar Sara Ahmed contends, "we touch things and are touched by things [...] bodies as well as objects take shape through being orientated toward each other, an orientation that may be experienced as the cohabitation or sharing of space." (Ahmed 2010, p.245) Inferring the entanglement of certain bodies, discourses, and objects by drawing them closer, or taking one element of these sets as a "nodal point," reveals the underlying structures and systems that make these agents come into existence and come together as a normative *earview*. The observation of a normative *earview*, in turn, creates the possibility of other, displaced *earviews*. It is by shifting these entanglements from background to foreground and vice-versa, picking up loose threads and intervening in them, that we begin to gain an understanding of the world from different orientations (Ahmed 2010); other sets of temporary connections may emerge, revealing otherwise silenced *earviews*.

### **Design and the *earview* of the normative listener: the case of *Here One***

A tangible example of how design privileges a normative *earview*, and in turn creates the conditions for an ontological design of normativity – with normativity here is understood as that which validates the inherent human-ness of the white, male, middle-class, european subject – can be found in a new range of products so-called "hearables," which are, at the time of this writing, just entering the marketplace of technological consumer goods. The most well-known example of such might be *Here One*, from Doppler Labs;<sup>21</sup> advertised as a set comprising of "wireless smart earbuds and a connected app" (*Here One*, n.d.), it offers the wearer the opportunity to "selectively choose what you want to hear and remove what you don't using Smart Noise Cancellation [sic]." In an early review by WIRED Maga-

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<sup>21</sup> <https://hereplus.me/> (accessed in October 26, 2016).

zine (Pierce 2015), the device was praised as a "a way to turn down and perfect the volume of our ever-louder world [...] selectively mut[ing] sounds you don't want to hear". Designed initially for what WIRED reporter David Pierce describes as a "niche use," the narrative around these earbuds indirectly addresses the question of for whom these earbuds are designed, and in turn show what is an example of a desirable outcome for noise suppression.

Doppler executive chairman Fritz Lanman describes to Pierce that, in wearing Here One, "you put them on, and at night you can hear waves and your wife doesn't have to hear waves. She can hear the baby crying, if she's nursing, and you don't have to" (Lanman cited in Pierce 2015); in another article, Business Insider reporter Nathan McAlone describes Doppler's vision to "[be] able to turn up the bass at a concert, or reduce the sound of a baby crying on a plane." (McAlone, 2015) In another report, Doppler CEO Noah Kraft excitedly describes the soundtracking capabilities of the device, that is, how the wearer can match the sound of music to the sounds coming from outside, claiming that "you could play the soundtrack to *Gladiator* all the time!" (Kraft in Pierce 2016) These descriptions imply a subject/object relation in which the use of the device, even though directly addressing the interlocutor, still describes the range and scope of its use in terms and examples that are immediately relatable to the average male subject; the movie suggested by Kraft, for instance, is a clear example of the narrative of hyper-masculinity such an object affords. In doing so, devices like these concomitantly design a noisy object which has to be cancelled out by the device. Thus in this earview we learn how the 'wife' can be prevented from hearing 'waves' — a nondescript sonic object — while the 'husband,' i.e. the interlocutor, is the one who is granted the opportunity of not hearing a well-defined auditory marker of nuisance: the 'crying baby'.

For the narrative around Here One, it is paramount that domestic labor relations remain divided by gender; only so the object of nuisance can be clearly defined to the male wearer, whereas in women might be present in the narrative only as a passing example. A more recent piece by the same reporter from the same magazine describes the ability of focused listening afforded by the design choices in software, or what the wearer describes as "like wearing audio blinders" (Pierce 2016). This mode allows the wearer to 'tune out' sounds coming from behind or the sides, creating a sonic environment in which only to what is directly in front of the wearer can be listened to. Similarly, the software design can tune the object towards sounds coming from behind the wearer, what Kraft described to the reporter as being the "eavesdropping mode, or maybe spy mode, or maybe something less sketchy-sounding." (Pierce 2016)

Designs such as those, assigned and implied to be tuned mostly for men to use, become an encapsulation of many male-biased listening practices already observed by scholars in psychology, sociology, and sound studies. Lynn Smith-Lovin and Charles Brody argue that there is a "considerable gender inequality in the pattern of interruptions" in group discussions (Smith-Lovin and Brody 1989, p.433), whereas Anne Cutler and Donia Scott have demonstrated that, despite the assumption that women talk more than men, it is likely that

this notion is biased by the perception of the social role of women, leading listeners to overestimate the amount of talk by a woman-identified speaker regardless of its content (Cutler and Scott 1990). Similarly, Jessica Kirkpatrick demonstrates from a first-person account how her ideas in discussions are often ignored, only to be later repeated by a man who ends up receiving acclaim and opening up debate; she claims that "interrupting, ignoring, over-talking, and dismissing also happen as the result of difference in class and social status, but research shows that gender is a dominant factor in this dynamic." (Kirkpatrick 2014) Experiences similar to those described by Kirkpatrick have led the women staffers from the White House under the Obama administration in the US to develop a technique they called 'amplification': in a meeting, whenever an idea would be proposed by a woman from the staff, all the other women in the meeting would repeat the idea and acknowledge its original author. This strategy, as Juliet Eilperin writes on the Washington Post, "forced the men in the room to recognize the contribution — and denied them the chance to claim the idea as their own." (Eilperin 2016) Furthermore, research on gendered listening bias has shown that women are often silenced or interrupted not only in public speaking but also in classroom environments, and even in online discussions where tone is only implied and not audible (Holmes 1992, Herring 1993, Plumm 2008).

Also predominant within and fostered by the narrative of noise-cancelling technologies, these listening practices respond to and perpetuate a "normative self" which is often assumed to be a "white, male, rational, monied, and mobile" body (Hagood 2011, p.584); in contrast, any other voices are perceived to be "emotional, distracting, and annoying—generally too young, feminine, and irrational to silence themselves." (ibid.) This is also evident in the majority of the advertisement pieces for noise-cancelling headphones, in which women, children, immigrants, overweight people, and subaltern others are almost always depicted as sources of disturbance. The creation of these 'secured spaces' for the display and exercise of listening normativity is what scholar Mack Hagood has termed the "politics of soundscaping"; this politics is which affords "controlled listening's utility in moments when the powerful wish to define, disappear, or make themselves socially inaccessible to the other." (2011, p.583, original emphasis) In other words, listening devices like noise-cancelling headphones or "hearables" such as Here One are tuned to attend to certain bodies in detriment of others, engendering specific listening practices that enforce, reproduce, and perpetuate these differences. Such a fine-tuning may appear as either directly engineered and therefore an immediate affordance of the device, or be embedded a posteriori, from an assessment of the sonic affordances it conveys and designs back by its targeted audience into the auditory space.



Fig. 1: Here One and its accompanying box.

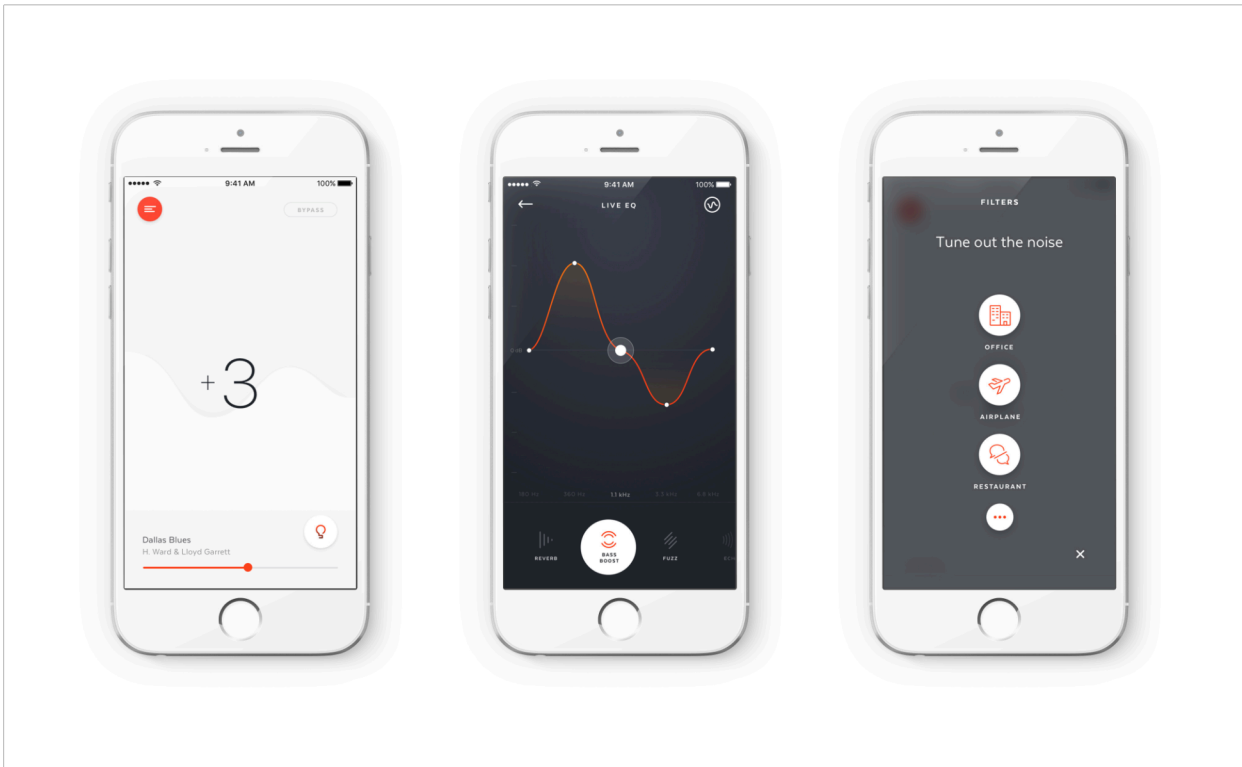


Fig. 2: Here One software interface.

Studies on listening biases and their subsequent encapsulation by design demonstrate how the auditory space is also strongly segregated by gender dynamics, and how women are perceived as less entitled to occupy the soundscape than men. This creates what Rebecca Lentjes calls "gendered sonic violence", that is, how women are required to refrain from their place on the auditory space not only by becoming silent or speaking less, but also by learning to ignore the overwhelming presence of men in the soundscape:

The spatializing of power dynamics via sound has forced women to become versed in aural refusal, to keep our ears closed the same way we are encouraged to 'keep our legs closed.' This aural refusal, however, all too often renders women silent in public, patriarchal spaces. (Lentjes 2016)

Women already employ headphones to 'tune out' male harassment, mimicking perhaps features similar to those seen with Here One. For instance, Michael Bull dedicates an entire chapter on the issue of the "gaze" in public spaces as opposed to interpersonal strategies empowered by the personal stereo (Bull 2000, pp.71-83), acknowledging a clearly gendered power dynamics insofar as "[...] women users refer to resorting to personal-stereo use in order to avoid the stare of others." (ibid., p.78) However, the question of entitlement in male harassment goes deeper than merely the 'voyeuristic' gaze' Bull alludes to; on his later study, a woman user remarks that for her, the iPod headphones are a way to make her "invisible", preventing her from "get[ting] intimidated by jerky men [...]" (cited in Bull 2007, p.31). Headphones thus may provide a palliative sense of safety for many women, often functioning as a "boost of confidence" (Vesey 2012), "security blanket" (Schneider 2013), or even a "street harassment-cancelling" device (Moore 2013).

Yet regardless of these efforts, a silent woman wearing headphones in public space is still perceived by the male subject as occupying too much of that space, which in turn should be 're-conquered'. Articles written by well-known misogynist 'pick-up artists' such as Dan Bacon teach men to "overcome the obstacle of being rendered inaudible" by women as if they are entitled to invade their auditory spaces (Lentjes 2016). Thus while at first glance a feature of a device such as Here One could be regarded as a (techno)solutionist approach to the question of male harassment or gender bias in conversation, what the discourse around Here One conveys is that men are in fact more entitled to become a sovereign auditory regent of the soundscape. In other words, Here One offers men the opportunity to not only socially but also physically cancel the women's voices, while women would have to not only be able to afford such a device — thereby creating another divider of class and economic power — but also if and when using the same technology would inevitably continue to endure harassment, auditory or otherwise. Moreover, it still places the burden of avoiding harassment on women rather than educating men not to invade their personal physical and auditory space. Hearables such as these embed, by design, listening biases into a consumer product, perpetuating the dominant earview around 'cancelling out' a gendered other, and coalescing such behavior into a practice that entangles the materiality of the artifact and the sonic contingencies it engenders.





Figs. 3 and 4: Advertisement for the BOSE QuietComfort Noise-cancelling Headphones.





Figs. 5, 6, and 7 (top row and bottom left): Advertisement campaign for Sony's Noise-cancelling Headphones by Bagby and Company. The title chosen for the campaign, "Yadda Yadda Nada", emphasizes the use of "nada" (nothing) in US American English as a form of "mock Spanish."

Fig. 8 (bottom right): Another ad campaign for Sony's Noise-cancelling Headphones, this time by Maruri Grey Ecuador.

### Shifting *earviews* and thinking through sound

Albeit interrelated with (and sometimes in direct response to) Eurocentric modernity, non-normative modes of listening also contribute to the understanding of the auditory space as a place of conflicting and temporary agencies. Ochoa Gautier reminds us that listening "is not solely an exchange practice because it is the locus where acoustic perception is inscribed, [...] but because it is *transduced* into different types of understandings" (Gautier 2014, p.67, original emphasis). The engagement with the auditory space as a place of confrontation and struggle among different histories and stories of listening shifts the usual focus of Sound Studies on technical-scientific notions of listening practices to account for, and give center stage to, counter-hegemonic and/or situated approaches that directly interrogate normative narratives of sound, its agencies and devices. What is needed, therefore, is an engagement with other "sonic epistemologies": sets of research mechanisms with which to acquire knowledge "not *about* but *by* sound and *by* listening" (Schulze 2016, p.112, original emphasis). A sonic epistemology is a "sonocentric" approach (*ibid.*, p.117); it regards the sensorial skill of listening as cogent epistemic practice, a "sonically centered [form] of knowledge [...] that is only or mainly accessible and presentable via the auditory", and therefore distinct from more 'traditional,' logocentric methods (*ibid.* p.113).

As Alexander Weheliye argues in his book *Phonographies: Grooves in Sonic Afro-Modernity* (2005, pp.202–3), connections between auditory phenomena and theories can be drawn instinctively from the moment one senses that such a connection might exist — i.e. prefigurative thinking. The juxtaposition of seemingly disconnected theories, manifested by the act of listening to certain sounds, does rely on a perpetual becoming — a sense of "always-could-be" (Eshun 1998). For Weheliye, researching with this sense of prefiguration privileges the process of unearthing connections — *finding how* — rather than a preoccupation with any accommodation to a linear trajectory of its outcomes — *finding what* (Weheliye 2005, p.204). Akin to the techniques used by DJs to mix seemingly distant records, for Weheliye, thinking through sound allows for the affect of vibrations to inform theories — not *about* sounds, but directly *from* them. Rhythm informs connections which inform knowledge in return. He adds:

to think with sound, rather than thinking about sound with the help of critical theory [serves as a] guide in this murky topography, since DJs mix records not according to primary content, but for the various dimensions of rhythm, timbre, texture, and the overall "feel" of the tracks in question. (*ibid.*, p.203)

Weheliye goes on to inquire the material affordances of sonic reproduction technologies, or, to use his terms, their "variable materiality" (*ibid.*, p.204). These *sonic* affordances pre-exist the object itself and thus reconfigure the cultural and social meaning of it, through manipulation and misuse of its intended purposes — a good example of which being the phonograph and its appropriation by DJ culture to become an instrument of its own. For Weheliye, these reconfigurations are in fact what shapes the materiality of sound technologies, and as such they provide the means for effectively *thinking sound*. Manipulation and reconfiguration of sounds are intrinsic elements of the sounds one thinks *through* — they exist in their becoming, but come into being by and through the material practices which configures them to be.

In a comprehensive analysis of Jamaican Dancehall Sound Systems, sound scholar Julian Henriques argues that to think through sound is to "work through the medium of sound as thought" (Henriques 2011, xviii). His analysis focuses the sound system as a physical object, and the techniques and technologies not only for playing and manipulating sound but also for technically operating the object itself (which often overlap). For Henriques, the act of listening to sound, and being subjected to its "vibrational affects" (cf. Goodman 2010), rather than its semantic content, triggers modes of thinking and making sense of the world that are external to rational/scientific or logical processes of reflection — that is, that are able to break with familiar sets of practices associated with listening. Henriques contends that the attention to the materiality of auditory events yields "instinctive" ways of acting, devising, and navigating reality, which cannot be disconnected from the set of techniques and technologies employed to generate these sounds (Henriques 2011, xviii, xxii). This approach to theory (or to *theory-finding*, as he puts it) is relational in nature, that is, it seeks to establish novel connections that allegedly would surpass epistemological frameworks

that are external to listening, in favor of rhythmic processes of juxtaposition and pattern emergence. In doing so, he departs from thinking as "finding out what" to understand thinking as the unravelling of dynamic patterns of materialities expressed through sound and through listening to those sounds. This materiality, Henriques argues, is what authorizes one to think through sound as a cogent sonic epistemology: instead of constraining its scope to "know-what," it also opens up for "knowing how" (*ibid.*, xxviii), or, in other words, to explore techniques and technologies to unearth contingent sonic materialities, and the politics of these materialities.

What both Weheliye and Henriques describe as the mixing techniques of thinking through sound resonate with what feminist philosopher Donna Haraway has termed a reading through "diffraction" (2004). She argues for diffraction in place of reflection as a strategy with which to analyze worldly phenomena, for "[d]iffraction does not produce 'the same' displaced [...] Diffraction is a mapping of interference, not of replication, reflection, or reproduction. A diffraction pattern does not map where differences appear, but rather maps where the effects of difference appear." (Haraway 2004, p.70) Adding to Haraway's reflections, Karen Barad clarifies that "a diffractive methodology is a critical practice for making a difference in the world. It is a commitment to understanding which differences matter, how they matter, and for whom." (2007, p.90) Hence thinking through sound can be understood as a form of sonic diffraction; an emerging theory that comes into existence from the moment one focuses on the materiality of sound in order to draw different histories and stories of listening closer to one another. This is done not by replacing one with the other, but by listening to them in both their differences and their togetherness — where they create rhythm. Such a line of argumentation is crucial for this research, inasmuch as I argue that design's relationship to listening practices should be less 'factual' and more relational; less universalizing and more plural; so as to prevent voices from being silenced, erased, or appropriated into the fabric of sonic reality.

### **Thinking through sound at the border of distinct *earviews***

The way sounds produce and articulate the different installments of the auditory space is inherently tied with the practices and techniques enacted by listeners. The scope and performance of these techniques is, however, shaped by design decisions that influence patterns of vibration — sound — into not only their physical but also their social, cultural, and political qualities. Design shapes the auditory space not only via sonic architecture but also by defining micro-borders of listening practices, as well as delineating their territories and marking certain bodies against others.

To think sound and listening beyond the framework of coloniality is an exercise in *border thinking*. As both a place from where one inquires as it is a form of counter-hegemonic epistemology, border thinking relies on the idea of the *borderlands* as a transitional space with no fixed point of origin. Walter D. Mignolo proposes border thinking as "not a matter of 'thinking the other' but rather, the 'other thinking'." (Mignolo cited in Kalantidou and Fry

2014, p 173) For him, it is a way to "think otherwise" (Mignolo 2000, p.69) that does not necessarily connect or refer back to Greek, French, British or German ontologies and epistemologies; rather, it refers to the "colonial wounds" that emerge from the erased subjectivities of subaltern bodies and the knowledge that was left in the aftermath of colonization (Mignolo 2000, p.66; 2007b, p.493).

The image of the border, which Mignolo draws his concept from, has its genesis in a direct encounter with the borderlands as a transient and contradictory space. Chicana feminist writer Gloria Anzaldúa writes from the perspective of a border subject herself. First published in 1987, *Borderlands/La Frontera: The New Mestiza* is an active call for the decolonization of knowledge, spirit and the self, exactly by seeing them as inextricably related, an entanglement of bodily knowledge, political identity, and ancestral reconciliation. For Anzaldúa, the border is not only the metaphor of how knowledge is positioned, but rather its very physical location. As a *Tejana* – that is, a person whose ancestry comes from Mexican instead of US American Texas — Anzaldúa did not move over borders but had the *borders moved around her* (2007[1987], p.28; Mignolo 2000, p.72). In articulating her own multiple identities — queer, indigenous, Mexican, US American, *Chicana* – her thinking is inevitably displaced into multiple perceptions of reality, "forced to live in the interface [...] to become adept at switching modes." (Anzaldúa 2007[1987], p.59) Anzaldúa reminds us that a "border culture" determines the places that "distinguish *us* from *them*" (*ibid.*, p.25, original emphasis); there is little we can do but to turn this border culture on its head, and use the border as the *locus of our enunciation* (Mignolo 2000). If the modern/colonial reality categorizes her very existence into a dichotomous narrative, her method for emancipation is to nurture a tolerance for the ambiguous and the contradictory (Anzaldúa 2007[1987], p. 101). Border subjects "cambian en punto de referencia [...] locating her/himself in this border lugar [the Borderlands she speaks of and from], tearing apart and then rebuilding the place itself" (*ibid.* 2015, p.49).<sup>22</sup> They are thus forced to think the world *through* dichotomous philosophies, not opposing them directly nor dwelling on either side, but rather navigating with and within their very differences (Mignolo 2000, p.85).

Thinking from the border is a not a replacement of the dominant discourses of enunciation with subaltern ones, for this would subscribe to the same logic that governs epistemological colonialism (Kalantidou and Fry 2014). Instead, it is a promotion of alternatives that must be situated and ever "universally marginal, fragmentary and unachieved" (Mignolo 2000, p.68). To be able to think beyond the subject-object dualism, to act on this "saber," is what Anzaldúa calls a "conocimiento" (Anzaldúa 2015, p.119) — or in Mignolo's words, *border thinking*. Moreover, border thinking assumes the *locus* of thinking — *where* one thinks

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<sup>22</sup> Gloria Anzaldúa writes in "Spanglish," switching back and forth between Spanish and English arbitrarily and often multiple times within the same sentence. This deliberate attitude highlights her own border thinking, a stream-of-consciousness which switches between languages at will and which she does not intend to tame but rather to embrace and emphasize in and through her writing. Hence, in her work – and in particular *Light in the Dark/Luz en lo Oscuro* (2015) — Spanish words and terms are seldom italicized, and translations to English are only provided when done by Anzaldúa herself. I deliberately chose to keep these faithful to the original text.

from — as an important point of departure; a place of ontological design that is never fixed (Kalantidou and Fry 2014, p.6). The ability to balance epistemologies by mapping them to their ontological *loci* allows one to listen to the cracks and pops that lie between and underneath them, and, from there, extract new ways of knowing and sensing the world. A border enunciation experiences reality *through* multiple perspectives, shifting from one to the other while never exactly fully departing from them (Anzaldúa 2015, p.127).

Mignolo proposes then, based on Maghreb philosopher Abdelkebir Khatibi's "an other thinking" (*pensée-autre*), a double form of critique (akin to e.g. W.E.B. DuBois' "double consciousness") seeking to emancipate its perspective from both Western and non-Western thought, belonging instead to the **border itself**. It is exactly this negotiation of different forms, that is, how they cannot be compared to one another, nor cancel each other out but rather be seen as juxtapositions — what Mignolo calls an "irreducible difference" (2000, p. 84) that paves the way for a decolonization of Western logocentrism. Similarly, Anzaldúa reminds us that "it's not enough to denounce the culture's old account—you must provide narratives that embody alternative potentials [...] we need a more expansive *conocimiento*. The new stories must partially come from outside the system of ruling powers." (Anzaldúa 2015, p.140)

In this research, I take inspiration from other histories and stories of listening as part of a proposal for de-linking from the Eurocentrism implicit and complicit in designerly language. Concomitantly, this proposal suggests a form of border thinking as the locus of enunciation for a decolonizing design practice. Border epistemologies highlight the controversial, dichotomous, and conflicting ontological mechanisms imposed by coloniality; however, instead of negating these conflicts, border thinking embraces them as the point of departure of a research inquiry: in how many ways can we acquire knowledge through listening? From the moment we understand that the borders of the auditory space are enforced to cross certain bodies rather than the opposite, and that normative modes of listening reenact this delimitation of borders *through* design, we require border thinking to allow us to confront these borders and redraw them anew.

Normative listening practices trace the borders of the auditory space within which we determine the scope of sonic reality. Privileging thinking through sound *at* the border opens up for understanding the *earview* falling outside the sonic affordances of design as being a proper *facultad* (Anzaldúa 2007[1987]), enabling other counter-hegemonic techniques with which to locate, interrogate, and negotiate the borders of the auditory space. Thinking through sound comes to the aid of the work of design by exposing the normative *earview*, while concomitantly making ground for other histories of listening — both those beyond rational-scientific techniques of hearing as well as those who emerge as practices of resistance. Thus in this work I propose in here a radical shift in the locus of enunciation of design and designing to that of the *border* between conflicting *earviews*. Only so we can unwrap and scrutinize the agencies and accountabilities of design to enforce a segregation

amongst divergent *earviews*, the domestication of difference towards consensual pluralism, and the privileging of hegemonic, violent narratives of sound and listening.

## Chapter Two

### Design as an apparatus of material-discursive practices: A decolonial reading

A common aspect of most literature in design research is the understanding of design as a powerful agent for extracting knowledge through modeling and constructing things. Thus research, when performed through these means, yields a specific type of expertise which relies on the "manipulation of non-verbal codes of material culture" (Cross, p.225). In other words, building things is the process through which design researchers acquire knowledge about a given issue in the world. Furthermore, coupling socially-oriented methods, anthropological and ethnographic methods, scientific, engineering and artistic approaches, designers make use of the transdisciplinarity afforded by the field's own enunciation in order to build things that would, allegedly, provide novel material knowledges about this portion of the world being studied. This is what Nigel Cross defined as the "designerly ways of knowing" (Cross 1982): the particular set of methods, modes, and means that pertain to material culture which, even when applied or appropriated within other methodologies, still remains the very syntax and grammar of design. It is possible to identify this framework as a process of *synthesis* and *systemic understanding*; that is, the ability of design to "organize knowledge" (Findeli et al. 2008); to condense, sort, rank, quantify and qualify distinct and diverse elements of any given situation (problem, issue, or otherwise) and make sense of it in a coherent, synthesized manner. To be able to use design as a way of extracting and generating knowledge demands a "project-oriented perspective", that is, the use of designed things and their affordances as the main tool of inquiry in the research (Findeli 2010, p. 287).

However, this process of synthesis, much cherished by design research, has its own shortcomings. In this work I demonstrate how whenever design sets itself to understand any given issue in a systemic way, it predominantly does so by following a framework centered on the logics of modernity/coloniality. In other words, despite claiming design as being a cogent and particular method of inquiry and hence devoid of the need for scientific universal truths, design practices still rely on and make use of discourses having the same part of the world as its locus of enunciation, and therefore subscribe to its colonizing logics. This is visible on the overall lack of accountability on the agency of the designer on the very act of designing; not only *what* is designed, or *what design designs* (Fry 2011), but also *who designs, how, and for whom*. There is a need for a profound reflection on the act of materially intervening in social, political, economic, and ethic configurations, which a "systematic inquiry" about the world (Findeli et al., 2008; Findeli, 2010), even through a project-oriented approach, is not able to properly address in and by itself because it ignores the very agency of design and the designer(s) in the act of researching and intervening.

In that regard, a more entangled interplay between reading and intervening in the world is of utmost necessity. The "program/experiment model" is a methodological architecture which is able to partially address the demand for a set of practices with which to *provision-*



ally accommodate the idea of design as an agent and performer of certain boundary-making actions. This framework provides enough room for practice to inform theories, and vice-versa, thereby fostering mechanisms to evince said boundaries (Binder and Redström, 2006; Brandt et al., 2011; Mazé and Redström, 2007). As Johan Redström (2011, p.2) argues, the outlining of a research program blends questions and answers in the form of propositions (experiments), which in turn demand design proposals that substantiate, instead of testing, the threads picked up by the program. The program/experiment model allows the researcher to configure the world in a certain way which is particular to that point of observation and experimentation, evidencing how methods and materials relate to each other rather than in their individuality (Mazé and Redström 2007). In that sense, the scope of this provisionality has to be constantly reassessed, for each experiment delineates new challenges which have to be re-fed into the program, to redistribute its boundaries. As Thomas Binder and Redström (2006, p.4) argue,

That the program is provisional means that it is not unquestionably presupposed but rather functions as a sort of hypothetical worldview that makes the particular inquiry relevant. As the design research unfolds, it will either substantiate or challenge this view and the dialectic between program and probing is in our view central to this kind of design research.

Hence, each experiment undertaken within this research model helps to delimitate a "design space" (*ibid.*) within the program, and which in turn the experiments have to adapt to. The use of "provisional" to define the scope of knowledge tackled in an investigation within this framework reflects the possibility of changing and adjusting the program to narrow down the focus and the nature of the inquiry, iterating for as long as the boundaries set by the program are able to address the loose threads left by the experiments (Binder and Redström 2006; Mazé and Redström, 2007).

At the same time, an uncritical adoption of such a model incurs on the risk of taking the position of the design researcher for granted as an objective and neutral agent, outside the boundaries provisionally set by the program; this excludes the designer from the political accountability on the act of designing, thereby yielding a research endeavor that is depoliticized and only instrumental in its aspirations (Keshavarz 2016, p.56). Design, as a set of ontological discourses and actions, might be understood as a cogent mode of generating knowledge in and about the world; concomitantly designing, as one practice put in motion by design, configures itself as capable of performing certain articulations which evince and enact the very materiality of designed things, and in turn generate different and contingent discourses in the world. Put differently, due to its force as an ontological endeavor, Design should be understood as an **apparatus** — a provisional set of objects, actors, and their agencies among themselves and the world — whereas the act of designing may be understood as a **material-discursive practice**, which articulates the contingency of relationships among these objects, actors, and their agencies, set by their own material conditions of possibility.

This apparatus I am interested in, more specifically, articulates forms of governance enacted by listening practices. I call my main method in this research the **Apparatus of Auditory Governance** (or AAG for short, when necessary). This specific delimitation of knowledge creates of course its own external boundaries, of which I, as the researcher, cannot presume to be an outside agent or observer but rather an active producer of them. This is a fundamental distinction that should be kept in mind throughout this entire text. Hence my investigation should be understood as a research **with/in** the AAG; put differently, this research unfolds *with* the Apparatus of Auditory Governance as its method, but at the same time *within* it, for I am subject and object of the same governances I discursively — via reading, listening, and designing — evince. With/in such a method I intend to provide a comprehensive but by no means exhaustive account of auditory governances, probing their articulatory power by and through design, in order to propose ways to disarticulate them. Such a method therefore **re/assembles** the AAG by examining the discourses and practices which constitute apparatuses in the first place — or, in other words, the tension between divergent *earviews*. Throughout this chapter I aim to clarify how I see the scope of agency of design research within such a methodological configuration; this entails, by definition, dealing with ethics and contradictions in the question of objectivity, subjectivity, agencies, and other material practices that result from such an engagement and delimitation of boundaries in this research.

Alas, design research as a field of inquiry is born out amidst post-war scientific positivism. The discourse of industrial re-development, mass production and consumption of goods, supporting the collective endeavor of rebuilding an obliterated continent in need of several reparations — of its history, identity, politics, and policies. It is within this scenario that somehow scientific despotism becomes the leading discourse in most of the European countries. Scientific truth is seen as the one and only way to provide answers about the world, an ultimate authority of undeniable validity to the popular mind and to the re-organization of these nations (Bayazit 2004, pp.18–19; Glanville 2014, p.13). With design this is in no way different: it is within this complex articulation that the scientific and theoretical validity of design was put at stake — this time around turning its attention “from hardware and form to the consideration of human needs.” (Bayazit 2004, p.18). Hence, we can point this need to understand and characterize *what it is that design effectively researches*, as the main thread of this field. To put it differently, design research is born out of the need to grant scientific endorsement to a portion of human knowing that does not necessarily rely on the premises of scientific research to create new knowledges about the world in the first place. It comes to the aid of those who were deemed by the colonial project to remain “behind in time, far in space” (Mignolo 2007b, p.472); it is a sort of self-fulfilling prophecy in which design, a colonial discipline, solves the problems created by coloniality.

Therefore, what I propose in this chapter is a re-reading of the program/experiment model through a decolonizing lenses on material-discursive practices. In constraining my research topic to a specific portion of the world, and focusing on a very particular set of listening

practices within this constraint, this decolonizing reading falls at the intersection of race, class, and gender, and therefore begs for a closer look at how these entanglements are articulated within these material-discursive practices. In turn, constantly reassessing and occupying different *loci* within the "design space" of the program/apparatus (which is delimited of course by the researcher's own ethics) may inform the researcher the scope of its own contradictions, challenges, and limitations. Rather than seek to bridge and address these contradictions, this understanding helps one to acknowledge, evince, and critically assess these limitations within the research. Such a re-framing of design under these terms is meant not only as a conditional rearrangement for the sake of this particular investigation, but rather a proposition for an ethical, ontological, and epistemological shift in the discipline. Understanding design as a product and producer of material-discursive practices with/in an apparatus, as well as reading said apparatus through intersectional theories, seeks to evidence and interrogate the ethical and political challenges a design researcher faces when adopting such a heuristic model of investigation.

### **A brief account of apparatuses in philosophy**

The philosophical understanding of apparatus was first introduced with the work of Michel Foucault; he never defined in exact terms what his *dispositif* accounted for, although a few insights as to his exact delineation can be found in an interview named *The Confession of the Flesh* (1980). In this interview, Foucault defined the apparatus as a highly mutant "strategic elaboration" of heterogeneous practices, discourses, institutions, philosophies, ethics, morals, among others, which respond "to an urgent [political] need" (Foucault 1980, p. 195) Foucault's apparatus is thus defined as the specific linkage among these practices which enact certain strategic elaborations in the interplay of power, knowledge and politics; moreover, an apparatus perpetuates its existence because it is able to adjust to its own actions, resonances, and contradictions, shifting *loci* and developing its forces "in a particular direction, [or] blocking them, stabilising them, utilising them, etc." (*ibid.*, p.196) His apparatus is, *a priori*, of a relational nature; it does not pre-exist discursive and non-discursive practices that enables it to exist, but at the same time it does not remain constrained to them. Rather, it adapts to its conditions of existence insofar as it maintains its structural, strategic character of sustaining and perpetuating a certain configuration of power relationships.

Following with his use of incarceration and the prison as his site of knowledge, Foucault delineates the prison system as an apparatus designed to be the "most efficient and rational method that could be applied to the phenomenon of criminality" (Foucault 1980, p.195) which in turn produced its own unforeseen side effects (i.e. contradictions), such as the delineation "the criminal" as a category. Such a 'byproduct' (and I will insist on the use of this word within quotes for reasons that will be clearer later) of the original design of this apparatus was then reincorporated into itself, and in turn this new political categorization — the criminal as that who is the subject of delinquency — was instrumentalized for political ends. Foucault uses this example to illustrate how an apparatus is able to come full-cir-

cle with itself, an example of a self-fulfilling prophecy that secures its propagation and perpetuation.

Taking up from and at the same time referring back to Foucault, Giorgio Agamben (2009) traces the apparatus to its theological origins. Agamben sees the apparatus as a relational structure that not only responds to an urgent need but also produces its own subject, which in turn secures its form of assertion of power through a set of complex relations that act at the interplay of power and knowledge (Agamben 2009, p.10). He does so by locating living beings as existing *outside* apparatuses in a Foucauldian sense. Agamben posits that living beings and apparatuses come into a relational momentum in which the discourses and practices of the former are "capture[d], orient[ed], determine[d], intercept[ed], model[ed], control[led], or secure[d]" by the latter (*ibid.*, p.14) This momentum, in turn, determines the subject as an *in-between* figure which struggles to find its own dwelling along the relational lines determined by the encounter of living beings and apparatuses. Thus, for Agamben, subjects — classes of living beings — only exist insofar they are caught on the power play of living beings and apparatuses, thus also coming into being outside this relationship, as a transitional form of subjectification that is external to the apparatus itself, or the living being itself. This subject-creating encounter, he maintains, is unavoidable. The agency of living beings is constrained and determined by the existence of, and interplay with, apparatuses. (*ibid.*, p.15)

What is interesting to observe in Agamben's expansion of Foucault's apparatus is the defining role he assigns to apparatuses as that which produces "Man" as the defining trait of our species. For Agamben, apparatuses produce 'order' in the world – or in Foucault's terms, disciplinary power. An apparatus is, then, that which channels and instrumentalizes the desire to be human, what "nullif[ies] the animalistic behaviors that are now separated from [man, allowing him] to enjoy [...] being insofar as it is being." (Agamben 2009, p.17) In other words, it is the subject-formation made possible by the apparatus what distinguishes 'Man' — in itself a subject of the *Homo Sapiens* – from other 'animalistic' living beings, in a 'quasi-civilizatory' project. "It is impossible for the subject of an apparatus to use it 'in the right way'", Agamben writes (*ibid.*, p.21); rather, "profanation" — the redistribution of the sacred onto the sphere of commonality — is the only way for radical emancipation from the power exercised by the apparatus in sustaining the desire for humanity as separated from "man". Such desire for becoming 'human,' for him, is the inevitable governance of any apparatus and what enables its disciplinary power of producing, paraphrasing Foucault, "docile, yet, free bodies" (Foucault cited in Agamben 2009, p.19). The apparatus is what grants the separation between 'human' and 'animal,' and renders visible its own inextricable necessity for the attaining of this separation. Agamben thus makes it clear that in his conceptualization, the apparatus exists outside (and before) the subject, and therefore prevents the "class" of "man" from possessing any interventional or transformational agency within it. Humanity is, then, a *commons* that is rendered separate by apparatuses; in order to regain the right to be human, one has to free oneself from the apparatuses and "bring to light the Ungovernable" (Agamben 2009, p.24).

Both Foucault and Agamben, however, assume 'humanity' (or 'Man') to be a universally applicable category to all *Homo Sapiens*, and whose quality, that is, *how human one is able to become*, is delimited by the subject-creation ability of apparatuses — practices, technologies, knowledge systems, etc. Power is then exerted and made possible by the pre-existence of a 'living being' that engages with the apparatus in question, and the particular configuration of an apparatus in the world is what determines 'man'. Hence the 'human,' as a creation of the relational character of an engagement with apparatuses, is external to the apparatuses' own design, and thereby excluded from any accountability upon its agencies — particularly in Agamben. 'Human,' as a supposedly universal construct, is an idea shared by both authors; 'man' as the pinnacle of subject-formation is a given, regardless of other markings that define who is entitled to be human from those who are not. In other words, both Agamben and Foucault ignore that before an apparatus is able to designate a 'human,' the very notion that defines what human means is, in itself, the working of other systems of classification and hierarchization of bodies. Instead, they consider "human" as a neutral category constituted as something outside and beyond apparatuses, as a pre-condition for their existence. Put differently, in Foucault's and Agamben's formulations, 'human' is not a creation of apparatuses *per se* but rather that which might be attainable otherwise, according to Agamben, via processes of "profanation", and as such possibly escaping the ability of apparatuses to exert power over 'man.'

#### **'Man' and its byproduct: the erasure of the 'less-human' in post-humanism**

Understanding the "human" as a given category whose agency is granted from with/in phenomena reflects political and racial constructs. As scholar Alexander Weheliye (2014, p.30) demonstrates, "Man" is born out of and within the subject of modernity, that is, the notion of the European, white, male, cisgendered body as the model for all other bodies. As such, "Man" only exists when it sees himself as ontologically (and even, Weheliye claims, *ontogenically*, i.e. based on physiological and genetic fictions) opposite to the Other – the non-white, non-European body — and this ontological/ontogenic [fabricated] distinction is not that which an apparatus separates from the notion of "human", but rather the very foundational character of the "human" as a category of being. This understanding happens, Weheliye contends, due to the fact that both Foucault and Agamben, even when locating their philosophies within systems of segregation, torture, and genocide, speak and write from a supposedly "non-racialized" — i.e. white — perspective. This point of view removes their concepts and ideas from "spatiotemporal contexts" and therefore grants them "universality" (Weheliye 2014, p.6). Biopolitics and bare life, themselves concepts that gather around and help these authors theorize apparatuses, are constrained to European histories (e.g. nazism and death camps), and thus projected "onto an exceptional ontological screen" which constructs these events as the starting and ending point of biopolitics and bare life (*ibid.*, p.36).

Weheliye points out that most posthumanist theorists only consider racism as ontologically relevant when it is re-appropriated from its colonial origins to dwell within the very notion of biopolitics. In other words, by evoking racism as a product of biopolitical power instead of a fabricated notion imposed by European colonial powers on the rest of the world, Foucault creates a distinction between supposedly two types of ontologically racialized bodies: the 'ethnic' and the 'biopolitical' (Weheliye 2014, pp.57–60). This, Weheliye contends, is a dangerous assumption because it positions not only 'ethnic racism' as geopolitically located "somewhere else" but also perpetuates the (misguided) notion of racial differences as being natural. In recalling Jamaican feminist thinker Sylvia Wynter, Weheliye reminds us that "racialization is instituted [...] in the realm of human physiology as the sociogenic selection of one specific group in the name of embodying all humanity." (*ibid.*, p.60) Authors such as Argentine semiotician Walter D. Mignolo and US American political activist Angela Davis remind us that biopolitical power — for instance eugenics as a method of population control — was exercised in the colonized populations long before being enacted within fortress Europe; different from the European subject of biopolitics however, the colonized body is intrinsically racialized (Mignolo 2009, p.16; Davis 2016).

The assignment of racial difference to the realms of biology and physiology is a violent instrument; one that renders invisible racism's power as a political, social, economic, and cultural disciplinary institution. It normalizes "man" as a neutral body, in itself the synonym of "human". Mignolo argues that "the *anthropos* inhabiting non-European places discovered that s/he had been invented, as *anthropos*, by a locus of enunciations self-defined as *humanitas*" (Mignolo 2009, p.3, original emphasis). When read within the notion of humanity both Foucault and Agamben define as that which apparatuses work to separate us from, it seems that such a body, the 'human,' is a universal model, the only possible category other than 'non-human.' Hence, ignoring how the 'human' is a Western construct, and as such imbricated in the discourse of racialization and coloniality, erases its own *byproduct*: the 'less human.' In other words, in evoking Foucault and Agamben as theoretical models and using their theories devoid of any racial interrogations assumes that 'humans' are only defined in regard to their 'non human' counterparts. This is clear, for example, in much of the scholarship from the 'materialist turn' of the social sciences (e.g. Actor-Network Theory), and particularly in intersection with the field of design. As black, feminist, and decolonial authors — which find themselves often outside the boundaries of the "abstract universals" (Mignolo 2007b, 2011) — demonstrate, there cannot be 'human' without the 'less human,' exactly because these notions are strongly dependent on, and born out from, racially outlined systems and institutions, colonialism being perhaps the strongest of them.

In returning to Foucault's key example of disciplinary apparatuses — the prison — Angela Davis (2016, p.107) reminds us that "prisons are racism incarnate [...] they] represent the increasingly global strategy of dealing with populations of people of color and immigrant populations from the Global South as surplus [...] disposable populations." This racial outlining made by Davis recognizes the prison-industrial complex as an inherently racialized apparatus, rather than a "fixed category" which is fissured *a posteriori* in Foucault's biopol-

itics (Weheliye 2014, p.62). Moreover, Davis' long history as an activist for prison abolitionism, identifying the prison system as an intrinsically racialized apparatus takes us back to the Black Panther's Party "Ten-Point Program" of 1966 which, in itself, revisits "nineteenth-century abolitionist agendas" that acknowledged racism as a defining component of these very disciplinary institutions (Davis 2016, p.73) Conversely, from the moment Foucault situates racism in time and space as something that precedes biopolitics, coming from *somewhere else*, and only gets institutionalized within European histories, he consciously chooses to ignore much of the tenets of post-colonial theory (particularly considering their locality in response to French colonialism). This narrow, metropolitan worldview renders invisible the fact that race and racism not only (a) are in itself discursive assemblages rather than fixed in categories of 'ethnic' and 'biopolitical' racism — as discussed earlier — but also (b) are assemblages whose origin is geopolitically located in Europe, shipped all over the world in slave vessels, materialized in forced labor, visible in the violence of whipping, lynching, torturing, and other apparatuses of dehumanization.

### **Apparatuses as boundary-making practices**

I will now turn my attention to Karen Barad's outlining of apparatuses in relation to Niels Bohr's philosophy-physics, as well as her own reading of apparatuses within an agential realist account. Barad expands considerably the notion of apparatuses from Foucault to encompass other readings — from Donna Haraway to Judith Butler — towards a comprehensive understanding of the constitution, role, agency, and extension of an apparatus. Because we "don't obtain knowledge by standing outside the world; we know because we are of the world" (2007, p.185, original emphasis), Barad re-reads the entanglement of matter and discourses in apparatuses as a form of onto-epistem-ology, that is, "the study of practices of knowing in being" which escapes the dichotomies of subject-object, mind-body, human-nonhuman (ibid.). Moreover, Barad contends that each performance, each agential act, is an ethical gesture; therefore she suggests another iteration of the onto-epistem-ology to embrace the work of ethics, thus proposing the practices that constitute and produce apparatuses to be ethico-onto-epistemologies (ibid.).

However, rather than merely presenting Barad's apparatus as a constitutive of my own method, i.e. the Apparatus of Auditory Governance, I intend to take the remainder of this chapter to read her insights in diffraction with other theories in order to address a few shortcomings, while at the same time providing a better framework with which to understand the agency of design in this research. From there, we can sketch out a theory of the Apparatus of Auditory Governance as an articulation and assemblage of conflicting earviews; reading these theories through one another shall help us delineate as precisely as possible these boundaries of the Apparatus of Auditory Governance, and in turn be clear about its contradictions.

For Barad, Foucault's articulation of the relationships between discursive practices and phenomena cannot be taken at face-value in light of contemporary ontological understand-

ings of human and non-human agencies. She contends that Foucault's biopower is 'time-bound,' that is, only adequate to the time he was writing about in the birth of the prison, i.e. the eighteenth and nineteenth centuries. Moreover, contemporary technoscientific practices enact and articulate power and knowledge in ways Foucault was not himself able to predict, and this is precisely because, she argues, Foucault did not take into consideration the constitutive role apparatuses play on the discursive production of objects and subjects (Barad 2007, pp.200-01). In other words, Barad, drawing from the philosophy-physics of Niels Bohr and expanding from him, considers apparatuses to be "the practices through which these divisions are constituted" (ibid., p.169), that is, not only the instruments with which to measure phenomena, but also the active determinants and constitutive of the phenomena observed.

Barad recalls Bohr's notion that the apparatuses themselves not only produce but are also intrinsically responsible for the observed phenomena. An apparatus is then, in principle, an amalgamation of the measurement device envisioned by laboratory experiments and the discourses that produce them. Barad argues that "phenomena are the ontological inseparability/entanglement of intra-acting 'agencies'" (2007, p.139), that is, they entangle observer and observed but do not preexist them; rather they are constituted within phenomena and concomitantly to them. Barad then asks whether the boundaries of an apparatus can be traced to its visual, perceivable endings, or if other elements outside the object itself — a computer and its peripherals, the technician, evaluators of the experiment itself — also constitute the apparatus. Hence if, according to Bohr, an apparatus enacts a specific portion of knowledge that is worth of attention to the exclusion of others, Barad concludes that "the boundaries and properties of an apparatus are not well defined outside its determination within a larger phenomenon." (ibid., p.142, 160) She dwells in concepts from physics, to argue that boundaries or edges are in themselves interfaces between different objects and actors; atoms are never fixed into sharply defined edges but rather constitute a series of diffractive patterns (ibid., p.156). What creates the boundaries between bodies — human and non-human — is determined by specific, temporarily assembled bodily engagements and practices, or, in other words, boundaries are always emergent and performative.

Even though Bohr already extends considerably the understanding of an apparatus, Barad argues that he "treats the apparatus as an ideal measuring device [...] frozen at a moment in time, denied its historicity and mutability [...] hermetically sealed off from any and all 'outside' influences." (2007, p.144) Put differently, Bohr gives too much value to the apparatus as a fundamental constitutive of phenomena, provided these exist solely within a laboratory setup. Here is when Barad will recall Foucault's – and Butler's – apparatus and read them vis-à-vis Bohr, in order to determine the function of an apparatus as a fundamental constitutive of how we engage with the universe ontologically and epistemologically. She comments that Bohr's formulations in quantum mechanics have drawn much criticism from physicists due to the central role he assigned to the human in conceptual frameworks. This criticism, based in rather positivist values — what Barad calls the "artifactual contrivances of laboratory exercises" (ibid., p.168) — conditions the human observer to a position of



complete exteriority to the experiment, in order to secure a supposedly objective perspective. Similarly, she argues that post-structuralists such as Foucault or Butler often take for granted non-human agencies within apparatuses, therefore also granting a central role to human agency within phenomena (ibid., p.145).

However, Bohr performs a similar understanding of the human component, as he sees, according to Barad, the "scientist [as] a liberal humanist subject who is merely there to choose an appropriate apparatus for the investigation and note the results. Once the apparatus is in place, the scientist stands back and watches what happens." (ibid., p.144) In calling attention to different (and often paradoxical) forms in which this anthropocentrism occurs even in different ontologies, Barad demonstrates how distinctions between nature/culture, and human/non-human are often presumed by these scholarships to be a given. Or, to recall Donna Haraway (2004, p.330), how, in treating apparatuses as a product of human agency and human agency only, one incurs in "the mistake of misplaced concreteness", that is, when specific set of epistemologies overcome the ontologies they were there to interrogate in the first place, and in turn become themselves a new ontology.

#### **Material-discursive apparatuses: a feminist post-humanist reading**

Barad expands from these definitions in order to overcome them, and thus outlines her apparatuses as that which constitutes reality – or in other words, as a form of ontological design as discussed by Willis (2006). As such, Barad treats apparatuses as not only the means with which humans and non-humans engage with phenomena but also creators of phenomena (and of the distinctions human/non-human itself). Instead of relying on apparatuses as instruments or sets of discourses (thus resorting to either physics or poststructuralism), she delineates a performative, "agential realist" account of apparatuses, that is able to read one notion through the other, and from there formulate a differential, complex, and novel concept. In short, for her, apparatuses are constituted by "material-discursive practices," that is, any element that (temporarily) forms an apparatus is produced by a performance of "matter [that] comes to matter" (Barad 2007, p.152, emphasis added). Matter is "produced and productive, generated and generative [...] not a fixed essence or property of things. Mattering is differentiating, and which differences come to matter, matter in the iterative production of different differences", that is, through agency (ibid., p.137) In other words, objects and practices — matter — emerge and are defined in and by the particular agencies they are engaged with. Yet, any agency should be understood as a set of engagements among different actors, that can only happen from within the apparatus; there are no fixed intrinsic boundaries which to rely on, but rather only temporarily enacted contingencies. Finally, any particular (re)configuring of an apparatus yields different "cuts", agential boundaries in which, inevitably, certain aspects will be evidenced to the exclusion of others — what matters for that specific moment and portion and what does not, and the accountability for delimitating both. (ibid., p.146)

Thus the world appears to us not as a fixed assemblage from which we can temporarily detach ourselves in order to 'discover' something. Rather, the world materializes "on a power-charged social relation of 'conversation'" (Haraway 1988, p.593); how agencies and boundaries are negotiated, observed, and accounted for is what determines the scope of knowledge we are able to perceive, and the discourses we are able to produce from **with/in** these boundaries. Hence Barad's "material-discursive practice" (2007, p.184) is a resultant and producer of "apparatuses of bodily production" (Haraway 1988, p.595), a conjunction of entities whose meaning-generating agents do not depend on a presumed 'inseparability' from the actors that possess such agencies. Put differently, 'bodies' are "site[s] of [bodily] production", canvases in which boundaries materialize social interactions (ibid., p.595). A body becomes but a node in the apparatus of bodily production, capable of condensing, by means of delimiting and projecting contingent boundaries, actors and discourses that will, if only temporarily, define what said body is or how it might act. The world, concomitantly, has to be understood "as a verb [, as] worlds in the making" (Haraway 2004, p.330); apparatuses are "boundary projects" in constant becoming, and boundaries produce bodies whose own categorization do not pre-exist them, but rather are part of the very process of boundary-creation. (Haraway 1988, p.595) As phenomena, they are "forever being re-folded and reformed" (Barad 2007, p.177)

Material-discursive practices, are, then, what design the temporary boundaries (cuts) of an apparatus. A delimitation of an apparatus already determines the scope of its own reach, because the apparatus is what produces the material configurations of subjects and objects of knowledge. However, to claim that apparatuses produce such distinctions does not necessarily mean they are an inevitable contingency, but rather that this capability of apparatuses must be taken into account when we attempt to make sense of them. Discursive practices, on the other hand, do not rely solely on the constraints of language nor on biopolitical constructions of subjects via articulations of power and knowledge (Foucault 1980), but rather are understood by Barad as practices which entangle matter and agency in order to produce bodies, things, and non-things — phenomena. For her, discursive practices and matter are not extrinsically related, but "mutually implicated [and] articulated", inasmuch as "neither can be explained in terms of the other [or be] reducible to the other" (Barad 2007, p.152) Put simply, objects, practices, materials, bodies, systems, strata, all of these exist only in relation to one another, and the nature of that relation is determined by not only the position any agent in that system might take while attempting to observe other components, but also how this very act of position-taking reconfigures the entire phenomena — and consequently the apparatus — anew. Haraway reminds us that "the knowing self is partial in all its guises, never finished, whole, simply there and original; it is always constructed and stitched together imperfectly". (Haraway 1988, p.586) As human agents (and only politically so defined) we do not assemble apparatuses to "examine" phenomena. Rather, we are ourselves phenomena in the very act of doing so. (Barad 2007, p.206) We are imbricated in the materiality of the apparatuses produced by and within the scope of our agencies.

### Historical-material conditions of apparatuses

Even though Barad, differently from Foucault and Agamben, distances herself from understanding "human" as a category pre-existing apparatuses, the agency granted to the subject of agential realism in observing and producing boundaries with/in phenomena is minimal, if not fleeting. Barad attempts to provide a broader understanding of when and how subjects and objects are formed, and her subjects and objects are — by means of other agential cuts and boundaries set before by other disciplinary apparatuses — also defined by their otherness. If any and every agential cut is always designing boundaries that extend beyond the very constraints the apparatus has been set to measure in the first place, or, in other words, if "there is no fixed metaphysical outside" within the regulatory practices of apparatuses (Barad 2007, p.210), it seems that there also is no escape from incurring in differential categorization. Alas, even though Barad constantly reiterates that agential realism bears a strong ethical responsibility and accountability, it seems that agency is, for the most part of her account, delegated to external (or unattainable/out-of-reach) configurations of human/non-human, subject/object and other apparatuses of bodily production.

The danger one might incur in assuming such an arrangement without performing a critical analysis within race and coloniality is to end up understanding racialization as something impossible to break free from, for the agency upon such accountability is always distributed upon other elements within a particular configuration of the apparatus of measurement/observation. Agential realism thus lacks a precise accountability of the hierarchization and racialization of bodies in its conceptualization; this in turn implies that this ontology, much like many others in new materialism, is conceived while having the white body as default. Human, as a phenomenon of the subject/object formation materialized through agential cuts, remains the inevitable subjectification of certain beings which a supposed "we" — a totalizing category bound to whiteness — are part of. Agency might be a matter of causal/effective interactions within phenomena; in fact, it is more a question of the weight Barad concedes to the relational nature of agencies-within-phenomena. In focusing too much on the fleeting nature of these relationships she overlooks the fact that certain actors have more 'gravitational pull' than others — that is, certain bodies have more agency, or more right to be human, than others.

Paul Rekret points out that the contingency of subject-object relations attributed to matter's primacy "obscure, and at times even risk naturalising the logics by which nonhuman nature enters into social relations." (Rekret 2016 p.238) More than that, it also renders the human/nonhuman distinction as a binary opposite without room for nuanced interrogation. Rekret relies on representationalism and dualism to build his criticism of Barad; nevertheless, his readings present some interesting arguments which help us unpack a few of new materialism's own shortcomings. He maintains that Barad takes issues of ethics such as 'attentiveness' and 'accountability' to the realm of "ontological speculation" (Rekret 2016, p.230), meaning that they too are contingent and thus can only happen post-factum (or

post-cut, if you will). This puts her specific form of speculative ontology — agential realism — in a vicious circle which, even though one may acknowledge race, gender, class, and other distinctions as bound to — as producer and product of — apparatuses of bodily production, **any attempt of performing differential agential cuts or reconfiguring apparatuses is inextricably caught within a relationship of external/internal dependency.** This posits, then, as Frantz Fanon reminds us, the non-white body as an agent with very limited (if not complete absence of) agency, always incapable of "ontological resistance." (Fanon 2008[1952], p.110) The politics at play within subject/object formations, of human/non-human constitution, remains a "third-person consciousness" (ibid.). By resorting to the primacy of matter as something exterior to human-as-such, as contingent "resolutions of [...] anterior ontological indeterminac[ies]" (Rekret 2016, p.230), such an ontology inevitably places human as the ultimate category, the immediate opposite of the non-human, without considering the colonial and racialized nuances of this distinction, the rough edges of any agential cut, those on the verge of becoming non-human by design.

When Barad accounts for the subjectification of human/nonhuman — regardless of what type of action or agency materializes this category — she still understands these categories as being inextricably linked to, in recalling Weheliye's words, "the world of Man [...] where all subjects have been granted equal access to western humanity and that this is, indeed, what we all want to overcome." (Weheliye 2014, p.10) In other words, to become human is to be granted permission to exist, to possess a particular type of agency that is perceivable and measurable. Both Rekret and Weheliye argue that posthumanism neglects the historicity of materiality as a product of social relations. Weheliye contends that humanity, personhood, and property are bound by political forms of jurisprudence, responding to a form of codification in which "the entry fee for legal recognition [i.e. to become a person] is the acceptance of categories based on white supremacy and colonialism, as well as normative genders and sexualities." (Weheliye 2014, p.77) In such a configuration, there is no place for those without granted agency of permission to exist. Instead, those are a form of surplus that gets constantly re-inscribed back into the apparatuses of bodily production as the less-human, no-body but flesh, rendered "hypervisible yet also illegible" only as a counterpart to the narrative of (post-)humanity (ibid., p.110).

Hence, Barad's insistence of thinking the "social" and the "natural" as fundamentally entangled and therefore constitutive of one another, incurs on the risk of naturalizing the social — an example of which being the notion of "human" as a non-racialized entity and hence understood under the guise of whiteness-as-default, even when "the social" is itself understood as a material-discursive practice (Barad 2007, p.25, 66). When an agential realist account — as an ethico-onto-epistem-ology that also articulates notions of biopower — neglects historicity, it can lead to mistaking the map for the territory, to use Sylvia Wynter's words (in Weheliye 2014, p.135), and as shown in reading these examples through Barad. Understanding one's "agency-within-phenomena" as a boundary-defining practice within apparatuses begs for considering the interrogation of the role of racialization and colonization of bodies as a cogent ethico-onto-epistem-ology, a consistent object of knowledge

rather than a localized object of agency, or the subject of other "universal" objects of knowledge (e.g. biopolitics). As Peruvian sociologist Aníbal Quijano (2000, p.555) reminds us, in such an Eurocentric perspective,

certain races are condemned as inferior for not being rational subjects. They are objects of study, consequently bodies closer to nature. In a sense, they became dominant and exploitable [...] It was only within this peculiar perspective that non-European peoples were considered as an object of knowledge and domination/exploitation by Europeans virtually to the end of World War II.

Therefore we must understand the subjectification of human/nonhuman as a totalization of "Man" as a universal mode of being, against the complete erasure of the "less-human". As Weheliye, echoing Fanon, argues, "the colonized subject cannot experience her or his non-being outside the particular ideology of western Man as synonymous with human" (Weheliye 2014, p.26). Man, as the subject of Modernity and the Enlightenment, is the [white and male] body against which all other bodies compare; it defines itself by defining its alterity, its other: the body that is less human, the colonized body, the subject of coloniality.

Coloniality is what produces modernity, the force which perpetuates this distinction between valuable and less valuable bodies; precious and expendable lives. (Quijano 2000, p. 548) This force, even if considered in itself as produced by the articulations of apparatuses, demands accountability rather than mere rhetorical argumentation. In other words, the assignment of bodies as less-human cannot be accommodated into the narratives of performance and hence assumed to be as contingent as any other phenomena; rather, they must be understood as a primary social and political force with enough agency to direct and sustain certain modes of being into the world, of which agential realist accounts cannot separate themselves from. Taking for granted the assumption of 'Man' as being that which 'human' refers to, is a form of a "ethnocentric pretension" (ibid., p.543). If agency is to be understood as that which is temporarily constituted amongst humans and non-humans, it concedes non-human actors potential to have more agency than less-humans, thus naturalizing the erasure and subservience of the colonized/racialized body.

This does not mean, however, that in her agential realist account, Barad completely eschews notions of race as product and producer of agential separabilities in her approach; rather, it means that such a perspective begs for contextualization and historicity in relation to acknowledging race as an object of knowledge from and within one, a priori, configures (and is configured by) apparatuses. Yet accounts for the role coloniality plays in this intra-active processes (and in the production of race) is largely absent from her philosophy, thus begging for a decolonising lenses upon her philosophy as well. This does not mean that to be critical of the amount of agency she concedes to things (i.e. how she understands the "non-human" as essentially other material configurations of matter not necessarily human) is to seek a return to anthropocentrism as the main locus of enunciation for an ethico-onto-epistemological approach. Rather, the point is exactly to address the dichotomies that are ren-

dered visible when reading Barad through theories of race and decoloniality, and, more importantly, not to dwell in them but to remain in constant flux, in resonance with "nodes in fields, inflections in orientations, and responsibility for difference" (Haraway 1988, p.588). If agential realist ontologies help one critically and ethically inquire how apparatuses are performatively constituted, one must also consider the causalities and effects of what other racialized and colonial apparatuses have already designed in the world, the social conditions that configure certain agencies and re-inscribe them back into material-discursive practices.

### **Sonic apparatuses and the ontology of vibrational force**

In resonance with new materialism and the "ontological turn" of philosophical thought, sound scholar Steve Goodman outlines an "ontology of vibrational force" in his book *Sonic Warfare: Sound, Affect, and the Ecology of Fear* (2010). His work theorizes over a trans-disciplinary methodology with which to investigate and engage with the materiality of vibrations, and their affective performativities among entities within a given system. In considering sound to be but the audible portion of the affective power vibrations entail, Goodman proposes a mode of thinking and sensing that directly confronts the "weak spots" Western ocularcentrism leaves unattended (Goodman 2010, p.81). To do so, he argues, an "ontology of vibrational force" must prioritize "the in-between of oscillation, the vibration of vibration, the virtuality of the tremble [... forming] the backdrop to the affective agency of sound systems [...], their vibrational ontology [...], and their modes of contagious propagation" (*ibid.*, pp.82-3). In other words, Goodman argues for an understanding of sound that transcends physiological listening processes to encompass the "contagiousness" of vibrations, how they propagate subjectivities and other affects via human and non-human bodies.

In a rather idiosyncratic and Deleuzian-esque writing style, Goodman's *Sonic Warfare* is a relentless journey among fictional and real pasts and futures, proposing an otherwise-untold history of sound and power. While he directly engages with a number of other theories of thinking through sound, his approach is but a proposition for a rather 'universally-located' theory of sonic affect. His 'body,' the subject of his book, is assumed to be a 'neutral' body — and hence male and white — even though he does borrow from a lot of musical and philosophical contributions from African-American and Afrodiasporic authors and artists. It is no wonder, then, that grounding his philosophy there are little to no women or women-identified philosophers and/or musicians. This, in strong contrast to the counter-hegemonic theories he often engages with — e.g. Julian Henriques' "sonic dominance" (2011), or Kodwo Eshun's "sonic fictions" (1998) — assumes the affective agency of vibrations upon human bodies to be disconnected from gendered, racialized, and colonized bodies.

While Goodman's theory is a significant contribution to knowledge *in* and *about* sound and vibration, he still assumes a disconnection *a priori* from the bodies who are subject to affec-

tive agencies and consequences of his Sonic Warfare. Considering the violence of the *sonic booms* perpetrated by the Israeli Army on Palestinian bodies with, to give an example, "predatory capital [mobilizing] audio viruses to hook consumers in advance for products that may not yet exist" (Goodman 2010, pp.189–90) equates them as part of the same spectrum of vibrational affect, and ignores the question of *whose bodies* are more likely to be subject to either side of the spectrum, which politics are at play within each part of this spectrum, and how one might be but a long tail of the other. Goodman's outlining of the vibrational affect thus lacks a discussion around the accountability for how power is distributed in entanglements of vibrations, and which entities are affected by certain vibrations rather than others. In an attempt of universalizing an ontology of vibration, Goodman ends up underestimating the political power of, as well as inscribed in vibrations – as producers and products of distinct auditory cultures – to be vectors for marks on *racialized* bodies, and their direct affect (and effects) on these bodies' very *flesh* (Barad 2007, Weheliye 2014).

In being a work heavily grounded on Sound Studies, it is important to acknowledge and examine the contributions from an ontology of vibrational force to theories in listening and power. Yet I consciously avoid relying on Goodman's theories; rather than employing his work in or as my method, I propose a closer look on the shortcomings it affords by dwelling on the unravellings of the colonial matrix of power. My outlining of apparatuses seeks to identify other contingent designed articulations of sonic violences, employing a framework that actively attempt to escape the logics of coloniality. What is needed, then, is a fine-tuning of our attention towards sonic epistemologies that configure apparatuses otherwise, taking into consideration the "marks on bodies" vibrations entail (Barad 2007). This demands a deeper understanding and a direct engagement with *vibrating bodies* as being gendered and racialized constructions, inextricably entangled with the experience of listening in itself, their participation (consensual or not, as we shall see in the next chapter) in an auditory culture, as well as the affective power of these experiences in said bodies.

### **Design as an apparatus, designing as a material-discursive practice**

This chapter has sought to demonstrate how an understanding of design as an ontological apparatus can positively contribute to a shift in designing as a material-discursive practice. Design, in its aim to systematize and bring order to the world, often exercises disciplinary power in aesthetic, epistemological, and material ways. In regarding design's relationship with the subject of designing – the designed – as inherently and inevitably producing a relation between a supposedly universally-defined category of existence in the world understood as "human," in relationship with but direct contrast to its counterpart, – "non-human" – it also creates its own byproduct – the "less human."

Design research is understood in this text as a set of ethico-onto-epistemological agents with/in apparatuses, and as such not only coordinators thereof, but also directly coordinated by them. Designing, as the practice put in motion by design, configures itself as a material-discursive practice, capable of performing certain agential cuts in order to assemble and re/define the boundaries of the apparatuses set by its own material conditions of possibility.

Findeli et al. (2008) contend that the outcomes of a project-oriented research should “improve” the “act of designing in itself”, thereby addressing three interested communities: design research, design practice and design education (*ibid.*; Findeli 2010). By uncovering auditory governances, and in turn acting on them, I interrogate the ways in which design practices can contribute to a reconfiguring of the auditory space and its devices. In exploring different, non-hierarchical and plural ways of engaging with participation, and thereby proposing a shift in designerly language to become a form of ethic-ontoepistemology, we may positively contribute to a decolonizing shift in the field. Understood in these terms, design research and practice, read as decolonizing material-discursive practice with/in apparatuses, might yield a framework with which to address the critical material conditions of violence, expressed in and through auditory governances.

The outlining of apparatuses in a material-discursive manner and their reading through decolonial theories of race creates a temporarily assembled form of *border thinking*. Moreover, it provides ethical and philosophical grounds for a precise positioning. A performative agential realist account of apparatuses provides us a more comprehensive understanding of how power is distributed via agency-within-phenomena whenever apparatuses are assembled. Moreover, these apparatuses are simultaneously subject and object, instrument and phenomena of any attempt of observation of said phenomena, for any shift in position configures the apparatus anew and thus influences the phenomena observed. The locus of enunciation is thus with/in the apparatus, and such a perspective broadens the understanding of how designed things act within the particular social configurations of the world. However, this does not mean that designed things have the same agency as human beings within an apparatus, but rather that certain material-discursive actions configure "nodal points" which redefine the boundaries of the apparatus, and thus allow for critical interrogation. Such an interrogation, even as happening with/in phenomena, begs for a carefully situated account of how social practices are re-inscribed into material practices and vice-versa.

Thus a decolonizing take on apparatuses cannot merely appropriate and "transpose" a supposedly "universally placed" philosophy of power and politics. The assumption that there are two distinct types of epistemologies — the universal as knowledge and the local as an object for said knowledge — authorizes the former to become a 'universal toolkit' while placing the latter within the realm of what Weheliye calls an "ethnographic locality" (Weheliye 2014, p.6). Rather, the instruments and devices must be tuned to the complexities engendered by material-historical conditions, and more importantly to their relation to racial and colonial onto-epistemologies: how "Man" is constructed as the model of humanity that yields the less-human, and how the less-human is, in most posthumanist accounts, devoid of agency by historical systems that condition them as such. Hence, any research, as well as their researchers and apparatuses, must be held accountable for the boundaries created when attempting to observe and experience phenomena, for it is impossible not to render certain things more visible than others, or to give voice to a certain thing without silencing another. If we start out from the idea that most of these universal knowledges are



constructed over the bodies and minds of colonized, non-white, non-male, non-heterosexual, able bodies, we conclude that other lenses must be constructed that inevitably will take these types of subject formation into account as a structural rather than superficial constituent of any inquiry into and through knowledge.

Gloria Anzaldúa reminds us that Western colonialism, in its effort to separate itself from its objects of knowledge, lost 'touch' with the things and people they objectified in the first place. For her, this fabricated dichotomy is "the root of all violence" (Anzaldúa 2007[1987], p.59) Donna Haraway complements by arguing that the assumed "passiveness" of objects of knowledge yields a reductionist worldview which is instrumentalized by Western societies for destructive and "usually dominating interests." (Haraway 1988, p. 591) Denying the interrelatedness of these constructs with the very objects which perform the agential cuts in apparatuses is to incur in a hyper-individualization of the agents that constitute phenomena (Keating in Anzaldúa 2015, xxxi); it cannot do anything but to contribute, even if unintentionally, to destructive, dominant, and violent epistemic subjugation.

This method is therefore a contribution to the body of work not taking "decolonial" or "feminist" thinking to be located within certain portions of knowledge that demand ethnographic or geopolitic locatedness, but rather that *start from and within* decolonial and feminist ethico-onto-epistemologies, towards developing a differential and diffractive view of, in the case of this research, design, listening, and their devices. Border thinking highlights the controversial, dichotomous, and conflicting ontological mechanisms imposed by the colonial matrix of power. Instead of negating these conflicts, border thinking embraces them as the point of departure of any research inquiry. As Haraway maintains,

The split and contradictory self is the one who can interrogate positionings and be accountable, the one who can construct and join rational conversations and fantastic imaginings that change history. Splitting, not being, is the privileged image for feminist epistemologies of scientific knowledge. 'Splitting' in this context should be about heterogeneous multiplicities that are simultaneously salient and incapable of being squashed into isomorphic slots or cumulative lists. (1988, p.586)

Disassembling the ontologies and epistemologies that are usually perceived to be 'neutral,' 'objective,' or 'universal,' and redirecting them towards other universalities, temporalities, and identities demands not additive, but *transformative* change; or, in Mignolo's words, "to change the terms, not just the content of the conversation" (2000, p.70). As many feminist, black, and decolonial thinkers teach us, there cannot be a methodology devoid of racial, gender, class, [dis]ability constructs (Sandoval, 2000; French, 2014). The departure point of this investigation hence sees design and design research as fields of study within the rhetoric of coloniality and neoliberal logic, and therefore cannot — and most importantly should not — be taken for granted as 'neutral' or 'universal' practices and epistemologies. Rather, this research also assembles its own devices that allow for a *border thinking* of design, informed by decolonial and counter-hegemonic understandings of research methodologies.

Apparatuses are not only boundary-making practices in and by themselves, but they also allow us, through specific agential cuts that must be situated in their historical-material relations, to think otherwise and to balance our knowledges amongst "*lo heredado, lo adquirido [y] lo impuesto*" (Anzaldúa 2007[1987], p.104, original emphasis), to account for the racial and colonial foundations of the apparatuses with/in which we perform research. In that sense, different engagements with design and designing allows us to temporarily shift between performing one role — that of the agent — and another — that of the looker/listener of phenomena — since, following Barad, they cannot be understood as the same thing.

That does not mean, however, that this apparatus of design is so loosely defined it becomes an open, endless space of interactions. Rather, such fluidness is a dynamic arrangement of complex agents across race, class, gender, [dis]ability and other identities which is contingent but nevertheless patterned (McCall 2005, p.1794). In this work, by understanding design as a constitutive agent of these patterns of material practices, and the act of designing as a language with/in these patterns, I intend to delineate, interrogate, and intervene on a few of these material-discursive practices. At the same time, these interactions demand a comprehensive understanding of the limitations engendered by my own position as a researcher and border subject who performs a temporary agency in order to re/assemble these boundaries in the first place.

## Chapter Three

### Colonized soundscapes: outlining auditory governances

While it might be tempting to equate what this research calls auditory governances with specific accounts of listening practices and listening devices in Sound Studies literature, it is useful to be clear about how and where they differ. There is a comprehensive set of studies on how listener subjects engage with listening devices in everyday life, and the scope informed by these scholarly works has considerably broadened how sound and cultural researchers regard mobile listening practices and their relation to the social spaces of everyday life. For instance, in a study about the Sony Walkman in 1984, Shuhei Hosokawa affirms that mobile listening affords the “autonomy-of-the-walking-self” (1984, p.166), addressing the interpersonal relationships happening amongst these listeners and their “spectators”. He explains that the walkman “concerns the *sensible* [...] transforming decisively each spatial signification into something else.” (*ibid.*, p.178, original emphasis) A slightly different take is given by Brandon LaBelle, who writes on the acoustic appropriation of the sidewalk space through music, be it in social (as in with *boomboxes* or sound systems) or in privatized listening forms. For him, the musicalization of urban space is a form of participating on the “ongoing flow of life” (LaBelle 2010, p.92) which ‘tunes’ the city to a multitude of rhythms, informing pace through repetition, creating a form of both individualized and collective “gaits” that “[pump] up the step to make the sidewalk a zone of freedom, or to detune the sonic script of patterning with a meandering beat.” (*ibid.*, p.98)

#### The "listener" as an enabler of political conditions of the auditory space

Michael Bull (2000, 2007) has dedicated a substantial part of his research interest to study the affordances of personal stereos and their cultural and social significances. For him, the personal stereo imposes its own subjectivities on the urban scenario through use (2000, p. 73), creating a “conceptual silence” which functions as a form of empowerment — and subsequent privatization of the ears and audition (2007, p.34). Mobile listening is, according to him, a form of living in a post-Fordist society in which music is but a commodity of the culture industry; its very functionalization through the mediation of the designed artifact and the headphones is a “private utopia” in which the subject cancels the pre-given agendas of the auditory encounters with the city in favor of a “silencing”, an “unproblematic reception” that protects them not only from the sounds themselves, but also from the world outside (*ibid.*, p.68). Throughout his two main studies on Walkmans and iPods he takes different approaches and analyzes both technologies in different aspects — but his outcome and conclusions are somewhat similar. He concludes that mediated listening removes the listener from the immediate world, “negat[ing] [public space] so as to prioritize the private” (2000, p.79) and ultimately “providing them with an overwhelming sense of presence whilst simultaneously blocking out any sound from their environment that might sully the heightened and empowering pleasure of use.” (2007, pp.45–6)

For Bull music's use in urban life is a form of "auditory filtering" which constantly mediates and thus generates a preferable or desirable view of everyday life, "'one step removed' from the physical world" (Bull 2000, p.72). He further argues that "when iPod users do choose to look, their attentiveness is an auditory attentiveness facilitated by the rhythm of sound pumped directly into their ears. [...] iPod users aim to habitually create an aesthetically pleasing urban world for themselves as a constituent part of their everyday life." (2007, p. 40) Concomitantly, Tia DeNora (2000) presents a comprehensive study on the uses of music by everyday listener. For her, the functionalization of music is a constant "attempt to 'orchestrate' social activity" (*ibid.*, p.111), and her ethnographic research illustrates how listeners rely on music to regulate their moods or to manage their social and aesthetic agency, paving the way "to shift mood or energy level, as perceived situations dictate, or as part of the 'care of self'." (*ibid.*, p.53) Moreover, DeNora claims that the experience of music — and hence its use — is also affected by "its co-presence with other things – people, events, scenes." (*ibid.*, p.66)

Most of the authors on personal stereo culture argue in favor of the "autonomy" of the listener and the reconfiguration of aesthetic experiences of the city through the consumption of music. For Ian Chambers, for instance, mobile listening activity is a "prosthetic extension" of one's body, repurposing its listener in a decentralized experience of subjectivities and identities (Chambers 2004, p.100). However, Chambers' claim of the Walkman as a "political act" deserves a critical look, insofar as for him a political act means "a different sense of space and time" of the city (*polis*) through a reframing of the contemporary world by the act of listening (*ibid.*, p.101). His politics of mobile listening are then confined into a nostalgic act of a "once sacred journey" that reverberates on the headphones of listeners (*ibid.*). Moreover, as noted by du Gay et al. (1997, p.108), Chambers' "political act" of resistance against the imposed urban subjectivities on the listener is exactly the reason why the Walkman, the first personal stereo, was designed in the first place. Hence, if analyzed through this perspective, what Chambers identifies as a political act is actually but a consumer practice cleverly embedded on the design of the object itself.

When analyzing these studies, the functionalization of music on the one hand lacks an analysis of how designed objects perform certain behaviors by their orientation towards certain social and political practices (Ahmed, 2010); on the other hand, granting agency to the encapsulation of listening practices enacted via an object, without probing in the types of social and political affordances it shapes and is shaped by entails a degree of technological determinism. For instance, whereas DeNora focuses on the social force of music as technique of everyday life, claiming that "artefacts do not *compel* users to behave in preferred or prescribed ways" (DeNora 2000, p.35, original emphasis), Bull analyses the relationships some of these said techniques of listening relate to their encapsulation as digital files in an object (Bull 2007). In these and the other studies above shown, the social actor — the listener — is taken for granted as an actor within an already established set of political conditions, rather than being regarded as both a performer and enabler of said conditions. Their participation in everyday life is flattened into an assumption of sameness-within-dif-

ference, that is, that all bodies are granted the same rights to belong and/or occupy the urban space. The material conditions which allow and deny the right of certain bodies to tread, dwell, move or not move in the "ongoing flow" of everyday life are not problematized. Hence, these studies on listening practices seek to evince the social and cultural role of designed artifacts and the modes of listening they convey, albeit without necessarily probing into the material-discursive, political, performative, and confrontational conditions that afford these roles and modes in the first place.

Micro-managed and privatized soundscapes are granted, by design, hegemony over an auditory commons; in so doing, the enforcement of a highly individualized *earview* is carried out. Thus the auditory space, as a place of antagonism, becomes militarized — a site of permanent violence. Auditory governances are insidious sets of normatization of listening practices, allowing certain sounds to occupy the realm of "signal" and in turn define other sounds to become "noises". This is a pervasive mode of what Sterne (2013) calls an "audile technique," though not instrumentalized for the sake of becoming a skill in itself, but rather as a way of navigating the world — as discussed previously. In turn, those oppressed by this political order are only able to become part of the auditory space, to conform to this already violent soundscape, in two ways: by being completely silenced through direct (and oftentimes physical) violence, or assimilating into the normative *earview*. In the first, sound is instrumentalized as a form of physical violence which renders those seen (and heard) as less-human hyper-visible in their forced silence. In the second, the oppressed subject conforms by adopting and reproducing the same set of criteria that define the auditory governance, in turn becoming a type of sub-oppressor (Freire 2000).

### **The militarized soundscapes of everyday life**

To a certain extent, my outlining of auditory governances bears similarity with J. Martin Daughtry's description of the militarized soundscapes and the auditory practices in wartime Iraq during Operation Iraqi Freedom. In his book *Listening to War* (2015), Daughtry engages with different types of "auditory regimes" which beget modes of orienting themselves into the world in times of extreme threats of violence. He categorizes the acoustic environment of occupied Iraq in three "analytics": "Auditory Regimes, Sonic Campaigns, and Acoustic Territories" (2015, pp.126–127). For him, "auditory regimes" outline listening as a phenomenon, but only understood as such under specific articulations of power; "sonic campaigns," on the other hand, are understood as frameworks dependent on which sounds and under which agendas actors produce and reproduce listening practices. Lastly, "acoustic territories" entail the creation of listening environments by an articulation of the two previous categories (*ibid.*, p.126). Moreover, for him auditory regimes are cyclical, inasmuch as they "fall and are replaced by others", while sonic campaigns "end, in victory, defeat, or stalemate", and acoustic territories are "destroyed and, eventually, new structures [are] built [...]" (*ibid.*, p.127, Table 2C.1)

Differently from him, however, I do not see these "analytics" as necessarily separate entities. What for Daughtry is a temporary combination of sound events, artifacts, actors and their agencies, I identify as a more pervasive material-discursive entanglement that not only describes an auditory State of Exception exclusive to militarized zones or times of war (as his description entails), but rather is a permanent state of auditory and political violence. This is not to say, however, that everyday listening practices in places like the occupied *favelas* in Rio are the same as the militarized soundscapes of Iraq. Instead, what Daughtry identifies as "militarized listening" is a set of listening codes that, depending on which part of the social spectrum one lives, often intermingle with and thus become practices of everyday listening. In other words, it is a set of strategies that allows not only for the enforcement of the borders of auditory spaces, but also one that determines the conditions for navigating it.

Daughtry's own distancing, that is, the in the other side of the world and under a very clear and specific set of rules deployed by the military-industrial complex, allows him to pinpoint characteristics of a violent auditory regime as if it were something exceptional. While these auditory governances I identify here might be also pinpointed in occupied Iraq, they might not be immediately perceived back in the United States, or in Europe – or even in Latin America – but nevertheless dwell there. These characteristics can be identified in the work of Black, *Latinx*, and Southern scholars, as happening in the everyday lives of non-white and/or non-Western subjects — let alone those outside the heterocisnormative spectrum. The work of these scholars, as it will be discussed in this section, frames up the very same criteria Daughtry identifies in the military zones of Iraq, and, not surprisingly, governs the sonic stratification of the everyday lives of those in a constant state of political violence.

On a conceptual level, the distinction I draw is illustrated by the fact that while he sees auditory regimes, sonic campaigns, and acoustic territories as transitory elements, in this research auditory governances are the enactments of a perennial entity: the colonial matrix of power, expressed through auditory means in different manners, which I intend to outline here in this chapter. With the Apparatus of Auditory Governance, the criteria remain the same, while the actors and technologies that enact them are the ones subject to change. These actors and technologies do not replace what was there previously, but rather assimilate it in order to become ever more effective, pervasive, and ubiquitous. The agendas never end in defeat or stalemate, but persevere over centuries and are normatized, transformed into systems, policies, and laws; its structures and environments are never destroyed or rebuilt, but rather only enforced and their borders made ever more visible. This is but an entangled relationship of power which is traversed *by and through* design. Design is, put simply, at the center of the Apparatus of Auditory Governance. In other words, if, referring back to Sterne (2003), listening is an articulation of power that is constructed over hearing, then design is that which authorizes, enacts, and perpetuates the instrumentalization, the power imbalances, and the stratification of listening.

Thus while engaging with Daughtry's writings, I could not help but notice a few resonances with my own listening practices back home. The forms of military listening he describes as

happening in a context which is physically and culturally displaced from the average US American reader are anything but a novelty to my own experience, and, more importantly, from those of my friends and family. Being born and raised in one of the largest cities in South America, the rhythm of my everyday life was always punctuated by the imminent threat of violence. Latin America is a place of permanent solitude and constant encounters with violences — from colonial, to political, to directly physical; therefore learning how to develop these types of listening acuity is a necessary everyday strategy for survival. Let it be noted, however, that my own auditory experiences are, even as someone who grew up in a fairly dangerous neighborhood in São Paulo, still fundamentally different from the ones in wartime Baghdad when it comes to the level of threat and starkness of violence imposed by this very threat. Yet for the families living in the vicinity of or within underprivileged parts of cities like São Paulo or Rio de Janeiro, the situation is more akin to that of permanent militarized forms of listening.

For instance, in his study Daughtry identifies the "ideals of military audition", that is, "the conceptual foundation upon which [a] military auditory regime [rests, and] can be traced back to the history of warfare". (2015, p.130) He lists "expert masculine auscultation," "hypermuscular inaudition," and "euphoric auditory hypermasculinity" as the defining traits of a militarized form of listening (*ibid.*), linking them to "objectivity (as opposed to empathy), rationality (as opposed to emotionality), toughness (as opposed to delicacy)." (*ibid.*, p.131) This means that for him, the military listener is able to enact listening as something that can be directed to objectively focus on certain events, cancel out the "unnecessary," and stay calm and comfortable under stressful and/or threatening situations. Daughtry contends that this rehearsal of hypermasculinity is what reproduces the ethos of the military subject (*ibid.*). In that sense, a different enactment of these modes of listening – which escape such modern/colonial binarisms such as the above outlined – can be illustrated by an anecdote.

In August 2016 I had a long Skype conversation with Jéssica Souto, a media activist and musician from Rio de Janeiro, who is working directly with grassroots projects within and for one of the biggest *favelas* in the city, *Complexo do Alemão*. My conversation with her focused heavily on her everyday practices of listening and how they have shifted after the

occupation of *Alemão* by the pacification project (UPP),<sup>23</sup> as well as her own perception in comparison to the auditory world of her friends coming from other parts of the city. One of the stories she told me described exactly that:

Teve uma amiga minha que veio aqui, e ela ouviu um único tiro, e a gente estava conversando com outro amigo que também mora aqui, e nós dois continuamos conversando normalmente, enquanto que ela ficou assustada sem saber se era tiro ou se não era porque ninguém reagiu. Depois de um tempo ela perguntou: 'era tiro?' e eu falei, 'era!' – Ela ficou chocada: 'mas porque que ninguém correu?' – e ela disse isso porque tinha gente tomando cerveja na rua, criança brincando de bicicleta, e música no bar... e todo mundo nem aí, porque já é uma coisa super normal, o ouvido fica sensível à distancia, à localidade, então se começa a dar tiro você já sabe [que] é em 'tal' lugar.<sup>24</sup>

For Jéssica there is a specific kind of *sensibility* — as opposed to *technique* — one needs to develop as a defense strategy against the apathy engendered by the constant threat of violence,

É um mecanismo que automaticamente as pessoas vão criando para defesa e pra não deixar de seguir a vida, senão a gente para tudo e fala 'vamos ficar refém disso, não saio mais de casa porque tá dando tiro', mas tem tiro todos os dias [...] As pessoas criam esses mecanismos, e automaticamente vão se monitorando [...] no sentido de que você tem que fazer suas coisas, trabalhar, viver sua vida. Quando tá dando tiro [no Alvorada] eu escuto daqui, e é uma distância razoável, [então] tá todo mundo fazendo tudo tranquilamente aqui, conversando no quintal, bebendo cerveja [...] Mas quando tem aqui próximo da minha casa – o que tem acontecido mais recente-

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<sup>23</sup> The pacification of Rio's *favelas* is a project started in 2008 which consisted, at first, of "dismantling the drug trades and re-conquering territory which was lost by the State", meaning the occupation of *favelas* by the Military Police and the violent offensive against the drug lords (Burgos et al. 2012, p.51). The main image for this occupation was the UPPs – *Unidades de Polícia Pacificadora* (Pacification Police Unit) — police stations installed in the middle of the occupied *favelas*. Later on the strategy was slightly tweaked and the Police started announcing the operations beforehand in the media, which, allegedly, mitigated the amount of violence of the occupations. The new strategy also consisted of occupying multiple *favelas* at the same time, re-incorporating them into new conglomerates, many of whom gaining the title *Complexo* ("complex"), a militarized term which many *favela* residents avoid using (Burgos et al. 2012). The UPPs have strong support by the mainstream media and the middle-class, but is seen by many *favela* residents as yet another repressive offensive of the State against underprivileged populations; cases in which the UPPs engage in direct violence against the residents, or is involved in corruption scandals is not unprecedented, but mostly invisible from reports on the mainstream outlets. (Burgos et al., 2012; Carvalho 2013)

<sup>24</sup> "A friend of mine came to visit and she heard a single shot, we were talking with another friend who also lives here, but the two of us kept chatting as if nothing happened, while she was completely freaked out by not knowing whether it was a shot or not, because no one reacted. Afterwards she asked me: 'was it a gunshot?' and I said, 'yes!' – She was shocked: 'why didn't everyone run?' — she said that because people were still drinking beer, kids were still riding their bikes on the streets, the bar still had music on [...] nobody cared that much, because it becomes super normal, the ear becomes sensitive to distance, to positioning, so when gunshots begin you immediately know [that] it comes from 'there' [as opposed to nearby]."



mente, inclusive agora há pouco tava dando tiro, se tivéssemos nos falado antes você teria ouvido [...]”<sup>25</sup>

While *Listening to War* is a comprehensive account on the different "audile techniques" (Sterne 2003) developed extensively by the US Military in order to navigate within the city-turned-war zone of Baghdad, they bear much similarity with other places in the world facing similar occupations. Daughtry describes the sort of performative literacy at play which allows both US soldiers and Iraq civilians to distinguish different types of firearms, to locate the approximate site of a shooting taking place, or to remain calm in a situation of perceived — but not immediate — threat. Indeed, his research is strongly focused on the practices of the deployed soldiers; nevertheless, he devotes portions of his book to the first-person accounts of a few Iraqi civilians, and their forms of adapting to or coping with the violence perpetrated by the presence of a foreign military and imperialist power in their everyday lives.

This is a fundamental distinction that allows us to understand how auditory governances operate by design. Differently from a direct engagement with everyday violence in Iraq, however, my intention in calling out this sheer difference in listening perception is to demonstrate how the auditory regimes, within which deployed US soldiers operate, are a direct consequence of the political regimes these soldiers represent and violently enforce. Conversely, those subjected to such violent politics are not allowed the option of identifying themselves as part of an auditory regime — whatever it might be. For those living in situations in which the sounds of violence are part of everyday life these listening practices are not techniques delineated by an objective, rational ethos — as Sterne or Daughtry would argue. Rather, they are sensibilities, survival strategies that employ mechanisms falling outside the criteria of what would be understood as 'rationality,' in order to dwell in affective responses, so that "we can move on with our lives."

Moreover, from the moment one understands how the colonial matrix of power articulates the notions of being human by putting the white male cisgendered body at the top of its list, the translation from the ideals of modernity — rationality and objectivity, for instance — into masculinity becomes clearer. In that regard, Daughtry's military listener is not only hypermasculine but also colonial. This resonates with how the ideals of listening as a set of expert techniques, both inside and outside the military context Daughtry writes about, is

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<sup>25</sup> "It is a mechanism which people automatically create as a form of [self-]defense, so we can move on with our lives, otherwise we stop everything and say [to ourselves] 'let's become a hostage of [the situation], I will not go out because there is gunfire outside,' while in fact gunfire is there everyday [...] So people create these mechanisms and automatically start monitoring themselves [...] in the sense that you have to do your things, work, live your life. When there is gunfire [in *Alvorada* — one of the hills near her place in *Alemão*] I can hear from my bedroom, and it's a reasonable distance, [so] everyone is going on with their lives, chit-chatting in the backyard, drinking beer [...] but when there is [gunfire] near my house — which has been happening more and more recently, in fact not long ago there was gunfire, if we had started this a bit earlier you would have heard [...]"

not only configured as *hypermasculine* but also as enacting *white supremacy* — even when the bodies enacting it might fall in other parts of the racial spectrum.

### From governmentality to governance

Auditory governances are thus the set of material entities that convey modes of listening, but are not necessarily encapsulated by them. Rather, they are the conditions and performances of these modes of listening, and are in turn shaped by them into material-discursive practices. In other words, I use the term auditory *governances* because they are sets of phenomena that while they can be experienced first hand, their actions cannot be traced back to one single, unified entity (Offe 2009, p.550). In a sense, auditory governances are an enactment of what Foucault has named "governmentality," that is, an "ensemble formed by the institutions, procedures, analyses, and reflections, the calculations and tactics that allow the exercise of [...] a specific albeit complex form of power" (Foucault 2001, p.219). In contrast to a Foucauldian understanding of governance, however, I see this form of power not to be the 'government' as an institutionalized set of power structures, but rather a complex entanglement of different actors, institutions, and the consensual policies and systems they convey. Hence the enforcement of auditory governances is not the sole work of a body of authoritative power (such as the State), but rather the enforcement of a set of values, policies, and systems that grant authority for certain bodies to give form and to occupy the auditory space. In turn, these auditory governances relegate other bodies – or bodies turned other – to either enact this normative ideal, or to be completely stripped off of their sonic identities.

Furthermore, I position myself away from Foucault's notion that 'governmentality' (and governance for that matter) is inextricably linked with, and "discovered in" the late European enlightenment (Foucault 2001, pp.220–1). Instead, I re-frame and problematize the origin of auditory governances within the project of Western European colonialism. As Mignolo argues,

Foucault devoted his attention mainly to Europe, but such technologies [of bio-power] were applied to the colonies as well [...] This consideration shifts the geography of reason and illuminates the fact that the colonies were not a secondary and marginal event in the history of Europe but, on the contrary, *colonial* history is the non-acknowledged center in the making of *modern* Europe. (2009, p.16, original emphasis)

Such an understanding disconnects the idea of agency over these phenomena from a set of depoliticized and disembodied actors, to re-frame it within the set of values and systems made sovereign by the colonial matrix of power, thereby locating governances at the very heart of colonial violence.

### Consensus as governance

What can be traced as perhaps the core character of these modes of governance is the desire to undermine divergent discourses. As Claus Offe remarks,

governance refers to institutionalized, if often "informal" modes of interaction, in which the participants cooperate in a conscious and goal-oriented manner, while not exclusively pursuing their own interests, but also the common concerns of the members of a political community (or a large corporation) (Offe, p.553)

The focus on a "common concern" is what directs the efforts of political communities to become, in themselves, enforcers and reproducers of auditory governances. This can be clearly perceived in the modes of self-vigilance imposed by noise-abatement laws; in the normatization of certain modes of speaking against accents and dialects; the perception of certain musics as 'educated' and others as 'dangerous', and so on. In a sense, any reproduction of auditory governances is a tentative of policing the *other* (or their peers) towards a consensual narrative. French philosopher Jacques Rancière defines political consensus as a "mode of symbolic structuration of the community that evacuates the political core constituting it [... striving] to reduce right to fact." (Rancière 2015, pp.188–9). For him, the elimination of difference in the name of political community-building is what removes the *political* from politics; moreover, the enactment of consensual politics radicalizes the outside actor as the body which does not comply with the imposed social order (*ibid.*, p.189).

A telling example of this within auditory practices is given by Mieszkowski et al. in the introduction to their book *Sonic Interventions* (2008). The authors show a piece published in *De Telegraaf*, one of the major Dutch newspapers, which tells the case of a mosque in the city of Vlaardingen whose community requested the city administration permission to use loudspeakers for the *adhan*, muslim daily calls to prayer. Now, even though Muslims are called to prayer several times a day, what the community was asking for was in fact permission to occupy the soundscape of the city only for the Friday afternoon service. This was unprecedented amongst the muslim community, and, according to the piece, other mosques soon followed suit. According to the authors' analysis, such a request for occupying part of the auditory space was instrumentalized by outside political actors in order to direct public opinion towards the elimination of difference, that is, in favor of a consensual narrative. For instance, the response of conservative, right-wing politicians was to pose questions as to inflate the already tense situation these immigrants live; these spanned to as whether or not the call to prayers would "create a climate that is alienating to a lot of Dutch people [and] increase the tension between the different cultural and religious communities [...]" (Mieszkowski et al. 2008, p.22), to whether "the constitution offer[ed] possibilities for interdiction" (*ibid.*). This discourse, while immediately ignoring the sonic markers of christian church bells, and the ubiquity of their sounds all around the Western[ized] world, instantly creates and reinforces a sense of *otherness* to the idea of a non-christian community having a sonic presence. This is so because having such a presence would defy the community's [imposed] position of the *silent others* of Dutch society. In fact, for societies built on practices of colonization, and yet very fearful of the colonized body, silence is clearly not only a commodity but a private property, and as such protected by a sense of communal *policing* to eliminate dissent sounds from being allowed to exist.

Granted, at the heart of the enforcement of consensus lies the very idea of the *police* – which is a fundamental concept for this work. For Rancière, the police is a symbolical force which does not act as a mode of control or repression per se, but does it insofar as it acts on "dividing the sensible" (Rancière 2015, p.36). By redistributing what he calls "the sensible," that is, the perceptions that define modes of partaking the political and social order of the world, the police works effectively to prevent certain actors to perceive *themselves as partakers* in the first place. Rancière explains:

If there is someone you do not wish to recognize as a political being, you begin by not seeing him [sic] as the bearer of signs of politicity, by not understanding what he says, by not hearing what issues from his mouth as discourse [...] to deny the political quality of a category — workers, women and so on — all that was required was to assert that they belonged to a 'domestic' space that was separated from public life, one from which only groans and cries expressing suffering, hunger or anger could emerge, but not actual speech [...] (Rancière 2015, p.38, emphasis added)

Thus for Rancière a pervasive way in which the policing of bodies act to suppress political difference is by means of silencing and removing the right to be understood from the bodies perceived as not belonging to the political order. Here the idea of "having a voice" goes well beyond its metonymical value, in which "voice implies the constitution of a political subject as one who 'has' an identity that through communication acquires the possibility of transparent political participation through representation" (Gautier 2014, p.171) Rather, the body whose voice and intelligibility is literally denied is the body displaced from its humanity. The cries and groans of suffering constrain the agency of this body to be "closer to nature" (Quijano, 2000; Mignolo, 2007b), a body-animal, a sonic intruder in the consensual policing of auditory order. The sonic identity of this *other* body is reduced to bare life, to *flesh* as Alexander Weheliye puts it (2014).

### **Colonial governances, sonic violences**

Martinique philosopher Frantz Fanon has argued that colonization is a system that works not only by physically delimiting borders between sovereign and servant bodies, but also by enforcing a de-sensibilization of the colonized mind towards their own values (Fanon 2005[1963], p.41). Colonial violence is a process aimed at domestication and unquestioning compliance; emotions are thus seen as a signal of weakness, as less rational and therefore less valuable than its 'objective counterpart'. As Fanon maintains,

In the colonial world, the emotional sensitivity of the native is kept on the surface of his skin like an open sore which flinches from the caustic agent; and the psyche shrinks back, obliterates itself and finds outlet in muscular demonstrations which have caused certain very wise men to say that the native is a hysterical type. (2005[1963], p.56)

The colonized body is this ever too loud, ever too noisy, ever too emotional and "animalistic" figure. Through denying the colonized body their own right to occupy space — be it physical, social, emotional, and/or auditory — the colonial mentality presents them no other option than that of embracing the "colonial vocabulary" employed by the colonizer, thus admitting "**loudly and intelligibly** the supremacy of the white man's values" (Fanon 2005[1963], p.43, emphasis added). Here, the borders between what is perceived as sound versus noise are again clearly traced. The colonized body is only allowed to be loud, literally and metaphorically, insofar as it is able to comply with the European/modern 'values' in a so-called 'intelligible manner'. Otherwise, it must keep silence as imposed by the colonizer's order.

Fanon again reminds us that "to speak [a language] means above all to assume a culture, to support the weight of a civilization [...] The colonized is elevated above his jungle status in proportion to his adoption of the mother country's cultural standards." (Fanon 2008[1952], pp.17–18). In fact, one of the strongest vectors of colonization was that of obliterating 'primitive,' native languages and musics, and replacing them by their European, 'enlightened' counterparts. No wonder most of the colonized world today has at least one of the five colonial languages – French, Spanish, English, Portuguese, and Dutch – as either their official or legal languages. Banning indigenous languages and replacing them with the colonizers' was the method through which colonial powers guaranteed hegemony over social order, religion, music and culture. Language becomes the vector with which to promote conversion to christianity; the European tonal system and musics, concomitantly, become its vessels (Villa Redondo, 2003; Gautier, 2014; Baker, 2011; Budasz, 2011; Agawu, 2016). Similarly, enforcing the literacy of a creole elite in the colonies was a method of granting "vocal immunity" to these languages via lettered, rather than spoken word. Only so could the (mis)pronunciation of colonial languages be tamed and kept standardized (Gautier 2014, pp.171–2). In enforcing the use of ["proper"] language as a way of disconnecting the colonial body from its place "closer to nature", the use of colonial languages becomes a marker of culture, "understood as a property of the person expressed through the acoustic parameters of the voice." (*ibid.*, p.190)

Auditory governances instrumentalize colonial violences by the colonized body against their own. Hence conflicts arise when the auditory space is occupied by alien sounds. For instance, Fanon tells us the anecdote of the Antillean man who goes to France and thus speaks a different French when back home, no longer understanding the dialect and employing a vocabulary that supposedly grants him a higher social status among the population of his home country. Fanon argues that "the fact that the newly returned [...] adopts a language different from that of the group into which he was born is evidence of a dislocation, a separation." (Fanon 2008[1952], p.25) In that sense, Anzaldúa reminds us that "because we internalize how our language has been used against us by the dominant culture, we use our language differences against each other." (Anzaldúa 2007[1987], p.80) In fact, Anzaldúa's complex *mestiza* subject, whose identity 'speaks in tongues', is another example of how auditory governances operate within the colonial social order. Anzaldúa de-

scribes the inner conflictual borders she has experienced as a speaker of, in her own words, a "border tongue" such as "Chicano Spanish" (*ibid.*, p.77). Anzaldúa deals with her own "wild tongue" as a juggler of a number of living, learned, as well as imposed languages. She tells how as a *Chicana* student at a US American university, she and other Latinos were required to take two English courses to 'clear up' their accents (*ibid.*, p.76). Similarly, she recounts her fear of speaking Spanish because her Chicano Spanish, being an "orphan tongue" and bastardized by anglicisms, is perceived by other Latinas to be a betrayal of ethnic identity (*ibid.*, p.80).

Conflicts within the auditory space are not exclusively enacted by means of speaking different accents or languages, but also by the perception of certain bodies to be louder than others, and in turn more disruptive of the fabric of normalcy. In her comprehensive study of noise-abatement policies in mid-twentieth century Harlem, Jennifer Stoever analyzes the overpolicing practices of silencing among Black and Latina/o communities, enacted and subverted through reports by the *New York Amsterdam News*, "the city's leading black newspaper" (Stoever 2015, p.146). She contends that a conflictual process of how Harlem, being largely ignored by the city's administration, was relegated to become a subject of "blaring sound trucks, all-night craps games, incessant record-store demonstrations, and other sonic irritants" (*ibid.*). At the same time, the community had to deal with and resist to the predominant narrative of the "white press" (such as *The New York Times*) which imposed a form of noise policing set against white standards. For Stoever, editorials in the *Amsterdam News* made extensive use of "double voice" to communicate noise awareness as "an internal social dynamic of communities that can be addressed and absorbed, rather than an external, despoiling nuisance to suppress", while at the same time call out racist measures taken by the NYPD to target their communities (*ibid.*, p.154). She explains that

the city's noise-abatement laws operated [...] under a cloak of urban anonymity; in fact, they were designed to increase it by cutting out "invasive" noises signaling the presence of one's others and by asking citizens to be concerned primarily with their own well-being. [Amsterdam News'] solution asked residents to operate from the stand-point of being concerned with another's welfare, a fundamentally different understanding of community and noise's role in building it. (Stoever 2015, p.156)

In dealing with noise differently than the state- and media-imposed policies of abatement, Stoever contends, community outlets such as the *Amsterdam News* addressed different intersections of race, ethnicity, class and nationality. In eschewing the white media notion that Puerto Ricans were the *noisy other* of Harlem, the newspaper "points to the necessity of African Americans working toward decolonizing their listening practices, becoming aware of how they have internalized and adopted the norms of the white listening ear" (Stoever 2015, p.164).

Moreover, the perception of sound and noise in colonial violence is also transformed by its direct connection with capital. In an analysis of the colonial soundscape of Gibraltar, Bryce

Peake describes how British colonialism functions via a set of auditory regimes which privileges a gendered, racialized body "to reproduce the state's social division of labour symbolically through interpersonal relationships" (Peake 2016, p.84) In that sense, he contends, "not all noise is equally disturbing" insofar as the body which produces it falls into certain categories (*ibid.*, p.79). Supported by an ambiguous law which delegates its execution to a personal decision from law enforcement officers, Peake demonstrates how everyday noise ordinances such as conversations, music, or leisure time were consistently reported by the white British elites and targeted at Gibraltarian people; conversely, the constant noise of the military bases and technological use which secure the sovereignty of the colonial powers were ignored by both State and elites as a component of the everyday soundscape of Gibraltar. He explains that

through orientations towards noise, through listening, Gibraltarians make a non-conscious double move against a mythologized Spanish: first they make a distinction between Gibraltarian and Spanish by adopting a British acoustemology wherein Britishness is sound and Spanish are equated with noise; and second they consciously adopt British attitudes towards class hierarchies by which the lower class – the Spanish – become the site from whence all social ills arise. (Peake 2016, p.95)

In doing so, Peake argues, listening becomes a technology with which to delegate and reinforce colonial hierarchies. In other words, listening is a device for managing the sensorial control of the colonized population via a designed system of acoustic compliance — as will be demonstrated later.

The weaponization of language, music, and voice is that which turns colonial violences into sonic violences. The above examples demonstrate one insidious character of colonial violences instrumentalized in and by auditory governances: drawing "suspicion or hesitation" towards those that otherwise might be powerful allies, by fear they were already co-opted by the same colonial mindset which creates this fear in the first place (Anzaldúa 2007[1987], p.80). We are thus left with a no-win situation: on the one hand, the misplaced colonized body must adapt to the "proper" sounding and listening practice in order to diminish the evidence of their otherness (whether or not this is successful is another story). On the other hand, once home (physically in the case of Fanon's anecdote or socially, as Anzaldúa contends), the adoption of a colonial vocabulary — linguistic or otherwise — is perceived as a signal of assimilation, betrayal, or pedantry. Assimilation, however, is a travesty, an ever-incomplete process. The non-complying body cannot be something other than a permanent outsider of the status quo. They dwell in an in-betweenness that bears strong auditory markers; as such, they need to embody a different mode of thinking and listening, a form of border consciousness that threatens the idea of a "consensual listener".

### **Compliance and governances by design**

Colonial violence, racism and patriarchy are implicated in the very "enunciation" of sonic violences (Mignolo 2009, p.5). Directed through sonic violences, design designs the bodies

targeted by this enunciation. Auditory governances shape and are shaped by what Tony Fry et al. (2015, pp.79–81) call a "system of compliance"; a system in which social actors and their agencies are disconnected, by design, from the accountability for the structures of the political regime they are inserted into. Thus a false sense of abstraction is created in the political self, and technology helps marginalize ethical judgements exactly by making this disconnection seem invisible (*ibid.*, p.108). The enforcement of systems for the management of the soundscape segregate listening practices into a technicized dualism, which works to actively disconnect agent from agency, actor from action. In turn, the actions enacted by entities within auditory governances seem harmful until their underlying structures are exposed by acts of counter-violence. As Fry et al. argue, "the less contact with 'a victim' the greater the propensity to act with cruelty." (*ibid.*)

Compliance and [colonial] instrumentalization are at the heart of what makes auditory governances operate in a seemingly invisible manner. For Fry et al., a severe gap between decision and action is a mode of ontological design that affords acts of violence to be performed without necessarily being perceived as such (2015, p.80). For him there are two ways in which this ontological design operates: the first is the abstraction by technological representation; for instance the silencing of the "voices of catastrophe" via voice-overs in television (Cusick 2013, p.17), the replacement of human targets by dots on a radar screen (Fry et al. 2015, p.80), or the screened silence presented during drone strikes. The second is instrumental delegation, that is, removing violent decisions from the scope of the public opinion and confining them to administrative actions (*ibid.*, p.103). This is mostly visible in the racial profiling enacted by law enforcement, whose violent performance on the streets is seen as disconnected from political, albeit bureaucratic decisions that vouch for it in the first place. In that sense, Fry et al. argue, this system enables "'good people' to do evil things, 'kind people' to perform acts of cruelty", thereby justifying violent acts as actions in the name of "reason" (2015, p.103).

It is important to emphasize, however, that the forms of auditory governances outlined in this research do not convey, nor necessarily condone, acts of cruelty. Rather, they enable behaviors and assumptions about certain racialized and gendered bodies that are indeed triggers for and mirrors of forms of direct and cruel violences. In other words, auditory governances are but *one way* through which colonial violences are enacted, but not by any means their sole actors. Moreover, the violences evinced and/or enacted by auditory governances are anything but symbolic. Rather, they are felt and experienced in the flesh, conveyed by how sounds traverse the world, and leave their (physical and auditory) marks on bodies (Barad 2007; Weheliye 2014).

### Sketching the Apparatus of Auditory Governance

Design creates the specific techniques and apparatuses that enact auditory governances, and as such acts as their material expression. In so doing, design brutalizes the auditory space, trivializes sonic violences, and affords "techno-utopian" sonic borders to secure privilege



(Hagood 2011, p.584). The ideals that constitute and help define this "listener" and the criteria of their audition are, in fact, never fully 'replaced' — as Daughtry contends (2015). Rather, these criteria work in a historical, cumulative process that has colonial violence as its origins. Coloniality is constantly re-enacted through listening apparatuses, and these imposed systems of acoustic order reverberate from the past into the present, and become projections of certain futures. Design affords a continued process of prescription of sonic violences, their materialization, and subsequent re-inscription as an instrumentalization of listening that perpetuates a segregating set of values. This articulation and its historicity is what this research will call the *Apparatus of Auditory Governance*. The identification, problematization, and intervention in these apparatuses evince the methods and devices for the occupation, expropriation, and reconfiguration of the auditory space, done so by a specific set of social, cultural and political governances. In turn, these sets of auditory governances help shape and design the apparatuses for the subjugation and obliteration of certain sonic subjectivities.

In a contemporary, Western[ized] world, techniques of sonic control are expressed and enacted through designed symbols of social and economic privilege, such as iPods or smartphones. These devices act as cloaking mechanisms for social situations; as technologies of aestheticization and management of the urban, acoustic space; or as (self-)measurement artifacts for productivity and capital (Hosokawa, 1984; DeNora, 2000; Bull, 2007; LaBelle, 2010; Stanyek and Gopinath, 2015). When coupled with apparatuses such as noise-cancelling headphones, they craft the spaces in which “guilt-inducing encounters with the homeless” (‘Ivan’ cited in Bull, 2007, p.35), or with immigrants that are “loud and rude [...] don’t learn English and [...] have no control over their children” (‘Tracy’ cited in Bull, 2007, p.36) are avoided. These couplings fabricate a state of perceived normalcy that is allegedly unspoiled by the ‘noises’ of cultural, racial and gender diversity (Hagood, 2011).

However, their potential for management of soundscapes lies beyond personal use alone. For instance, within law-enforcement contexts, these personal listening devices may be connected to acoustic weapons such as the Long Range Acoustic Device (LRAD) to disperse crowds of “hostile civilians,” control rioting, or be employed in “music-enhanced interrogation[s]” (Daughtry 2014, pp.241–243). Moreover, they are active agents on the complete obliteration of subjectivities, one example being the extreme amplification of specially-crafted playlists, such as the "torture playlists" designed by the US Troops and employed in often week-long sessions of sonic torture upon prisoners in Afghanistan and Guantanamo (Cusick, 2008a, 2008b). Through the weaponization of sounds, silence is commodified, and the desire to re-tune sonic reality is exacerbated and enforced as the only means with which to navigate the auditory world. These methods are in turn woven in the fabric of normalcy *by and through* design, thus configuring an increasingly violent auditory regime.

Auditory governances then, in the scope of this research, are the set of material-discursive practices, fictions, and apparatuses that, once entangled in a certain manner, orient themselves to enforce the hierarchization and racialization of bodies as an instrument for social

and political control. I frame auditory governances as a set of power relations which are almost always geared towards an everyday policing for consensus, eschewing dissonance in favor of the enforcement of and total compliance with harmonious undertones. A cacophony of listening practices is violently stripped of its uneven elements to be accommodated within a discourse of 'diversity' and 'pluralism' which in fact are but masks for political and sonic erasure. Design is present in the entire process of constitution and enforcement of auditory governances; it enforces the creation of and instrumentalizes 'the listener,' by constraining its designs to privilege "signals" and obliterate "noises". Similarly, it also creates the apparatuses with which one manages their private soundscapes, and in turn weaponize the public acoustic space to foster this dualistic notion. Design also dwells in the creation of apparatuses that grant the oppressed subject 'permission to belong,' either by helping them conform to normative practices of listening, or by rendering them devoid of political meaning. Such an uneven power relation generates the tension between listening technique and listening sensibility we found earlier; notwithstanding, it is exacerbated by how design designs auditory governances, for it generates the need for, as well as demands certain sensibilities as strategies for survival, while at the same time negating them within the ethos of an auditory commons.

Concomitantly, designing is a language this research speaks, listens, and intervenes with. In being so, this work focuses both on "things [...] created with a specific end" as well as "the non-verbal dynamics" of our interactions with the material conditions of the world (Atfield 2000, p.29). My understanding of design as an apparatus and designing as a practice which inevitably delineates boundaries, requires a diffractive reading of the systems that orbit around material and artifactual agents, while at the same time interrogating and accounting for my own position as a designer, researcher, and border subject with/in the process of research. Hence the experiments in this research are accounted for in their very enunciations — who sets the boundaries, how, and how *hard* or *porous* they are. What differentiates a "project-oriented perspective" from other methods of investigation in cultural and/or sound studies is that I understand the Apparatus of Auditory Governance as being composed of sets of different experiences, stories, things, practices, discourses, and actions which are temporarily connected by not only a *reading* but also an *acting* upon them. In other words, these sets come into existence as "auditory governances" not only through my very act of drawing these temporary threads among them, but also by directly intervening on them through design-oriented projects, which have sound and listening as their driving force.

## Chapter Four

### Re-organizing reality: Storytelling and sonic fiction as pedagogies for design research<sup>26</sup>

Cultural theorist Kodwo Eshun introduced the field of Cultural Studies to his concept of *sonic fictions*, outlined in his 1998 book *More Brilliant than the Sun: Adventures in Sonic Fiction*. The book, an idiosyncratic narration of listening experiences, traces alternative theories of the future performed by African-American musicians. He locates the starting point of his *sonic fictions* in the 1950s with Sun Ra and his Arkestra, echoing all the way until the turn of the century with artists such as Drexciya and DJ Spooky, among others. Yet rather than looking at the masterminds of musical revolutions such as Grandmaster Flash or George Clinton through the lenses of critical theory or ethnomusicology — which would be common practice in his field — Eshun evinces the concepts the artists themselves have put forward with their work, and in so doing develops an argument towards understanding these ideas as cogent ways of tapping into the future they portray. Sonic fictions extend the listening experience in itself to encompass a multi-sensory engagement with the auditory, combining sleeve notes and album covers with the music towards composing tales of estranged futures. These futures are 'already there, unevenly distributed' into grooves, sleeve paintings, and liner notes' manifestos—fictional worlds filled with political struggle, coming into being the moment one grabs the record, continuing in the process of dropping the needle, flipping the piece of vinyl from side A to side B, and finally inscribing itself in one's memory. In this process, dystopias of African-American culture come into play with the listener, abducting her from the physical limitations imposed by the bodily apparatus of listening to engage in a "field trip through a found environment" (Eshun 1998, p.66) of possibility spaces.<sup>27</sup>

Eshun set out to signal that sonic fictions are to be found in records and inhabiting their own future and fictional universes. His way of doing this consists in "finding" these theories and "switching them on"—that is, turning the listening experience of this music and the universes painted by both the visual and the sonic narrative into personal stories, plentiful with neologisms and very dense and highly ambiguous writing (Eshun 1998, p.193; Schulze, 2013). For Eshun, the text is the medium through which these fictions become research, even if they propose to break with traditional and Eurocentric

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<sup>26</sup> This chapter contains parts of several previously published works: Design at the *Earview: Decolonizing Speculative Design through Sonic Fiction*", published as an article for the *Design Issues* journal in spring 2016; "Futuristic Gizmos, Conservative Ideals: On Anachronistic Design", published as an article for the *Modes of Criticism* magazine in early 2015; "Breaking the Cycle of Macondo: Design and decolonial futures", published at the XRDS Magazine in summer 2016; and "Designer/Shapeshifter: A decolonial redirection for Speculative and Critical Design", to be published as a chapter for the book *Tricky Design: The Ethics of Things*. All of these publications, except for the first, were written in collaboration with Luiza Prado de O. Martins.

<sup>27</sup> This can be seen, for instance, in Grandmaster Flash's "*skratshadelia*," where the turntables (his *Wheels of Steel*) become "a machine for building and melding mindstates from your record collection..., a tone generator, a defamiliarizer, a word-molecularizer." (Eshun 1998, pp.14–15) It can be seen in Drexciya's fictional country in which enslaved African Americans are reborn as water-living creatures, using "electronics to replay the alien abduction of slavery..., fictionaliz[ing] frequencies into sound pictures of unreal environments." (*ibid.*, p.84)

theories of how research in music and sound should be undertaken in the first place. From the moment he refutes the colonialist undertones so frequently found in academic theory, claiming that they “[subdue] music’s ambition, [rein] it in, [restore] it to its proper place, [reconcile] it to its naturally belated fate,” (Eshun 1998, -004) he crafts his own empirical research, turning his attention to the knowledges sounds are able to convey in and by themselves. Sonic fictions generate an inter-semiological articulation of signifiers that is critical and multilayered; they “place theory under the dominion of sonic affect, encouraging a conceptual mutation.” (Goodman 2010, p.82) Sonic fictions are always unfolding themselves in a constant sense of “could be,” in which their “inner contradictions, ambiguities, and frictions” (Schulze 2013) help craft an individual account of a sonic experience. Eshun’s sonic fictions are thus a means by which the subaltern not only speak, but also sound and unfold their knowledge as theory and culture, and find resonance in other bodies, traversing through time and space. Sonic fictions are the proposal for a radical divorce from so-called universal (metropolitan and/or Eurocentric) theories, a claim staked for looking otherwise, listening otherwise, and hence learning otherwise.

Similarly, in the introduction to *Primate Visions: Gender, Race, and Nature in the World of Modern Science*, philosopher Donna Haraway argues on the power of stories to be technologies for embodiment (Haraway 1989, p.8). In understanding both fact and fiction to be inextricably related to forms of human action and experience, she considers scientific practice to be in itself a form of storytelling, of assembling histories as "stories about stories", a "rule-governed, constrained, historically changing craft of narrating [...] historically specific practices of interpretation and testimony." (*ibid.*, p.4) She thus equates the inventiveness of fiction with the stability conferred to facts as both being part of the same *process* — that of experimenting. Thus, Haraway regards any narrative of scientific practice to be entangled with fictional narratives of social construction, mediation, inscription, observation and performance (*ibid.*, pp.6–7). These fictional narratives are stabilized insofar as they embody and enable power relations attached to certain bodies. In that sense, for her "evidence is always a question of interpretation; theories are accounts *of* and *for* specific kinds of lives." (*ibid.*, p.8, original emphasis) Haraway’s approach to this understanding places the "potent fictions of science" within the "heterogeneous space" of science fiction/speculative futures, regarding both to be facets of a same field.<sup>28</sup> In doing so, these facets are not placed against each other, but rather become able to respond to the other in a diffractive manner (*ibid.*, p. 5). This is the main reason why Haraway understands science as narrative, and consequently storytelling and fiction to be effective methods for unearthing knowledge in the world.

As already explained with the idea of the *earview*, this research revolves around regarding evidences as being but forms of storytelling. Storytelling comes in different shapes and sizes along this research’s journey, but, most of all, starts out from the understanding that **designed things shape and design back different *fictions* into the world**. In my engagement with how design works as both an enforcer and producer of colonized listening practices — dominant and hegemonic *earviews* — I felt the need to look at the types of *storytelling* design is able to convey, as well as the *sonic fictions* manifested in and by the contingency of

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<sup>28</sup> Haraway uses "SF" as a signifier for "speculative fiction, science fiction, science fantasy, speculative futures, speculative fabulation." (Haraway 1989, p.5)

listening practices revolving around designed things. In other words, in this research I do not understand fictions to be separate from facts, but rather I acknowledge that one works *through and across* the other, at times emphasizing the so-called 'factual side,' and at other times giving way to personal narratives, different encounters, and creative uses and re-appropriations. Some of these fictions create roots and grow: they are spread, tested out, and evolve into being commonly accepted (or sometimes imposed) as *facts* in society; other fictions, on the other hand, remain questioned and 'questionable,' and thereby are perceived to inhabit the realm of the *anecdote*.

### The *earview* as border epistemology

Similar to Anzaldúa's and Haraway's understanding of storytelling as a process that generates theory, in this research I constantly negotiate my relationship of subject and object within this study, my own shifting perspectives and performed identities as a Latin American doing research in Western Europe; as a cisgendered male Brazilian pursuing a PhD; as a "latino body" in the eyes of the white subject, and so on. The colonized body, Anzaldúa contends, is a shapeshifter in nature, living and speaking from the borders of different languages, identities, and knowledges (*ibid.*). This research is a contribution to a longer conversation on the limits and accountability of design practice, and therefore begs for a direct engagement with the researcher's position and its impact on the research inquiry. Thus I attempt to make these *shapeshifting* processes as visible as possible, synthesizing the "dualities, contradictions, and perspectives from these different selves and worlds"; as a border subject, in this work I also cross "other mundos" and "speak in tongues" (*ibid.*, p.3), moving away from identity politics to inhabit a space of transitions and intersectionalities. In other words, I assume a position in which I deal with my own accountability as a privileged researcher, and try not to speak for others, not to research from the position of others; rather, I attempt to stand together and in phase with the stories, anecdotes, sonic fictions, and struggles I am but an interlocutor for. In doing so, I extend this notion as a direct call for designers to engage with the political accountability of their designs and researches.

Thus in this work I set out to look at three specific types of storytelling, which I engage with in distinct forms. Focusing on a sensitive dynamics of Brazilian society — a racial and gendered problematics, hyper visible and strongly enacted by class struggles — demands a particular type of attention not to appropriate voices that are not mine and speak from realities I am not familiar with. The voices which constitute the theory of the Apparatus of Auditory Governance in this work are, from their very point of departure, plural and multiple, rather than just my own. In connecting "experiencias personales con realidades sociales" [personal experiences with social realities] across different perspectives I build a specific kind of narrative and proceed to theorize upon it to create a hybrid *ethico-onto-epistemology* (Barad 2007) as a way to produce new knowledges in the world (Anzaldúa 2015, p.6). This is evident, in different ways, in all the types of storytelling and sonic fictions I am looking at with this work. In one instance, I listen to narratives coming from encounters with designed objects in contexts that are understood to be dissimilar to those

their designs were first intended to; and I use the power of these narratives not to attest their factual relationship to theories, but rather look at and for *uses*, *misuses*, and *abuses* of designed things by these narrators and their narratives. By using these sonic fictions as a vector for developing theories, my intention is to create a space in which multiple voices are able to speak by themselves, and as such create "meaning and identity through self-inscription" (*ibid.*).

In another moment, I find stories of sound and listening by looking at how these practices are reproduced and conveyed through works of fiction found in media narratives — be they journalistic reports, promotional and advertising, or movies; the latter in particular focused on the delicate political moment Brazil has been going through since its redemocratization in 1985, culminating with the judicial and administrative Coup d'Etat of 2016 and its aftermath. In looking at how stories of listening are portrayed in specific works of media, I contrast and analyze how these auditory governances penetrate the imaginary and public discourse. Lastly, I use storytelling in my own design practice by assembling a semi-fictional scenario as an open work, and probe into the loose threads and breaking points of the stories conveyed through this micro-universe in a methodological format for design work that is recursive and mobile. This format is a mixture of workshop, listening session, and sonic fiction, and with it I expand from and observe how auditory governances are manifested and conveyed. By creating a kind of "suspended space" in the shape of a semi-fictional universe, I allow for these perceptual realities to create a form of "magical thinking", that is, the use of "external events to give meaning to my own mythmaking" (Anzaldúa 2015, p.4) without appropriating narratives from realities I am aware of but disconnected from. The creation of such a "liminal space", as Anzaldúa puts it, allows me to test the limits and loose threads of these auditory governances by performing a collective "rereading and rewriting of reality—a rearrangement of preexisting elements" (*ibid.*, p.40).

In mixing these distinct narratives and assuming them to not only to be spread along the continuum of *fact* and *anecdote* but also not exactly giving more power to one form over the other, my intention is to remain at the border of distinct *earviews*, probing into how design negotiates the tensions between divergent listening modes, sonic fictions, and material-discursive practices. Hence each look at a different form of storytelling shifts the *earview* and provide another dimension to the ideas being studied. The following sections unpack further what I mean with the creation of 'liminal spaces' and the rearrangement of reality through design. To do so, I first offer a critical reading of the limitations found in Speculative and Critical Design (SCD) — a specific approach to design research that allegedly inquiries into the loose threads the future might hold. I argue and demonstrate that SCD, rather than being critical of the status quo, ends up reinforcing coloniality insofar as it appropriates dystopian realities and colonial histories to create cautionary tales for a privileged elite. From there, I present a proposal for a decolonizing SCD practice: I describe how I use elements from different perceptions of the present in Brazilian everyday life to build up a micro-universe — the "Ocupação Algerinha". I then present "Yarn Sessions" — a format of collaborative speculation developed together with Luiza Prado de O. Martins

during the course of this research — as a method of both populating and challenging this universe by collectively performing open-ended design experiments.

The aim of this chapter is thus to cement the strategy that will be employed in part two of this dissertation. In there, I negotiate these shifting *earviews* by presenting design-driven analyses of a) objects and the contingencies engendered by sonic fictions attached to them; and b) media narratives and/or movies in which the *earview* is displaced between different audiences. I then weave these analyses together with an assessment of stories and fabulations observed and discussed in the Yarn Sessions.

### **The colonial ethos of Speculative and Critical Design**

The discipline of Speculative and Critical Design (SCD) was introduced in the UK in the early 2000s as a significant contribution to a supposedly counter-hegemonic design vocabulary. This type of designerly practice concerns itself, allegedly, with visualizing and making tangible “probable, plausible, possible, or preferable futures” (Dunne and Raby 2014, p.2), through fiction and storytelling. In fact, SCD made its first appearance as “critical design” in the late 1990s in the corridors and studios of the Royal College of Art (RCA) in London. It envisioned design as a tool for critique, and aimed to explore the metaphysical possibilities of the designed object in order to “provide new experiences of everyday life, new poetic dimensions” (Dunne 2005, p.20). Even though the idea in itself was not new — with other practitioners already undertaking similar endeavors without necessarily defining them as “critical design” — this was perhaps the first time that criticality was proposed as a deliberate attitude to product and interaction design, “a position more than a method” (Dunne and Raby 2008, p.265; 2014, p.34). In the following years speculative proposals became a strong driving force and a trademark of the Design Interactions program at the RCA – under the direction of Dunne – and a few other schools in northern Europe. Across the Atlantic, practitioners and authors such as Julian Bleecker and Bruce Sterling, as well as curators such as MoMA’s Paola Antonelli, began taking interest in these new perspectives on design; in the US the discipline was rebranded as “design fiction” — though it maintained most of critical design’s core goals.<sup>29</sup>

Despite the growing number of practitioners and the interest that this approach has garnered in the design community since its inception, the discourse in the field has remained suspiciously static. In *Hertzian Tales* (2005), Dunne passionately argued for an exploration of the metaphysical possibilities of the designed object, focusing on its potential as embodied critique, political statement or activist provocation. His proposal rejected design as a discipline exclusively focused on servicing the industry, though it was equally careful not to align itself with Marxist ideals (*ibid.*, p.83). Distancing its speculative proposals from the industry of the market emerged as the motto of Design Interactions’ output, with a good

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<sup>29</sup> It is unclear who coined the term “design fiction.” Dunne and Raby (2014, p.100) remark that even though similar in nature, design fictions are “rarely critical of technological progress and border on celebration rather than questioning.” For a comprehensive account of design fiction, refer to Bleecker (2009).

number of the program's alumni becoming mainstream references for what speculative design is able to achieve. Yet, projects framed within this approach predominantly embody an aesthetics of conspicuous consumerism within a clear neoliberal framework. For instance, Dunne and Raby's discourse constantly speaks of design as inherently tied to consumer culture and the agencies of capitalism. Their call is one for a critique of the futures "we" (as a society) make real through buying, rather than challenging the need for buying things in the first place (Dunne and Raby 2014, p.49). Whereas their famous *A/B Manifesto* (*ibid.*, vii) makes sure to differentiate their approach as directed towards "citizens" rather than "consumers," the authors reinforce in their most recent publication that it is basically through *what people buy* that futures are brought into existence (*ibid.*, p.140). Furthermore, for them, the political sphere of SCD ends where the design profession ceases its responsibility, that is, at the moment a consumer product (or a prototype thereof as "critical design") comes into being (*ibid.*, p.161).

Yet contrary to what they affirm, I argue that designers are as politically responsible and accountable for their practice as for their actions as citizens; there is no separation between one role and the other. Thus, for a practice that aims to be critical of society's encounters with technology and at the same time to inquire about political subjects that govern and circle around these encounters, SCD has thus far concerned itself only with the very "narrow assumptions" it claimed it intended to challenge. As I and others have argued elsewhere, the development of this discipline in European and North American universities has contributed significantly to engagement by both practitioners and researchers in rather classist, racist, and colonialist stances in their questions and projects (Kiem 2014, Tonkinwise 2014). Most of the reactions to these texts confirm that these stances are not only overlooked and reinforced, but also largely misunderstood as if they were a call to limit the application of these methods only to Northern-centered questions.<sup>30</sup> Indeed, when claims are made that design is a language "pretty well understood *in the west*" (Dunne in Wiles, 2014, emphasis added) and are used to justify a primary focus only on so-called 'first-world issues', the constant and complete erasure of non-Western manifestations of design continues. In so doing, I argue, SCD acts as the mildly-dystopian wing of the status quo, an asset *of* and *for* coloniality; instead of questioning hegemonic discourses, it depicts futures in which the systems of the colonial matrix of power are still intact, only glazed with thin layer of middle-class dystopia. Modernity, capitalism, patriarchy, and whiteness are assumed to be not only 'universal' or 'neutral' modes of existence in the world, but also to continue to be the pillars upon which the future must be built.

In engaging critically with Speculative and Critical Design, the limitations of this approach to design research became clear. Particularly troubling was the assumption that 'the' future is that which has to be constructed from a supposedly homogeneous present. As a Latin American researcher living in Western Europe I felt already that our futures were underrep-

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<sup>30</sup> Raewyn Connell also observes this attitude in the social sciences as a common excuse for the narrow perspectives of "Northern theories" of knowledge. (2007, pp.10–18).



resented in SCD's own narratives: it seemed that the structures of power that relegate the Global South to be the other of European modernities was never challenged or questioned, but rather taken for granted. If this realization has left us already in a state of misplacement within design's own projected futures, I felt this approach would be even more disconnected from the realities I come from.<sup>31</sup> The format with which SCD works is partly responsible for these shortcomings. By relying on representation as its driving force, SCD projects are consumer goods displayed in a "market place of ideas." (Kiem 2014) The exhibition is the language of the absolute majority of these projects, and galleries, museums, and universities its strongest funders and supporters. However, despite what Dunne and Raby (2014, p.140) claim, these are not spaces that allow for diversity; instead, they are strongly segregated by social and economic markers such as literacy, class, or economic power. These 'invisible markers' not only limit the scope of SCD's audiences, but also assign clear roles: the visitor, the object, and the author[ity]. In enforcing a disconnection between bodies and worlds, through the device of imagetic representations, political complexities and accountabilities are flattened into a picture of an estranged world, of *somewhere else*, disengaging observer from reality observed (Mitchell cited in Kiem 2014).

### **Speculative Design as a device for re-colonizing the past**

Coloniality in SCD is not only perpetuated by prefiguring futures, but also by rewriting pasts. For instance, Elliott P. Montgomery and Chloe Brillatz's work "The Non-Earth State" (2013) consists of a "performative reenactment of research conducted by geologists August Haquet and Alex Milfort, who in 1996, proposed the notion that portions of Earth are not native to our planet." This project locates its "portion of Earth" in Brazil and presents evidences that the geologists, basing themselves on the "profundity of their discovery" (*ibid.*), wanted to expropriate a piece of Brazilian land. The work bases its central point in a specific part of the world that is not only physically distant from the designers' own reality, but also perceived as exotic enough to have its history re-written by a "discovery" of "interstellar matter". In this process of distancing and othering, the violent act of expropriating land is rendered as performance. While one could argue that their work embraces this colonial move as an act of irony or sarcasm, there is a sensible historical and ontological problem when European designers re-enact the appropriation of native land. This act of "overidentification" as mimicry, as Mexican artist Pedro Lasch (2012, pp.27–29) argues, cannot be a critical endeavor when the colonizer does not do anything but to act exactly like himself.

In these terms, the "Non-Earth" in Montgomery and Brillatz's Brazil is not metaphorical but rather literal alien matter. A "no-one's-land," waiting to be claimed as soon as European researchers — geologists or designers — "discover" something that supposedly justifies expropriation. Historically, Europeans have used similar rhetoric to invade "portions of Earth" – Brazil among them — and assassinate entire populations; however, this historical

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<sup>31</sup> Gonzatto et al. (2013) comment on this misplacement by using their own teaching practice of critical design in Curitiba (Southern Brazil) as an example. Though what is meant with this commentary is more geared towards the political struggles Brazil has been facing since the uprisings of June 2013 and culminating with the consolidation of a Coup d'Etat in 2016.

fact did not seem relevant to the project's narrative. According to the story, the geologists' "legal claim" for the ownership of this piece of land was not further pursued — not because of its conceptual absurdity (even for a piece of fiction), nor due to any thorough response from the Brazilian Congress, but rather to "Haquet's diminishing health" (Montgomery and Brillatz 2013). The Brazilian side of the story — that is, the perspective of those facing the threat of re-colonization — is not part of the narrative devised by the authors; such a decision not only silences any attempt of refusal or resistance, but also depicts the Brazilian government as a peaceful savage — a regular trope in [colonial] fiction — mesmerized by the colonizer's alleged superior intellect and scientific apparatus. In other words, the project's description leaves enough room for speculation that the geologists' endeavor might have been successful otherwise. Echoing Quijano (2000, p.555) once again, in the project's view Brazilian land remains, as of 1996, "closer to nature" than Europe, as alien as when the Portuguese first invaded and found enough goods to pillage; and Brazilians are "objects of study [...] dominable and exploitable." This time, however, such act becomes a performance endorsed by the colonizer's institutions — the Imperial College in London — without any further consideration of the profound historical and geopolitical implications this narrative may have. Coloniality is, in their speculation, validated through a re-enactment of and direct homage to colonialism.

Confining SCD to the realm representation exempts designers from debate. It undermines contestation and critique because it sets clear boundaries, having the gaze — as well as a normative *earview* — as their conductor. The visitor — the observer and listener — is only able to project herself onto uncanny futures and try to fit into the scenario that is already there, to watch as the story unfolds before her — "a form of window shopping", as explained by Dunne and Raby (2014, p.140). There is no space for questioning where that scenario came from, what sequence of events preceded it; history is already written, the future already secured "in a specialist shop selling state-of-the art material culture" (Dunne 2005, p.86). There is only space for one narrative — the one devised by the designer; no rough edges, no place for those who cannot afford to have their stories up for display. A future secured is, after all, a future that does not need to be deeply debated.

Such an assessment demands a more profound reflection on the designer's own position in the world; conversely, it evidences the complexities of political/colonial issues SCD tends to blissfully ignore and, in doing so, perpetuate coloniality. Negotiating these complexities and making them research assets, so they can be evinced, challenged, and eventually dismantled, requires designers to create "a split in awareness" (Anzaldúa 2015, p.28) to allow a "divergent thinking" (Anzaldúa 2007[1987], p.101): the ability to navigate between hegemonic and non-hegemonic worldviews, designing "an in-between space, el lugar entre medio." (Anzaldúa 2015, p.28).

Moreover, when design practices uncritically comply to the agenda found in most Eurocentric/northern science fiction, futures are secured predominantly for those already privileged by the past. Kodwo Eshun (2003, p.290) reminds us that "[...] science fiction was never

concerned with the future, but rather with engineering feedback between its preferred future and its becoming present.” The underprivileged, in contrast, are kept “erased from the future”, reenacting histories of serfdom and genocide, “hidden from view in the barrios, ghettos, reservations, and prisons of the present.” (Ramirez 2008, p.188) Thus design must learn from alternative practices of futuring, such as latin american Magical Realism, Afro- or Chicanafuturism (Eshun 2003; Ramirez 2008). These *other* futures acknowledge the past as being much of a speculative nature as the future might be, and as such understand the present as the only possible site in which both directions can be redesigned. Being in themselves mirrors of decolonizing struggles, they offer counter-hegemonic ways of devising the future towards a plural notion of preferability that is not confined to a single narrative. In the next sections I present how I dealt with these complexities in this research, and my own method for finding and engaging with the Apparatus of Auditory Governance.

### Re-framing Speculative Design as a "carrier bag" of fiction

Speculative and Critical Design, as it is usually practiced, offers its audiences a linear trajectory onto the future. Usually and largely exemplified by a conical shape,<sup>32</sup> the point of departure — the present — is depicted as being the same for each and every actor — designer, observer, designed things (Fry 2011, Tonkinwise 2014). Similarly, it is assumed that, by starting from the 'same' present, we may all arrive in a 'same and preferable' future (Dunne and Raby 2014). In incurring in such a narrow view of how different bodies live different realities, SCD is able to create but ready-made, stories, things to be observed, perhaps even reflected upon for a brief moment. The disconnection between designer and audience is thus cemented: the designer, as the enlightened subject, speaks and exhibits; the silent spectators of the audience, merely listen and observe, and try to find themselves in that narrative. Audiences become the passive subjects of a future already speculated and pre-packaged for them, representing but a single angle from a specific present — that of the author — albeit dressed and sold as if a universal tale of the future.

The story of "Ocupação Algerinha" (*Algerinha* occupation) was designed to function more as a *container* of possible experiments rather than self-sufficient, linear narratives. As a semi-fictional universe, it resembles what science fiction writer Ursula K. Le Guin has named "carrier bags of fiction"; recipients of stories whose purpose is "neither resolution nor stasis, but continuing process." (Le Guin 1996, p.153) For Le Guin, fictions that move away from linear, unidirectional, arrow- or spear-like narratives, entail "transformations and translations", loose ends, "far more tricks than conflicts", and "far fewer triumphs than snares and delusions". (*ibid.*) This is what confers these carrier bag fictions their relational quality, for they focus on the acts and consequences of collective actions rather than individualized tales. Thus, stories like these are more prone to crook, bend, or sometimes even fail completely, and therein lies their engaging quality. Focusing on relations rather than ends allow for multiple visions of reality to emerge, for divergent accounts of what

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<sup>32</sup> I am referencing physicist Joseph Voros' *Futures Cone*, recurrently employed by speculative and critical designers to position their projects — as seen, for instance, in Dunne and Raby (2013, p.5).

Enraged by both the Police and media obliviousness to the shooting, activist groups within and outside Vila Algerinha take the streets of the surrounding neighborhood in protest. They occupy the streets; Military Police's actions are not fully effective.

After seven days of protests and violence, Military Police is able to lead the protestors to a dead end near the occupation's borders. Trapped in a corner and away from journalists, a massacre ensues. Protesters are shot dead by the Police, which argued "self-defense". Many community leaders go missing.

A 45-year old man from the neighborhood surrounding Vila Algerinha shoots three teenagers at the entrance to the occupation. Witnesses say the man was arguing with the group about their loud music. Two of the teens die from the wounds.

This man might have been a member of the Neighborhood Watch.



Start from the center, then downwards in clockwise motion.

— Historical data supported by "official" accounts and facts.

— Complementary facts and data about Vila Algerinha and its story.

— Speculations based on evidence obtained from the Mixtape and the Game.

A Neighborhood Watch vigilante group is created to target the occupation's "problems". Taking advantage of a recently-approved law allowing civilian use of non-lethal sonic weapons, the group buys a large batch of LRADs, Mosquitos, Gunshot Detectors, and Ultra-directional Microphones.

See e.g. PEC2333/21

The Neighborhood Watch might have been an accomplice to the Police, using both high- and low-frequency oscillators to ungroup and move protesters towards the dead end.

A few weeks after the massacre, a fire destroys the entire community. Official accounts report it as an accidental fire originating from within the occupation. Survivors and new community leaders, however, claim it was in fact an arson.

Nevertheless, families disperse and divide themselves into different groups; some accept governmental aid, others start political movements of their own and begin occupying other spaces.

## VILA ALGERINHA VIVE

A Timeline of Events

"Vila Algerinha" (São Paulo, Brasil) was the largest occupation of Latin America during the housing crisis and after the series of Coups d'Etat all over the continent.

Opinions and perception about Vila Algerinha were divided: one side wanted the families evicted, linking the occupation to crime rates, drug influx, and noise pollution. Other groups were interested in giving the occupation proper infrastructure, turning it into a neighborhood.

Initial size: 3170m<sup>2</sup>  
Population: ca. 450

Final size, five years later: 1,33km<sup>2</sup>  
Population: ca. 121,250

"Ruidografías" was a participatory design workshop commissioned by the city council to take place at Vila Algerinha. The research outcomes were later used to develop controversial "smart" anti-noise policies targeted at the occupation's inhabitants.

See e.g. Decree 1035/22  
a.k.a. "Lei do Silêncio Inteligente."

A musician, a survivor of Vila Algerinha or descendant from a resident, releases a Mixtape as both a testimony and homage to the story of the old occupation. The sound compositions tell a story that differs significantly from the official one: not accident, but political and racial erasure.

At the same time, children from the survivors retell the story of the "seven-day riots" of Vila Algerinha in the form of a playground game's routine. A curious, small sound-making object might position the story of the massacre in a different light.

Both objects, combined, form the base of our speculations. They help us dig deeper into the story and find alternative narratives of struggle and resistance.

The Mixtape and the 3D-Printed Toy end up in a box, together with other assorted memorabilia, sold by the owner's daughter to a small pawnshop in the countryside of São Paulo state.

happened or what may happen to be able to live together, and, more importantly, for more than one person to be able to tell the story, to see herself represented in that particular worldview.

Following this route, the story of "Ocupação Algerinha" does not have a clear beginning or an end, but rather several ramifications that expand from, as well as repeat, factual and anecdotal events. Time might still be perceived as linear, but where exactly one event begins and another ends constantly shifts every time the story is told. The story above presented is the amalgamation of several micro-stories that were developed within and in parallel to the design experiments undertaken using the occupation as their background. Hence, not all points that make up the story of "Ocupação Algerinha" are filled up, and this was deliberately done for two reasons. The first being the fact that such missing gaps opened enough room for contestation, alternative timelines and de-routes, something that was actively encouraged in each and every experiment undertaken within this story. I treated this speculative story as a speculation in and by itself; much like in our historicized world, facts might have been deliberately distorted or fully omitted so as to fulfill a narrative with specific political goals. The second reason is due to the fact that linearity was also deliberately dismissed in favor of more blurred boundaries between fact and fiction — as explained before. In other words, this universe was constructed by misplacing "real world" facts with those that pertain to the story, often changing time and place where they happen but at the same time maintaining their connection to the political realities being portrayed.

### Fragments of "Ocupação Algerinha"<sup>33</sup>

The story and timeline of "Ocupação Algerinha" was developed in close collaboration with game designer Rafael M. C. Arrivabene and Luiza Prado de O. Martins. It was sparked by an informal conversation with Rafael on the possible intersections between speculative design and play; he was interested in the exploration of games as cultural devices, and I introduced him to some practical aspects of speculative design — namely the use of props and stories to investigate the possible development of technologies and its political implications. We started discussing the role of playground games may play in the future, if at all — particularly considering questions of class and the social stratification of Latin American societies. We also thought about how music and sounds within playground games often reproduce prejudices and/or struggles that are sometimes perceived to be 'invisible' in society, and its ramifications as becoming violent acts. This led us to speculate on the probable role of sonic violence for children's interpretation of reality in a speculative, not-so-dystopian future of Brazil. Thus the first installment of the "Ocupação Algerinha" was developed: a playground game called "O Jogo do Tarréfono" ("The Game of *Tarréfono*"), with *Tarréfono* being a word invented by us to be the main object used in the game.

Fig. 9 (next two pages): Detailed timeline for the story of "Ocupação Algerinha".

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<sup>33</sup> The "final" version of the story of "Ocupação Algerinha" can be found in Appendix One of this document.

The very first description we came up with for this game already framed aspects that were kept until the very end: the game routine would tell the story of an occupation that was forcefully and violently evicted; that this story would be uncovered (or re-discovered), initially, through the rules and devices of a game; that this would be presented in an experimental format mixing workshop and play session. This is the first description we crafted for this project:

Can we better understand (a) history through play? How can we observe the changes through which society undergo, when certain aspects become embedded in normality? More than that, how can we get a glimpse of the power relationships at play, through what is normatized and normalized as play?

This project is a game, a workshop, and a piece of speculative fiction at the same time. The scenario is set as a piece of media archeology, done through a process of re-enactment. However, the past being observed here lies already in our future. So there are two leaps we must take: first to a distant tomorrow, in which we, as inhabitants of it, try to find out the hows and whys our future society is the way it might be; second, “back” to the near future, in which a certain history comes into the scenario and becomes ordinary.

In that sense, we can start by asking: whose history is true history? Can we trace back, through play, the precise motives for a certain event? If so, who is telling this story, how, and with which intent?

Rafael is a talented game designer, and a long time friend. We have discussed every aspect of this story carefully and thoroughly, from the social and political context to the minutiae of the game rules. He helped write the timeline of events and developed the core rules of the game. He also did a few play tests in board-game form of aspects which were not clear whether they would work or not. To create this micro-universe, we started from imagining the situation in which we — assuming our roles as the initial narrators — would have come across this scenario. As narrators, our stance had to be seen as crucial: we needed to truly believe in the story we’re telling the audience, but we have to leave enough room for doubt and discussion of what is real, what is a hoax, what is fact and what is pure fiction, even if said fiction is already within a given set of speculation. With that in mind, a few aspects already stand out: the use of role-play as a crucial device to suspend disbelief within the workshop setting; the “evidences” would leave enough room to be mistrusted if the case need be; and the attempt to make a story come to life only by analyzing the traces it left. This all relates to key issues in SCD practice, the first being the acknowledgment that not only the future is speculative, but also the past, and both are constructed in the present. Secondly, the fact that suspension of disbelief must be shared equally among workshop-leaders and audiences, so that the story can be at the same time real and fictional for all parties involved. This also pertains to not trusting or taking for granted any of the props presented in the session.

The universe of the game evolved to a point in which it became bigger than just the play routine. We decided that we needed to populate the universe with faint evidences that would only hint at what and how things may have happened within and outside this occupation, and that the occupation itself needed a story. To do so, we designed several pieces — which we called "fragments" — that help tell the story from several and often contradictory points of view. These include a broad range of designed outlets, from video to graphic pieces, from sound to 3d-printed objects. These fragments were divided into several categories such as: personal accounts in the shape of interviews and reports; news pieces from journalists, bloggers, social movements; 'found evidence' such as online videos, audio files sent via messaging apps; and designed objects which pertained or relate to the occupation, its story, its residents, or its continued existence and memory. While these pieces were directly connected with the story of the occupation, we have also designed a few 'propositions' that were presented as being part of our own speculations as to the connection between our findings and an alternative story of the occupation and its demise. Thus the final description for the "Ocupação Algerinha" project reads as follows:

While browsing for old records at a pawnshop in the countryside of São Paulo State, Brazil, we have come across a small box containing an old Walkman, a tape, and a curious little 3D-printed object. Intrigued by the apparently anachronistic character of its contents, we ended up buying the box and taking it home. The tape, labeled "Algerinha Vive" ("Algerinha lives on" in English), revealed a universe in the shape of short compositions, partly documentary and partly aesthetic. The 3D-printed object, however, was very cryptic; we took a picture and posted it in a game design discussion board, in an attempt to get some clues as to its origins and uses. It ultimately led us to a person whose mother had a similar object, and from her we learned about a particular playground game, in which sounds made through and by the object played an important role. Both objects trace back to the same, long-forgotten place: Vila Algerinha, the largest occupation in Latin America after the housing crisis and the series of Coups d'Etat all over the continent.

The "Ocupação Algerinha" (*Algerinha* occupation) or "Vila Algerinha" (*Algerinha* neighborhood), formerly known as "Ocupação Dona Algerinha" (*Mrs. Algerinha* Occupation) was one of the biggest occupations in South America in the first decades of the twentieth-first century. During its five-year existence, the occupation was home to around one hundred and twenty people, distributed over an area of approximately one thousand and three hundred square meters in Southeastern Brazil. The exact origins of the occupation are unknown, but it is believed that the families were initially part of a transmigrational group in Latin America which, in itself, was dissident from a larger group of families directly affected by the housing crisis that followed the wave of Coups d'Etat all over the continent. Due to increased incentives to real estate markets, progressive gentrification in big cities, and the suspension of most social housing programs in South America, thousands of families — many of whom also unemployed — were forcefully expropriated from their homes, and hence started waves of peregrination and demonstrations all over the continent, particularly in the Southern Cone and Brazil.



While the story of the occupation is easily traceable via news pieces and media reports, we believe that the sonic narratives of both tape and game construct an alternative set of events that led to the occupation's tragic demise and its aftermath. More than that, we believe that these other stories directly confront the "official" account we both knew and found online. However, many links are missing from what connects the mixtape and the game together, and for how long they have been in that box. Our own assembled story is, after all, as speculative as we found the "official" one to be.

This session is part of a series of speculative projects intersecting workshop, performance and storytelling. In it, participants will be presented to a series of evidences — some factual, some fictional, some none of them — and will use them as starting points for new narratives, new objects, scenarios and social configurations. By doing so, the untold past, the immediate present and prospective futures will not only intermingle but also be collectively designed and discussed.

In the end, the project has more than twenty fragments altogether; some of these are connected to specific events and therefore were designed with the sole intent of illustrating a specific point of the story, while others are more general statements that helped shape the context in which the occupation would exist. Among the fragments, we have the *Tarréfono* itself: a broken, 3D-printed toy measuring 7x7x4,5cm; seven fictional news stories detailing and indirectly telling what may have happened with the *Algerinha* occupation; one descriptive *WhatsApp* audio message from a person who has just witnessed children playing "a loud and very weird game" on her street.<sup>34</sup> She then assesses who are these children, saying that "they do not belong here;" one audio interview with the person whose mother allegedly owned the *Tarréfono*. She tells how her mother used to describe the object and the game to her, and warns the interviewer that the object is broken and missing one crucial part; she is also the one who tells the researchers the actual name of the object.<sup>35</sup> We uploaded to YouTube a "found video" of, allegedly, an acoustic weapon in operation;<sup>36</sup> this video is assumed to be recorded from inside the "Ocupação Algerinha". We also designed an animated schematic of the game rules, as imagined by the researchers based on their findings, as well as two possible sonic reconstructions of the sound of the *Tarréfono*.<sup>37,38</sup>

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<sup>34</sup> <https://soundcloud.com/partido-alto/audiomessage> (accessed January 12, 2017).

<sup>35</sup> <https://soundcloud.com/partido-alto/interview> (accessed January 12, 2017).

<sup>36</sup> <https://www.youtube.com/watch?v=p9Ts908vai0> (accessed December 12, 2016).

<sup>37</sup> <https://soundcloud.com/partido-alto/rec-1> and <https://soundcloud.com/partido-alto/rec-2> (accessed January 12, 2017).

<sup>38</sup> The animated version can be found at [http://a-pare.de/temp/tarrefono\\_PT.gif](http://a-pare.de/temp/tarrefono_PT.gif) (accessed January 12, 2017).

### Speculation as rehearsal: Yarn Sessions<sup>39</sup>

When SCD moves away from being a directional narrative to take the shape of a carrier bag, the narrative of the Self, the individualized actor, becomes but one item in a larger container in which other selves and trajectories other than linear are able to coexist. Thus reality is re-organized collectively, and the "audience" is invited to speak in the first rather than in the third person; dialogue replaces the monologue of fiction (Anzaldúa 2015, p.35). A dialogue implies flux, exchange, negotiation. "The world is already constructed (by the consensus of human beings) when you come into it", Anzaldúa reminds us; you "can reconstruct the world [... but] because your reconstructions are always in progress, the world, society, and culture are always in compositional/decompositional states." (*ibid.*, pp.41–43) However, the perception of how compositional and decompositional futures are balanced is inextricably bound to how which bodies have the world, society, and culture secured, and which do not.

Brazilian playwright Augusto Boal argues that finished performances are stories made *by* and *for* the bourgeoisie, depicting *their* reality; only those whose futures are secured are able to display them as completed (2008[1979], p.120). Following Boal's thoughts, in this research I expand the methods commonly applied to SCD project in order to embrace incompleteness and flux — or in Boal's words, **the rehearsal, not the spectacle** (*ibid.*). Only in so doing that multiple, often contradictory realities, knowledges, pasts and futures can co-exist. Speculation needs to be enacted in transient and liminal spaces, in which different perspectives yield loose threads for exploring the future, or an amalgamation of untold pasts and uncertain presents. This requires, of course, a substantial change in the strategies used in SCD. First, it becomes clear that the exhibition format cannot attend to those needs; thus, the act of speculating must shift from static, self-contained narratives to dynamic, open-ended collaborative projects.<sup>40</sup> Second, the authors of an SCD project need to be physically present, to become a part of the story, to acknowledge the fragility of their versions of the future, and, more importantly, to make themselves accountable for the debates that may emerge and to their own positions as authors. They need to move between roles, negotiating the repercussions that their actions and ideas have in the worlds of others, and understanding that these worlds may entail knowledges that directly confront those of the authors or other participants.

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<sup>39</sup> This section was written in collaboration with Luiza Prado de O. Martins as part of the text "Designer/ Shapeshifter: A decolonial redirection for Speculative and Critical Design," to be published in the upcoming book "*Tricky Design: The Ethics of Things*".

<sup>40</sup> The exhibition can be seen as one extra instalment of a project, rather than becoming its main goal or final form. For instance, "Ocupação Algerinha" was exhibited from November 4 to December 11, 2016, as part of "Climactic: Post-Normal Design" at the Miller Gallery of the Carnegie Mellon University School of Design. Only two fragments — the 3d-printed toy and the Mixtape — were exhibited, and the description emphasized the project's incompleteness and the open-endedness of this micro-universe. More details on the exhibition can be found at <http://millergallery.cfa.cmu.edu/exhibitions/climacticpostnormal/> (accessed November 4, 2016).



Fig. 10: The *Tarréfono*: A 3D-printed toy/sonic object.

The fragments we created for the *Algerinha* story were not immediately placed in an exhibition. Rather, they were constantly opened up, tested, used, misused, replaced and misplaced, by participants of collective storytelling sessions. These "Yarn Sessions," as we called them, were developed in collaboration with design researcher Luiza Prado de O. Martins; the name stems from *tricotar*, a popular saying in (at least in the southeastern part of) Brazil that means on the one hand to *yarn with thread*, but on the other to engage in long, open-ended conversations and gossip. Similarly, according to the Oxford Online Dictionary (n.d.), "to yarn" means to "tell a long or implausible story". It is also a "way oral-based cultures use stories and conversation as a process of making meaning, communicating, and passing on history and knowledge" (Terszak 2015, p.90). Yarning is a method of generating knowledge about complex matters through "living engagement" and "relational patterning" (Sheehan 2004, p.38). In other words, it is an understanding that individuals can only possess a fraction of knowledge that directly relates to their personal engagement with said knowledge; by negotiating the relations among every individual's portion of knowledge, a group is able to extend their perspective to a collective one, while respecting the fact that a collective worldview implies diversity and allows for contradictions (*ibid.*, p.40).



Fig. 11: Fictional news report on the forceful eviction of the *Algeirinha* occupation.



Fig. 12: Fictional news report on the massive sale of Long Range Acoustic Devices for domestic use.

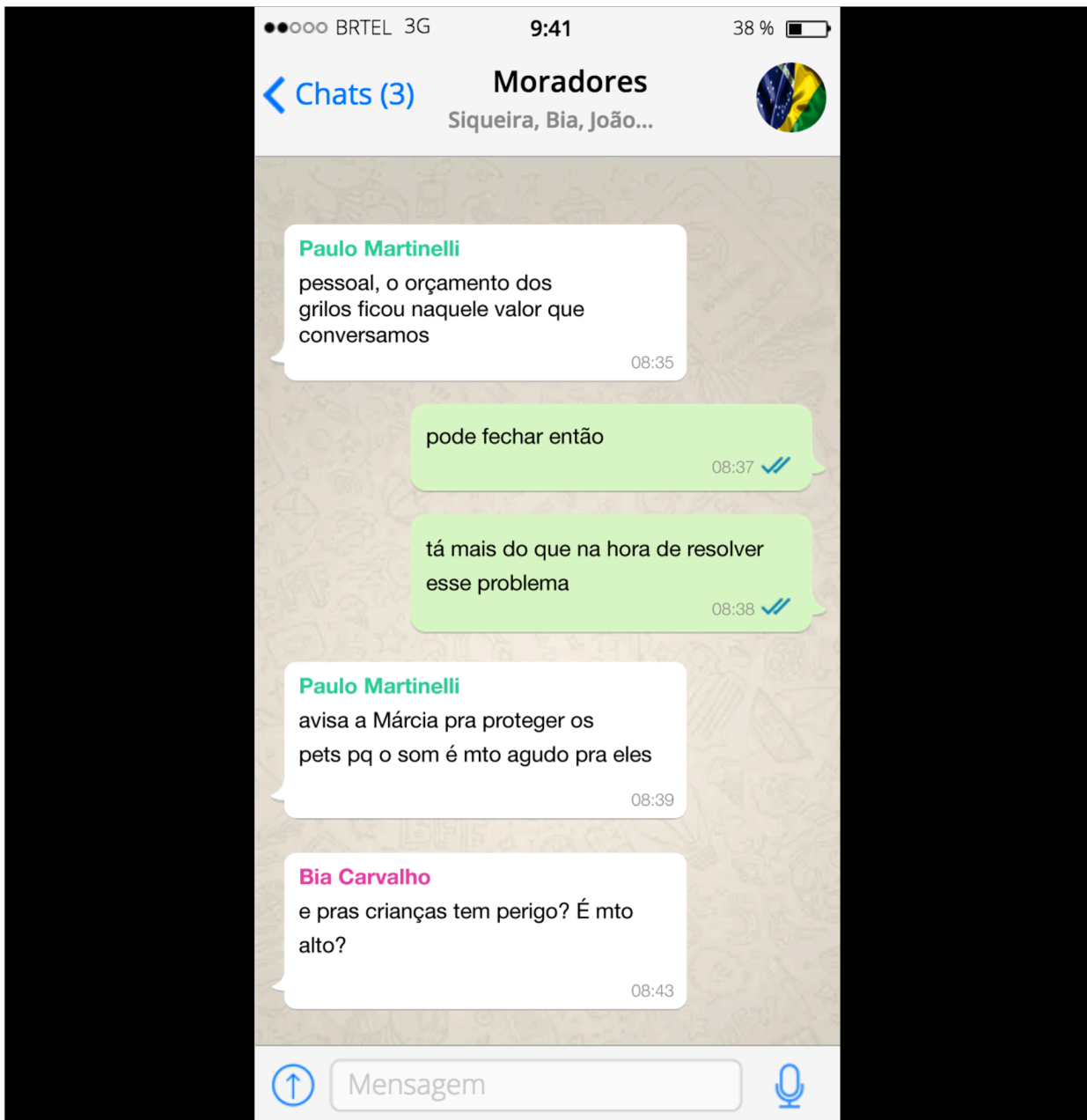


Fig. 13: Screenshot of a fictional *WhatsApp* chat: a group of neighbors discuss buying *grilos* (crickets), which would be a euphemism for Long Range Acoustic Devices.

Yarn Sessions are not workshops, nor theatre pieces; they cannot be understood as seminars or courses either. They are, in fact, the projects themselves, in which the process of speculation unfolds collectively, simultaneously, and may or may not reach a common point. Differently from Participatory Design (PD) sessions, in which the goal is to "design for use before use" (Ehn 2008, p.93), Yarn Sessions do not seek to produce a fixed or a set of fixed outcomes but rather to devise paths on which to go forward together. Hence Yarn Sessions are to be understood not as *participatory* nor *collaborative* design endeavors, but rather as a pedagogical framework which uses storytelling as its main device. The tradition of PD as a practice connected with struggles of workplace politics in 1970s Scandinavia restrains the effectiveness of the approach to market-led agendas and in turn sustain, rather than effectively challenge, neoliberal desires (Keshavarz 2016). While PD has been of recent consistently employed as a method for generating less friction between usual, hierarchized design

processes, the fact that the power to decide upon "identifiable stakeholders within an organisation, paying attention to power relations and the empowerment of resources to weak and marginalised groups" (Björgvinsson et al. 2012) still lies in the hand of privileged designers, is what prevents Yarn Sessions to be considered a form of Participatory Design. In fact, when Participatory Design concerns itself with promoting political debate by balancing different power structures, it still does so only within very controlled spaces with privileged stakeholders.

Listening for how knowledge and understanding is produced across difference — what Walter Mignolo calls a "pluritopic hermeneutics" (2003) — breaks with the usual claim of design to be a transposable and universally applicable endeavor. This mode of understanding the world allows for storytelling as a form of "political intervention" rather than relying on principles of "cultural relativity or multiculturalism" (Mignolo 2003, p.15). Thus, instead of designing *for* or even designing *with* — narratives much found in the work of socially-oriented, Participatory or Co-Design, the type of work proposed by Yarn Sessions is that of, to paraphrase Vietnamese-American scholar and filmmaker Trinh T. Minh-Ha, designing *nearby* (Minh-Ha cited in Chen, 1992). In referring to her own film work as a way of "speaking nearby", Minh-Ha argues for

a speaking that does not objectify, does not point to an object as if it is distant from the speaking subject or absent from the speaking place. A speaking that reflects on itself and can come very close to a subject without, however, seizing or claiming it. A speaking in brief, whose closures are only moments of transition opening up to other possible moments of transition [...] (*ibid.*)

In that sense, Yarn Sessions do not promote participation as a form of agonistic politics (Mouffe, 2009; Björgvinsson et al., 2012; DiSalvo, 2014), nor claims to create space for dissensus as a placeholder for a plurality of perspectives. Instead, Yarn Sessions start out from diverse worldviews and in so doing promote diverse and, more importantly, divergent outcomes. These sessions advocate for and sustain a type of engagement which has in speculation and collaboration but a starting point, not so much as a form of enacting politics but rather as a pedagogical tool for political literacy. As argued by design researcher Mahmoud Keshavarz,

Participation based on an ontological understanding of design and politics [...] is about how taking a part, sharing a part or acting a part in an already partitioned dynamic environment can point to various unrecognised or less recognised power relations and positions involved in any partitioned space produced by any form of participation [...] Dissensus, unlike designers' agonistic pluralism is not something to be planned, programmed or even "workshopped" [sic] and prototyped. (2016, pp.104–5)



Fig. 14: Fictional news on the Police report about the fire in *Algerinha*.



Fig. 15: Fictional news describing the reaction from local leader to the Police report.

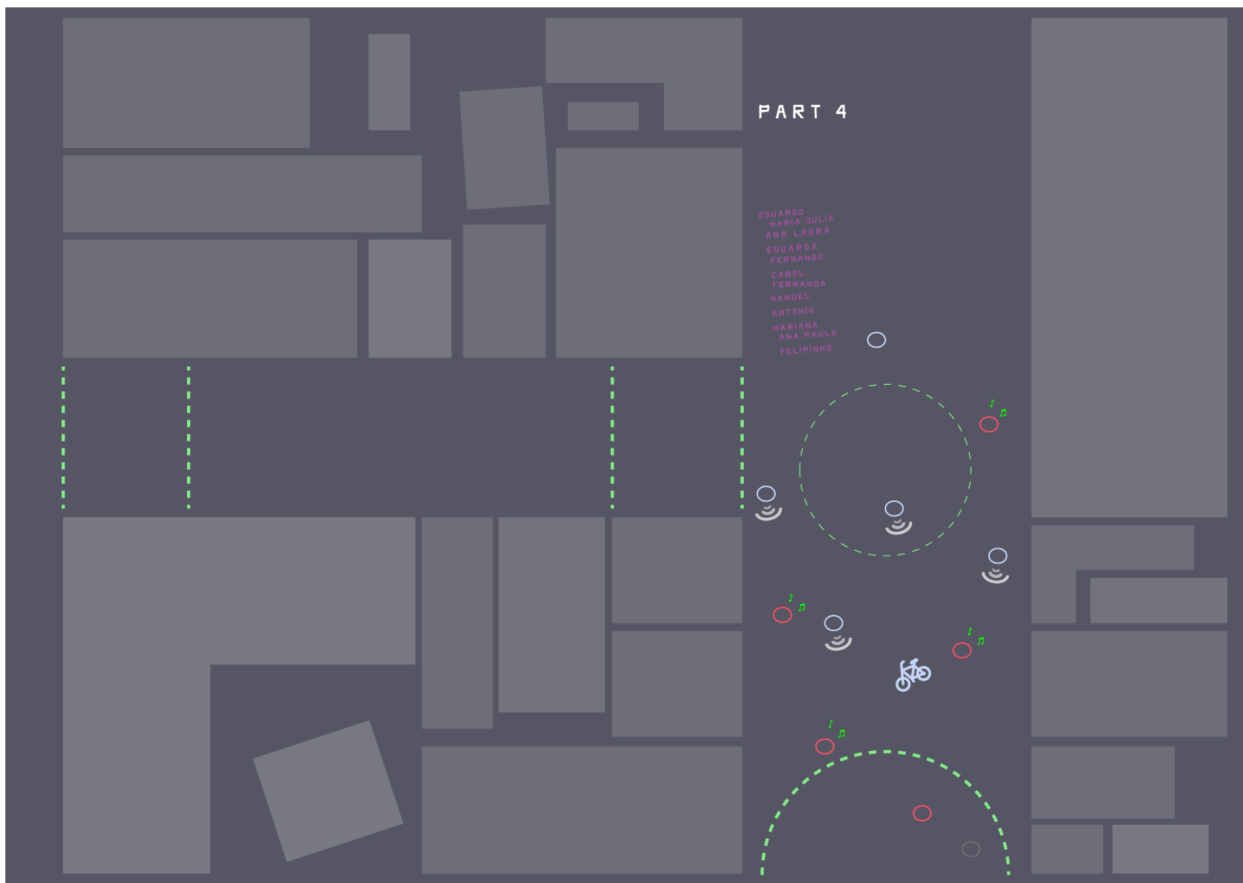


Fig. 16: Still from the animated schematics designed to depict a possible routine for "O Jogo do Tarréfono."

In this mode of performing design work, the designers cease to be mere observers and become themselves participants of the action, assuming a "constant movement [...] between the moments of discontinuity of past and present conceptual frameworks." (Mignolo 2003, p.329) While the story of the *Algerinha* occupation might be immediately perceived as fictional — something that did not necessarily happen throughout the sessions — it was nevertheless filled with all too familiar, real-world aspects. By suspending time in a narrative that is "nearby" enough to the ones of the 'real world,' we use speculation as a way to explore the possibilities of disrupting with the order of things; and, more importantly, we actively encourage our participants to use these explorations as platforms from which to start identifying and acting on the political as an everyday struggle.

In the context of this research, these Yarn Sessions aimed at using the *Algerinha* story as a platform upon which conversations, stories, propositions, and debates in and around the themes tackled by the story — racism, classism, migration, violence — all having sound and listening practices as the main threads of the narratives. Participants were brought into a space where not knowing anything for sure allowed for more creative and decentralized debates and propositions to emerge. Similarly, there is no 'main character' or 'hero' in the story of *Algerinha*; people are presented as 'nodal points' of the events that propel the story, but their actions are never given center stage in order to avoid misguided assumptions of empathy or moral judgements about the occupation and their residents. This goes against the usual narrative of social and co-design which often relies on the creation of 'personas'



for drawing empathic responses from participants (see e.g. Brandt and Grunnet 2000). In doing so, we promote a type of material-discursive engagement with these themes that seek to evince the problems with their very 'taken-for-grantedness' as fixed sets of designed things, systems, and policies. These engagements, intermingled with the other types of storytelling analyzed in this research, will give the grounds for developing a theory of the Apparatus of Auditory Governance.

### "Ocupação Algerinha" as a set of Yarn Sessions

The story of "Ocupação Algerinha" was constructed collectively within each Yarn Session, using the fragments as 'faint signals' to which participants were asked to respond to and fabulate upon. To help organize these fragments for every session, we created three distinct 'projects' — meaning parts of the story in which we decided to have more detail and more fragments relating to. The aforementioned "O Jogo do Tarréfono" became a project of its own. We then imagined that the city administration would have commissioned a week-long, social-design workshop to take place within the occupation as a public-private partnership developed in order to deal with complaints over the alleged noise coming from inside *Algerinha*. To convey the idea of this fictional workshop, which we named *Ruídografias* (roughly translated as "noiseographics"), we designed a pair of earbuds to be a prop for a set of binaural microphones; an 'augmented kite' equipped with ultra-sensitive microphones and a micro-controller; and a 'map' which depicted the frequency bands that would have been measured by these devices during the workshop.<sup>41</sup> Lastly, we re-purposed all the sonic material generated by the other fragments and crafted "Algerinha Vive": a four-track, eleven minutes-long mixtape of 'uncertain origin', which is believed to retell an alternative history of the last days of the occupation.<sup>42</sup>

More importantly, these projects were also shaped and informed by anecdotes and fabrications collected and discussed together as the project was placed within Yarn Sessions. In total there were five Yarn Sessions of the *Algerinha* project, held in four different countries – Brazil, Germany, Switzerland, and Croatia. The choice for these specific places was more due to interest from the parties involved than anything else; the intention was to shift geopolitical contexts as much as possible so as to get a larger variety of backgrounds and responses. Average attendance for these sessions were around thirteen people, with the lowest attendance being seven participants, and twenty at the largest; having a gender balance was enforced in every proposal and call for participation, and luckily four of the five sessions had a well-mixed environment in terms of gender. Participants were usually from the same countries in which each session was being held, with the exception of the fourth installment, which had a more balanced group of both Europeans and non-Europeans. Even though the story of "Ocupação Algerinha," which functioned as the igniting device for the sessions, is set in Brazil, only a few of the participants were Brazilians or Latin Americans – with the obvious exception of the session held in Brazil. Due to the contexts in which ses-

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<sup>41</sup> These materials are shown in detail in chapters six and seven.

<sup>42</sup> <https://soundcloud.com/partido-alto/algerinha-vive> (accessed December 15, 2016).

sions were booked — usually within specific events such as conferences, summer schools, or lecture series — professional and/or academic background of the participants was heavily oriented towards design, sound studies, or arts. This enacted a specific — and unfortunately constrained — cut as to the diversity of the participants in terms of class: the absolute majority of them were from at least a lower middle-class background and had access to higher education, at least in the Bachelor level. I discuss these constraints and their implications for both the Yarn Sessions format and Designerly discourse throughout the exegeses in Part Two of this document, as well as in the final remarks.



Fig. 17: The "Algerinha Vive Mixtape."

Each session started already from the story of *Algerinha*; elements of the story were told without making it explicit that they were part of a fictional narrative. For each session, one or more objects — the so-called "fragments" — were given center stage, and the story was conducted around this specific set; other fragments functioned as supporting props for the scenario being described. Using mostly a first person account to describe the finding of the "curious objects" at a pawnshop, the attention of the participants was drawn towards a personal anecdote that slowly revealed itself to be worth of a research project. Conversely, the 'witnesses' of the *Algerinha* story were those determining the initial *earview* of the session.<sup>43</sup> Suspension of disbelief was broken spontaneously, usually around the time participants were asked to intervene on the story — although, as it will be seen later, in a few cas-

<sup>43</sup> We made it a point of having intercalating gender dynamics for this: the first-person accounts were always from men (myself and Rafael, the co-author of the project), whereas the *earview* from within the *Algerinha* story are always from women. While this does not necessarily refer to a correlation-causation narrative, it was a subtle device for having a clear shift in perspective which may or may not have been picked up by participants.

es participants either remained within the story until the end or were unaware that they were hearing a fictional narrative. While the narration was centered on myself and the co-author of the project Rafael M. C. Arrivabene, he was more of a supporting character, mentioned as part of the story rather than a co-facilitator — mostly due to physical distance and conflicting schedules. Conversely, all sessions were held with the support and collaboration of Luiza Prado de O. Martins, which sometimes assumed the role of co-facilitator and/or documented the sessions; at other times she joined in with the participants and performed as an *agent provocateur*. All sessions were recorded in audio, as well as photographed with consent of all parts involved; I have later on transcribed the recordings. All participants have also agreed to share their sketches, maps, and stories for this work.

The first session was held in December 5, 2015, at Universidade Estadual Paulista (UNESP) in Bauru, Brazil. Announced as a workshop, it was part of a series of events organized by the student-led extension project SOMA, which took care of organizational matters such as the open call for attendance. Thirteen undergraduate design students from the campus took part; the majority of the students were halfway through their studies except for one first-year. The main focus of this session was the playground game and its accompanying 3D-printed toy, supported by news and 'found evidences' such as videos and audio files. Participants of this session were given more specific tasks in comparison with the subsequent installments; for this we had a 'script' which guided them through key points in the narrative, expanding their knowledge about the occupation as the session progressed. Their main task, however, was to perform a 'detective work' as to how the story of the occupation ended up translating into a set of rules for a playground game. The second session was held in Berlin at *re:publica*, a media convention which annually opens a call for contributions.<sup>44</sup> Running for an entire weekend every May, the event comprises of several so-called 'stages' for different activities ranging from panels to practice-based workshops. For the 2016 edition we proposed a two-hour workshop on the theme of "destructive interferences" and "sonic violences."<sup>45</sup> Using the *Algerinha* story as the main conductor, this session revolved around drawing connections between events from the story and sonic weaponry, and used a set of cards with real news and events from the story as the main narrative threads. This session, held on May 4, 2016, had a varying attendance but the maximum quorum was around twenty participants of various mixed backgrounds and interests.

The third session was held in June 14, 2016, in Basel, Switzerland, invited by the team at the Critical Media Lab at the Institute of Experimental Design and Media Cultures (IXDM), Academy of Art and Design FHNW.<sup>46,47</sup> This session had eight participants, all of them researchers and scholars at least at the Master level, who took part via an announcement on the Institute's website as well as on Facebook. For this session we were given a full

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<sup>44</sup> <https://re-publica.com/en> (accessed November 24, 2016)

<sup>45</sup> <https://re-publica.com/en/16/session/destructive-interferences-conversation-sound-violence> (accessed November 24, 2016).

<sup>46</sup> <https://www.ixdm.ch/critical-media-lab/> (accessed November 24 2016).

<sup>47</sup> <https://www.ixdm.ch/speculation-design-beyond/> (accessed November 24, 2016).

day (six hours), so the story could be properly unravelled and discussed in detail. In the end we focused mostly on the contents of the "Algerinha Vive Mixtape" and their possible connection with the playground game, while having the objects from *Ruídografias* as supporting props to conduct the story. This session, while productive, proved itself to be too complex and feature too many layers of speculation and back-and-forth between fiction and reality for the participants to fully grasp the extent of the story of the *Algerinha* occupation. This fault was addressed in the fourth session held on September 5, 2016, at the collaborative space CLB in Berlin with support of the Sound Studies Lab.<sup>48,49</sup> This session had seven participants with various backgrounds stemming from Digital Humanities to Performance Studies, who responded to an open call launched on the CLB Website as well as on Facebook. For this installment of the *Algerinha* story we decided to give a stronger focus on — and in turn the center stage to — one single track from the mixtape, asking participants to think about the types of narrative and fictions it would supposedly tell; simultaneously to the sonic material we introduced a few key events from the story as a set of random occurrences in the session, using a set of dice to assign what we named 'plot twists' to the groups formed by the participants in order for them to work with and create stories from.<sup>50</sup> Much like the first, this session ended up yielding cohesive stories which unfolded the events in the *Algerinha* story to interesting settings.

Lastly, we held a fifth installment as a three-hour exercise within a week-long workshop held as part of the Speculative Now! Summer School at the Academy of Arts Split, Croatia. This short session, held on October 17, 2016, was centered on another track from "Algerinha Vive" and the cassette player the tape was supposedly bought with; however, different from the previous installments, this particular session moved away from drawing connections and creating stories, focusing instead on unpacking ideas from the sounds and objects themselves. Attended by fifteen design and architecture students with a mix of Bachelor and Master level, this last session yielded interesting reflections more concerning methodological aspects of the Yarn Sessions themselves, as well as different modes of dealing with sonic materialities under a design perspective. The way participants dealt with the sonic material they were presented with was crucial to sharpening and further developing the theory of the earview proposed in this work.

Since we employed a variety of different tasks and distinct objects in these sessions, the specific techniques for engaging the participants in the story are not relevant as methods for this research, and will be discussed only briefly and when applicable to the context of the narrative in part two. Granted, more important for these sessions was to foster an environment in which stories could be built as supports for discussions around listening practices and auditory governances, using the story of *Algerinha* as both a platform and metaphor

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<sup>48</sup> [http://www.clb-berlin.de/de\\_DE/](http://www.clb-berlin.de/de_DE/) (accessed November 24, 2016).

<sup>49</sup> <http://www.soundstudieslab.org/> (accessed November 24, 2016).

<sup>50</sup> This system of plot twists is loosely based on the mechanics of the role-playing game "Fiasco," by Jason Morningstar. More info on the game at <http://bullypulpitgames.com/games/fiasco/> (accessed March 27, 2017).

for the struggles of real life that are somehow enacted and present in sonic practices and the different types of fictions they yield.

### A decolonizing redirection for Speculative and Critical Design

To explore experience in an indeterminate world such as the one we inhabit, one in which anything that can be imagined can happen, I need a different mode of telling stories, one that can simultaneously hold the different models of what I think reality is. I need a different way of organizing reality. (Anzaldúa 2015, p.43)

The *Algerinha* story can be understood as a *dub version* of the 'real world'. In creating a semi-fictional story we were able to manipulate the pieces that compose this story at will, sometimes highlighting certain issues that were perceived to be more relevant for a specific session but not for another. It also helped discussions around the agencies of design to emerge in a 'zone of timelessness'; in other words, instead of talking about auditory governances in a top-down, lecture-like format, time is momentarily and collectively suspended in order for participants of a session to dwell in the story of an imagined community as a means of conveying an idea. It thus allows everyone to explore the ramifications of certain sonic technologies in 'safer' environments in order to perceive issues that might lead to un-safer worlds; a "reorganized reality" (Anzaldúa 2015) in which discussions take over presentations, and narratives with and through sound are used as pedagogical devices for debating diverse and divergent presents and futures. With an assessment of the contents generated by Yarn Sessions it is possible to weave together the types of storytelling we were already looking at — anecdotes and media narratives — with a scenario in which the boundaries of reality and suspension of disbelief are always negotiated.

My own "locus of enunciation" (Mignolo 2007b, 2009, 2011) evinces the importance of locality in performing such a research endeavor. I negotiate my very position as a Brazilian researcher living in Europe, that is, as a *border subject* as discussed previously, as coming from a highly educated background, to offer a look and a listening otherwise, a narrative adjacent to the political conflicts of everyday life in Brazil's peripheries. My intention with this work is, as Haraway argues, to "join with another, to see together without claiming to be another." (Haraway 1988, p.586) At the same time, the design work in this dissertation presents an encapsulation of political struggles as the starting point for a more profound engagement with the urgent issues it portrays, opening up space for dissonant views of design and listening practices, as well as what design is and what it can be ultimately able to achieve.

However, similarly to the discussion initiated above with the limitations of Participatory Design, one probable downside of fostering a collective 'liminal space' for debate, discussion, and experimentation in Yarn Sessions was to end up confining the relevance of these outcomes to this very 'safe environment'. In that sense, one aspect that was kept in mind during the entirety of this research project was to avoid constraining the discussions gener-

ated in the sessions to the realm of speculation. We fostered an environment in which everyone was invited to "see the world with two sets of eyes", and to bring the new languages and worldviews this "'magical' knowledge" generated to their everyday lives (Anzaldúa 2015, p.45). Even when participants — particularly those not coming from the Global South — were unsure whether or not the *Algerinba* occupation in fact existed, each session had a moment in which the fictional aspects of the story were exposed in full disclosure. Following that exposure, we asked participants to talk freely and to transpose what they observed from the session to 'real world' contexts, and connect the questions raised during the speculative sessions to their own realities, backgrounds, worldviews, and expectations.

Reading auditory governances in a plurality of worldviews, both as direct encounters with as well as responses to how design things act in the world, requires a shift in the understanding of design research. The decolonizing of design processes requires negotiating the existence of multiple perspectives within the same project while avoiding hierarchies; listening to one's surroundings and adapting communication accordingly; discussing how one's social and cultural position informs how one engages with the material world. Moreover, the designer has the task of communicating and accommodating these novel understandings to their peers and audiences. Due to its history in the Western[ized] world, Design has long subscribed to narrow, Eurocentric ideas about what constitutes knowledge. Whilst other fields have, in the past years, greatly benefitted from discussions initiated by decolonial and feminist thinking, Design has yet to sufficiently address them. In proposing Yarn Sessions as a possible decolonizing redirection of SCD, we aim to start a discussion about problems that are not only particular to this approach, but also endemic in the general field of design.

## PART II

### *Design at the Earview*

## Chapter Five

### Weaponizing distance: Sound bombs and the militarization of silence

A tense, beat-driven soundtrack follows a group of four Military Police officers walking down a badly-lit, graffiti-covered narrow street. In the evening, most of the windows of the houses are closed; yet some curious eyes carefully watch the action unfold. A faint rhythm, with strong bass frequencies, can be heard over the soundtrack, coming from the spot towards which the officers are walking. The leader of the Police operation commands his subordinates to group near a corner, in order to prepare a grenade launcher for firing. The camera zooms in on the officer's hands as he says to the camera: 'here we go'. He then places a canister on the weapon; as he does so, the image freezes and the movement is replayed, this time in slow motion. The soundtrack now gets louder and more intense as the camera switches to a first-person view of the Policeman bearing the launcher. A crimson overlay on the screen simulates a night vision, while small, unreadable text quickly flows on the bottom left corner, as if gathering data from the weapon and calculating the precision of the launch. A digitally-placed white crosshair, with the text "Policeman's POV" on top, appears on the center of the screen. Pointing the weapon slightly upwards, the officer proceeds to fire. Seconds later, as the audience follows the trajectory of the canister, a loud 'bang' echoes all over the street, which in turn triggers several alarms from cars parked nearby. Starting almost in unison, the alarms slowly move in and out of phase due both to the different manufacturers as well as the reflection of the sound waves on the walls, lampposts, and other cars parked on the street, thereby creating a rhythmic, small difference in the frequencies that is as annoying as it is ear-piercing. White smoke slowly rises in the distance, while screams are heard and people can be seen running for cover. The soundtrack is now louder than the car alarms, as the officers in the auditory foreground discuss whether or not a second grenade might be necessary. As the group moves to another corner to resume firing, one of the Policemen asks the other to hand him the 'explosive grenade'. As the officer reloads the gun and prepares for firing, a dramatic orchestra hit follows the camera rhythm zooming in on his hands again. The image freezes and the movement is replayed: this time in slow motion.

While this sequence of events may read as a heavy military warfare operation, it is in fact a video showcasing a routine raid by the Military Police of São Paulo. Titled "Polícia acaba com pancadão" (*Police raids a "pancadão"*), this eight-minute and forty-three seconds-long video was uploaded to the official YouTube account of the Military Police of São Paulo in June 2015, and as of November 2016 displays more than forty-thousand views, as well as three hundred 'likes'.<sup>51</sup> The absolute majority of comments, responses, and reactions on the upload praises the success of the operation and congratulates the effort of the officers, making extensive use of racist and classist tropes and slurs to refer to the population targeted by the operation.

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<sup>51</sup> <https://www.youtube.com/watch?v=0I-2NI7xhaQ> (Accessed November 25, 2016)





Fig. 18: Screenshot from the video "Polícia acaba com pancadão."

### The militarization of silence in São Paulo with "Operação Pancadão"

The narrative presented above depicts one of the actions from "Operação Pancadão," a joint collaboration initiated in 2012 among the city council of São Paulo, the Municipal Traffic Engineering Office (CET-SP), community leaders, and the Military Police. "Operação Pancadão" is described as a set of actions with the purpose of combating noise and policing "the sale of alcohol to and consumption by citizens under the legal age" (Terra, 2012). The strategy for doing so is to raid and disrupt *bailes funk* or *pancadões* — street and private parties in lower- and lower middle-class neighborhoods of the city.<sup>52</sup> "Operação Pancadão" is part of the *Programa de Silêncio Urbano* ("Urban Silence Program"), or *PSIU*, a branch of the city council of São Paulo focused on "making the relationship between businesses and neighbors more peaceful" (PSIU, n.d.), enforcing silence laws and addressing complaints over "controversial sounds" (Cardoso 2012). In 2015 alone, PSIU received more than thirty-thousand calls, of which twenty-six thousand were answered; more than five-hundred businesses were shut down, and over one hundred and forty fines were issued — an endeavor which generated over twenty-five million Brazilian Reais (ca. seven million Euros) for the city in that year (PSIU, n.d.). Yet São Paulo, with more than ten million inhabitants, is anything but a silent place. The city has by far the largest car-owning population in Brazil, and one of the largest helicopter fleets in the world. Music in the soundscape of São Paulo is a relief from the noises of free-flowing predatory capital and urban pollution — rather than simply a nuisance.

This is not to say that the *pancadão* is a quiet event; on the contrary, the whole point of this type of social gathering is exactly to be a battle for the best song which attracts the most people around a given sound system (usually installed in the trunk of cars), in a clear

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<sup>52</sup> These parties have also been called *fluxo* ("flux") because of the 'mobility' of the party: sound-equipped cars assemble and re-assemble in different streets to avoid the disruption caused by Police intervention.

demonstration of both economic and acoustic power. What is most strikingly in this scenario is the sheer deployment of unnecessary violence by the Police – something that is not seen with other types of loud parties or gatherings in more privileged, whiter spaces in the city. For instance, journalists Vinicius Souza and Maria Eugênia Sá, reporting on the cultural implications of "Operação Pancadão," describe the actions of the same military police when called to intervene on a street party happening near a private University in São Paulo, a clear middle-class environment. According to these journalists, the Police only acknowledged its presence by turning their cars' sirens on and slowly driving by the party, so that people could lower down the volume of the music coming from their parked cars; from the moment the Police left the scene, they recount, loud music was put back on (Souza and Sá 2013, p.33).

### *Pancadão and Ostentação*

Even though *PSIU* may also be called for addressing noise-related issues coming from musical disturbances other than *Pancadões*, no co-operation between the agency and the Military Police has ever been coined a name so intrinsically connected with the type of sonic manifestation it aims to silence in the first place. *Funk*, or *Pancadão*, a heavy, beat-driven musical genre stemming from the favelas of Rio de Janeiro in the late nineteen-eighties, is largely perceived in Brazil to be a 'lower' form of music, often associated with criminality, poverty, and lack of education — assigned to both those performing the music and those listening to it (cf. Vianna, 1998; Lopes, 2011; Palombini, 2014; Garcia Pedro, 2015). Funk only gained popularity in São Paulo State in the late nineties, first in the coastal city of Santos and its vicinities, reaching the capital only a few years later mainly in the eastern part of the city in *Cidade Tiradentes*, a settlement for displaced residents from evicted *favelas* in other parts of town (Garcia Pedro, 2015). Slowly, funk rhythms and lyrics began to rival with the tradition of socially and politically-oriented hip-hop in São Paulo, and eventually, in the late 2000s, a new sub-genre was created in the city: *funk ostentação*.<sup>53</sup>

While not an exclusivity of São Paulo, the sub-genre thrived in the state by adapting and reflecting to the business- and money-driven rhythms of the largest city in Brazil. MCs and producers were strongly influenced by the US American *Gangsta Rap*, yielding in turn songs whose lyrics praise heavy consumerism in clothing, jewelry, cars, high-class brands, illicit drugs, and liquor. Similarly, the beats became progressively more complex in character, incorporating samples of motorcycle roars, clinking and breaking glasses, as well as the cocking of guns and other weaponry. The main platform for the success of *funk ostentação* is YouTube, and the association between video-makers and MCs became tighter, with video producers being often as famous as the lyricists themselves in the scene. A classic example of *funk ostentação*, and perhaps the song (and video) which helped defined the sub-genre (Garcia Pedro 2015), is MC Boy do Charmes' *Megane* [sic], named after the car manufac-

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<sup>53</sup> A rough translation would be "ostentatious funk".

tured by *Renault*:<sup>54</sup>

Imagina nós de *Megane*, ou de 1.100  
Invadindo os bailes, não vai ter pra ninguém  
Nosso bonde assim que vai  
É Euro, Dólar, em nota de 100  
Nota de 100, nota de 100<sup>55</sup>

The appraisal for material culture, much present in the aesthetics and contents of funk ostentação is still regarded by the middle-class population of Brazil as a vulgar display of consumption, a sign of not being able to live by the standards they sing about. Right-wing weekly magazine *Veja*, one of the top-sellers in the country, has in September 2013 dedicated one of its cover features to report on the rampant success of MC Guimê, a twenty-three year old funk artist from Osasco (another district of São Paulo) who achieved international fame with his YouTube videos and lyrics (Batista Jr. 2013). Yet the feature makes a point of using the consumer desires of Guimê as a trope for showing how his tastes, while expensive in themselves, cannot be as 'refined' and 'educated' as those the target reader of the magazine allegedly have (Garcia Pedro 2015). The writer claims that in Guimê's lyrics — as well as in the genre as a whole — "the list of objects desired [by the MC] is inversely proportional to [the lyrics'] poetic richness." Yet the lyrical content of funk ostentação is largely populated with metaphors of consumerism as a vector social inclusion, as a necessity of belonging to the spaces of the city by overtly showing off that the MCs – and by extension their listeners — are able to afford what it takes to occupy those spaces. Still, at another point in the feature, the writer emphasizes how Guimê's newly-bought apartment "looks like it was decorated by a realtor," contrasting it with the MC's apparent amazement with the house at a condo in a richer neighborhood he once performed in (Batista Jr. 2013). Thus for the middle-class casual listener and observer of funk ostentação, while the poorer classes of São Paulo might eventually come to have the money, they are nevertheless seen as not worthy of occupying the same material, social — and as argued here, auditory — spaces of the higher classes.

In that sense, the alias for "Operação Pancadão" — whether officially coined by the police or by the media — constrains the scope of policing to a very specific race and class intersection, creating a direct connection between the right to the auditory space, and the types of bodies that are allowed to exercise said right. Granted, it is not uncommon to read or hear that "funk is not a proper cultural manifestation"; this very statement is voiced by one of the Police officers to the cameras in the video. The criminalization of the musics and gatherings of black and brown populations in Brazil goes back all the way to the dictatorship years; Brazilian historian Lucas Pedretti argues that a closer look at the archives of the dictatorship years shows an explicit concern of the national security forces towards the parties

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<sup>54</sup> <https://www.youtube.com/watch?v=r2wUIRkpOVw> (accessed December 20, 2016).

<sup>55</sup> "Imagine if we had a *Megane*, or a 1.100 [cc motorcycle] / arriving at the *bailes*, no one would beat us / this is the way we do it / Euros, dollars, everything in 100-bills/100-bills, 100-bills"

organized and attended by "colored youths," as the documents say (Pedretti 2017). These parties, Pedretti argues, were a vector for political and racial consciousness that extended well beyond the political activism happening in the (mostly middle-class and mostly white) environments of Universities and student unions at the time. Photographer Januário Garcia recounts the types of social organization happening at these *bailes*,

É que o baile estava comendo solto, mas estava comendo solto mesmo, o baile estava no maior embalo, quando estava no maior embalo, parava tudo. Parava tudo, parava música, parava tudo. Subia um negão [sic], pegava o microfone e fazia o maior discurso contra o racismo, contra a ditadura, contra a repressão, sabe? E aí todo mundo parava no baile e ficava todo mundo assistindo. E aí: 'Cai na caixa!', e começava tudo de novo. Então, a gente parava o baile três, quatro vezes para fazer isso, está entendendo? E isso assustava [o regime] porque a garotada estava se ligando, se ligando, né.<sup>56</sup> (Garcia cited in Pedretti, 2017)

Given the racial and social demographics of Brazil, the connection between a Police operation and a musical genre reasserts funk and its perception by the media and public opinion as "noise" coming from a very specific, racialized body. In 2008 a bill was proposed to the city council of Rio de Janeiro by congressman Álvaro Lins in order to impose austere measures against *bailes funk* in the city. The bill suggested not only an enormous bureaucratic endeavor in order to concede municipal authorization to hold a *baile*, but also ruled that these parties should have video surveillance systems that needed to remain available to the Military Police for up to six months (Palombini 2014, pp.220–1). In 2009 this law was overruled by a new one proposed by congressmen Marcelo Freixo and Paulo Melo; concomitant with another bill, also proposed by Marcelo Freixo in collaboration with congressman Wagner Montes, which secured funk to be in itself a "popular cultural activity [...] whose manifestations should not be subject to rules different to those falling onto the similar category." (Law 5543/2009-RJ cited in Palombini 2014, p.221) The bill secured that funk should not be subject of any racial, social, or administrative prejudice, but also excluded from the definition of "popular cultural activity" the musics which eventually advocated or incited criminal activities (*apologia ao crime*). (ibid.)

### Mediatized Policing: "Gamified" narratives

The "Operação Pancadão" video, part of a TV show focused on Military Police operations, begins with the image and voice of the show host, who describes in grandiloquent words to the audience what is about to happen. According to him, the Military Police of São Paulo was called to impose a "shock of order" in one of many "forbidden parties, [which] gather

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<sup>56</sup> "The *baile* was going on, like real hard, everyone was partying and then when everyone was having a good time, everything stopped. Music, everything. A black guy [sic] would go up on the stage, take the microphone and start a powerful speech against racism, against the dictatorship, against repression, you know? And then everyone at the *baile* stopped and watched the guy. Then 'bring the noise!', and everything started all over. So we stopped the *baile* three, four times, to do this, you understand? And that scared [the military rule] because the kids were getting it, getting it, you know?"

together all sorts of people, but mainly criminals." Despite the overly dramatic use of language and music in the video, these operations are anything but risky — at least for the Police; in fact, the video showcases a disproportionate use of military technology as an excuse to, in the words of one of the officers, "[protect] the neighbors from noise, so they can rest and prepare for work on the next day." What is seen and heard in the video is in fact a racialization of loudness and the constant threat of violence, depicted as a direct confrontation of musical noise with military noise, in order to enforce silence. At one moment in the sequence, Policemen raid a closed bar in order to silence a private party; while ordering people to get out of this closed space back to their homes, every man passing through the front door is demanded to show their bare waist to the officers and to the cameras, so as to ensure they are not bearing any concealed firearms. When noticing that one of the women attending the party is pregnant, a bewildered Sargent asks "what the hell are you doing here? You should be home!" The attention given in the video editing to highlight the different types of violence — verbal, gestural, physical — inflicted by the Police on black and brown bodies intends to praise a fictional, self-assigned 'moral superiority' of the Police officers, and by extension of the audience, from the 'vandals and criminals' depicted in the video. In this narrative, black and brown women should not be anywhere but at home, nursing; similarly, as made clear by the show host, black and brown men cannot be anything other than criminals. Yet, nothing in the video suggests criminality; the video never shows the Police apprehending illegal drugs, weapons, or anything that could have justified the operation in the first place. The only question the Police is violently attending to in this operation is the loudness of the music which these bodies are listening and partying to.

While the video narrative is grounded on the personal experience of the officers, making use of the Policemen's own voices and actions as the main conductors, the visual and sonic language of the sequence is specifically designed to mimic an action movie, as well as a first-person shooter video-game. This means that the *earview* of the audience is designed to be understood as an extension of the *earview* of the police. Specific actions of the Policemen are picked up in the visual as well as in the sonic discourse, highlighted as a way to justify the abuse of the Police apparatus. This is done so by making extensive use of digitally-manipulated visual enhancements, such as first-person viewpoints simulating a digital display on a helmet; zoom-ins and close shots; and long and detailed descriptions of technology to the audience. Moreover, the dramatization employs a diegetic, beat-driven soundtrack to articulate the moments of tension that precede the Policemen's movements and firing, very often superimposing the soundscape of the video. Such a dramatization and soundtracking of the video is not at all an arbitrary decision; in alluding to first-person shooter games and war action movies, the video automatically establishes the same kind of narrative, where there must be heroes — the Police — and villains — the dwellers of that space. The spectacularization of a police operation in those terms designs potent visual and sonic markers of the operation's success: the subservient and "obedient" black body, in face of the authoritative power of the Police. It is a type of storytelling specifically designed to justify and glamorize the violent deployment of military warfare for the enforcement of silence.

Stuart Hall et al. have already probed on the effects of coalescing policing and media narratives for the public understanding — as well as rise — of criminality in the book *Policing the Crisis: Mugging, the State and Law & Order*, using the campaign against 'mugging' in 1970s United Kingdom as its main case study. For them, a belief that certain criminal activities are becoming widespread issues, and therefore more violent, is what disconnects the level of threat from the reactions to it, and ultimately what vouches for the disproportionate enforcement of the latter. In increasing their 'clear-up rate,' that is, by crafting a *perception* of fighting crime and resorting to offenses which yield a high detention potential — such as raiding *pancadões* — the police create what the authors call a "moral panic" caused by "ideological displacement" (Hall et al. 1978, p.29). At the time of the release of the study seen in *Policing the Crisis*, the mediatization of policing activities was still far from being as widespread as it is today. Yet they claim that the "role of the police in any campaign [...] is similar to that of the media, but they come in to play at an *earlier* stage in the cycle." (*ibid.*, p.38) In other words, even before the sensationalization of policing, as evident in the case of "Operação Pancadão", the authors understood the role played by the media in articulating, together with the Police as an institution, an undisclosed separation from the *perception* of the threat of violence and the *actual* danger it represented.

By criminalizing the *Pancadão*, what the Military Police of São Paulo is doing is to orchestrate an insidious form of auditory social control. It sustains a narrative that enforces the separation between the Brazilian middle-class and its others — as seemingly separate universes that never shall meet. As João Freire Filho and Micael Herschmann maintain, the argument much found in the discourse of the middle-class (supported by the mediatized police narrative) is that *pancadão* is not only an auditory nuisance, but also a "threat to the youngsters coming from 'good families' — i.e. middle-class — since these parties give rise to fights and allow for the *promiscuous familiarity with the 'natives' related to the drug trade*." (Filho and Herschmann 2003, p.63, emphasis added) The idea that *funk* and criminality are closely related to one another is, at times, an overstatement. This is not to say that *funk* also sustains a narrative of hypermasculinity which is, most of the times, associated with the rebellious attitude of the criminal; yet these narratives are also to be found in many other music genres which are not as heavily problematized as *funk* might be.

### The case of the "Sound Police"

The militarization of silence and its violent enforcement, a tangible reality in the underprivileged neighborhoods of São Paulo and other parts of Brazil, seemed to inhabit the realm of fiction for many participants of the Algerinha sessions held in Europe. Furthermore, for some participants, a heavy policing of silence was not only seen as a necessity, but also praised and fetishized. Similar to the perception of loudness enforced by the Military Police of São Paulo, comments and ideas presented during a specific installment of Yarn Sessions pointed to a desire for a designed system operating for the racialization of bodies and their sonic practices — a "sound police".

In this session, done in May 2016 at the Berlin-based media convention re:publica,<sup>57</sup> we decided for a more dynamic and fast-paced activity, exploring the ways in which technologies, their designed materializations, and their social and political consequences could be freely rearranged. To do so, we collected news, descriptions, and reports from different enactments of sonic violences — listening practices of segregation, acoustic weapons, and other technologies for sonic control — from past, present, and the future, and distributed them into color-coded cards. We also crafted miniatures of different objects such as the Mosquito, an LRAD, a headphone, a kite, and so on, to give the participants as a marker of material objects they could take inspiration from. The overall idea for this session was to provide ways in which participants could freely connect these news, technologies, and practices into a narrative that could fill in some gaps of the Vila Algerinha story. We explained that these sonic technologies were not necessarily used as they are, but may have had a role in inspiring certain practices, or could serve as examples of things that could have happened in the story. We encouraged the participants to be as creative as possible with the connections they could find, and to try to come up with a believable story which culminated on the news they had at hand.

While the participants were keen on knowing more about the story of Algerinha, and the reasons why there was such a strong power imbalance (sonic of otherwise) in the first place, the absolute majority of participants assumed that the occupation should have tried to adapt to the situation. Other questions that emerged were related to the role of real-estate market in evicting the community, and the perception of the community as "noisy" by the neighbors, with the latter being mentioned as a fact of which no immediate solution was possible. Furthermore, the groups assumed that the enforcement of sonic technologies was a consequence of either a lack of, or a failed attempt at a dialogue with the surrounding neighbors. When asked to further elaborate what they meant, most participants showed support for the city council and neighborhood's decisions, arguing that sonic technologies — albeit violent in nature — were only deployed due to excessive resistance from the community to adapt to 'the local way'. In other words, all participants understood sonic violence as an inevitable device for settling conflicts in "non-lethal" ways, and thus immediately started their speculation from the earview of those perpetrating sonic violences in the first place. As an example, one of the groups described in their final presentation a "gigantic sonic weapon" they had come up with for their story. This device would be mounted on a Police truck, into which one of the Policemen would scream, amplifying the sound to, in their words, "unbearable levels". The situation in which they imagined the use for this weapon would be a siege around the main entrance to the Algerinha occupation, in which the Police was called to get the residents "out of the [place] where they shouldn't be". After mentioning this detail, the participant/narrator for this group briefly stopped, hesitated, and then added "from the perspective of the Police."

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<sup>57</sup> <https://re-publica.com/en> (Accessed November 24, 2016)

In general all groups were somehow critical of these technologies' violent consequences — as made clear to them by the news they read — yet none of them offered a perspective that diverged from the normative and hegemonic mode of listening which privileges and enforces silence, conformity, and assimilation; rather, counter-actions were only discussed briefly in passing, and when specifically asked whether or not there would be resistance. Even though the news they were presented with pointed to a rather violent outcome in every case, the participants of this session took a deterministic approach into imagining that 'there couldn't have been other way'. It was very telling to listen to these statements, coming from a group of predominantly white Europeans, at a media convention in which the question of otherness in face of the so-called 'refugee crisis' was subject of many panels and discussions. It shows that the discourse of integration via assimilation and domestication of difference happens also at the level of the auditory space.

Our task as facilitators of the session was to attempt a balance by making sure all participants could speak freely, and in turn be equally responsible for the decisions made within the group. During the discussions, personal stories and engagements with sound, noise policies, and listening practices were abound within all groups — a fact that repeated itself constantly over all Yarn Sessions. However, in one particular group one of the participants immediately dominated the discussion and the decisions, and immediately took the stage to speak for her peers in the final presentation of ideas. This participant, a middle-aged, white German woman, voiced several xenophobic and racist comments; moreover, she made a point of always racializing the noisy elements of her stories. For instance, at one point she was telling of her "very noisy neighbors," who spoke Spanish but whose ethnicity she was not sure about. She decided, then, that these neighbors were "The Mexicans" [sic], and proceeded to elaborate on how Mexicans and latinos in general are "loud and rude."<sup>58</sup>

Granted, the fabulation her group came up with for performing a part of the *Algerinha* story directly mirrors this desire for silencing the "loud and rude." This particular group drew a news card which depicted the shooting of three teenagers over loud music. While the text of the news cards were fictional, the situations they depicted were all inspired by real events; in the case of this group, the card was based on the shooting of Jordan Davis in Jacksonville, Florida, in 2012. Davis, an african-american teenager, was shot dead by Michael Dunn, a forty-five year old white man, after a heated discussion over the music Davis and his friends were listening to (Bagwell, 2014). The card read:

'So it's my fault because I asked them to turn their music down?' A group of teenagers was listening to loud 'funk carioca' music outside a bar. A black sedan pulls up and the driver asks the teens to turn the music off. They comply, but after a few seconds the music comes back on — some say louder, some say quieter than before. The driver gets really angry at the teens, and a tense discussion ensues. Two of the teenagers are shot dead, the other is severely wounded.

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<sup>58</sup> Let it be noted, for the sake of the absurdity of her comment, that she was telling this anecdote, without missing a beat, specifically to the facilitators — myself and my research partner — both of us Latin Americans.



The other card drawn by the group described the United States Psychological Operations' "Wandering Soul", deployed by the US Military during the Vietnam war in the late nineteen-sixties. This operation consisted on equipping helicopters with loudspeaker sets and tape players, and flying them over spots where they thought the Vietnamese soldiers could be potentially hiding. The tapes broadcast by the helicopters featured "haunting sounds said to represent the souls of the dead [...] in order to perturb the superstitious [Vietnamese] snipers, who, while recognizing the artificial source of the wailing voices, could not help but dread that what they were hearing was a premonition of their own postdeath dislocated soul." (Goodman 2010, pp.19–20). After each group took their two cards, we would choose one small miniature to give them; these would either match or contrast the cards that were drawn. To this group we gave the miniature of a kite; the decision of giving them specifically a kite was motivated not only by its association with childhood and play — the news they got presented with spoke of a case involving teenagers — but also due to the fact that the card for "Operation Wandering Soul" described, instead of directly referencing helicopters, the use of 'overhead flying vehicles', so we thought this connection could entice their curiosity.

In the final presentation, when the groups were first asked to read the news card they got to the others in the room, this participant immediately described the shooting of the teenagers as a 'conflict'; moreover, she deliberately chose to omit the part which reads "some say quieter than before", stopping right after "louder", and putting a strong emphasis in this word. According to this participant, their group took the kite to be "a symbol for a drone nowadays," and then proceeded to describe their story. For them, the kite represented a flying vehicle which, when called by concerned citizens, would come to the scene and blast loud, high-pitch frequencies in order to repel teenagers from places where their presence is unwanted. Moreover, the group decided that they themselves were, in fact, this "sound police":

So we can solve the problem without anybody getting shot. The driver calls the 'sound police,' which are us; the drone comes and provides the area with a 'soundless sound' and the teenagers get really annoyed, get their 'ghetto blasters' for the loud music and go away, nobody gets shot.

The fact that an older man draws a lethal weapon for publicly engaging in a discussion with three teenagers over the allegedly loud volume of their music is far from being a 'conflict'. Rather, it is a strong marker of the power imbalances that permeate notions of masculinity, authority, the right to occupy the public space, and the perception of certain musical practices to be noisier than others. For this group, however, such power struggles were not seen as an immediate concern; rather, maintaining and exacerbating the power imbalances was paramount for getting the 'conflict' under control. They instantly identified themselves with the side of the powerful player, performing themselves the role of this speculative "sound police" in the story and applying what they described as "the British solution,"

referring to the widespread use of the Mosquito device — a sonic weapon which produces frequencies allegedly only heard by those under twenty-five years of age — in the United Kingdom before it was eventually banned. Thus with their weapon of choice being based on the high-pitched frequencies of the Mosquito, this group constrained the main target of their "sound police" to be teenagers. According to sound scholar Mitchell Akiyama, the Mosquito

is one technology in a long line of technics that have abetted the construction of youth as a biological category, discrete and distinct from adulthood. It has isolated one group of individuals and then conveniently profiled it as antisocial and problematic. (Akiyama 2010, p.457)

Indeed, the inventor of this device was allegedly motivated by the complaints of a shopkeeper in Wales about "a particularly malicious gang of teenagers who hung around his stores, particularly in the evenings" (Block 2006). Such a classification of young human beings reinforces the need for delimiting and designing auditory zones in the city in which only consumption-motivated movement is allowed, and in turn constructing the presence of teenagers as a potential menace to the free flow of the citizen-consumer. The perception of youth — and youth of color specifically — as a vector for trouble and criminality (as opposed to, say, a person openly carrying a pistol to a street altercation) was much present in the discussions we heard coming from this group, and in particular from this participant; hers was the narrative which justifies the design of sonic weapons such as the Mosquito device in the first place, and which fosters the design of distance and segregation.

While this story showed a clear interest from the group in enforcing silence by means of direct sonic violence, there was dissent within the group as to the necessity of using a sonic weapon in the first place. As another participant from the same group complemented right after they finished their presentation,

the questions we ended up with were 'does the end justify the means'? That is, 'does the fact that we prevented the gunshots justify subjecting young people to crying shrieks and eerie sounds', that's one; and two, we thought, without talking about it, that we would pilot the drone, when she calls the 'sound police' — which is something she added now, we haven't discussed that — does that mean we know where the drone is supposed to fly to? We had a discussion on negotiation, the driver said 'turn it off,' not 'turn it down,' or 'go somewhere else, let's work it out,' so there was never a discussion, in the card but also within the group, on these facts.



Fig. 19: Cards designed for the *re:publica* session.



Fig. 20: Miniatures designed for the *re:publica* session.

In performing a specific part of the *Algerinha* story in this manner, the desire to become a policing entity for the enforcement of a homogenous set of listening practices is exacerbated in their very design choices. For instance, while they could have taken the kite to be a marker for the occupation, or a representation for other technologies — say, a counter-intelligence device from the community — they immediately imagined it belonged to the authoritative powers in the story of *Algerinha*. Designing an unmanned flying vehicle as a perpetrator of direct sonic violence is a clear example of how to instrumentalize separation as a way to police the other. In this narrative there is a clear designing of distance, which is working in two ways: on the one hand by disconnecting the agent from the violent act, thereby leaving the former invisible and inaudible for those subject to the loudness of the latter; and on the other hand by creating a corporate 'bodiless entity' for the enforcement of silence as an aggressive, repelling device for consensual 'conflict resolution.' After all, the management of the auditory space is a sleeker device for control which refrains from a direct contact with the body of the other. In so doing, their fabulation privileges the part of the story the group identified the most with: the normative, adult, middle-class body.

### Sound Bombs and the Designing of Distance

Bomba explode na cabeça estraçalha ladrão  
Fritou logo o neurônio que apazigua a razão  
Eu vou cobrar e com certeza a guerra eu vou ganhar  
Os trutas e as correria vão me ajudar<sup>59</sup>

The Military Police of Brazil has an appreciation for grenades, using them extensively and much often in situations where the deployment of such violent devices could be completely avoided.<sup>60</sup> In fact, the main actor in the "Operação Pancadão" video is the grenade launcher. This military weapon is praised and given center stage in the operation, both by the officers' own detailed descriptions, as well as by the video editing that focuses on the working mechanism of the weapon. In the video, grenades appear in the narrative in two forms: either as a 'five-shot, literal cloud of teargas', as described by one of the officers in the video; or as an 'explosive grenade,' which is another name they have among themselves for a stun grenade. The sound bomb is used by the Policemen in this operation after the first two teargas shots prove to be ineffective, causing the party to regroup and restart elsewhere. For the Policemen, this is what justifies their use of these violent devices; through the use of the

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<sup>59</sup> MC Dodô's 2009 hit "Bomba Explode na Cabeça" employs a good number of slangs. A very rough translation of this verse might be as follows: "A bomb blasts right in one's head, tearing thieves into pieces/[This bomb] fried the neurons that might calm one down/I will remain in my path and for sure I will win this war/My pals and 'being on the grind' are what will help me." The song can be listened to at <https://www.youtube.com/watch?v=Tm3Bil-KOjeM> (access December 15, 2016).

<sup>60</sup> In 2013, the state of Rio de Janeiro spent, in a single purchase, more than one million reais (approximately five hundred thousand Euros) in teargas and stun grenades to replenish their stocks after the massive protests and demonstrations of that year (UOL/Estadão, 2013). According to a report published in 2016 by the Brazilian Forum for Public Security, more than seventy percent of the Brazilian population believe the Police makes disproportionate use of violence in their operations (Deutsche Welle, 2016).

grenade launcher the idea of 'safety' becomes, as it will be demonstrated, a concern directed only to those already operating in the safeness granted by their authority.

The stun grenade was developed by the United States Army in the 1990s as a "clear-a-space device," whose design allowed for "easy reconfiguration so that the sensory subcomponents can be changed to adapt to new uses." (US Scientific Applications and Research Associates, cited in Volcler 2013, p.59) A report from 1996 described that the "initial evaluation of high power acoustic weapons [...] indicated a very strong potential for the weaponization of acoustic energy. We determined that acoustic weapons would produce target effects and possess operating characteristics that were unique and unlike any other weapon." (SARA cited in Arkin 1997, p.316) This device for weaponizing acoustic energy came later to be known as a 'sound bomb'. It is designed to create a loud bang of up to 180 decibels at a distance of less than two meters, disorienting or even completely impairing its targets (US Army Armament Research, Development and Engineering Center, cited in Volcler 2013, p. 60). In fact, non-lethal weapons have been a device for the enforcement of colonial powers under the premise of keeping peace and order and silence political dissent. A report from June 2000 published by the European Parliament titled *Crowd Control Technologies (An appraisal of technologies for political control)* traces back the use of 'non-lethal' weapons to before the twentieth century in the British colonies of Cyprus and Hong Kong (OMEGA 2000, p.27).

Sound bombs are part of a set of law enforcement apparatuses deemed as "non-lethal"; however, their effects are far from being inoffensive.<sup>61</sup> First, there are direct physical consequences from the materiality of the device itself: a metallic grenade being launched by a mechanic apparatus at a considerable speed makes the canister itself heavy and hot, and very likely to hit a body. Moreover, the explosion of the grenade releases fragments of the shell which become dangerous projectiles of their own, i.e. shrapnel. Secondly, and most importantly here, there are the unseen yet felt effects of sound waves in the body. The consequences of sudden, low-frequency and high volume blasts at close to mid-range can span from direct ear pain to temporary deafness, tinnitus, or vertigo, depending on the level and duration of the exposure (Altmann 2000, p.189). A sound blast of more than 140 decibels can cause severe ear pain, and above 160 dB it may lead to eardrum rupture, often with long-lasting sequels to one's hearing ability (Altmann 2000, p.177–8). Overpressure in more extreme levels can also lead to rupture in other organs, particularly in the lungs (Altmann 2000, p.174). While these effects might not be promptly perceivable but rather increase over time, sound bombs are also known to have caused more immediate responses from the body such as heart attacks, muscle spasms, and anxiety crises (Goodman, 2010; Volcler, 2013).

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<sup>61</sup> As a matter of fact, in Brazil 'non-lethal' weapons are sometimes referred to as 'less-lethal' weapons. While a more honest acknowledgement of their danger, this renaming has not prevented or effected their disproportionate use by the Brazilian Police; instead, it seems to have worked more as a validation of their use rather than a thoughtful engagement with such apparatuses.

Most sonic weapons have been developed for what Volcler calls the "management of living beings", be it under the discourse of either warding off pests and wild animals or actually protecting these animals from the harm of turbines or other machinery. Yet as made clear by her, the main target of the use of these weapons is actually reversed, inasmuch as the main concern is not to protect wildlife from technology but rather to prevent animals from crossing privatized space or interfering with expensive machinery (Volcler 2013, p.128). Similarly, their use in civilian contexts suggests a similar approach: under the premise of "crowd control," sonic weapons have been largely deployed to enforce racial segregation, as well as to contain political demonstration which threaten institutions and exercises of authority. The notion that sonic weapons are unable to kill or severely injure a human being is what sustains their appraisal as 'clean' techniques of control and management of so-called 'conflicts'. Yet the extent of their effects are more a designed affordance of the weapons rather than an immediate concern of the manufacturer, thus delegating the decision upon the power of its use to the judgement of its operator; as an example, the panel interface on some models of the Long Range Acoustic Device (LRAD) indicates the threshold between a 'safe' and a 'non-safe' usage — symbolized by the use of green and red bars respectively (Volcler 2013, p.131).<sup>62</sup> In other words, even though designed primarily as a 'non-lethal' device, the very design of the weapon allows, if judged necessary by the operator and the operator only, for its use beyond the 'recommended' factory-setting of 'safeness'.

According to the study by Omega Foundation, technologies of crowd control are "capable of refinement and transfer and consisting of a spectrum of options containing increasing levels of coercion"; as such, the understanding of crowd-control technologies should encompass not only the devices deployed by the authorities in charge but also the entire set of techniques and routines which surround the use of said devices (OMEGA 2000, p.27). As a matter of fact, cases in which weapons like these are used in situations where a strong imbalance in the power relationships affords the misuse and abuse of sonic violence are abundant. For instance, sonic blasts have been used extensively in neocolonial contexts as an indirect and invisible assertion of power as well as disproportionate use of violence (OMEGA, 2000; Goodman, 2010). In 2005, the Israeli Air Force reportedly flew several military jets over the Gaza Strip at very low altitudes, breaking the sound barrier and thus dropping upon Palestinian civilians an extremely loud and deep-sounding shockwave blast, which has been named a "sonic boom". In the course of four days, almost thirty of these sound bombs, happening mainly at dawn or late in the night, were reported by civilians; the accounts varied from sudden cracks on walls and broken windows to nosebleeds, hypertension, panic attacks in children, and even miscarriage (Goodman 2010, Volcler 2013). When the matter was taken to court by Human Rights organizations, the state attorney argued that the aim of the sound bombs was to "disrupt terror activities [...] deceive, create disinformation and a sense of threat and confusion among terrorists." (Volcler 2013, p.56).

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<sup>62</sup> This can be seen also in the following video <https://www.youtube.com/watch?v=1P3EsLMKwJE>, minute 2:44. (Accessed on December 20, 2016)

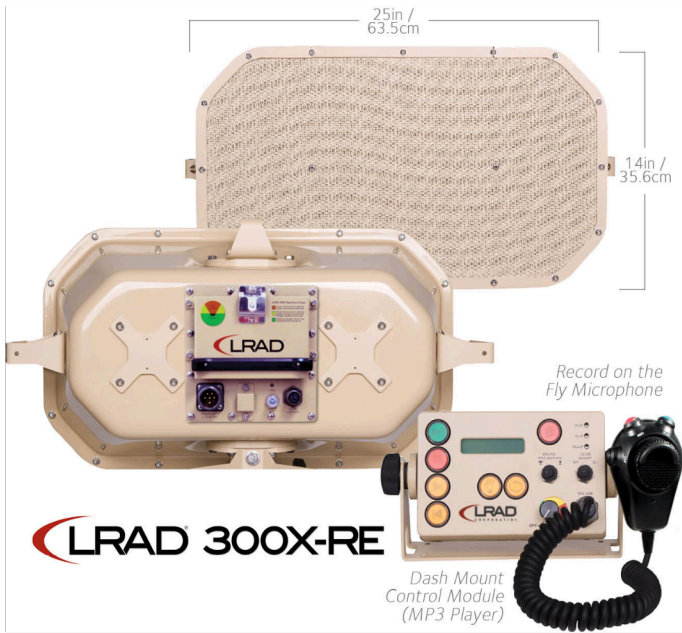


Fig. 21 (left): Back panel of LRAD Model 300X-RE.

Fig. 22 (below): Back panel of LRAD Model 1000.



Fig. 23: Mosquito Youth Deterrent device.

Journalist Gideon Levy compared the use of sonic bombs to "how a bully demonstrates his strength" (Levy cited in Volcler 2013, p.55), while the Israeli Government, in response to the legal action, claimed that sound bombs were actually preferable than real ones (Goodman, 2010; Volcler, 2013). Thus under the premise of using psychological warfare against invisible 'terrorists', the Israeli State entitles itself to abuse the extent of 'non-lethality' of its tactics over an occupied territory, as well as to threaten and injure those already considered by the state to be less human.

Stun grenades are designed encapsulations of sonic booms, and their use in a civilian context such as the one demonstrated in the video of "Operação Pancadão" violates international legislation by subjecting bodies outside any combat situation to disproportional acts of violence. Throughout the video, officers assert a number of times that their main concern is to operate from a safe distance, so that their approaching may not be immediately perceived by the partygoers. The grenade launcher is thus deployed as a paramount device for the success of the raid; one of the officers describe it as a guarantor of a 'safe course' in the operation. The shooter recognizes the grenade launcher as the best way to ensure civilians do not come in direct confrontation with the Police. In this case, the policemen seem to only avoid entering direct confrontation with the partygoers because it might put the Police in a tight spot, and not otherwise; disabling their targets by blasting them with an immediate sensory overload seems to fall within the narrative of 'avoiding conflict'. This, he claims in a condescending and sarcastic tone, is due to the fact the Police are also 'concerned with the safety and dignity of the *vandals* — because we have to.' As argued by Wright (2005), the instrumentalization of non-lethal weapons as being a *less violent* mechanism promotes a discourse which is not concerned with the immediate effect of these weapons on another human being, but rather is used to prevent the use of more violence as a direct response.

The officers make it a point of calling the partygoers vandals and criminals all over the sequence; yet, their actions are deployed upon people who have done anything but partying. Such a disparity between discourse and action gives a dimension of the hatred that is expressed through the violent occupation of the soundscape by militarized noise. The Military Police of Brazil has an unresolved and ongoing, increasingly violent relationship with black and brown youth in the country — consequences of a country marked by a long history of colonialism and black slavery. A study published in 2014 by the *Grupo de Estudos sobre Violência e Administração de Conflitos* ("Study Group on Violence and Conflict Management," 2014) has shown that sixty-one percent of those killed by the Police are black men, and fifty-seven percent of the victims are under twenty-four years old. Conversely, eighty percent of the perpetrators of these killings identify themselves as being white. Moreover, the amount of incarcerated black men is almost three times larger than those of white men (Sinhoretto et al. 2014, pp.27–8). Throughout the entire video no one of the partygoers is seen responding to the Police's provocations; most of them do not even directly look at the policemen in fear of violent — verbal or physical — backlash. Silence is what the Police enforces and demands, not only from the generally-defined targeted group of *Pancadão* go-



ers and supporters, but from the very individuals over whom they exert their power during the raid. The discourse of crowd control is, thus, from colonial times to "Operação Pancadão," a form of policing aimed at forcing the achievement of consensus, rather than seeking social justice (Wright 2005). Black and brown bodies dared to make themselves visible by becoming hyper-audible in an auditory space they should, in the eyes and ears of the Police, never occupy; in doing so, their sonic presence becomes immediately criminalized, and therefore prone to being violently silenced.

### The "ninja" approach to Sound Bombs

The session held at the *re:publica* convention yielded stories that differ significantly from those being generated in other installments of the *Algerinha* story. We knew — based on previous experiences in the convention as well as the overall focus of other presentations and workshops — that the participants of this session would be more interested in state-of-the-art technologies and their political discourses than in storytelling. Therefore this session, different from the previous one in Brazil, was designed in order to emphasize the different technologies for sonic control and the weaponization of sounds, and the consequences of their popularization and aestheticization in design and technoscience circles. Yet in stark contrast to what we expected, the stories created by the participants ended up showing an uncritical appraisal and celebration for techniques of policing and conflict-solving at the institutional level towards underprivileged populations. Similar to what we have seen before with the case of the "sound police," another fabulation coming from this session also demonstrated a desire for achieving maximum effectiveness in enforcing normative listening practices at a "safe distance."

This particular group drew a news card that differed slightly from the others, for it did not contain a piece of news but instead an instruction to play a sound file in the room.<sup>63</sup> These sound files, of around one minute in length each, were taken from the soundscapes created for the session in Brazil, and which would be later on used as samples for the design of the "Algerinha Vive Mixtape." In the case of this card drawn by the group, the soundscape played was an example of the functionality of the *Mosquito* device; coincidentally, the other card they took from the technology pile described the *Mosquito* itself:

High-pitched sounds with stable frequencies ranging from 8 to 17.5KHz. In the highest setting, the sound is allegedly only perceived by people under 25 years old. These sounds can be heard within an angle of 60 degrees and at a distance from 25 to 40 meters away from the device's front. It is a best-seller among shop owners.

Since there were already enough coincidences for this group, we decided to give them a miniature that could perhaps elicit different engagements with the sonic affordances of the *Mosquito* device. Thus we handed them a miniature of one of the many designs of the LRAD – an octagon-shaped plate with several smaller octagons inside. This miniature was

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<sup>63</sup> <https://soundcloud.com/partido-alto/rec-1> (accessed January 12, 2017).

cryptic enough for them not to associate either with the workings of the Mosquito card or with the sound they had just heard. In the end, they interpreted the piece to be true to size instead of a miniature of a much larger device; and based on the effects of the Mosquito device, they imagined a situation in which several smaller sonic weapons would have been sneaked inside the occupation in order to remove the *Algerinha* residents and rebuild the space anew for the real estate market:

We came up with a scenario in which the neighbors would be a quite conservative community, and the others [the *Algerinha* people] would come to this space, but the neighbors wanted to use it to rebuild it and add more houses, so a conflict ensued. They wanted to get rid of these occupants, so they didn't necessarily use the *Mosquito* but something similar, more aggressive, that could cause sickness after a certain time. This device looks like a ninja bomb, and we imagined them to be this size but hundreds or thousands of them that could be thrown around and they would explode and release this terrible sound. They would be very difficult to find and to locate, so it would be very effective.

In this case, then, the forceful eviction of the *Algerinha* residents is undertaken with the help of a technology hidden in plain sight. In miniaturizing a violent sonic device, the participants of this group mirrored and enforced the narrative that sustains the alleged subtlety of the effects of acoustic violence in the body. Similarly, in imagining a mass deployment of these devices, the group worked directly towards the hyper-amplification of sonic violences as a way to create distance by direct and immediate force, creating a shockwave of acoustic energy that would seem, to the victims of its multiple explosions, coming from all places at once and with full-blast energy. The deployment of multiple, short sonic blasts has been first hypothesized by physicist Jürgen Altmann in his study on the feasibility of acoustic weapons and their potential development:

One can also speculate what would happen if such [sonic] explosions – with initially planar, bounded wave fronts – were produced repeatedly. In analogy with combustion engines, where many thousands of ignitions can occur per minute in each cylinder, frequencies of 100 Hz are conceivable with liquid fuel, with micromechanical valves etc [...] After the first shock, each sufficient one would propagate in already heated gas with a correspondingly higher speed. Thus, later shocks would continuously reach and replenish the first front. As there would be some decrease of pressure and temperature away from the beam axis, following wave fronts would become more forward-dented and would suffer more from diffraction loss away from the axis. (Altmann 2000, p.198)

In fact, as demonstrated by Juliette Volcler, the US Military has been experimenting with the idea in the past decade, using what they have termed "Pulse Detonation Technology" to create a shockwave cannon capable of releasing "60 to 100 bursts per minute, each traveling at about 2000 meters per second and lasting up to 300 miliseconds [creating] a double deterrent to rioters and potential intruders" (US Military press cited in Volcler 2013, p.54).

The story created by this group differed insofar as they imagined not a cannon, but rather an enormous quantity of little devices yielding the very same acoustic power as a shock-wave cannon.

Thus while not necessarily speculating with and about a direct racially-charged violence as it was the case with the other group in this session, these participants imagined the eviction of *Algerinha* to take place through, among other means, a violent acoustic attack on its residents. In the meantime its perpetrators — the "conservative neighbors" — would remain seemingly invisible and virtually disconnected from the consequences of their acts. Moreover, under the premise of using a "non-lethal weapon," the participants commented that this action would not be necessarily regarded by the media or the public opinion as "too violent". In their fabrication of acoustic violence, therefore, the designing of distance happens through fragmented and numerous little devices, which yields the clearing up of physical space and ensures the invisibility of those directly acting on the cleansing of otherness.

It was curious to find out that in the case of these examples shown from the *Algerinha* session in re:publica the technologies drawn from the pile by the groups were also present in the other's narrative. For instance, while the "sound police" group drew the card for the "Operation Wandering Soul," in their story the effects of sonic control would be enacted by blasting high-pitched frequencies from an unmanned vehicle at the teenagers. Similarly, the group that took the card describing the Mosquito technology ended up focusing on the effect of a sonic blast similar to the sound bombs — another card present in the pile but not drawn by any group in this session. Both these cases — as well as the first one mentioned briefly in the beginning — make use of sonic technologies to design distance and disconnect agent from action; moreover, their ideas act directly on the militarization and enforcement of silence, both literally and figuratively. In the conversations preceding as well as after the session, all participants commented they had so far only minor knowledge about acoustic warfare; yet, the violences performed by these weapons seem to inhabit the imaginaries of those interested in techniques for the policing and management of the auditory space as a vector for the enforcement of private property. In the next section, however, we reverse the narrative and explore an alternative manifestation of the designing of distance, albeit still maintaining the "sound bomb" as our main plot device.

### **Decolonizing the Sound Bomb in *Branco Sai, Preto Fica***

Adirley Queirós' movie *Branco Sai, Preto Fica* ("White Out, Black In," 2015) creates a narrative that oscillates between the universes of documentary and fiction. Taking as its central point the events of a night in March 1986, in the city of Ceilândia – fifty kilometers away from Brazil's capital Brasília — the movie makes extensive use of sonic material to unveil the blurry zones between the real characters and fictional stories. Ceilândia is one of the so-called "satellite cities" of Brasília, settlements populated by workers who had to permanently move to the *Cerrado* region of Brazil while building the capital, back in the ninety-fifties. These workers and their families, however, have been pushed to the margins of the

Federal District in the ninety-seventies in government-led programs of resettlement — another term for forceful evictions of underprivileged populations; as the director himself comments in an interview, "Ceilândia was born out of an *apartheid*, a territorial abortion." (Queirós cited in Lopes, 2015) The movie thus takes this imposed condition of otherness, which crosses markers of class and race, in order to design an alternative present in which such segregational measures are made highly visible and therefore incorporated into the political order of the Federal District of Brazil.

Much like the raid described earlier in the video for "Operação Pancadão", the Military Police of Ceilândia specifically targeted *bailes black* parties happening at the club *Quarentão*, in the city center.<sup>64</sup> In the opening scene for the movie we see Marquim — a DJ, played by himself in the movie — who has been permanently confined to a wheelchair after being shot by the Military Police in March 1986 at *Quarentão*. Speaking to the audience of his radio show, and by extension to the viewer, he describes the events of that night from a first-person *earview*. Using nothing but the sound of his own voice and a funky bass line as background, the listener — and the viewer — travel with him back in time, from the door of his house to his friend's house, then to the entrance of the club where he can, already from a distance, listen to the bass grooves and therefore guess how crowded the party might be. Marquim then raps to the audience about some of the dance moves he is now watching from an outside window before coming into the club, to then meeting the girl he is interested in and promising her to teach his new *passinho*. Suddenly, the viewer — but not the listener of the radio show — is interrupted by the sound of a gunshot and the barking of dogs: the Police has invaded the club in order to stop the party. Marquim then mutes the background music in order to match the events happening in his narration, and changes the tone of his voice to enact the loud and violent orders of the Police:

Bora bora bora bora! Puta prum lado e viado pro outro. Bora, porra! Anda, porra! Tá surdo, negão? Encosta ali. Tô falando que branco lá fora e preto aqui dentro! Branco sai e preto fica, porra!<sup>65</sup>

The explicitly racist language employed by the Police officers is what lends the movie its name; concomitantly, the aftermath of the violence engendered by these orders is what sets the tone for the rest of the narrative.

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<sup>64</sup> "Baile black" is an earlier name for what would become the *baile funk* or *pancadão*. Before *funk carioca* became a genre of its own, these parties were much like the disco parties of Studio54 in the United States, playing mostly Motown classics and Disco Funk in huge Sound Systems, while having groups of partygoers developing and showcasing their own intricate dance moves — *passinhos*.

<sup>65</sup> "Go, go, go, go! Whores to this side, faggots to the other [sic]. Go, damn it, go! Are you deaf, n\*\*\*\*? Lean over there. I'm telling you: whites outside, blacks inside. White out, black in, damn it!"



Fig. 24: Still from *Branco Sai, Preto Fica*.

*Branco Sai, Preto Fica* is set in an alternative timeline of 2012 in *Antiga Ceilândia* ("Old Ceilândia"), implying that Ceilândia, as well as other "satellite cities," may have given way for an entirely new form of geopolitical delimitation within the Federal District. Brasília, on the other hand, has permanently closed its borders for citizens of the surrounding settlements; any person wanting to enter the city is demanded to present a valid passport at the border inspection, or return to their own district. Enforcing these policies is the *Superintendência de Migrações Intra-Distritais* ("Bureau for Intra-District Migrations"), represented in the movie by the *Polícia do Bem-estar Social* ("Police for Social Wellbeing"). This Police, a rebranded version of the Military Police, imposes a daily curfew for the residents of the settlements, thus submitting the underprivileged population of Ceilândia to the authoritarian surveillance of the Federal District government. Key to the narrative is this interplay between the normalizing narrative of racism and class segregation already at play in Brazil since colonial times, and the immediate threat of validating such a narrative through explicit, government-backed, political violence; the imposition of a daily curfew at dusk by the Police, for instance, is not so distant from the reality of many of the 'pacified' favelas in Rio de Janeiro. In that sense, the movie brings these discussions to the fore by turning the everyday aesthetic practices of Brazil into science fiction, while at the same time making a stark contrast with the stranger-than-fiction aspect of the real stories told by the characters. The visual narrative is much like Brazil as we know it: improvised installations, counterfeit devices, hacked everyday practices, lo-fi solutions to hi-tech demands. The sounds, however, convey a different technological reality, one that gives the viewer the impression that these are, in fact, highly advanced devices from a parallel present. In the movie we listen, but do not see, to the eerie buzzy sounds of full-body 3D scanners; highly advanced machines with automated hydraulic doors and hyperspatial, time-traveling capabilities; disembodied voices from authoritarian surveillance apparatuses, and so on.

However, the only truly fictional character in this story is Dimas Cravalaças, who is presented as an outsourced time traveller at the service of the Brazilian Government of 2070; his mission is to collect enough material evidences for a lawsuit back in his time. These evidences, once in the right hands, will give the prosecution enough power to hold the Brazilian Government, which has been overtaken by a "Christian Avantgarde," accountable for crimes perpetrated against black and underprivileged populations throughout history. To do so, Dimas has to find Sartana, who, similar to Marquim, was also left permanently impaired by the violent actions of the Military Police that same night. Sartana, here interpreted by Shokito – another real victim — had to have his left leg removed and replaced with a prothesis. In the movie we see a rather large informal market of used and discarded prosthetic body parts, which Sartana buys and resells as a way to make a living, as well as to aid other victims, who cannot afford the high-maintenance demanded by the original manufacturers, to bypass the closed software and hardware requirements. The viewer learns during the movie that Marquim was shot twice by the Police, and Shokito was run over by the Policemen's horses while trying to escape the club. These two actors/characters are, in parallel to this quest for social and political justice, telling the audience their real story, one of a violent event related to the perception of certain bodies to have less rights to the auditory space than others.

Queirós has let the actors fabulate freely and insert their own versions of the narrative intermingled with the documentary side of their stories. To evince this parallel narrative of reality, the movie makes use of voiceovers to let the actors tell their struggles, while the visual narrative shows them/their characters engaging in everyday activities such as cooking eggs, smoking a cigarette while observing the movement of the streets, or driving around Ceilândia. At the same time, longer shots demonstrate the difficulties engendered by the improvised architecture of the city, the design of its urban furniture, and the lack of accessibility, as well as the workarounds the characters have to come up with — in both reality and fiction — to be able to live with their new conditions. In doing so, Queirós makes a conscious effort not to glamorize the struggle with disability or to make it a trope of the story; rather, he picks it up as one narrative thread at the intersection of race, class, and ability: the aftermath of an act of political violence enacted through the enforcement of normative listening practices.

In contrast to these normative practices, the musical production of underprivileged communities is a central aspect of the movie, and what constructs *Branco Sai, Preto Fica* as a brilliant work of sonic fiction. Marquim spends most of his time in his own basement, a low-ceiling, open space, half-adorned with old tiles and pulleys holding cables connecting to mysterious electronic devices. Even though the basement is full of complex technological solutions — from a makeshift elevator that gives him wheelchair access, to a do-it-yourself video monitoring system for keeping track of what happens outside — the low-tech aspect of his setup is a visual marker which repeats itself in the entire movie. From this mixture of

science lab and old garage, Marquim broadcasts his own radio show; according to Queirós, these scenes were, much like the rest of the movie, improvised without a set script; they were also broadcast as proper radio shows while the movie was being shot (Lopes, 2015). Marquim usually performs by choosing records from his own collection and playing them, mixing the music with punctuations made by the sounds of his own surroundings: a creaking door, the neighbor's vacuum cleaner, motorcycles passing by. Moreover, as seen in the opening sequence, he uses these playlists as a background track for telling stories to his listeners, constantly reminding them and the audience that the violent events which have left him impaired for life, have in fact never left his mind for a second.

Instead of mourning his tragedy, Marquim has a plan of vengeance against the violent systems that have put him in this condition. To enact his vendetta, he requests the services of one of his clients – DJ Jamaika, to whom he sells one of his counterfeit passports to enter Brasília — in order to help him build a "sound bomb". The bomb launcher and the plans for it, are seen from the very beginning in plain sight at the corner of Marquim's basement/ radio studio. He is constantly seen tweaking bits and pieces from inside this launcher; however the viewer is never presented to the actual workings of this device, but rather only to the high-pitched, buzzing sounds it produces. The bomb, Marquim explains to Jamaika, has to be equipped with "incommensurable sonic force, so strong as to bring down a helicopter in mid-air flight"; his intention is to launch the bomb from his basement and deploy it in the very center of Brasília, blasting in all directions and flooding the capital with the sounds and musics of underprivileged populations. Together with DJ Jamaika, Marquim goes around Ceilândia as a field recordist, walking through the narrow corridors of the central market, passing through stall after stall capturing sounds from televisions, Jukeboxes, video karaokes, pirate CD vendors, Sound System providers. At a later moment, they contact the musicians they heard being played at the market, and go for a closer recording of the underprivileged artists from Ceilândia; the audience listens as they record the sexually enticing lyrics of *Forró*, played in the narrow backyard of a house by *Grupo Família Show*, as well as back in Marquim's basement capturing the social critique of hip-hop by rapper *Dino Black*.

When DJ Jamaika and Marquim are finished crafting their sound bomb, they go on to try to find Sartana. Marquim dedicates a song and a story to him during in his radio broadcast, which in turn also calls the attention of Dimas; in the end, both are able to locate Sartana. In fact, Sartana's knowledge of makeshift electronics and computer hacking is the final piece to the success of the bomb, for he is the one who can power it up and make the launch. However, now in possession of the needed material evidence collected by the time traveller, the Brazilian Government blackmails Dimas, commanding him to act quickly in order prevent the deployment of the sound bomb by the trio. The bomb thus becomes an entanglement of two distinct, yet close narratives: on the one hand, the victims of police and political violence subvert the logic of distance afforded by the military apparatus of the bomb, misusing and re-appropriating the device to turn it into a vessel of the voices, groans, and musics silenced or unheard by the erection of borders around the capital. On the other

hand, their main objective with the bomb is not the reconquering of the physical and auditory space of Brasília, but rather a violent reconciling of the auditory markers once removed from the now 'guarded space' of the enclosed city. The narrative designs the bomb as a device for decolonizing the listening practices of Brasília and its residents. Conversely, in making it a condition for his return to his own time, Dimas becomes himself an installment of a new "sound police" for the Brazilian Government, in a final operation to protect Brasília from being flooded with the sounds of its racial others.

### **Weaponizing Distance**

Distance is the device which allows for both the Police and those performing the act of policing to remain safely invisible while perpetrating violent acts — even when their own words suggest otherwise. Distancing allows those who have the power to extend the reach of their apparatuses, and disconnect their actions and gestures from their immediate, violent consequences. In the video of "Operação Pancadão," the grenade launcher is what designs the materiality of this distance, ensuring that the effects of the Police's violent actions are kept disconnected from the Policemen's own bodies. Concomitantly, the sound bombs and the kite-police are devices which enforce the temporality of this distance, maintaining, through bursts of noise, an auditory space free of *noisy others*, for as long as deemed necessary. Combined with the screams of the 'morally superior' bodies, be they Brazilian Police officers or European civilians, the collateral noise engendered by the military presence of the Police validates the violent enactment of policing. In that sense, the use of sound bombs or high-pitched noises for the enforcement of 'silence' comes out, at best, as an ironic move. Such irony is explored by a device such as the one seen in *Branco Sai, Preto Fica*, in which the noise of the other is weaponized as a way to re-occupy physical and auditory space. It is a movement towards becoming present, and in the case of the bomb, sonic presence; the movie shows that it might be easier for a sonic bomb to enter Brasília than for a black body to do the same. The porosity of the auditory borders is explored, made visible, tangible, and, more importantly, large enough to allow material entanglements that act on the decolonization of sonic affordances and listening practices.



## Chapter Six

### Forbidden music, forbidden jukeboxes: the amplification of listening anxieties in Rio de Janeiro

In September 2016 I interviewed Samara Tanaka, a Brazilian designer and educator, to talk about her everyday listening practices and her auditory perception in Rio de Janeiro. I chose to interview her due to the fact that she is a "border listener" herself: born in the wealthier, southern part of Rio, and having lived for a few years in Germany, she returned to Brazil in late 2011, and a few months later decided to move to the northern part of the city, more specifically to *Complexo do Lins*, the militarized name for a group of twelve *favelas* whose borders blend with the mostly residential neighborhood of *Lins de Vasconcelos*. *Lins*, as this massive part of the city is best known for, has more than twenty thousand residents, and in 2013 was the thirty-sixtieth region of the city to be occupied by the military police of the UPPs.<sup>66</sup> Even though Samara decided to move to a place that could not be more different from her own experiences thus far, she still maintains the privilege of navigating freely between two heavily contrasting realities; her perspective is always that of a 'double-consciousness', as she told me herself. In other words she, differently from many of the people who also live within *Lins*, can always resort back to a different Rio de Janeiro, and stay somewhere else, for as long as needed, whenever the situation in *Lins* gets too tense.

In fact, our conversation about her everyday listening experiences started a year before, when I met her in November 2015 for a few beers at a bar in *Lins*, still in the *asfalto* — ground level — albeit close to the *morro* — or the hills.<sup>67</sup> Back then, we were talking about the presence of music in everyday life in Brazil in comparison to our own perceptions of living or having lived in Germany. She began to tell me about a specific machine which was in another bar, this one uphill and very close to her house. According to her this jukebox performed interesting social functions in her neighborhood. Thus in the following sections I focus on this particular object, the jukebox. Starting from a brief history of pay-for-listening musical machines, their use and the listening practices they create, I will then focus on the contingent sonic practices engendered by one particular jukebox, which belongs to a particular place and produces a specific set of sonic affordances. This specific jukebox is, of course, far from an isolated object; rather, it is embedded in a system of practices and policies which defy the scope of written — and in turn generate new forms of unwritten — laws. The cultural and political function of this type of jukebox — illegally assembled and distributed over a network of practices on the fringes of the economic system —, and specifi-

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<sup>66</sup> Information retrieved from <http://www.riomaisocial.org/territorios/complexo-do-lins-e-camarista-meier/> (accessed December 15, 2016).

<sup>67</sup> The usual language employed by many of Rio de Janeiro's inhabitants to talk about the *favelas* is to make a distinction between those from the *morro*, meaning the people who live in the *favelas* (which are almost always uphill), and those living in the *asfalto*, meaning the ground, flat parts of the city. *Lins de Vasconcelos* is the *asfalto* of *Complexo do Lins*, a sort of entry point which gives way to the *morro*.

cally the jukebox from *Lins*, subvert and extend well beyond its intended design, embracing the contingency of certain localized listening practices in order to become, in itself, an ambiguous device for provisional forms of auditory governances. Put differently, because of the ways in which its presence and absence articulate a non-verbal language within the social configuration of *Lins*, this jukebox performs temporary governances that might be particular to that specific place, but can be nevertheless observed and enacted elsewhere.

### A brief history of jukeboxes

Jukeboxes or music machines have their technological origins directly connected to the history of Thomas Alva Edison's phonograph of the late nineteenth-century. However, culturally, they owe their iconic status and ubiquity to the racial history of the US American South. Cultural historian Kerry Segrave, in his comprehensive book *Jukeboxes: An American Social History* (2002), has drawn the connection between the absence of country and R&B on the radio programming of the early twenties in the US, to an emphasis put by jukebox manufacturers on, to quote him, "'race' records" as the only outlet for african-american populations to listen to "their own music." (Segrave 2002, pp.45–6) With Jim Crow legislations forcefully preventing african-americans to be in certain places, particularly for entertainment, the jukebox came into being as a marker of black music (*ibid.*). This is also reflected on the name the machine came to be known by as well. While other names for this music playing machines such as 'automatic phonograph' were tried out, the name that stuck and for what the machine is internationally known as of today has a close connection with the shanty bars and coffee houses frequented by african-americans in the agricultural South, as well as with their racialized perception by the white US population as 'inadequate places' — or "jook joints" (*ibid.*, p.17). As Segrave demonstrates, the term 'juke' is believed to be originated from the word 'jook,' "an old Southern word of African origins used among blacks [sic], which meant 'to dance'" (*ibid.*). He complements by saying that

the Oxford English Dictionary defined 'juke' as of West African origin meaning disorderly or wicked. It defined the term (and its spelling variants) as a roadhouse, or brothel, especially a cheap roadside establishment providing food and drinks and music for dancing [...] A second meaning was to dance, especially at a juke joint, or to the music of a jukebox [...] (*ibid.*, p.18)

Moreover, Segrave argues that the coining of such a name for the machine was thought to be, quite expectedly, a problem for the music industry, due to its association with these roadhouses and "whorehouses" [sic] which "stayed open after hours and disturbed neighbors with loud music" (*ibid.*, p.17) In addition, Paul Oliver claims in his account of the oral history of the Blues that manual phonographs "were set up in the country districts at every crossing café, and in every joint and juke. The latter gave them their name – juke-boxes began to replace live musicians everywhere [...]" (Oliver 1997[1969], p.140) Thus by looking at how the jukebox got its name sediments the connection between the listening practices afforded by it, and the racialized subject of said listening practices.

Regardless, the jukebox presented itself as a business model promising enough to be turned somewhat into a symbol of US American popular culture. The communal listening practices afforded by the machine signaled that music in public places were meant not only for soundtracking everyday life and adding background sounds to bars and restaurants, but also to foster the US American citizen to 'eat, drink, and be merry'. With World War II, jukeboxes became also a symbol of US patriotism and protectors of the youth. The main targets for the industry were places in which young patrons would get together and pay for entertainment alongside food and drinks (Segrave 2002, p.68). Segrave also recounts how the machines functioned as a way to keep patriotic morale up via listening to music that could speak directly to the 'good spirits' of the US American people, exactly by focusing on the so-called "masses [...] who frequented the taverns, restaurants, and so on from which the armed forces were drawn." (*ibid.*, p.129) Similarly, jukeboxes became an icon for the image of the joyful and proud US soldier as the War went on; Segrave argues that there was a specific demand for these machines amongst servicemen, as well as in teen clubs set up specifically to combat juvenile delinquency (*ibid.*, pp.132–144). The jukebox, thus, affords modes of listening that serve not only entertainment but somehow functional purposes as to its cultural function and social placement.

The close connection between the listening practices of the jukebox and youth culture have historically drawn controversy to the enforcement of silence laws, usually being perceived as a vector for juvenile delinquency rather than actually a device for curbing it. These perceptions connected dancing and collectively listening to popular music in jukeboxes with the general and widespread belief that these environments — and one can speculate the 'jook' connection as a probable cause — were places in which loitering and substance abuse were fostered (Segrave 2002, p.149). Moreover, the question of the machine's perceived loudness was a constant throughout its history, provoking different sets of reactions — from the establishment of curfews in the US to the complete shut-off of machines in Mexico, as well as connecting the 'noise' of jukebox listening with American imperialism in Italy. In his study Segrave also offers interesting workarounds to the apparent nuisance caused by the jukeboxes' presence in taverns and restaurants; the most interesting of these being the suggestion, by a mayor from Cleveland, of setting up the machines with 'silent records' that could be also selected and paid for, provided a patron felt the sound to be a source of disturbance (*ibid.*, p.139). This would turn silence into a literal consumer good, a commodity in which, by paying a nickel, one could guarantee a few minutes of perceived quietness associated not with lack of sound *per se*, but rather with the absence of certain sounds.

Despite its successes and controversies, the design of the jukebox was not always perceived to be welcoming nor inclusive. The bulkiness and sturdiness of these machines made it particularly difficult to place them onto multiple spots in a tavern, or to allow for individualized access to them. Particularly for women, this turned the act of standing up to choose a song in the machine into a troublesome situation of facing possible harassment by male patrons; Chris Rasmussen attributes the redesign of jukeboxes into smaller machines such as the wall-mounted, or restaurant-booth jukeboxes to this very fact (Rasmussen 2011, p.

196) Rasmussen also speculates on how changes in the machine's design had a significant impact on the affordances of the jukebox. For instance, by making the system for inserting coins visually appealing and easier to interact with, the machine would allegedly turn into a more welcoming mechanism for impulsive consumption of music. Moreover, he claims that making the robot arm visible while changing records for the customers reflected a desire towards humanizing the jukebox, equating it with the works of a personal music selector at the patron's service (*ibid.*, pp.195–6).

### **Jukeboxes in Brazil: the case of Rio de Janeiro**

The highly profitable business model of the jukebox thrived in the after-War period, in close connection with the cultural branch of the US American imperialist expansion. It is in this moment of the twentieth-century that US companies began exporting a substantial amount of music machines to places where consumer practices were fueled by and flooded with US American media, music, and consequently lifestyle — with South America being perhaps the largest of them. In fact, Segrave argues that the demand for jukeboxes in countries such as Colombia, Nicaragua, Ecuador, and Brazil was happening at a rate much bigger than the actual numbers manufacturers could supply these markets with (Segrave 2002, p.167). In fact, according to his study, while in 1939 sixteen jukeboxes were exported from the US to Brazil, that number skyrocketed to over six hundred and fifty machines only ten years later (*ibid.*, p.327, 330).

The popularity of jukeboxes in Brazil demanded the creation of unions which could ensure that the operation of these machines were covered by import, work, and copyright laws in the country. Thus in 1979 the *Associação Brasileira das Empresas de Reprodução Automática de Áudio, Vídeo e Similares* ("Brazilian Association for Businesses of Automatic Audio and Video Reproduction Equipment," *Aprova*) was founded, and it is the only association concerned with the functioning, distribution, and licensing of jukeboxes in the country. According to their institutional brief of 2013, until the late nineties all music machines in the country were imported, and the foreign investment policies in Brazil at the time prevented the emergence of a local manufacturing market (Aprova 2013, p.1). Yet digital jukeboxes, which can be easily assembled with a regular desktop computer set and fed by digital music and video files, supplied that demand quite easily, and popularized the device all around Brazil. Still, *Aprova* only regulates the jukeboxes distributed by private companies, not by individuals. Digital jukebox systems are also in high demand for buying and renting on the Internet, while a myriad of video tutorials for setting up and downloading unlicensed content for jukebox software can be easily found with a quick YouTube search.



Fig. 25: Software interface of a homemade Jukebox.



Fig. 26: Typical design of a dive bar Jukebox in Brazil.

The use of jukeboxes in Brazil recalls the early history of the machine and its original sonic affordances. Machines like these can be found in a good number of dive bars in unprivileged neighborhoods and outskirts of São Paulo, for instance (Feltrin 2016). In 2013 it was estimated that there were more than seventy-seven thousand jukeboxes in operation in Brazil, with less than half of them being properly licensed (Aprova 2013). Each machine can generate a monthly revenue of up to five million Reais (approximately one and a half million Euros). As it will be shown, jukeboxes are an essential device for probing into the sonic practices of everyday life in the *favelas* of Rio de Janeiro, and in this case, the particular auditory governances of *Complexo do Lins* in the northern part of the city. Thus Segrave's claim that jukeboxes are disappearing everyday is far from being true when it comes to the consumption of music by the Brazilian lower and lower-middle classes.

Precise information about jukeboxes in Rio de Janeiro are scarce. This is due to a number of reasons, the most relevant of them being that the absolute majority of these music machines are considered to be illegal. According to a report published by the newspaper *O Dia* in May 2015, ninety-eight percent of the more than twenty thousand machines installed in bars and restaurants in the state of Rio are outside the scope of those controlled by the Brazilian Association for Phonographic Licensing (*ABLF*) and registered at *Aprova* (*O Dia*, 2015).<sup>68</sup> Having the proper license to install these machines means, mostly, a way to ensure royalties are paid back to the artists whose music is stored in the hard drive of these jukeboxes. These machines operate either with tokens — which are sold at the bar counter — or directly by inserting notes and coins. For one Brazilian Real – approximately thirty cents of Euro – the listener can choose two songs to be played from a rather comprehensive catalog, downloaded from torrent websites or added directly via USB sticks by either distributors or bar owners. According to Eric Cwajgenbaum, a lawyer for *Aprova*, the manners in which these machines operate, that is, assembled from regular desktop computers and filled with music files downloaded from torrent websites or distributed informally, may also be subject to the Brazilian law against contraband and illegal trade of electronic components (Cwajgenbaum cited in *O Dia*, 2015). In another report, the Brazilian newspaper *Extra* (2012) affirms that unregistered machines are mostly controlled by either drug lords or *milicianos* (factions within the Military Police which perform illegal activities in most *favelas* in Rio),<sup>69</sup> who collect around thirty to forty percent of the money spent in music playing deposited in the machines (Barreto Filho, 2012; *O Dia* 2015). This 'fee,' the reports claim, is used by the

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<sup>68</sup> Precise numbers differ from one report to another. *O Dia* calculates that only three hundred machines are properly licensed (*O Dia*, 2015); the report from *Band*, however, claims the number of registered and licensed machines might be over five hundred (*Band*, 2015). Nevertheless, in both cases the percentage is almost irrelevant in comparison with the number of unregistered machines.

<sup>69</sup> The relationship between the Military Police and the drug lords is complex and marked by disputes over territory. The *milícias* are factions that evolved from death squads and vigilante groups in the late ninety-eighties in Rio. Composed mostly by policemen, ex-policemen, firefighters or reformed military officers, these factions have overtaken power in many *favelas* in Rio in the early 2000s, and function as their parallel power, extorting business owners and taking control of services and infrastructure in these communities. Comprehensive discussions on the emergence and actions of the *milícias* can be found in Zaluar and Conceição (2007).

factions in money laundry schemes, as well as for financing the illegal trade of drugs and firearms.

The ubiquity of music machines in bars and pubs in Rio demonstrates that jukeboxes are not only a profitable source for the activities above discussed, but also function as a marker of control and influence over territory. In these and other similar journalistic reports, anonymous sources claim that installing illegal machines over legal ones is an imposition from the dominating faction in the area. To enforce this, every faction designs its own label — some use images of cute little animals, others pictures of beautiful landscapes (Anonymous cited in Band, 2015); such a designed visual marker ensures that no other service provider — covered by law or otherwise — may profit from installing jukeboxes in that area. Knowing how to identify these labels then gives clues as to whom each jukebox originally belongs; it is a subtle mechanism for understanding which faction is in control of the business and trade in the area. In some areas in which slot machines and other gambling devices dominate the flow of money, jukeboxes are a forbidden piece of technology and have been subtracted or explicitly destroyed by the dominant factions; businesses from these areas either resort to the officially licensed devices — operating in accordance with the Police — or avoid dealing with music machines altogether (Barreto Filho 2012).

Yet, the question over the legality of these music machines is not something completely silent to the public ears. According to the report from *O Dia*, jukebox systems are largely advertised on the Internet, and their business representatives do not shy away from confirming that the jukeboxes they sell are not licensed by either *Aprova* or *ABLF*. Moreover, they explicitly advise any interested buyer against pursuing their registration or licensing with these associations (O Dia, 2015). *ABLF*, for instance, represents the interests of all major record labels within the country, namely *EMI Music*, *Som Livre*, *SonyBMG Music Entertainment*, *Universal Music*, and *Warner Music Brasil* (*ibid.*); hence the absolute majority of mainstream artists in Brazil protected by copyright law are directly connected to the Association. This means that by licensing the jukebox, a substantial amount from the profit of each machine would be immediately out of the distributor's hands — a narrative that supports the selling and using of these machines outside the scope of the law.

### Understanding *Proibidão*

Another likely reason for keeping the jukebox unlicensed is the possibility these machines may offer for adding musical content falling outside mainstream channels for media distribution. Particularly in the case of Rio de Janeiro — but not necessarily constrained to it — this means a set of artists composing and performing a specific type of music, *proibidão*. This sub-genre of *funk carioca*, whose name is a neologism roughly translating as an augmentative for *forbidden*, has different — albeit less used — denominations such as "*funk proibido* (forbidden funk), *rap de contexto* (context rap) or *funk de facção* (faction funk)" (Palombini 2011, p.103, original emphasis) It is perhaps the most controversial type of *funk carioca*, often acknowledged as a direct response from the *favelas* to the ongoing

criminalization of the genre and its MCs and DJs by the Brazilian media (Lopes 2009; Palombini 2014). *Proibidão* songs usually re-appropriate melodies from other well-known songs, adapting them to the beat of *tamborzão*, and replacing the original texts with lyrics celebrating violence, or extolling the activities of one of the main factions operating in Rio (Sneed 2008, p.71). Moreover, its lyrics often serve as a direct provocation or confrontation towards the Military Police, the *milícias*, or rival drug factions. Due to its close connection with these factions, as well as the often explicitly violent content of the lyrics, *proibidão* is seldom circulated via the usual means of music distribution, relying instead on bootleg recordings from live performances or informal file sharing in USB-drives, bluetooth exchange, Facebook, or *WhatsApp*. Music videos for *Proibidão* tracks are abundant and have gained more significance in the past five years – often presenting 'clear' versions of the original tracks, omitting key names and toning down on profanity (though not necessarily refraining from using it).

According to the historiography of *proibidão* offered by Brazilian scholar Carlos Palombini the term has been circulating among funk MCs and DJs as early as 1995 (Palombini, 2015). Tracing back to a series of homemade CD-Rs containing live recordings of songs praising the leaders of *Comando Vermelho*, this sub-genre has been drawing attention from the media and generating fear amongst the middle classes of Brazil. Palombini recalls a specific report from newspaper *O Dia* describing the prosecution of twelve funk MCs who, according to the headline, sang "*funk do mal*" ("evil funk") (Palombini 2014, p.220). Ironically, what is perhaps one of the most famous examples of *proibidão* has made the international news in a very different way — as the soundtrack and main theme of the movie *Tropa de Elite* ("Elite Squad", Padilha 2007). While the song featured in the movie had its lyrics changed, the original "*Rap das Armas*", by MC Junior and Leonardo, describes a broad range of firearms very much present in the everyday life of the *favelas*:

Metralhadora AR-15 e muito oitão  
A Intratek com disposição  
Vem a super 12 de repetição  
.45 que um pistolão  
FMK3, M-16  
A pistola UZI, eu vou dizer para vocês  
Que tem .765, .762, e o fuzil dá de 2 em 2  
[...]  
vem pistola Glock, a HK,  
vem a Intratek Granada pra detonar  
vem a caça-andróide e a famosa escopeta  
vem a pistola Magnum, a Uru e a Beretta  
Colt .45, um tiro só arrebeta  
e um fuzil automático com um pente de 90  
estamos com um problema que é a realidade



The song features extensive sampling and manipulation of sounds of gunfire. In parallel with the long list of different types of firearms the MCs describe, the chorus — which yielded rather embarrassing copycats in both English and German — mimics the sound of the weapons in the repeating syllables of MC Cidinho and Doca:

parapapapapapapa  
parapapapapapapa  
papapapapapapara clak bumm  
parapapapapapapa

In my visit to *Lins* with Samara, I perceived *proibidão* to be much more than a music genre; rather, it was a strong sonic imprint of the neighborhood. It is everywhere and anywhere; walking around the streets I could not help but notice a good number of kids wearing a small, square-shaped black speaker box on their waistbands. The sounds coming from the box were louder than a regular cellphone speaker, and the ubiquitous sound of *tamborzão* was recognizable from a distance. Rather than using headphones, these kids walk around *Lins* either wearing these boxes or attaching them to their bicycles or motorbikes; in doing so, they are privately listening while at the same time occupying and sharing the auditory space with the entire neighborhood. Samara told me that it is not uncommon to see two or more teenagers walking side by side with these boxes in their shorts while listening to different songs, all together concentrated in their own public-yet-private auditory spaces. When I visited a music studio, where MCs and DJs of *Lins* record and produce their music, one of the artists who were recording that day proudly announced to me that his new recording would be "in no time playing on the speaker boxes of the faction *vigilantes* while they patrolled the *favela* with their rifles in hand."<sup>71</sup> This is another reason why the jukeboxes are a reliable business activity extending well beyond the reach of the tiny speaker boxes: they allow for music specific to that area, and in turn from the specific faction in control, to be not only played but also permanently stored, functioning as a sonic marker in that specific place of a particular and wider territory. Indeed, playing a *proibidão* song celebrating the leaders and events from one faction in a *favela* controlled by another may lead to rather violent backlash for all parts involved.

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<sup>70</sup> A rough translation would be "Machine gun AR-15 and lots of [gauge] .38s / Intratek comes with a good mood / Now comes the repeat [gauge] 12 / .45 which is a big pistol/ FMK3, M-16 / Uzi pistols, let me tell you / We got .765, .762 and the rifle shoots in 2 by 2 [...] Now comes the Glock pistol and the HK /And also the Intratek grenade to rock it out / Now comes the "android hunter" and the famous shotgun / The Magnum pistol, the Uru and the Beretta / Colt .45 one shot makes a mess / and an automatic rifle with a 90-bullet clip / We have a problem, that is our reality / And this is why I ask for peace, justice, and freedom."

<sup>71</sup> With discretion to the things being said, as well as the connection between the MCs and the factions, I did not record my meeting at the studio in *Lins*, and cannot disclose the name of the MC. Therefore I am paraphrasing his exact words.

### The Jukebox of *Lins*

When Samara described to me the jukebox sitting outside a bar near her house in *Lins*, she immediately remarked how the machine was a key element for everyday life in her part of the neighborhood. She told me that, specially because the machine was placed outside the bar, it could be used at any time of the day or night, often working non-stop until the wee hours of the morning. Samara described the auditory space of *Lins* to me as "definitely more intense than other parts of the city." Indeed, the soundscape of *Lins* is quite busy, dissimilar from the experiences I heard from inhabitants from other *favelas*, or even in comparison to other residential neighborhoods in Rio de Janeiro. In my own experience of walking around *Lins* the sounds of this neighborhood felt louder than in other parts of the city; loud music, shouted voices, conversations, and the occasional gunshot are an important component of this soundscape. The overall loudness is also aided by how open the architectural surroundings are, with more houses than tall buildings in comparison with similar configurations in the city.

As such, in her own experience, music is a paramount element to understand the flow of everyday life and the hidden cultural codes of *Lins*. Conversely, silence becomes the auditory code with which to orient oneself to the presence of confrontation. Samara told me that the sudden absence of music might mean that conflict has already arisen, and silence works as a way of allowing the neighborhood to identify the source of the gunfire and the appropriate measures to be taken:

Outra coisa da música é que sempre que tem operação e tiroteio, as pessoas desligam todos os sons pra que você consiga ouvir direito e saber de onde os tiros estão vindo. Isso no dia-a-dia mas também nas festas. Às vezes a música está num volume ensurdecedor, mas alguém ouve um tiro e imediatamente tudo fica em silêncio. Isso já aconteceu muitas vezes, de parar tudo pra saber pra onde ir, pra que lado fugir [...]<sup>72</sup>

For her, paying attention specifically to the music being played in the jukebox near her place was fundamental for knowing who was around, what was the general mood of the street, and, more importantly, whether it would be safe to go out and walk around. She described its function to me as a kind of "thermometer" for sensing the situation:

Dava pra saber quem estava no bar pelas músicas [...] não necessariamente a pessoa em si, mas você sabia, por exemplo, que 'aquela pessoa voltou', por conta de músicas que não cabiam no ambiente, não combinavam com o local. Acho que era Raul Seixas, não lembro, mas era nítido que era a mesma pessoa. [...] A música, principalmente no começo [quando se mudou para o Lins], era um indicador do clima. Quando eu estava em casa, eu sabia o clima das coisas conforme a música que estava to-

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<sup>72</sup> "Another thing with music is that whenever there's a raid and gunfire, everyone turn off their music so that you know where the gunshots are coming from. This not only in the everyday but also in big parties. Sometimes music might be extremely loud, but someone hears a gunshot and immediately everything goes silent. This has happened several times, of everything stopping so people know where to go, where to run [...]"

cando [na jukebox]. Como a música era muito presente e muito alta, eu usava como um termômetro. Quando tocavam raps mais pesados, por exemplo, eu ficava com receio [...] <sup>73</sup>

From the way she further described the social function of the jukebox in that specific dive bar, it was clear to me that the idea of it as a 'thermometer' was not a practice constrained to her. Samara noticed that this particular machine was being constantly confiscated by the Police whenever there was a raid in her area, to the point in which the machine was eventually replaced by another, smaller, wall-mounted one, which now stays inside the bar. When I asked her if she knew, or could at least guess the reasons for the constant subtraction of the first machine, she said that she did not know for sure but had a strong feeling it was not due to the machine being unregistered, but rather because this machine had a lot of *proibidão* songs in its hard drive:

A jukebox perto da minha casa já mudou. Inicialmente era uma máquina ilegal, se bem que eu acho que todas são ilegais [...] a ilegalidade tá no conteúdo. Os vizinhos donos do bar me contavam quando tinha operação [da Polícia], essas máquinas eram apreendidas. [...] Quando a Polícia percebia que tinham essas músicas ilegais, não sei se eles só retiravam as músicas ou se apreendiam a máquina inteira numa vez, não me lembro [...] Em teoria as jukeboxes são proibidas, primeiro é porque é uma rede, não sei exatamente que rede é essa mas não me parece ser um serviço 'legal' [...] e segundo por conta do tipo de música que é tocada. A dona do bar paga uma mensalidade para que a máquina fique lá, e também para a manutenção. Ela me disse que essa máquina menor é 'legal', porque não vem com o 'proibidão', então você tem meio que 'hackear' [...] enquanto que a primeira, a maior que ficava ao lado de fora, já vinha com 'proibidão' dentro. Daí essa como em teoria não tem 'proibidão', em teoria não tem problema [para a Polícia]. Mas não sei se máquina em si é legalizada.<sup>74</sup>

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<sup>73</sup> "You could also know who was at the bar by paying attention to the songs [...] not necessarily the person itself, but you could know, for instance, that this 'one person' was around again, because they would always choose songs that didn't fit much the place. I think it was Raul Seixas [late Brazilian rock and roll singer from the 1970s], I can't remember, but it was clear to me that it was the same person always choosing these songs [...] Music, particularly in the beginning [when she moved to Lins], was an indicator of the mood. When I was home, I knew what was going on according to the music being played [in the jukebox]. Since music was always there, and always loud, I used it as a thermometer. Whenever heavier raps were played, for instance, I became a bit wary [...]"

<sup>74</sup> "The jukebox near my house has changed. Initially it was an illegal machine, though I believe all of them are [...] their illegality is in the content. The neighbors which own the bar said that whenever there was a raid, these machines were confiscated [...] Whenever the Police noticed they were playing these illegal songs, I'm not sure but I think they confiscated the machine, or only confiscated the songs, I can't recall precisely [...] In theory these jukeboxes are forbidden, first of all because it is a network, not sure exactly what kind of but I doubt it is legal [...] and secondly because of the type of music it plays. The bar owner pays a monthly fee for the machine to be there, and also for maintenance. She told me this new, smaller machine they have now is a 'legal' one, because it does not come with *proibidão* songs in it, so people had to sort of 'hack' the machine [...] while the older one, which stayed outside, had *proibidão* songs in it by default. So this new one, which in theory does not have *proibidão*, is not a problem [for the Police]. But I am still not sure the machine itself is legal."

Despite its lyrical and sonic content, as well as direct connections with the main factions in Rio, playing and listening to *proibidão* is not forbidden by law, although it lies on a blurry legal zone between freedom of speech and advocating/inciting crime (*apologia ao crime*) — a felony under Brazilian law. Indeed, Samara was right in her guess: according to the report from *O Dia*, the Police does not have legal authorization to confiscate and remove jukeboxes from businesses, even when the machines are not licensed with *ABLF* or *Aprova*. In an official note to the newspaper, a spokesperson affirmed that the pay-for-music-playing business model of jukeboxes "is not characterized as gambling, and as such these machines are outside the scope of action by the Police." (*O Dia*, 2015) Regardless, for the Military Police from the UPPs, *proibidão* poses a direct threat to the alleged peace engendered by the project of pacification; its very presence in the hard drive of any given jukebox yields a tense and anxious environment of conflict, governed by a micro-universe of sonic possibility. The listening of *proibidão* is a sonic manifestation that takes up the auditory space, removing the fabricated 'state of normalcy' engendered by the Police presence, and replacing it with the violent reality of everyday life in the *favelas*. In doing so, it creates a permanent situation of listening anxiety, which affords and prepares for direct confrontation.

The association between jukeboxes and crime is not necessarily particular to the case of *Lins*; rather, it has been a constant throughout its history in the US, due to the close connection of these machines with the music industry. As Segrave argues, politicians have been accused of leading illegal operations involving the machines (2002, p.164), and, in 1955, an article published in *Reader's Digest* associated the jukeboxes with the "underworld" of many cities in the US, denouncing an alleged trade association dictated by "mobsters" who decided who would have the right to have a jukebox in their bar or restaurant, as well as controlling which artists would be featured in the machine's catalog (*ibid.*, p.267). This created a monopoly of the distribution and profit of these machines, often holding tavern owners financially bound to this union and significantly undermining their profits from music playing. Despite these correlations with jukeboxes and organized crime in the US, the jukebox of *Lins* shows a more insidious and subtle relationship with the perception of criminality, as well as with the very agents responsible for enforcing this notion. In fact, the machine of *Lins* functions in itself, and most importantly in the ears of the Military Police of the UPPs, as a provisional vector not only for criminality but also for the threat of violence.

Samara commented that, in her experience, longer sessions of *proibidão* played in the jukebox meant a number of different codes; it might mean that key figures of the faction or its local branch could be around the bar; it might also be a form of celebrating the success of an operation or raid performed by the faction; and lastly, it is the code with which to indicate that something bad is about to happen, anytime soon. The latter served as both a warning sign for the people from *Lins* – so they could stay in, shut the windows and remain quiet at their homes, as well as a trigger for the listeners themselves. Samara describes this specific listening practice to me as a sort of "teasing playlist":

Às vezes tinha muito *proibidão*, quando tocava muito *proibidão* em sequência ficava um certo clima de guerra. Nem sempre acontecia algo, mas às vezes eles ficavam lá cantando, e você já sentia que era pra eles ficarem 'animados'.<sup>75</sup>

The jukebox is, then, a designed installment of Rio's Drug Wars in the neighborhood. Much like the illegal drug and firearm trade, it exists hidden in plain *earview*. It dictates the overall spirit of that part of *Lins*, while at the same time reasserting the hegemony of the faction in charge of that place. It is a form of shared listening that expands the original sonic affordances of the original jukebox — casual listening, background listening, or simple musical entertainment — to become an instrument for the non-verbal communication of the threat of violence. Listening to *proibidão* in the jukebox thus re-frames the original design of the machine in order to subvert its functionality: sharing music amongst its immediate listeners as a code and mood enhancer for mutual recognition of one another as members of a community; inwards listening, to the community as a warning sign for their own safety; and lastly, broadcasting music outwards to the targeted enemy — be they the rival faction or the Police — as a direct affront and provocation.

The selection of a long playlist of *proibidão* in this case is not necessarily meant for personal consumption, but rather for shared, public mood enhancement, crafted as such due to both its sonic character and lyrical content. Michael Bull (2007) has argued for the potential of music for "syncing of mood to place" (2007, p.126), or the use of long, repeating playlists to "maintain a specific cognitive state in contrast to the ebb and flow of time" (2007, p.125) Similarly for Tia deNora, the instrumentalization of music listening is a constant "attempt to 'orchestrate' social activity" (2000, p.111), and her research illustrates how listeners rely on music to regulate mood or to manage social agency, using it as a way "to move out of dispreferred states (such as stress or fatigue) [... Music's] specific properties — its rhythms, gestures, harmonies, styles and so on — are used as referents or representations of where they wish to be or go, emotionally, physically and so on." (*ibid.*, p.53) Yet the *proibidão* playlists crafted in the jukebox of *Lins* perform a slightly different activity which resembles more of what J. Martin Daughtry describes, in his study on the use of personal listening devices by the US Troops in operation Iraqi Freedom, as "technologies of self-regulation in combat" (Daughtry 2014, p.230). For Daughtry, the often unauthorized use of personal stereos by deployed soldiers in Iraq, either in earbuds or connected to PA systems, was a device for "attain[ing] the mildly altered state of heightened awareness and aggression that is necessary in order to be an effective warrior." (*ibid.*, p.231)

### The amplification of listening anxieties

The jukebox blurs the distinction between the auditory space of civilian and military life, negotiating the permanent imminence of combat through situations of perceived quietness

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<sup>75</sup> "Sometimes there would be a lot of *proibidão*, whenever a lot of *proibidão* songs were played in sequence the overall mood was a bit like that of war. It did not mean that something would necessarily happen right away, but they would be there singing, and you could tell that it was to get them 'excited'."

of everyday life in the neighborhood. The soundscape of *Lins* in this act of listening to long *proibidão* playlists is in neither and both states at the same time. Thus a condition of listening anxiety is created by the jukebox: conflict is always lurking ahead, be it because the faction itself is ready for taking action, or because the listening to these songs may attract the Police to the area to check on the alleged 'illegality' of the jukebox, which in turn poses the risk of engaging in direct confrontation with the listeners. This is the reason why, for instance, Samara could not provide me a picture of the particular jukebox this chapter concerns itself with; she mentioned that doing so could draw suspicion towards her and her intentions on photographing that object, particularly considering she is not from *Lins* but rather moved there recently. Thus the auditory space of *Lins*, in the presence of the jukebox, is governed by the anxiety of militarization, of wartime as normalcy.

While it might have been simpler — from the perspective of austere public policing measures — to resort to the elimination or prohibition of jukeboxes altogether, the possibility of criminalizing certain listening practices designs a scenario of an auditory state of exception, with enough rough edges so as to justify actions falling outside the scope of those in the written law. This in turn creates what Stuart Hall et al. have discussed as the "amplification" character of the Police (1978, p.38): engaging in performative acts such as raiding bars full of local residents to subtract 'illegal jukeboxes', the act of policing actually creates and foments the conditions for more violent acts to happen. Hall et al. claim that this "translation of fantasy into reality [...] can elicit from a group under suspicion the behaviour of which they are already suspected." (*ibid.*, p.42) It becomes thus a self-fulfilling prophecy of creating conflict by violently silencing the sounds that are perceived to generate conflict in the first place. Whether or not listening to *proibidão* actually leads to conflict is irrelevant in this case; what matters is not if the jukebox affords violence in a correlation-causation manner. Rather, the sonic affordances of the jukebox trigger anxieties that provoke a shift in the auditory perception of that community.

The listening practices fostered and made possible by this specific jukebox extend the notion of legality under the perspective of copyright law, to the notion of legality of the auditory space in and by itself. It is through the way it occupies the auditory space of *Lins* that the jukebox allegedly 'allows' the Military Police to bend the rules, exacerbating and overstating their already strong authoritarian position in the *favelas*, so as to be able to turn these machines into illegal devices. Because the machines are perceived to be menacing to the hegemony of the pacification project, the Police performs an auditory state of exception, while concomitantly abusing the State apparatus to protect private interests. Put differently, the Military Police directly acts on the forceful eviction of certain auditory markers — *proibidão* — as well as the practices they engender, from the auditory space of *Lins*. Therefore it is not by being unregistered, but rather by how the jukebox creates tension and anxiety in both the bar's neighbors and in the Police of the UPP, that the machine becomes illegal. It creates a temporary set of unwritten laws, which are enforced by the armed wing of the State in order to render the machine's sonic affordances – and consequently the populations who are subject to or make use of them – silent. In that regard, the tense environment

afforded by the jukeboxes' *proibidão* songs become a tangible form of auditory governance enacted by the Police; their actions only sustain and reinforce the very existence of this listening anxiety.

### Violence from "outside": *O Som Ao Redor*

The manner in which violence is perceived by the Brazilian middle-class can also be traced back to the hyper-amplification of an 'invisible' threat. This perception is also supported by the same racial discourse that permeates the discourse surrounding *funk*, *proibidão*, and the disenfranchised populations of the country as a generalized category of bodies. For instance, in the movie *O Som ao Redor* (Neighboring Sounds, Mendonça Filho 2013), director Kléber Mendonça Filho amplifies seemingly trivial sounds to create moments of permanently unresolved tension in the narrative. The movie is a cautionary tale of middle-class life in Brazil's northeastern city of *Recife*, former capital of New Holland, the Brazilian installment of the Dutch Empire from 1630 to 1654, and nowadays one of the cities with highest homicide rates in Brazil. The narrative makes extensive use of sounds and sonic manipulation techniques to craft an auditory portrait of class-based and racial struggles of a country that has not yet come to terms with the wounds of its own colonial difference. Without necessarily having a main character, the movie navigates around the lives of residents of a small part of the *Setúbal* neighborhood, in the film mostly owned by one family of former *Senhores de Engenho* of the region which is personified in the figure of the patriarch, Francisco.<sup>76</sup> João, one of Francisco's grandchildren, makes a living as a real estate agent for the newly built, tall residential buildings which have been flooding the neighborhood and bear opulent names such as *Castelo de Windsor* ("Windsor Castle"). João is widely shown as being socially disconnected from the family and particularly distant from his grandfather; however, while never explicitly acknowledging it, the narrative makes it rather evident that most of these real estate investments are either property of João's family, or have been built over older houses that were previously owned by Francisco.

Living in one of the few remaining older houses nested amongst the new real estate developments is Bia, her husband and their two kids. In comparison with Francisco and his grandchildren's wealth, Bia and her family have a modest albeit privileged life, a condition that mirrors most of the new Brazilian middle-class which emerged during the 2000s. Their home is drowned a soundscape of constant buzzing of construction work, happening either to reinforce the security of older houses like hers, or to carry on the new residential developments of the neighborhood. Bia is seemingly oblivious to these sounds, being instead driven to the point of mental breakdown by the incessant wailing of the next door neighbor's dog, who disrupts her sleeping patterns and her moments of tranquility when she is away from her kids. Her struggle is portrayed as almost a comic relief of the narrative; yet it is a thread which demonstrates the physical and psychological power of sound over one's body. At one moment Bia buys an expensive, imported *Mosquito* device to use against the dog;

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<sup>76</sup>*Senhores de Engenho* were the owners of the sugar cane fields and master of the houses. In rough terms, it is the Brazilian equivalent of a Southern US American plantation owner.

the scene in which she blasts the dog's ears with extremely loud high-pitched frequencies, smiling with sheer satisfaction over the crying animal, is one of the few moments in the movie in which the power over sound, and the desire for absolute control of the auditory space is made rather explicit.

The narrative thus centers not only in this scenario of an emerging middle-class neighborhood and its listening practices, but also in the role these practices play in the neighborhood's conflicting relationship with an imminent threat of criminality. 'Threat' is, however, a key word in here: even though the movie focuses on the tensions and anxieties felt by the residents of this small block of tall buildings and soon-to-be-demolished houses, danger is but a general feeling shared by all of the characters and made hyper-audible in the movie narrative. This is particularly emphasized in the movie after the appearance of a group of 'private security officers', who join in with the neighborhood's anxiety by going from house to house offering their overnight vigilance services for a small weekly fee. Most of the neighbors seem to think of it as a good idea and a necessity against the 'increasing criminality' of the neighborhood and the city in general; Francisco, on the other hand, is skeptical of this disruptive elements coming from outside his territory. He then summons Clodoaldo and Fernando, the security leaders, to his two-story apartment in order to explicitly warn — more of a veiled threat, rather — them and their team against touching Dinho, his other grandson and the local petty criminal about whom everyone in the neighborhood knows, but still pretend they do not.

Yet over the course of the film this group of 'watch dogs', as the movie names them, only performs trivial tasks which have little or, in most cases, nothing to do with preventing criminality in the neighborhood. In fact, they appear bored at their posts, usually looking at their cellphones of chit-chatting with one another, for the most part of the movie. The narrative demonstrates, quite un-ironically, the sort of harmless situations they have to deal with during their night shift; nevertheless, the group enacts them as if they were highly dangerous military operations. In one scene one of the *vigilantes* summons their entire personnel over the radio, just in order to act as guides for a drunk Argentine tourist who went out of a party in the neighborhood to buy more alcohol and forgot the address he was coming from. While assembling their entire apparatus for this trivial task of looking for the building described by the slow-paced Portuguese ramblings of the drunk man, the group performs this entire operation making extensive use of military jargon in their radios, constantly checking with one another whether the operation is going smoothly, or whether the drunk tourist is 'causing any trouble'.





Fig. 27: Still from *O Som ao Redor*.

In conjunction with this feeling of constant threat, the movie features the constant 'apparition' of dark skinned, bare-chested kids. They are seen climbing on rooftops around the neighborhood, or walking inside empty houses; yet, they never perform any criminal activity in the movie other than being there, always at the corner of the eye and, most importantly, always *silent*. Their role in the movie is to be a marker of this 'invisible threat' of criminality, which in the prevalent discourse of Brazilian society is exclusively ascribed to the black, male and young body. For instance, in one scene the viewer/listener is placed inside a dream from Bia's daughter, in which she listens to the rhythmic, repetitive sounds of more than thirty of these silent kids coming over her neighbor's wall: the gate creaking when they grab it to prop on before jumping, their flip-flops slapping onto the concrete floor when they land and gather in the backyard right next to hers. The sounds keep layering on top of one another, in a cacophony of mismatched loops that slowly overtake the entire auditory space of the movie; as soon as the kids approach the entrance of Bia's house, the viewer/listener is immediately brought back to the only loud sound present in the evening: the wailing dog. At another point in the movie, Fernando, one of the security men, ambushes one of these silent kids climbing a tree. He then calls Ronaldo, another of his team, to help him check what is going on, and both order the kid to come down immediately. As soon as he touches the ground he tries to run, but the two men, much taller and stronger than him, hold him up and beat him; they give him what Ronaldo calls a 'shut-up beating,' even though the kid never actually says anything, only cries and runs away. Fernando then asks Ronaldo if beating the kid was indeed necessary, to which he responds: "I dare him to come back here again after this."

In fact, the only act of criminality we see in the movie is performed by the privileged, white-skinned adult who lives and moves under the protection and the blind eye of his family, as well as the complicity of the neighbors. João's girlfriend, Sofia, spends the night in the neighborhood only to find out in the following morning that her car was broken into, its window removed and her CD player stolen. In the following scene we watch as João confronts Dinho, his cousin, who indirectly confesses to the crime, but mistakenly returns a different (and as Sofia remarks, even better), albeit also stolen, CD player. Thus through the perceived criminality of the silent black youngsters *versus* the spoiled bouts of the law-breaking-as-pastime living next door, we probe into the racial inscription of criminality in Brazil's neighborhoods; such a perception of threat is imbricated even in the minds of other black males, such as Fernando, when they are granted a position of power to protect the property of the white and wealthy. The black kids are immediately perceived as criminals not only because of their skin color, but also because of their lack of producing sounds; their silence, an auditory marker of their invisibility in Brazilian everyday life, is criminalized and, in turn, made hyper-visible and hyper-audible.

In that regard, *O Som ao Redor*, much like the accounts of militarized Iraq (Daughtry 2015), creates tension exactly by focusing on and amplifying the seemingly unimportant sounds of the mundane. Thus we hear, with a crispness particular to recordings made with a close-range microphone, intermittent and intercalating sounds of vacuum cleaners, dishwashers, washing machines, buzzers and intercoms, bouncing balls, drilling machines, jackhammers, car horns, and so on. Similarly, we glimpse onto overheard conversations on the phone by the neighbors, the alarm beep of a car locking up from a distance, knives and forks clunking against plates, barking dogs, and other unintentional eavesdropping into the neighborhood's life. Certain sounds, usually the ones with a more repetitive character such as the droning of the elevator in Francisco's building, or the whistling of the wind, get progressively louder in slow *crescendi* at certain moments of the movie so as to build tension; however, these sequences always resolve into scenes in which there is no tension whatsoever. The same strategy is employed with the few elements of non-diegetic soundtrack present in the movie, such as repetitive drumming or sparse bass notes. Conversely, the presence or absence of specific sounds from technological devices is also highlighted and used as markers of the class differences present in the movie. As an example, the aforementioned droning of the elevator is perceived to be much louder when the listener is placed inside the maid's bedroom in Francisco's apartment. Similarly, the sound of Bia's home appliances such as the dishwasher are presented much louder than in other moments — when the listener is inside João's apartment, for instance.

Thus it is by making these neighboring sounds of everyday so present, bright, and clear that the perception of silence — in this case not the full absence of sound, but the absence of *particular sounds* — gains a menacing character. When sounds seem to come from anywhere and everywhere at the same time, they become, in themselves, the threat of violence which lurks at the fringes of the safe spaces built by and for the Brazilian middle-class. Within such a performance of an *earview*, the viewer/listener joins in with the characters of

the movie in a state of a permanent listening anxiety. In becoming hyper-aware of a criminality that may never come, the middle-class of Recife – and in that a metaphor for the Brazilian middle-class as a whole — engulfs itself, building and securing its physical and auditory walls against any perception of threat — that is, any sound that might disrupt the perception of silence engendered by the everyday rituals with and around consumer goods.

The development of listening practices with the purpose of dealing with violence as a constant threat was a recurring subject in the *Algerinha* sessions, even when the conflict between the occupation and the nearby residents were not explicitly marked or disclosed at first. In the following sections I show two interesting examples that deal with listening anxieties in different, although loosely connected, manners. The first one shifts the sonic affordances from an acoustic weapon to a children's toy in order to use the peril of violence as a cautionary tale and a place for possible resistance; while the second translates the sonic affordances from one object to a person in order to create a different type of fiction which employs the projection of sounds as a threatening device to make everyday violence hyper-visible and audible.

#### **"...they are being prepared for what is about to come": Anticipating violence**

In the first session conducted within the *Algerinha* story, a strong focus was given to the mechanics of a speculative game — "O Jogo do Tarréfono" — and its material qualities. The session took place in December 2015 at UNESP Bauru, in the countryside of São Paulo State in Brazil, and it was the only session conducted exclusively in Portuguese. Rather than introducing the participants directly to the story of the *Algerinha* occupation, we started from an alleged 'found object' and the processes of unpacking it within a speculative story, in order to design alternative timelines and understand how the process of aestheticization through play may also happen with sonic violences. My role in this session was to act as a mixture of narrator and 'game master,' guiding the participants through a set of 'evidences' cued at specific times and upon which they would have to perform small tasks and create stories. The object, in this case, was a small 3D-printed artifact I presented to the participants as being a *Tarréfono* — a word in Portuguese invented by us, but having nevertheless a suffix, *fono*, which immediately hints at the idea of a sound-producing device. I began the session by introducing myself and my absent research partner in this project, Rafael Arrivabene; I told the participants he bought this object at a pawn shop a few years earlier, and that its curious shape and apparent anachronistic character — old-looking but 3D-printed — had left him intrigued enough to invite me to join him in pursuing the object's history and its possible uses. During the session, the participants listened to statements from people allegedly connected to that particular object, as well as other found sounds, extracts of news pieces, and videos; at the same time, we made sure to never let them know exactly whether these fragments were true or completely invented. Rather, we reinforced several times that throughout the session, 'truth' would have a looser meaning. Thus while keeping them within the suspension of disbelief was an important characteristic for this session, our intention was not to make them immediately believe the story to be accurate; we wanted

them to play along in their own terms, and carefully listen to what the fragments and evidences had to say instead of presupposing an objective veracity.

In that sense, the session continuously moved from within the story to more general, personal questions about playground games of their own childhood, and their perception of the social functions these games might have played — however always having a strong focus on which songs were sung, which auditory conflicts emerged, and the overall sonic character these games have. Participants were playing along, drawn to the story and keen on learning more about the device; this created a smooth scenario for introducing technologies that are usually perceived as too surreal to be real, such as the Long Range Acoustic Device (LRAD).

The participants were then presented to another evidence: a 'found video' in which an LRAD placed in a balcony is supposedly put into use towards the occupation. The title translates as "*Ocupação Algerinha*: alleged use of LRAD," while the description reads "LRAD from the balcony and pointing at the occupation."<sup>77</sup> While watching the video — as well as afterwards when I described its placement within the story — some of the participants wondered how feasible such a technology might have been:

Pedro: Quando a gente achou este vídeo nós vimos que se chamava "Ocupação Algerinha", e aparentemente as pessoas que jogam esse jogo são conectadas com esta ocupação. alguém postou isso no nosso blog e nós fomos atrás [...] O LRAD é uma coisa que a Polícia usa, começou com uso exclusivo militar mas agora a Polícia tem usado em atos civis. O nome significa "Long Range Acoustic Device", ou seja, é um dispositivo acústico de longo alcance. Ele é um objeto relativamente pesado, parece com um prato só que octogonal, e usa falantes ultra-direcionais [...] e eles fazem este som que é muito agudo e muito alto, e machuca mesmo. Os militares começaram a usa-lo no Iraque, na operação "Iraqi Freedom" (risos) para dispersar militantes e insurgentes [...] e depois foi usado em atos civis, por exemplo no G20 de 2009 em Pittsburgh, e a Polícia Militar usou também no Brasil durante a Copa do Mundo [...]

Participante 1 (sussurrando): Você acha que isso é verdade?

Participante 2 (também sussurrando): Acho que não...

Participante 1 (ainda sussurrando): Parece que ele tá inventando esses dados pra dar credibilidade...

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<sup>77</sup> <https://www.youtube.com/watch?v=p9Ts908vai0> (accessed December 12, 2016).

Participante 2: Talvez, muito estranho.<sup>78</sup>

The dissonance between a piece of technology being immediately perceived as fictional within a story in which participants were not entirely sure was real or not for the entire duration of the session — as disclosed by them to me in the end — reassures the absurdity of acoustic violence as a method of coercion or control. Yet somehow other participants in the session immediately placed the use of LRADs within other usual forms of violence perpetrated by the Brazilian Military Police. When presented to the sounds of an LRAD, they commented:

Participante 3: Imagina esse som pra dispersar manifestante... irritante pra c\*. Com jato d'água então...

Participante 4: Spray de pimenta, porrada... pacote completo.<sup>79</sup>

The LRAD became then the technology that all of them drew inspiration from, in order to imagine the workings of the *Tarréfono* device and its use in a playground game. At a later moment in the session I gave the participants printed pieces of news which discussed what was happening in parallel with the story of the *Algerinha* occupation, and whose texts could potentially lead to clues as to the aftermath of the neighborhood in the story. While the news were all from fictional sources and journalists, they were nevertheless all based, both in tone and content, on real news pieces and news outlets from Brazil; this was perceived as somewhat uncanny by the participants, as they recognized the use of certain tropes and language devices from people they usually read, but still could not place these news in a narrative they might have been familiar with. Yet some of the news were, for them, essential devices for constructing the scenario of the *Algerinha* occupation as one marked by a permanent threat of violence; more importantly, they understood this political and social tension as a producer of alternative forms of living and being in that particular world:

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<sup>78</sup> "Pedro: When we found this video we also noticed it was called "Ocupação Algerinha," and apparently the kids playing this game are somehow connected to this place. Someone posted it on our blog and we went further investigating it [...] so the LRAD is a thing used by the Police, it started with exclusive military use but now the Police has been using it in civilian operations. The name stands for "Long Range Acoustic Device," that is, [translation to Portuguese]. It is a relatively heavy object, looks a bit like a plate but octagonal, and also makes use of ultra-directional speakers [...] which make this very high-pitched and extremely loud sounds, which can really hurt you. The military first used it in Iraq, during operation "Iraqi Freedom" (participants laugh), to disperse militants and insurgents [...] later it was deployed in civilian situations, for instance the 2009 G20 Summit in Pittsburgh, and the Military Police has also used it in Brazil during the World Cup [...]

Participant 1 (whispering): Do you think this is real?

Participant 2 (also whispering): I don't think so...

Participant 1 (still whispering): Looks like he's making these information up to make it believable...

Participant 2: Maybe, really strange indeed."

<sup>79</sup> Participant 3: Imagine these sounds used to disperse crowds.... annoying as f\*. With cold water...

Participant 4: Pepper spray, beating... the whole package.

Participante 5: Essa aqui fala sobre o estatuto do desarmamento e sobre uma brecha no estatuto que abre para armas brancas que não matem nem agridem, tipo o LRAD... e que há um conflito de interesse.

Participante 4: Pera, pra galera poder usar armas, então seriam os civis usando estas armas?

Participante 6: Então quem vai estar usando? O pessoal de dentro da *Algerinha* ou os policiais?

[...]

P4: Faz mais sentido se o pessoal do *Algerinha* estivesse usando, porque o jogo é deles; é como se fosse uma reutilização destes objetos.

P5: É como se o jogo estivesse preparando as crianças pra enfrentar algo...

P4: Pra guerra?

[...]

P6: Eu acho que existe na verdade uma espécie de campanha, eu acredito. Se você ensina as crianças desde sempre que este lugar é parte da história deles, você está preparando as crianças da ocupação pra reagir com violência.

P4: Então eles estão criando um 'exército infantil', é isso? Mas isso colocaria os moradores de *Algerinha* numa situação muito errada.

P6: Não necessariamente. Eles podem estar se preparando pro caso de serem expulsos dali, para resistir quando forem grandes e forem expulsos de suas casas.

P4: Então não seria uma campanha, e sim um mecanismo de defesa. O jogo, no caso.

[...]

Pedro: O jogo então é uma encenação do que aconteceu?

It is worth mentioning that participants were not requested to present finished stories in the end of this session. Rather we encouraged them to think of clues, signals, and key moments which they believed could be useful to trace a loose continuum between the events that happened to the *Algerinha* residents and the creation and playing of the game without necessarily placing it in the aftermath of the occupation. The two groups were completely distinct from one another in that sense: while one group took the game to be a device for remembrance, the other saw it as a piece of resistance. This is the case of the group featured in the above conversation: the participants kept their fabulation consistent until the very end of the session, focusing on the game as being a subversive technology of the *Algerinha* population. Their final proposition suggested that the *Tarréfono* they had in their hands was, in fact, a 3D-printed replica, a *memento* of a much larger device — a repurposed LRAD. According to the story they came up with, these acoustic weapons were discarded by the Police in the *Algerinha* grounds, after a sequence of partially successful crowd-control operations within the occupation. During a brief 'moment of peace' between these violent raids, the debris of these LRADs were repurposed by the oldest kids in the occupation as props for a playground game — a clue the participants got from one of the statements they listened to in the beginning of the session.

Moreover, teaching the building of this object to the kids in the occupation would be their introduction to a universe of a sonic guerrilla tactics and underground resistance. In their proposition, the *Tarréfono* would be a device that only a few members of one team would have access to; these members would then employ the sounds made by the object to guide their fellow teammates, who were required to play with their eyes closed. When I asked

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<sup>80</sup> "Participant 5: This piece of news is about the no-guns law and about a loophole in it that allows for non-lethal weapons, like the LRAD... and that there's a conflict of interest.

Participant 4: Wait, so the people could use weapons, so that would be civilians using these weapons?

Participant 6: So who is using them [in the story]? The people from within *Algerinha* or the policemen?

[...]

P4: It makes more sense if the *Algerinha* people were using them, because the game comes from there; it is like a re-purposing of these objects.

P5: It is as though the game were preparing them to face something...

P4: To war?

[...]

P6: I think there is some sort of campaign, I believe. If you teach children from the very beginning that this place is part of their history, you are preparing the children from the occupation to react [to menaces] violently.

P4: So they are assembling an 'army of children,' is that so? This would put the *Algerinha* residents in a wrongful situation.

P6: Not necessarily. They could have been preparing for the case they are evicted from there, to resist when they grow up and are forcefully removed from their houses.

P4: So it is not a campaign, but rather a defense mechanism. The game, I mean.

[...]

Pedro: So the game is a re-enactment of what happened?

P6: Or they are being prepared for what is about to come.

them the reason why some of the players needed to close their eyes during the game, they mentioned the numerous occasions, widely reported in the media, in which the Military Police of Brazil has made excessive use of pepper spray to injure peaceful protesters; therefore it would have been a natural thing to teach the kids to move around using auditory rather than visual cues. The mechanics of this game, as well as the songs and noises they would play through these *LRADs-turned-Tarréfonos*, were the manner found by the older residents to teach their youngest to resist to what looked like an inevitable, forceful eviction in their future. In fact, the members of this group hinted at the idea that by imagining the game to be a device of resistance they were directly interfering on the sequence of events in the story. In response, one of the participants from the other group suggested to them that their story might lead to a scenario in which the *Algerinha* people, by using the tactics they learned from the game, would eventually resist Police violence rather than being forcefully thrown out.

In this particular session, amplified sound and music was instrumentalized and became a device against the invisible menace of forceful eviction. Rather than speculating on the future of the *Algerinha* in the aftermath of violence, they imagined a scenario in which the permanent risk of violence ultimately led to the development of auditory tactics to attempt a change in the course of their history. Moreover, the devices used to perform this task were, initially, the insidious mechanisms employed against them in order to make them disappear from the public eyes and ears. This was, for me, a rather interesting shift of sonic affordances from a violent object to a piece of resilience, employing the very same listening practices albeit turning them into public, available, playful, and more importantly, seemingly invisible discourses. The sonic violences suggested by me to be targeted and directed at the occupation and its residents, were redirected by this group towards a completely repurposed narrative of de- and re-instrumentalization of sonic material as a weapon. Through a re-reading of the fragments and evidences I presented to them, this group constructed a different type of sonic affordance: one which has civil disobedience and the misuse of technology as its *ethos*.





Fig. 28: Participant examining the *Tarréfono* object at the UNESP session.

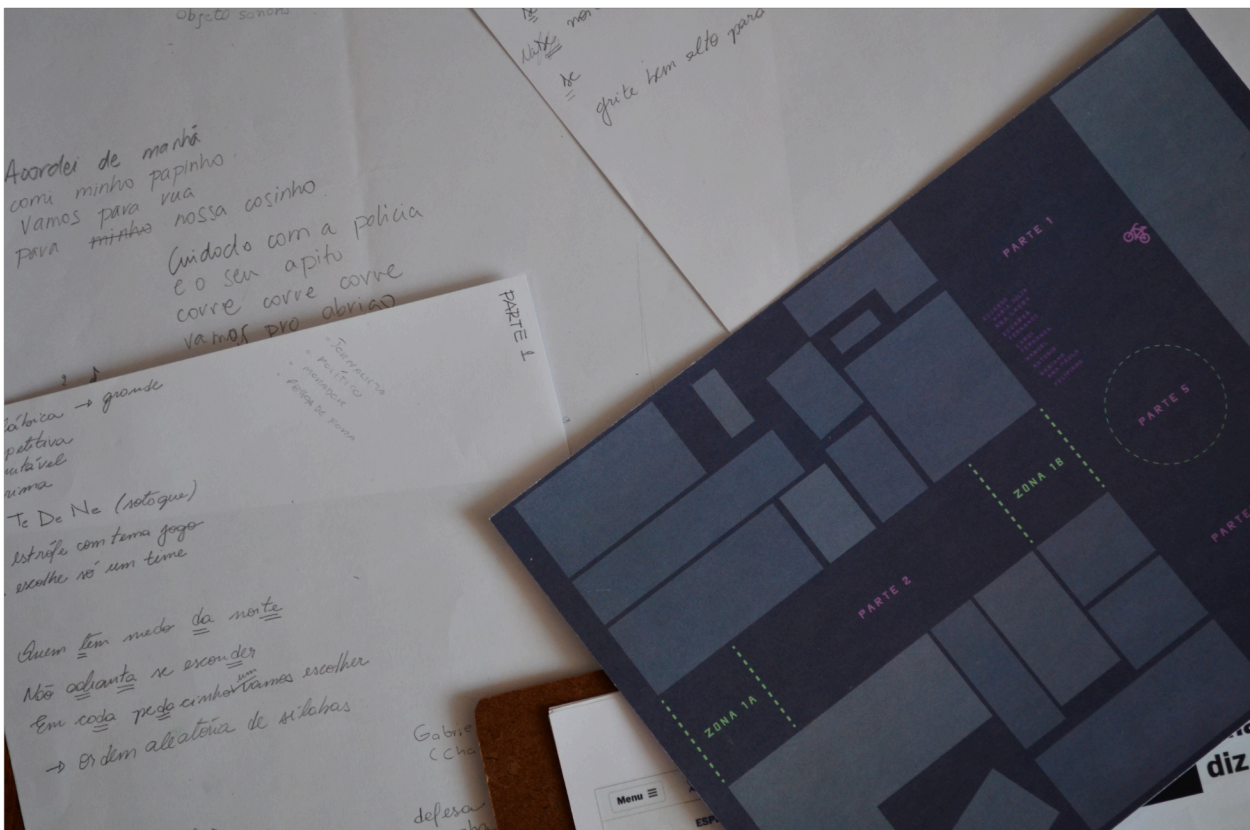
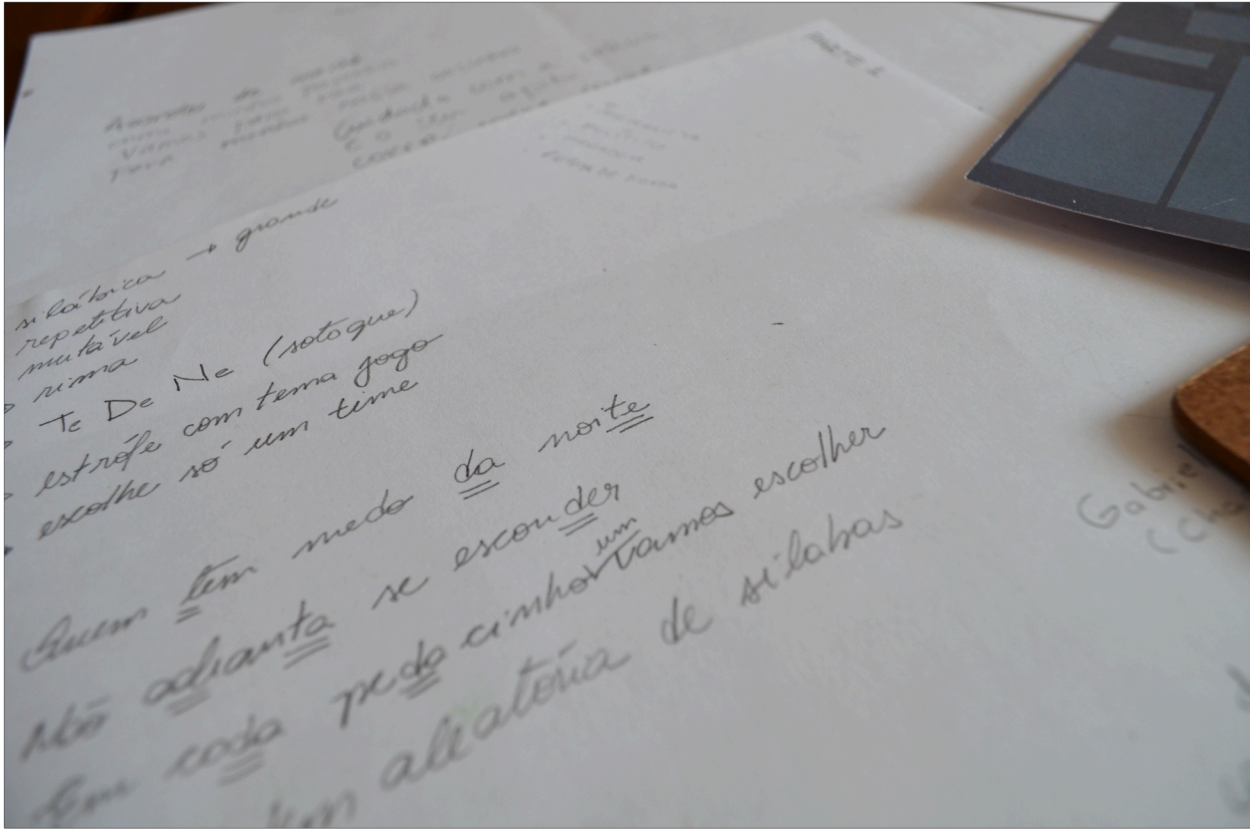
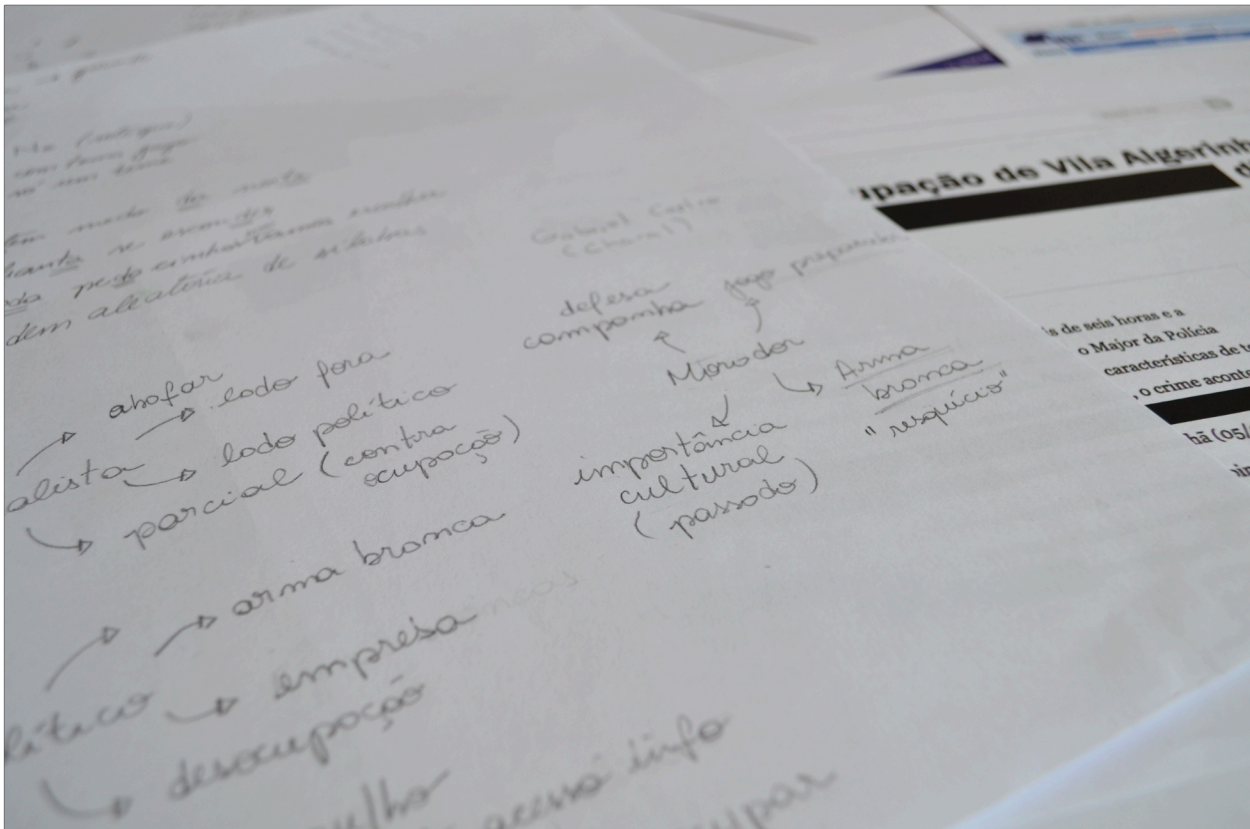


Fig. 29: Material generated by the participants during the UNESP session.



Figs. 30 and 31: Materials generated by the participants during the UNESP session.



### "The Human Jukebox": Performative sonic affordances in the aftermath of violence

The possible timelines being constructed around the occupation were, at the final stage of the *Algerinha* sessions, progressively drawing more inspiration from interviews and news pieces encountered during the course of the research, as well as stories developed by participants from previous sessions. Exactly because of that we felt these narratives were tending towards closure rather than remaining open canvases for different and alternative stories to emerge. In order to act directly on that, the fourth session, held with the support of the Sound Studies Lab<sup>81</sup> at the collaborative space CLB in Berlin,<sup>82</sup> focused on one single input as the source of the entire session; at the same time, and differently from the previous sessions, this input were to be affected by an element of chance in order to become a possible story. The single input given to participants this time was the second track of the "Algerinha Vive Mixtape," presented as part of an old tape found inside a portable cassette player bought at the pawn shop 'together with other curious objects from the same occupation'. I described the tape as if it were of unknown origin, except for the label which read "Algerinha Vive," which immediately connected my research to the story of this long-forgotten occupation.

Similarly to all the other sessions within this research, I have narrated the stories around the objects present in the session from a first-person point of view, never fully disclosing whether or not these findings I was showing them were true. Yet different from the other installment being discussed in this chapter, in this session I did not have a sequence of evidences to present the participants to; rather, I only played them this three-minute-long collage of different field recordings from busy streets, intercalated by sudden and stark shifts on the *earview*. Sounds in this track range from inside out soundscapes to sounds of power lines, buzzing of lights, and electronic appliances; from trivial, everyday dialogue to high-pitched hisses and *funk carioca* beats. Participants could listen to the piece over and over using headphones if they wanted to; they were then asked to map their *earviews* of this piece and identify elements which drew more attention than others in their perception. Furthermore, they were encouraged to expand into the social, political, and cultural systems at play in this narrative, paying attention to rhythm, timbre, movement, and other sonic elements.

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<sup>81</sup> <http://www.soundstudieslab.org/> (accessed November 24, 2016).

<sup>82</sup> [http://www.clb-berlin.de/de\\_DE/](http://www.clb-berlin.de/de_DE/) (accessed November 24, 2016).

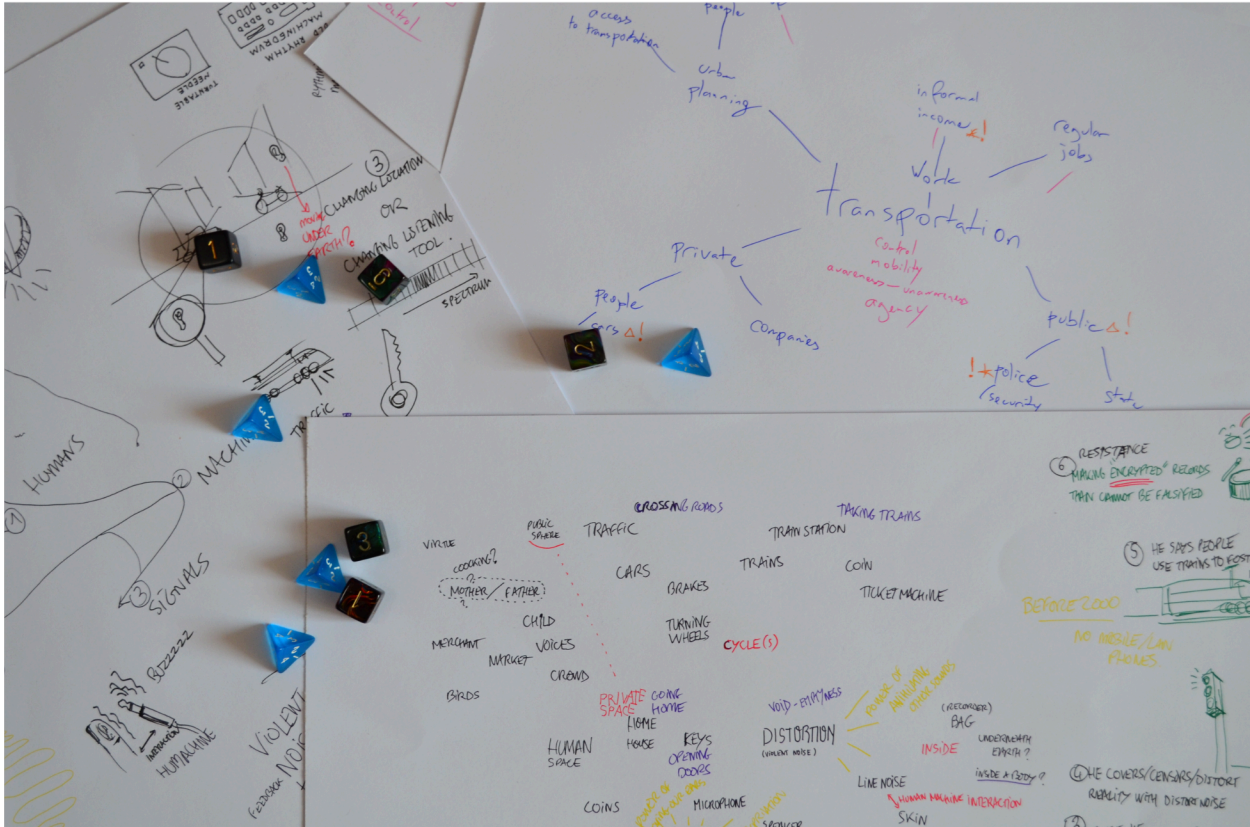


Fig. 32: Maps generated by the participants during the CLB session.

The image shows a yellow table of modifiers ('plot-twists') and a set of dice. The table is divided into three sections: 'PEOPLE', 'PLACES AND EVENTS', and 'PRACTICES AND DISCOURSES'. Each section contains a list of modifiers, each preceded by a number in a box. The dice are scattered on the table.

| Section                  | Modifier   |
|--------------------------|--|
| PEOPLE                   | 1. [Modifier]  |
|                          | 2. [Modifier]  |
|                          | 3. [Modifier]  |
| PLACES AND EVENTS        | 1. The busiest bar within the community has closed.          |
|                          | 2. An NGO hosts a design workshop within the community.      |
|                          | 3. The house nearest to the community's [unclear] [unclear]. |
|                          | 4. A Police raid in a makeshift community [unclear].         |
|                          | 5. A mass protest against [unclear] [unclear].               |
|                          | 6. A sudden influx of [unclear] [unclear].                   |
| PRACTICES AND DISCOURSES | 1. Noise abatement law imposes a 7 P.M. [unclear].           |
|                          | 2. Jukeboxes are outlawed within the community.              |
|                          | 3. An informal, coded network is created.                    |
|                          | 4. Surveillance is encouraged in the community's [unclear].  |
|                          | 5. Political censorship in media production [unclear].       |

Fig. 33: Table of modifiers ("plot-twists") and set of dice used in the CLB session.

After each group presented their maps to the facilitators and to one another, we introduced a semi-random modifier to their maps, which we have called the 'plot twist.' By rolling a set of dice and assigning them to elements on a table provided by us, each group could choose up to two modifiers to their map, and from applying these modifiers they would have to come up with a story. In this session, we had four categories of modifiers, each one with six possible elements; four-sided dice would choose the category, and six-sided dice would give options as to the elements that could be chosen from the categories rolled by the four-sided ones. Thus while rolling dice would output quasi-random numbers, participants could have some degree of agency as to which combination of dice they could pick. The categories in this table were: 'Objects,' 'Practices and Discourses,' 'People,' and 'Places and Events'; each of these categories had elements stemming from previous sessions or other key themes of this research, as shown in the picture.

One of the groups in this session unpacked the Mixtape track into a map mostly focused in the labor relationships present in the sounds; they understood the track initially as a "journey on a suburban train" and marked down the moments in which there were people selling things, talking to each other about work, or occupying spaces with sounds of labor such as construction sites, ticket machines, electrical interferences. Their mapping yielded an interesting focus on the movements of informal and local practices of work which are constrained to the access — or lack thereof — to public transportation in underprivileged neighborhoods; this is the reason why they chose modifiers signaling a shift in the rhythm of the occupation. Interestingly enough, the two modifiers they chose were directly connected with stories I gathered from my conversations and interviews with residents from *Complexo do Lins* and *Complexo do Alemão*, in Rio. The group selected one modifier from 'Practices and Discourses', and another one from 'Places and Events', thus connecting two very distinct situations to their map: jukeboxes would be outlawed within the neighborhood, while at the same time the residents would see a sudden influx of tourists inside *Vila Algerinha*.

The manner this group decided to engage with these two modifiers to their story, and at the same time to connect them to a possible moment in the timeline of the *Algerinha* occupation, also reflects the employment of auditory markers as vectors for menacing phenomena. Yet differently from the case of *Tarréfono* in Bauru, this group used the idea of hyper-amplifying the sounds of the community itself as a way to convey the threat of violence to the tourists which were suddenly interested in the area. They did so by creating a character, who would be a resident of the *Algerinha* occupation, and by placing this person at the center of a subtle insurgent movement within the community. They described this person as someone who would act as a guide for these curious tourists in the area, but when given the opportunity would become, in their words, a "human jukebox," performing sounds using a hidden, wearable musical gear, and collecting donations from the tourists for doing so. However, the actions of this human jukebox were seen by the group as twofold: on the one hand, this activist would let the tourists know of the 'cultural cleansing' measures taken by

the city administration to 'embellish' the occupation for the tourists. Banning jukeboxes in bars, for instance, was interpreted by them as a way to prevent subversive acts in the occupation, because the musics played by these devices "demonstrated affiliation to certain groups and cultures," and the city "did not want those 'pesky individuals' listening to their 'noises'." Therefore the "human jukebox" would make it a point of playing these songs to the tourists as a manner of both denouncing the violent silencing of the occupation, while at the same time empowering its cultural production.

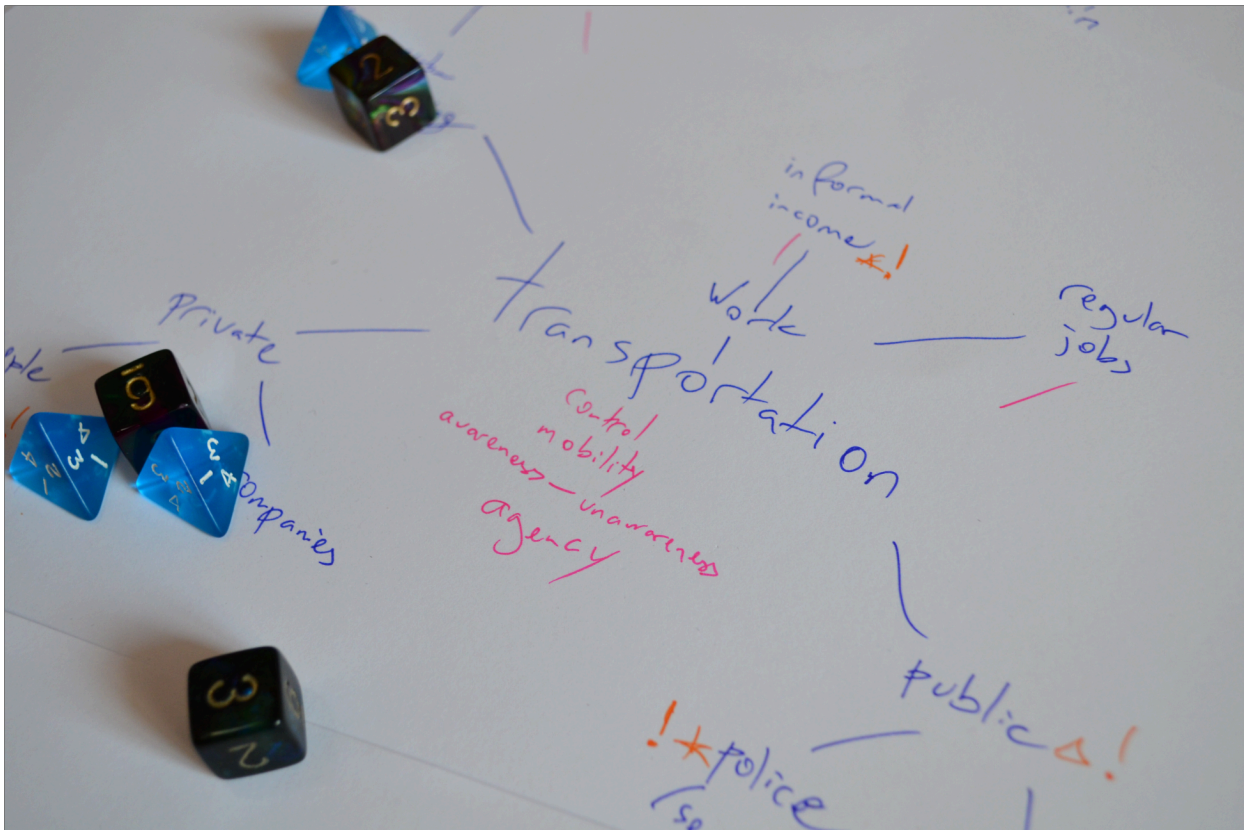


Fig. 34: Map from one of the groups; this map focused on labor relationships versus urban mobility.

Conversely, they also imagined the "human jukebox" to be a protester against the eventual gentrification and real estate speculations that could be coming to the occupation together with the sudden influx of tourists. The way they would enforce this was to use the performance of these jukebox sounds as a scare tactics towards the tourists, to give them the real feel of the everyday life in the occupation. As described by one of the participants:

So you would still have this linear narration of walking around the community [in the tour], but this 'human jukebox' would do it differently: towards the end they would play these strange electronic sounds, which we discussed amongst us and decided that they would be perceived as 'threatening sounds' by the tourists. So the idea was to lure the tourists on this tour, but then in the end lead them to a place in which there would be a lot of menacing sounds going on; [the human jukebox] plays other menacing sounds on top [of that soundscape], then collects the money for his music and leaves them there to get out of the occupation on their own.

Thus according to their fabulation on how this activist would perform these scare tactics, sounds of the occupation that are "perceived as 'threatening'" by the visitors would be weaponized and played back against them by the 'human jukebox'. The participants in this group understood the mixtape track they were presented to at the beginning of the session to be a recording of one of these 'jukebox' performances; however, the elements present in that particular track are, for the most part, sounds of the everyday life of informal labor and public transportation — as evident in their mapping during the first part of the session. Such an apparent contradiction implies, as they described to me when asked to elaborate more on that, a completely different type of auditory perception coming from the tourists from outside, in comparison with that from the residents of *Algerinha*. Therefore in their story, rather than instrumentalizing the sounds as a device for denouncing everyday violences which the *Algerinha* population were subjected to, these sounds would be perceived by the outsiders to be, in themselves, violent. It is as if there were different triggers of what violence — and auditory violence, for that matter — mean for two different kinds of population sharing the same space of the city. For one group of people — the residents of *Algerinha* — these sounds represent their own reality and listening anxieties; for the other group — tourists and outsiders interested in a romantic narrative of informal living — the very same elements become carriers of a violence they know little about, but are nevertheless afraid of. The 'human jukebox' thus becomes a mobile performer of weaponized sonic affordances; much like the jukebox from *Lins*, it works by translating violence into sounds, and sounds back into auditory violent acts. These jukeboxes — human or otherwise — perform the work of hyper-amplifying the threat of sonic violence and nurturing the tension engendered by social and political estrangement.

## Chapter Seven

### Mobile auditory borders: Design and the domestication of otherness

"O Governo não protege a favela nem do som dos tiros, vai é proteger do som dos carros!?" (Jéssica Souto, media activist and musician).<sup>83</sup>

In March 2010, a wall of over seven kilometers in length was erected along the expressway which connects the International Airport of Rio de Janeiro to the main tourist attractions of the city. Named *Painéis de Animação Cultural e Proteção* ("Panels of cultural activity and protection") by the city council, the barrier was built by *Linhas Amarelas S.A.*, a concessionary company, in an investment of around twenty-million Brazilian Reais, or approximately five and a half million Euros (Cabral, n.d.). Each of the more than two-hundred blocks that build this barrier is thirty-eight meters long and three meters tall; intercalated with the acrylic panels there is another type of structure, this one a cinderblock made of a mixture between harder and softer materials such as concrete, steel, and styrofoam (Agência Estado, 2010). According to the Rio de Janeiro City council, this long wall was erected as a way to ensure the auditory safety of the residents of *Maré*, one of the largest *favelas* of Rio de Janeiro. The building of a wall with this specific design follows paragraph 2, item III of Law number 4324/2004 from the State of Rio de Janeiro, which concerns itself with the "guaranteeing the auditive health of all citizens from the State of Rio de Janeiro" (Minc 2004).

What is known as *Maré* was, until the early ninety-eighties, a group of six other *favelas*: Morro do Timbau, Baixa do Sapateiro, Parque Maré, Parque Rubens Vaz, Parque União, e Nova Holanda (Raposo 2012, pp.317–8); nowadays the neighborhood is loosely divided into eleven to sixteen smaller units (Araújo, 2006). *Maré*, in comparison with other *favelas*, benefits from the bare minimum of infrastructural conditions provided by the city administration — sewage and paving, for instance. Many houses are built of brick-and-mortar, some of them even being two- or more-story buildings; a good number of residents have been able to legalize and build their own houses, and businesses within the neighborhood are abound. As such, clustering its residents into belonging to the lowest classes is a statement that does not reflect the reality of *Maré* (Raposo 2012). Nevertheless, the neighborhood still lacks an efficient action from the state to deal with its social and urban inequalities; according to Otávio Raposo (2012, p.318), this is mostly due to a concern from the state to solve the problems that are visible to the outside, but not necessarily address the needs from the residents themselves — as it is the case of the acoustic barrier discussed here.

The acoustic barrier was not exactly the first wall to be erected around a *favela* in Rio; similar constructions had taken place in other *morros* of the city, almost always under the justi-

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<sup>83</sup> "The government cannot even protect the favelas from the sounds of gunfire, now they think they will be able to protect us from the sounds of cars?"



fication of being a preventive measure against natural disasters such as landslides. However, the landscape of *Maré* is, for the most part, flat; its residents do not necessarily face risk of being affected by the landslides so common during the rainy season. Regardless, recommendations for isolating *Maré* from the fabric of the city were never absent; earlier propositions suggested, for instance, the construction of so-called "partition blockades" in zones around the *favela* considered to be "risky areas" for the drivers going through the *Linha Vermelha* (and parts of *Linha Amarela*) expressways. Yet the project for the acoustic barrier presented reasons relying solely on an indirect, 'invisible' danger — noise pollution — as the main motivation for the walling up of one large portion of the neighborhood (Gonçalves 2010).

The mitigation of noise has been, for the most part, always delegated to the judgement of an authoritative body; in 1929, for instance, an act passed by the UK government determined that the decision upon whether or not a vehicle was noisy relied on the testimony of a policeman, as well as a court's assessment (Kotzen and English 2008, p.2) The building of acoustic barriers alongside expressways, however, dates back to the late ninety-sixties in the US, where allegedly the first wall of this kind was erected in California (Berg 2014). The design of these barriers almost always resembled those of traditional walls, using bricks and cinderblocks due to their strong absorption properties. In the UK, conversely, timber fences mounted on earth piles were the preferred method (Kotzen and English 2008, p.2). In Brazil, the first acoustic barrier was built in 1999; made solely of concrete blocks, it was erected along two-hundred meters of one of many highways in the state of São Paulo (Barbosa 2015, p.199).

At the time of the erection of the acoustic barrier in *Maré*, most of the mainstream Brazilian media followed the narrative provided by the official accounts, particularly highlighting the fact that the concessionary builder and the state would be commissioning artists stemming from *Maré* to contribute with drawings, graffiti, and paintings in the wall as the most positive feature of the project. Yet most of these reports could not shy away from the amount of controversy the building of a wall created amongst the residents and the public opinion; some of these pieces were careful enough to balance their text with divergent opinions coming from the local residents (Agência Estado 2010, de Menezes 2011). In that sense, a study published in September 2011 by *Núcleo de Estudos e Pesquisa sobre Favelas e Espaços Populares* (Center for the Study and Research about Favelas and Public Spaces), in partnership with the *Observatório de Favelas* (Favela Observatory) and *ActionAid*, argued that more than seventy percent of *Maré* residents were confident the acoustic barrier was erected as a device for isolating the neighborhood from the rest of the city (Redes da *Maré*, 2011). The study, aptly named *Os Muros do Invisível* ("the walls of the invisible"), demonstrated that "both the aesthetic and discursive model employed in the justification of these constructions points to a preoccupation directed towards social and aesthetic order rather than the safety and dignity of the residents from *Maré*." (Redes and Nepfe 2011, p.8) For many residents, the amount of money spent in building a wall, provided its intentions were in fact a legitimate concern with the well-being of the *favela*, could have been otherwise invested

directly in improving sanitary and health conditions within *Maré* itself (Redes da Maré, 2011).



Fig. 35: General overview of the acoustic barrier of *Maré*.

### The "Wall of Shame"

A video made by the activist group *Bloco Se Benze que Dá!*, published on YouTube in May 2010, discusses with the residents of *Maré* the motivations and the investments made by the city council on this project. The group argues that the residents themselves were never consulted by neither the city administration nor the concessionary builder as to the real necessity — or feasibility — of such a project. Most of the residents in the video affirm categorically that the sole reason for the barrier was to erase *Maré* from the cityscape in face of the World Cup and the Olympic Games, at the time yet to be held in the city. One particular resident cannot help himself and starts guffawing when informed by the cameras what was the reasons behind the project of the barrier, affirming in complete awe: "An 'acoustic barrier'!? Well, they did make fools of everyone, haven't they?"<sup>84</sup> Geographer Jailson de Souza e Silva, himself a former resident of *Maré*, affirms that "the city administration would hardly show any sensibility towards *Maré*, to the point of being legitimately concerned with the noise from the expressway." (de Souza e Silva cited in Gonçalves 2010) This is clear by how the discourse around the acoustic barrier is depicted by the media, academia, and public opinion. In the absolute majority of studies and mainstream news reports on the acoustic barrier of *Maré*, an assessment of its reason of being — its impact on the noise levels inside the *favela* — is largely absent.

<sup>84</sup> <https://www.youtube.com/watch?v=HX5tyiTD2vg>, minute 2:05 (accessed November 2, 2016).

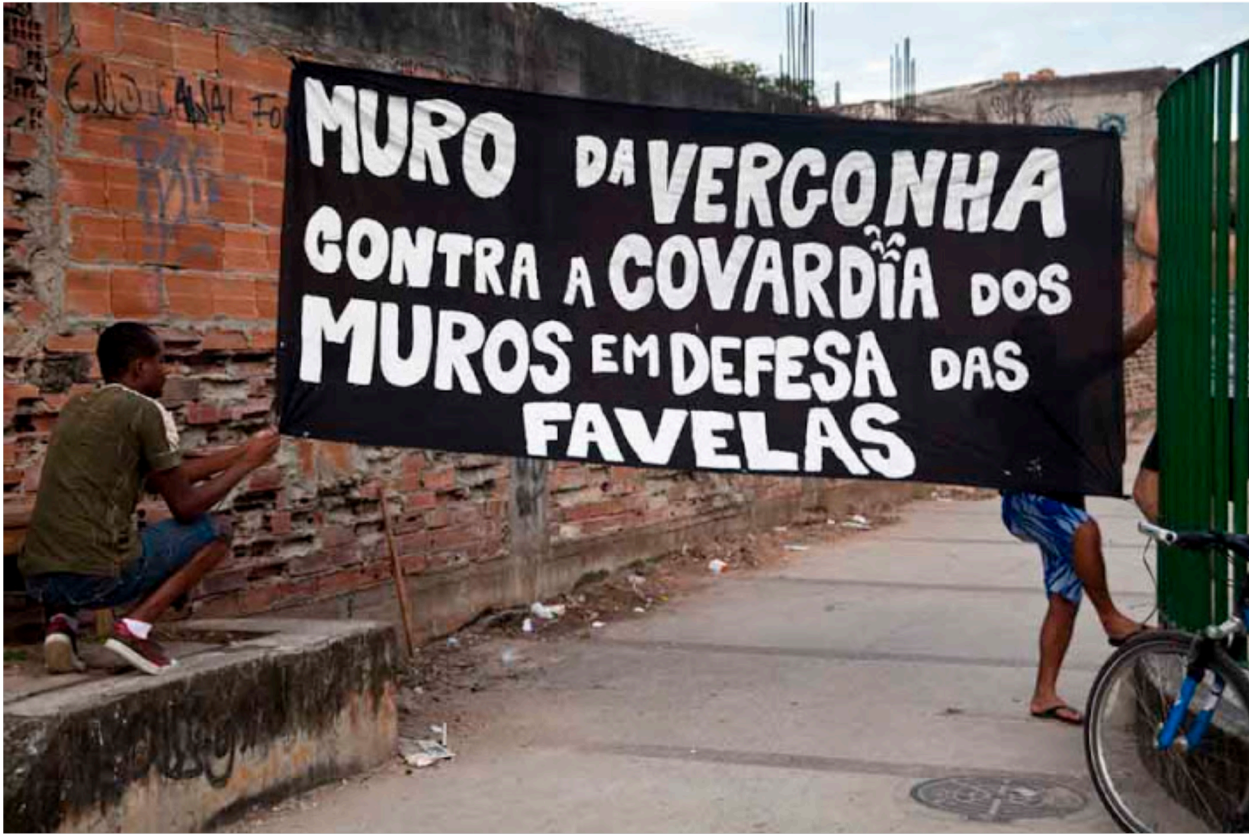


Fig. 36: Protest sign against the acoustic barrier of *Maré*. The sign reads: "The wall of shame. Against the cowardice of walls [and] in defense of the favelas."



Fig. 37: Acoustic Barrier in *Maré*, with special panel design for the Rio 2016 Olympic Games.

In 2016 the acoustic barrier of *Maré* was again subject of discussion in the media due to the preparations for the Olympic Games in Rio de Janeiro. The transparent panels of the wall, which provided only a minor sight of *Maré* for those on the expressway, were covered by the city administration with stickers showing the visual identity for the games. This reinforced the point of the residents that the wall actively works for the erasure of the frontline of the *favela* to the tourists taking that route from the airport to other places in the city; in response to those claims, the Secretary of Tourism of Rio de Janeiro Antonio Pedro Figueira de Mello argued, using an expression in English, that the "only motivation for [placing] the stickers was to take care of the *look of the city* [...] Rio's *favelas* are always at view for those arriving in the city, and we regard them as tourist attractions." (Figueira de Mello cited in Ferreira, 2016) For the state, from the moment the *favelas* refuse to become invisible they have to be capitalized, re-purposed into a form of distanced attraction for the visual entertainment of the tourists. How the wall works *back* towards the residents of *Maré* is never present in the discourse of the Secretary; in fact, for him, the task of taking care of the wall is a burden the city takes in spite of "those who take advantage from the traffic jams to [break the panels and] get into the expressway [in order to] sell [food, water, souvenirs] to the drivers." (*ibid.*) The flow of capital generated by tourism, in his view, cannot benefit the residents of *Maré* even when their very existence is commodified as a visual attraction for the eyes of the visitors. They are condemned to remain in a state of economic subservience, which the State also excuses itself of being accountable for.

Six years later, there is no mention as to whether or not the wall has, in fact, met the conditions that justified its building, that is, improving the auditory conditions of the neighborhood and caring for the ears of its residents. Discussions are largely directed towards the alleged criminality surrounding the region (which would be mitigated by the wall), or focused on how the barrier would cause a significant drop in informal commerce around the expressway. Other reports on the acoustic barrier were either concerned with vandalism towards it (de Menezes 2011), or with the divergent opinions and contradictions that surround the wall itself (Gonçalves 2010). As an example, major Rio newspaper *O Globo* reported on the erection of the first three-hundred meters of the barrier in March 2010; while mentioning only in passing that "the main goal [of the wall] is to provide noise reduction for the residents near the expressway", they dedicate a significant part of the design of the page to discuss the alleged impact the barrier would have on reducing the number of "gun-fights, robberies and demonstrations which block the traffic." (Magalhães and Galdo, 2010) The main feature of the piece, which takes a good portion of the center of the printed page, is a box laying down statistics on traffic jams, reported kidnappings, and police confrontation.

The device employed by the media narrative to persuade those tending towards perceiving the barrier as a method for erasing and silencing *Maré* from the public eyes and ears was to give focus to local opinions, insofar as they enacted the same behaviors as those advocating for the building of the wall. For instance, the piece in *O Globo* gives voice for two residents from *Maré*; they are featured there as an evidence that the barrier was met with divergent

opinions. Yet unsurprisingly, both these voices are read as supporting platforms for the idea that the acoustic barrier was to be erected, in fact, as a safety measure *for* the residents rather than *against* them. The director of *Centro de Estudos e Ações Solidárias da Maré* ("Center for Studies and Solidary Actions of Maré", *CEASM*), Lourenço Cezar da Silva is described as someone who, after understanding how the design of the barriers would allegedly privilege transparent panels, changed his mind about whether or not the wall would segregate *Maré* from the rest of the city. Similarly, local community leader Uiliam Gonçalves e Silva is described as someone who, although still maintaining that the barrier is "an aggression towards the community," thinks nevertheless that the project would end up benefiting the residents of *Maré*. (Magalhães and Galdo, 2010) The "domesticated voices" of local bodies are deployed as leverage to sustain the mechanisms of oppression that affect their communities in the first place. By having voices coming from within, but who nevertheless support the hegemonic narrative being pushed against the residents, is a strategy employed to undermine all criticism and struggle against these segregating measures. In the case of the acoustic barrier of *Maré*, these reports make use of the local voices to continue to reproduce the idea that there was a legitimate concern with the auditory safety of the local residents — a claim that is only used as a storytelling device, for which there is no reporting nor support.

Yet despite the claims by the city administration that the acoustic barrier does not block the view from *Maré* for the drivers, the very design of the panels shows otherwise. Since part of my extended family lives in Rio, I sometimes have to go along *Linha Vermelha* on the way from or to the airport. The first thing one notices while passing through the expressway, either as driver or passenger is that the panels are not designed for seeing through, even if they are built of transparent acrylic. Due to their curvature, sunlight is reflected and therefore any vision is blocked unless one pays close attention. According to a study on the materials of acoustic barriers, acrylic panels like these tend to become opaque relatively quickly due to deterioration and, in the case of an expressway, exhaust fumes (Barbosa 2015, p. 218). Moreover, the acrylic panels are placed apart from one another, separated by a cinderblock. In driving at high speeds, the visual effect is that of a thick, solid line rather than transparency; at lower speeds, each panel is not wide enough to provide a full view of what is behind it. Many videos found on YouTube explore these faults; usually from the perspective of a car driver, the videos narrate how the acoustic wall of *Maré* fails at every single thing it was allegedly designed for, be it for mitigating noise, preventing informal commerce, or displaying the artistic work from *Maré* residents.<sup>85</sup> Nevertheless, little to no comment is provided on its noise-suppressing efficiency; it is clear, both to the residents as to those driving alongside the acoustic barrier with critical eyes and ears, that this wall serves everything but for noise reduction.

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<sup>85</sup> See, for instance: <https://www.youtube.com/watch?v=ZySxrOv7Fr4>, <https://www.youtube.com/watch?v=WladdXFywE>, or <https://www.youtube.com/watch?v=RZn1oxV8PVw> (all videos accessed on December 17, 2016).

More often than not, residents and activists draw comparisons between the acoustic barrier of *Maré* with the Berlin Wall or the wall in Palestine, to name a few, as a way to evince the segregational practices to which the population of *favelas* in Rio are constantly subjected to. As *Maré* resident Thaís Cavalcante mentions in her special report to *The Guardian*,

when foreign visitors come to Rio de Janeiro for the Olympics, they will have to drive through the expressway known as the Red Line. On both sides, they will see colourful murals on barriers that hide our favela. *Maré* residents have nicknamed this the Wall of Shame. It was erected a few years before the 2014 World Cup. [...] Officials say the barrier is acoustic and reduces the noise of cars for the locals. I believe that is a lie. I think they are attempting to deny our existence, which is revolting. (Cavalcante 2016)

The discourse around the acoustic barrier is conveyed via an allusion to listening practices, but never with their enactment; it is misplaced and misused as a violent mechanism with which to exercise segregation. This demonstrates the insidious ways in which listening and its practices are instrumentalized for the imposition of not only auditory but also physical borders. An alleged concern with auditory safety is used to legitimize the construction of an architectural device whose very materiality is intrinsically connected with ongoing histories of segregation and exclusion. As journalist Nate Berg denotes, "sound walls are little more than an ignorable background architecture, something to look away from or even despise [...] sound walls are designed not to be noticed." (Berg 2014) This analogy extends well beyond its intended use when the sound wall of *Maré* is taken into consideration. The acoustic barrier is designed to block sound waves in the direction from the expressway to *Maré*; yet the material-discursive agendas engendered by the placement of this wall creates another contingent type of sonic affordance. *Maré* is rendered invisible and therefore placed away from attracting any attention or interest from those who drive around its borders; the residents are silenced by the same designed artifact that was supposedly built there to create silence for them in the first place. Such *earview* of this design establishes itself as hegemonic via an overall, fabricated idea of how the acoustic barrier is supposed to perform. Yet the emergence of other, conflictual *earviews* around the wall evinces the segregation reproduced and perpetuated by material-discursive practices such as these. In that sense, auditory governances manifest themselves by instrumentalizing the dissenting *earview* towards its complete silencing-by-difference. In other words, the *earview* of the other is co-opted and re-oriented to become a part of the discourse and later marginalized as other. The following sections explain this notion further by using an element of the story of "Ocupação Algerinha" in which this instrumentalization of otherness was used to create a mobile and provisional auditory border.

### ***Ruídografias*, a fictional social design workshop**

One of the elements that helped compose the story of "Ocupação Algerinha" was a fictional social/participatory design workshop that we imagined would have happened for the course of a week inside the neighborhood, focused on issues of noise pollution and listening practices. This workshop — named *Ruídografias* (roughly translated as "noiseographics")

— would have been promoted in the story by a public-private partnership among the city administration, the council for urban planning, and a (also fictional) Latin American Design and Innovation Research Lab called *¡Hubla!* — an acronym standing for "*Hub Latinoamericano de Innovación en Diseño Social*". Part of a series of measures taken by a so-called liberal and progressive administration in order to 'integrate' the residents of the occupation into the fabric of the city, this hub would have built a 'pop-up Lab' inside the *Algerinha* grounds for undertaking the week-long activity. Amongst the goals of this event was to reach an agreement between the sonic practices of the residents from the occupation and the surrounding neighborhoods, thereby seeking a way to 'adapt' the soundscape of *Algerinha* to the former order of the auditory space of that specific place. For this, we developed a text describing the idea of the workshop, how it was performed, and the consequences of its intervention in the settlement. This text, commissioned by the editors of the book *The Responsible Object: A History of Design Ideology for the Future* (2016), composes a parallel narrative to participatory, co-design, and social design workshops which are usually carried out within underprivileged communities. Within this framework, we also thought that the arrival of this 'pop-up Lab' in the occupation would be met with varying degrees of mistrust, and occupation leaders were described as being in constant and often heated debate as to whether or not to authorize the Hub designers to have full access to the occupation's both physical and social infrastructures.

For this particular event within the story, we thought it would be a useful plot device to design the objects which would have been used within this fictional workshop. We saw in the objects an opportunity to articulate these tensions from the story in their material and sonic affordances rather than just by oral storytelling. The objects were created by drawing inspiration from, as well as integrating ideas generated during the Yarn Sessions into the story; these were transposed into artifacts that perform certain sonic affordances mirroring much of the conversations and propositions seen in the sessions, therefore including them in the open timeline of the occupation. In later installments of these Yarn Sessions, the story of the workshop itself became a key point into the overall narrative of *Algerinha*, and participants were asked to react to and fabulate around the event and the idea it aims to represent and criticize. In the following sections we describe the elements of this fictional workshop unpacking how and why these particular objects were designed. In doing so, we used the objects as a reflection on the bordering aspect of auditory governances; we probe into the ways in which design practices directly intervene on dissenting *earviews* in an effort to shift them towards dominant listening practices, thereby promoting a domestication of auditory difference. Lastly, we return to the Yarn Sessions and discuss how this element of the *Algerinha* timeline was interpreted and re-purposed by the participants.

### ***¡Hubla!* and social innovation by design in Latin America**

The institution responsible for promoting this workshop within the occupation was imagined to be a multi-country collaboration towards promoting and executing design activities within Latin America, but particularly within the Southern Cone – Argentina, Chile,

Uruguay – and Brazil. What follows is a description which is part of a longer text depicting the activities that would be performed by this fictional Design and Innovation Hub; this is part of the above mentioned chapter, which was written in collaboration with Luiza Prado de O. Martins. Therefore the text featured herein is a slightly edited version of the one co-written and co-edited with her:<sup>86</sup>

The Latin American Design and Innovation Research Lab – *¡Hubla!* — was established a joint collaboration between Latin American countries as part of a development program for the second decade of the twentieth-first century after the wave of administrative coups d'état that took place in the continent. As a public-private partnership spanning several countries, the hub had its three major branches in Valparaíso (Chile), Buenos Aires (Argentina), and Brasília (Brazil). *¡Hubla!* would allegedly enforce design-driven innovation projects within "social-borderline" communities, focused on designed solutions for urban planning and socially-oriented politics in South America. Due to gentrification and the extinction of social housing programmes, displaced and evicted families occupied a good number of abandoned industrial parks, allotments, and buildings in these countries. Many of these occupations lasted less than a month due to media pressure and forced evictions, but several persisted amongst waves of mistrust, hate speech, and segregation, led by 'neighbourhood watches', self-proclaimed 'moral vigilantes' and most of Latin American mass media. The legality of these occupations was the subject of long debates in the media, and online sharing of information about the struggles of the occupations themselves was scarce, but nevertheless showed a side of the story that was largely ignored by corporate media outlets.

In this delicate social and political context, we imagined the hub being commissioned by the city administration as a key element into establishing a dialogue with the occupations. This attempt of a conversation between all parts would serve both as a platform for a progressive view on institutional politics, as well as a manner of finding a common ground rather than resorting — or before having to resort — to a forceful and violent eviction. Thus, under the discourse of 'improving communication and integrating the *Algerinha* occupation into the neighborhoods', *¡Hubla!* would have developed the *Ruídografías* workshop as a playful way to tackle issues of sound and listening through improving, as well as raising awareness for listening practices within the occupation, thereby directly addressing the neighbors' complaints about the noise pollution coming from the *Algerinha* grounds.

In the story, we imagined the *Ruídografías* workshop as being introduced in the final stage of the hub's project within *Algerinha*. The fictional press release promoting the workshop for the media, as well as for the residents of the occupation, reads as follows:

In this week-long Workshop led by the Latin American Design and Innovation Research Lab, in collaboration with the urban development council, we will create playful devices with which to locate, measure, and map the loudest and quietest places in

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<sup>86</sup> See Prado de O. Martins and Vieira de Oliveira, 2016.



our neighborhood. With that we want to empower the inhabitants themselves to become aware of their own sonic footprint, and develop a better listening experience for families and businesses both inside and outside the community.

The artifacts were developed to showcase the methodology *¡Hubla!* would have used in the workshop: engaging with the occupation and developing playful devices for mapping out their own sonic environments, in order to educate the residents over acoustic disturbance, and thus move towards developing 'better listening' practices. These devices would record overhead soundscapes which would be later used for frequency band sorting and measurement, as well as discrete sounds of the occupation which were of specific interest to the lawmakers, in order to feed an ever-growing database of 'undesirable' or 'annoying' acoustic events. In the story, these mappings ended up leading to the posterior development of 'smart' solutions for muffling or even cancelling out frequency bands, or eliminating certain sounds by using active-noise cancellation techniques and urban furniture around the occupation.

In practice, we envisioned *Ruidografías* as consisting of three distinct activities involving several members of the occupation: first, hub designers and volunteers would teach kids to build "augmented kites," meaning that they would add high-sensitive microphones and lightweight micro controllers to small kites that would be flown around the community to gather different types of data. Secondly, the hub would introduce to the residents a pair of wireless, binaural earbuds — a prototype they had been working on.<sup>87</sup> These earbuds, connected to a customized smartphone app, would allow their wearer to "zoom in" into specific points of interest and provide a crisper auscultation of these sounds; the designers would have given this device to a resident from *Algerinha* — an informal worker that spent her day walking around — in order to gather as many data points as possible from distinct auditory spaces within the settlement. These engagements among residents from *Algerinha* and state-of-the-art technologies would allow *¡Hubla!* to navigate places they would not have access to otherwise. Lastly, both data from the kites and the earbuds would be plotted onto 'audio maps' which would be then made available for the city administration, the council for urban planning, and later on the general public; this would help the designers identify which kinds of sounds and zones they could focus on after the workshop, and therefore develop 'solutions' for.

### **Silent sonic surveillance: the kite**

The first object we developed for the narrative is a crimson and black-colored kite, which would look ordinary if it were not for two highly sensitive microphones placed one at the top and the other at the bottom front, and connected to a micro-controller glued to the back of the device. We imagined that kites like these would be built collectively at the beginning of the week, engaging kids, volunteers, and designers from the hub in an activity

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<sup>87</sup> Binaural microphones are stereo microphones split in two separate devices which, due to their placement on the ears of the recordist, capture a stereo image of the soundscape which is slightly delayed from one side to the other (depending on the direction the sound comes from), thus mimicking almost precisely how a human being hears.

which sought to, according to the report issued by ;Hubla!, 'bridge traditional forms of play and toy-making with contemporary technologies such as smart sensors, recorders, and other forms of augmented interaction.' Kids would be taught how to attach and connect microphones and sensors to the kites in a way that would not disrupt its ability to fly and perform acrobatics in the air. They would be also briefly instructed about how the electronic devices in the kite worked, as well as to specific things they should look for when flying the device around, e.g., busy places, spots where music was being played, or any other kind of assembly within the occupation. The kites would be flown every day for the entire week in different parts of the occupation, recording not only overhead soundscapes with the microphones but also collecting other data points such as timestamps, weather data, and flight trajectory through the micro-controller. These points would be collectively monitored in real time by designers and participants alike, in a playful and educational activity.

The use of a kite in the narrative works as a plot device which, at first glance, serves as an exercise in showing kids and youngsters from the occupation how to gather different types of data using cheap and do-it-yourself solutions. The choice for the kite, a simple design which is shared among different class strata in Brazil, is not at all arbitrary. It was, first and foremost, a response to the engagements with this particular object in previous Yarn Sessions such as the one discussed in chapter five; while participants of that session chose the kite to represent a device for policing, we saw in it an opportunity to show how simple objects like these do-it-yourself toys could be appropriated into more subtle practices of domestication of difference beyond the use of direct sonic violence. In so doing we aimed to convey a narrative that would transform kite-flying, a common practice in Brazil within lower and lower middle classes, into an 'augmented' form of play which is at the same time technologically attractive and pedagogical, while using an immediately relatable visual marker of everyday life. Moreover, such a narrative directly confronts an often unspoken, but well-known practice connected to drug trafficking in underprivileged communities: the co-opting of kids and youngsters by drug factions to fly kites as indicators of police presence in the favelas, as both a method for counter-surveillance as well as a mechanism for 'protecting' the community from armed conflict. In flying these kites with a different purpose, that is, that of collecting sounds from its flying path as it is would be employed in these scenarios, a project like this, if undertaken in a context similar to the Algerinha story, would yield a state of mutual surveillance. Kites then become silent listening devices, both markers and intruders into the everyday life of the occupation, and at the same time an ambiguous political narrative of harmless and harmful.

### **Mobile and provisional sonic intruders: the earbuds**

The main object from the set we developed for the fictional workshop is a pair of metallic-green earbuds. We imagined it to be a high-end product which would not have been developed as part of the activity, but rather assembled by ;Hubla! beforehand, exclusively to be employed in Ruídoграфías. The workshop would then focus on how the residents would engage with it, rather than develop something from scratch or augment an existing device

with sensors (as it was the case with the kite). The earbuds are designed to be a concoction made of discreet wireless binaural microphones, together with active-noise cancellation headphones; in combining these two technologies, the earbuds isolate the wearer from external sounds and constrain listening to the experience of the microphones, therefore allowing for a direct engagement with what is being heard and captured simultaneously. To create them we were partially inspired by the idea of 'hearables,' and particularly the Here One device discussed in chapter one; yet differently from most technologies for binaural recordings available as of this writing, we imagined the device could offer the possibility for the wearer to 'zoom into' certain sounds by adjusting the microphone's sensibility to certain frequencies in real time over a smartphone app. This would be achieved by enhancing certain frequency bands, while completely filtering out or blocking others; the app would also double as a recorder, gathering not only sounds but also marking the recordings with GPS and weather data. This entire apparatus would be able to listen to the environment and find points in which certain frequencies would stand out significantly more than others; it would then alert the wearer with a specific sonic code played into the earbuds, so that the user could choose whether or not to stop and enhance specific event identified by the algorithm.

¡Hubla! would deploy the earbuds in the occupation as part of a 'cultural probe,' and the device would be given to a previously selected resident of the occupation, to be worn for the entire duration of the workshop. The wearer would be instructed to keep the earbuds always on except when sleeping, while at the same time remaining alert to the sonic signals the smartphone app would give when identifying potential areas of interest for zooming in. The chosen resident in this case would be a middle-aged informal worker — a broom seller — which was native to the occupation and therefore knew how to navigate for the entire extension of the Algerinha grounds; moreover, her labor activity would have made her an almost invisible element of the everyday life of the occupation and would therefore draw little to no attention to herself. She would be instructed to perform a routine of closely listening to her surroundings and selecting, by means of tuning the microphones in and out at will, conversations, events, and other auditory markers she found particularly interesting. These behaviors were present in the sound composition we made as the accompanying sonic material, which would be one outcome of the workshop. The voice of the seller is seldom heard in the recordings, except for her call-and-response selling refrain; similarly, the listener's attention shifts in and out of focus at seemingly random moments, implying a possible anxiety in using a concealed recording device while walking around the occupation.

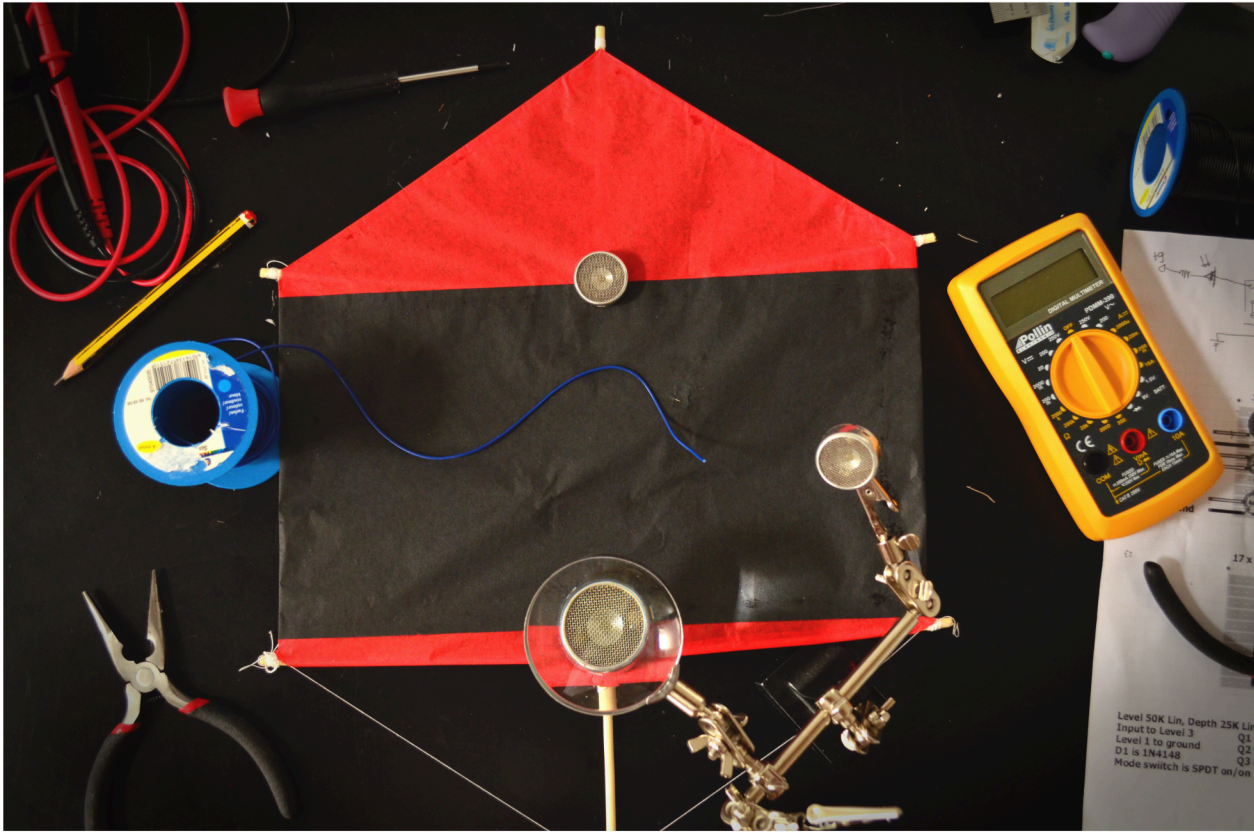


Fig. 38: Kite designed for *Ruído grafías*.

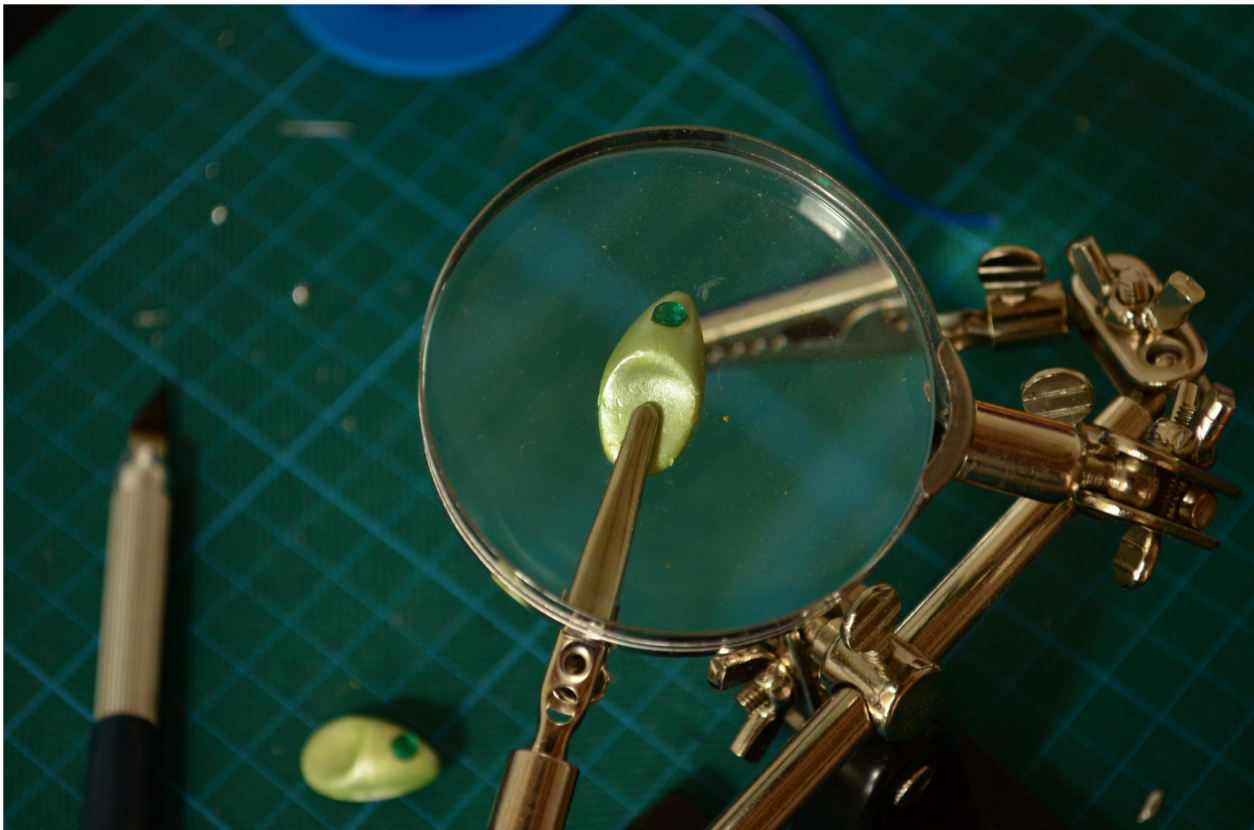


Fig. 39: Earbuds designed for *Ruído grafías*.

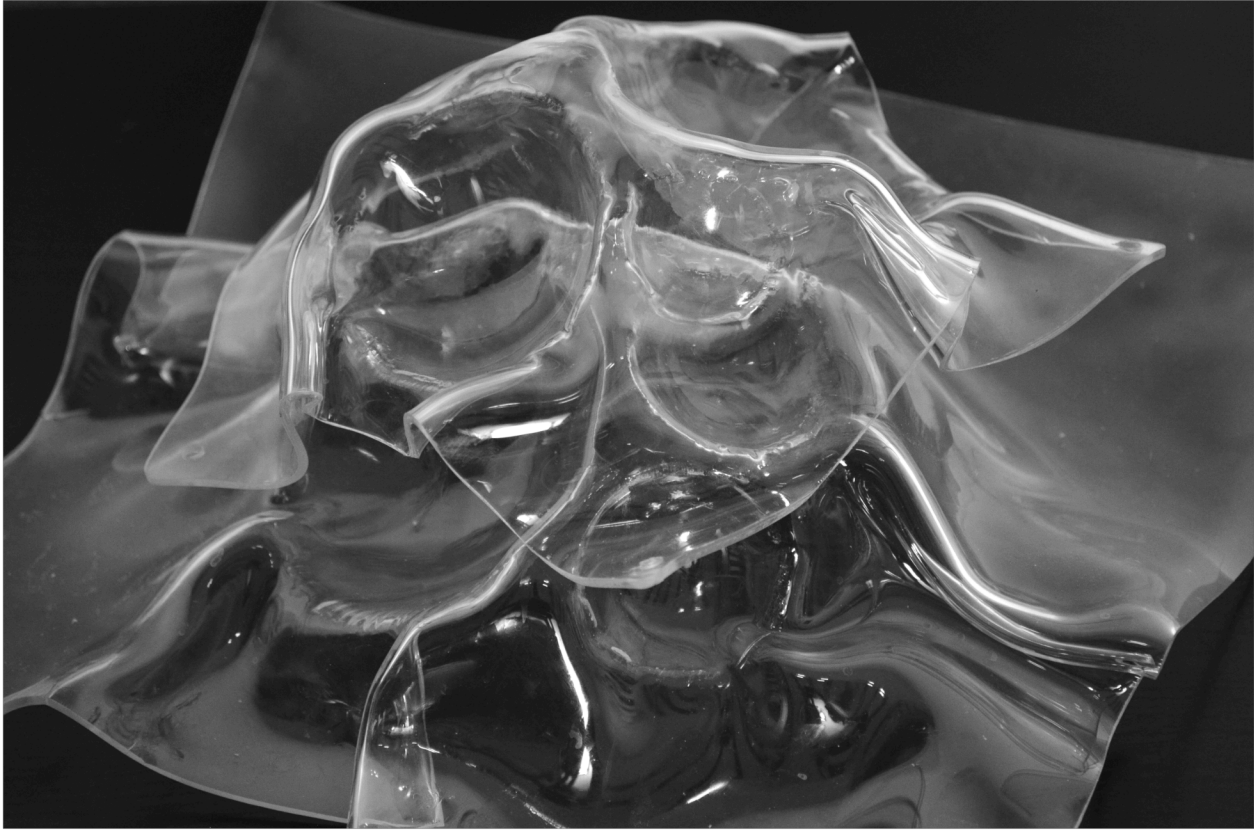


Fig. 40: Data visualization designed for *Ruídografías*.



Fig. 41: Earbuds designed for *Ruídografías*.

The earbuds were designed as a way to show the complexities of design practices in underprivileged contexts, particularly when a piece of technology is employed as a method for directly quantifying and measuring the everyday life of these places. In the story of *Algerinha*, many attempts to integrate the occupation into the city were tried out, but the one we decided to focus on was the project of turning the occupation into a makeshift neighborhood, symbolized by the temporary renaming of the place from "Ocupação *Algerinha*" (*Algerinha* occupation) to "Vila *Algerinha*" (*Algerinha* neighborhood). This was inspired by similar policies implemented in Rio de Janeiro, the most important being the *favelas-bairro* (slum-neighborhood) program. This idea, introduced in the city by mayor Marcello Alencar in 1992, has as its motto the "integration of favelas into the city" (Burgos 1998, p.48), which sought to implement or improve the living conditions of the favelas, providing the residents with sewage, paving, access to the *asfalto*, proper power and TV lines, garbage removal and waste collection, and so on. However, as Brazilian sociologist Marcelo Baumann Burgos argues, the lack of a unified agenda — due to the chaotic nature of the emergence of favelas in the city — as well as the urgency to treat the populations of these favelas as a matter of public security rather than human rights, created a disconnection between the demands of the favelas and the design of this program. The mayor and the architects, not the residents, were the ones giving the final decision upon the measures implemented by the *favela-bairro* initiative (ibid., p.51).

While the ideas of *favela-bairro* were promoted in the public discourse as a way for the city administration to integrate the *favelas* into the city, they envisioned this not only by securing the bare minimum of living conditions but also by promoting the visual erasure of difference from the *favela* to the *bairro*. In practice this, fortunately, has not been the case in Rio. Yet it is within this idea that we imagined the actions of *¡Hubla!* and the promotion of *Ruídografías* as taking place within the *Algerinha* occupation. As seen with the sound wall of *Maré*, an alleged mitigation of noise pollution in or around underprivileged neighborhoods has been already deployed as a device for pushing segregating policies disguised as a concern with the auditory safety of its residents. These accounts served not only as an inspiration for the story surrounding *Ruídografías* but also as a 'cautionary tale' to the accountability of designerly practices originally aimed at 'improving' conditions of living in places and situations the designers are not exactly familiar with. Yet differently from the explicitly segregational character of the acoustic wall in *Maré*, we imagined this fictional workshop as working towards more subtle ways of domesticating the residents of *Algerinha* into a consensual narrative of urban dwelling.

Therefore, we imagined the processes and outcomes of *Ruídografías* as being crucial for the city administration and the council for urban planning to understand how they could act towards 'integrating' the occupation into the city. For them, public policies aimed at 'domesticating' listening practices perceived as 'not belonging' to the space they were inserted in, could help a better dialogue with the neighborhoods around the occupation, and in turn manage public opinion towards tolerance rather than prejudice. In other words, the precise identification of "noisy elements" within the occupations (which would be a natural occur-

rence of the organic development of the settlement), as well as using collected data to map these sounds and produce a tangible visualization of it, would be later on used to develop measures that would appease public opinion, but not necessarily improve the living conditions of the residents themselves.

With the earbuds designed to inhabit the micro-universe of *Ruídográfias*, we gave a special focus to the ability of these fictional objects to "zoom in" into sounds, thereby engaging in a direct criticism towards augmented listening devices such as *Here One*. Rather than speculating around these specific, brand-ready products, we instead placed a similar technology within the narrative of the workshop in order to highlight the logics by which they operate. Using the idea of noise-cancelling algorithms to pinpoint specific audio events of interest to the aims of the workshop — that is, mapping the complexities of the occupation's soundscape — we reverse the operational ethos of these devices, thus moving from individualized to communal 'smart audio filters', finely-tuned to suppress 'unwanted' frequency bands according the judgement of the 'experts' — designers and policy makers — evaluating data after the fact.

In exaggerating the narrative by placing it within *Algerinha* and giving agency to an inhabitant of the community — a woman, no less — rather than a so-called 'expert', male narrator, the earbuds evince the ambiguities that might be triggered by a minor change in the listening practices of the wearer when using such a piece of technology, while at the same time complicating the agency over this entanglement of humans, non-humans, and those seen as less-humans in the narrative. Implied in the sonic character of the soundscape composition describing the wearer while using the device is the fact that she becomes herself not only an eavesdropper, but also a surveilling body from and within the occupation. As a local body turned intruder, but at the same time unawarely so, she enacts a form of self-policing that is delegated by design to her, a 'noisy other' herself in the ears of the public opinion. This enactment happens from the moment she is perceived, in the narrative present in the soundscapes, as an 'alien body' due to a visible change of her listening modes, enabled via a clear technological marker — the earbuds. In other words, her earview is shifted so as to mirror the dominant listening practices coming from outside the occupation.

The sounds collected by the objects worn and used by the occupations' inhabitants in the story were displaced from their place as an "internal social dynamic of communities that can be addressed and absorbed" (Stoever 2015, p.154). We imagined they would be used as basis for developing policies that, marketed as beneficial to a 'communal living,' would in fact subordinate the auditory character of the occupation to conform to the overall notion of 'silence' usually ascribed to urban environments. As Jennifer Stoever reminds us, "noise-abatement laws [carry] with them differing ideas about what [constitutes] 'noise,' essentially subjecting [underprivileged] neighborhoods to policing based on standards set elsewhere, based on white desires and sensory orientations." (ibid.) Thus, a "sonic mark of 'otherness'" (ibid., 157) is ascribed to the populations of underprivileged communities, whose place in the auditory space is immediately perceived as dissonant and therefore in

need of domestication by design — via public or sometimes internal policing and suppression. Moreover, the overall language of the workshop — based on how other similar socially-oriented activities articulate their endeavors in text-form — subjectively directs the efforts of taming said "noises" to the inhabitants themselves, demanding them to police one another and thereby installing a state of mutual and internal surveillance that disrupts the previous social order. In other words, it places the burden of being silent on an alleged inability of the "other" to comply to notions of quietness "set elsewhere".

While one could argue that such a narrative undermines the seller's own agency in the context of the workshop, such an enactment is not so uncommon within social and co-design activities. In my conversation with Samara Tanaka about *Lins* (see chapter six), for instance, she mentioned several times how NGOs and other "innovation Labs" often plan and carry out activities within the favela and the residents show up and do as they are told because they feel it is their social obligation to do so. This, according to Samara, is due to the fact that no project has ever attempted to engage directly with the residents, relying instead on their methodologies from outside of which the residents from these communities are only test subjects for. Jéssica Souto, a musician and media activist I interviewed (see chapters three and seven), who lives in another *favela* on the other side of town, also confirmed this information. Hence the whole narrative around *Ruídografias*, and in particular the earbuds, were inspired by these conversations.

### **Ruídografias in the context of Yarn Sessions**

Due to the fact that *Ruídografias* was a text-based, Speculative Design project commissioned for the "Responsible Object" book, the account of this fictional event featured a more detailed and 'closed' narrative in comparison with other major points that compose the story of "Ocupação Algerinha." Yet we decided to use bits and pieces from it in the Yarn Sessions so as to explore whether the perception of such an event in the story of the community would be much different from the one we envisioned. Therefore we transposed the idea of this workshop to be an 'open marker' in the story, and to focus on two different affordances: a) the designed affordances of the Earbuds, and b) the sonic affordances of the audio compositions created to sustain the plot of the workshop. These were presented to participants either as directly connected to one another, or in different points in the sessions as complementary material to the story of the occupation.

In designing the soundscape that would have been recorded by the kite, we created a sonic composition that is not necessarily perceived to be noisy, but shows nevertheless a different set of frequencies not to be found in regular field recordings took from microphones placed too high above the desired region of focus. We described it to participants as an "overall soundscape populated with sub-bass frequencies (45–200Hz); music is less prominent, giving way to often shouted conversations, multiple fireworks, motorbikes, and sometimes even a gunfire." Conversely, the composition for the earbuds featured a constant shifting of close and distant sounds, from everyday conversations to call-and-response refrains of in-



formal sellers, from line noise sounds to busy train stations, all punctuated by different variations of *tamborzão*, the main leitmotiv of *funk carioca*.<sup>88</sup> The following sessions discuss two different perceptions of the material stemming from *Ruídografias*; in the first case we analyze how participants have understood the aims and workings of the activity in the context of the story of the occupation by using the earbuds as its plot device, while in the other we probe into how participants have interpreted the sonic material to have a similar character to that conveyed by the workshop even though the idea of *Ruídografias* was absent from that particular session.

### **Performing or enacting sonic violence? A body turned other**

The third installment of the *Algerinha* Yarn Sessions took place at the Critical Media Lab, a research group at the Institute of Experimental Design and Media Cultures (IXDM), Academy of Art and Design FHNW in Basel (Switzerland).<sup>89</sup> Our main task in this session was to further develop the theory of the *earview* by exaggerating the idea of what it means to listen to the world in different manners. To do so, we tried to condense as many elements of the story as possible in a six-hour long workshop — a task which in the end proved itself to be too complicated, having too many layers for the participants to be able to properly focus on the story of the occupation. Yet a few points of this installment are worth discussing in this particular section, insofar as they negotiate the designed affordances of the earbuds in the context of *Ruídografias*, as well as reproduce a few of the ideas being discussed in this chapter.

The session was attended by seven participants, all of them Germans or Swiss except for two women, one Russian and one Serbian. Four of them were researchers at the Lab, while the remaining three were also connected with the Academy of Arts in Basel in some form, working with or around topics of sound and design. After introducing ourselves to the others we decided to come up with a creative way of dividing the groups; the final decision was to split the participants into a "loud" and a "quiet" group, meaning how they perceived themselves to be as well as how they are perceived by the others. Interestingly and somehow expectedly, a brief discussion ensued as to how gender and nationality are perceived in relation to loudness, with factors ranging from sounds that are specific language and social and cultural behaviors. For instance, one participant remarked that for him loudness in speaking was immediately connected to aggressiveness, but at the same time he perceived Spanish women to have "deeper voices" and that this "seemed to be acceptable [sic]." In the end, of the three women attending the workshop, the only one who (voluntarily) went to the 'loud' side was the one from Serbia; similarly, one of the participants who identified

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<sup>88</sup> <https://soundcloud.com/partido-alto/algerinha-vive> (accessed December 15, 2016).

<sup>89</sup> <https://www.ixdm.ch/critical-media-lab/> (accessed November 24, 2016).

himself as having Latin American roots was also selected by the others to integrate that group.<sup>90</sup>

When introducing the story of "Ocupação Algerinha" to the participants, we emphasized the fact that in all reports and interviews we did with people connected to the occupation, there was always the comment that 'they listened to the world differently.' In that sense, the first task we did collectively in this session was to try to come up with a few hypotheses as to why this was something worth mentioning. Interestingly enough, all participants immediately assumed that 'they' referred to the *Algerinha* residents and not the neighborhood around the occupation; it took around fifteen minutes of discussion for one of the participants to ask me whether 'they' was in reference to the neighbors instead. In the end, these were the hypotheses — which in the session we called 'guidelines' — they came up with:

1. The occupants have a looser notion of private (sonic) space;
2. The architectural space of the occupation sounds differently;
3. Sudden variations in volume in the way they [the] occupants speak;
4. There was a predisposition from the original residents to perceive the occupants as loud because they were not welcome in the first place; and
5. The two groups have different schedules/routines

It is clear then that these hypotheses/guidelines are all written in relation to an *earview* that is considered to be 'neutral' and therefore 'normal'; the language employed in these guidelines always assumes that the listening practices from *Algerinha* — the 'occupants' — somehow deviate from a perceived normality. We did not interfere on that assumption, rather letting the participants fabulate freely so as to generate a debate around the reasons why they took decisions in that manner. These criteria were written down and a copy was given to each group; they were asked to keep these hypotheses in mind for the subsequent exercises.

Similar to the *re:publica* session, the activities for this installment in Basel revolved around a set of cards containing events which participants could connect to objects and sonic compositions, in order to develop short stories. Yet differently from the previous session, this time they had more time to create situations which were to be inserted in the timeline of the *Algerinha* occupation, thereby focusing more on the entanglement of objects, events, and the fictional story rather than just the technologies and their consequences by themselves. The third exercise of this session consisted on a card describing the *Ruídografias* workshop, for which we used the same description featured in the beginning of this chapter, only omitting the part which discloses who led the activity; participants were given the set of green earbuds, and they all listened to the second track of the "Algerinha Vive Mixtape" — a

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<sup>90</sup> Despite the apparent triviality of this division, it was interesting to observe that in practice the groups did not differ much in terms of volume in conversation; it seemed to be more rooted in perception rather than anything else.

mixture of electronic sounds, line noises, and field recordings captured with binaural microphones.

While one of the groups dismissed the object and focused on the social changes which would be triggered by an event such as *Ruídografias*, others imagined ways to disrupt a potentially harmful narrative implied in the workshop's description. Yet both groups understood quite clearly that the idea of a workshop like this could not be for something other than assimilation and domestication, and this was clear in their fabrications and performances. The first group decided to create a small set of performative gestures based on rhythm: the three members would sit down side-by-side and begin clapping at completely different rhythms; the goal was for every member to try not to be confused by listening to the other and eventually adapt his or her rhythm to their neighbor's. In their description, they imagined it to be a metaphor for what happened during the workshop; they did so by putting the only man in the group right in the middle of the assembly, and having the other two women to inevitably assimilate into his dominant rhythm. It was an effective device in which listening to the other could imply being assimilated into another rhythm that not your own, in a small routine which revealed, quite clearly, a strong power dynamics implied by the story.

The second group, on the other hand, applied the objects quite directly into the story. They understood the object to be not a set of earbuds but rather signal jammers disguised as earrings; for them, the residents from the surrounding neighborhood would promote *Ruídografias* as a 'pedagogical measure' to enforce the "guidelines" discussed previously. They imagined that the neighbors would get into the occupation and proceed to record all the soundscapes they found interesting, and take those recordings to the media and the urban planning council as a way to sustain their complaints about noise. However, a group of activists from the occupation would develop these signal jammers and give them to participants of this workshop, so they could walk together with the ones bearing recording devices, while at the same time ensuring that all of the recordings would be glitchy and impossible to discern. Even though they gave a stronger focus on the earbuds/earrings as a device of resistance, this was the only task in which the perspective taken by both groups was that of the *Algerinha* residents.

In the final discussion at the end of the session, one of the participants commented that stronger cultural differences between our own idea of what the occupation was and the reality experienced in Germany or Switzerland have somehow worked against the aims of the workshop. This participant felt that there was a disconnection between the reality we as workshop leaders were speaking about and the realities of their everyday lives, particularly concerning the auditory space of Brazil and Switzerland. Despite being a valid point as to the extent of cultural differences, my experience with the Yarn Sessions somehow contradict this notion that sonic realities are that distinct as to provoke a disconnection. Quite the contrary, a lot of assumptions about whose bodies perform this *auditory otherness* kept repeating themselves through all sessions, and in particular the one held in Basel – with the guidelines being perhaps the strongest evidence of them all. In that sense, one anecdote

from this session proves itself useful here: another participant commented that throughout the entire day he felt "quite uncomfortable to reproduce certain discriminatory [sonic] behaviors in the workshop." When asked to elaborate, he referred to the creation of the guidelines and the types of performances the groups came up with, which only reinforced the perception that the occupants did not belong to the space they were in. Yet while for him it may have felt like he was reproducing listening practices perhaps too disconnected from his own, all of the other participants seemed to be quite sure of what they were speaking about; from the way they were speaking about the guidelines, this was not a performance of listening practices that enforce the domestication of otherness; rather, it was an enactment of them.

### **"He edits reality into his own particular narrative": Sonic fictions of deception**

Similar to the Basel session, in the installment conducted at the CLB space in Berlin participants were presented to the track from the "Algerinha Vive Mixtape," a three-minute long collage of sounds with shifting *earviews* and sound sources that ranged from close-up recordings to more distant, eavesdropping sounds. The difference is that in this session, a description of or discussion around *Ruídografias* was absent, so this sonic composition was the only element of the story that was presented to them. These recordings were collected mostly with a set of binaural microphones, and therefore can convey an entirely different experience when listened to with headphones; participants had access to this recording at all times during the session, and could navigate freely through it in order to listen as carefully as possible and focus on any sequence they judged more interesting. The first task we gave the groups was to map out these sounds and identify probable narratives communicated by them; from there, they could choose one specific grouping to expand from, mapping out the social, cultural, and political implications those sounds, when combined together in that specific composition, could convey.

While the group discussed in chapter six focused their attention on labor relationships and informal work in the context of urban mobility, the second group from this session decided to explore the sonic characteristics of the composition itself rather than discrete sonic events. Hence in their mapping they moved from a descriptive list towards a qualitative assessment of pitch, timbre, and most importantly, context; the sound of a key into lock became, in their map, 'home,' which mapped out to 'private space'. Similarly, 'line noise' was mapped out to 'human-machine interaction' and later on into 'skin'. Having a map focused on the subjective character of sounds and the abstract notions they could convey helped this group imagine a more linear narration for the composition, in which every single element placed in the stereo field could potentially mean a plot device to be unpacked from. In the end, they decided that the central character of the entire composition was 'distortion' — a feature they described to me as being present in different ways for the entire duration of the sound piece.



Fig. 42: Card designed for the session at the Critical Media Lab.



Fig. 43: Rhythm-based game devised by one of the groups at the Critical Media Lab session.



Fig. 44: Earbuds as "bug devices" as devised by one of the groups at the Critical Media Lab session.



Fig. 45: Map from one of the groups at the CLB session. These maps focused on "distortion."

As explained previously, after this first exercise of mapping out participants were assigned with a semi-random 'plot twist,' decided by rolling dice and selecting the results from a table we provided to them. The options in this table ranged from 'Objects' to 'Practices and Discourses', from 'People,' to 'Places and Events', all of them having an element which was picked up from previous Yarn Sessions or from the material accounts in this research. In the case of this group, they agreed on picking up one die for 'People,' and another from 'Places and Events'; the former gave them a 'journalist from a media conglomerate which does not support the occupation,' while the latter set the narrative around 'the house nearest to the community's borders.' It was not implied whether or how the two would be connected, nor if the house belonged to the occupation or not. The group decided that the house ultimately belonged to the journalist and as such there would be a conflict of interest in his reporting.

Based on their previous focus on 'distortion' as a general idea for the soundscape, they fabricated on a story that placed the journalist as an upper-middle class character, whose own house was progressively devalued due to its proximity to the *Algerinha* grounds. In their 'parallel reality,' as they described, the journalist would have access to a myriad of high-tech surveillance devices which would allow him to monitor several data points from the occupation. As argued by them, the journalist "covers up, he censors, he distorts, he edits reality into his own particular narrative." Moreover, he would progressively install audio bugs and other listening devices "into all the electrical and communication lines in the community [...] even in traffic lights themselves so he can gather noises and information." His surveillance material would be later on craft a fictional story in the shape of sound compositions, which would be aimed at proving that the occupation was dangerous to the well-being of the citizens and to the overall structure of the city. The buzzing noises and other electrical recordings would be manipulated and exaggerated, so as to convey an alleged plot towards the complete disruption of the living standards of the population outside *Algerinha*. They also imagined that one strong feature of these recordings would be "to remove people from the narrative," in an attempt to further dehumanize the residents and entice the minds of the listeners.

Yet the group did not stop on this distorting of reality against the community, imagining instead the beginnings of a resistance coming from inside the occupation. They said that one unexpected effect of the journalist's operation of surveillance and distortion of reality would be that "the lines start buzzing, creating an overall droning sound in the entire community, so people began to notice these sounds it more and more as it happens." By becoming aware of the attempt of distorting their story to the public outside, the residents of *Algerinha* start to devise a counter-narrative that creates a specific and particular sonic imprint of them, that is prevented from becoming subject of the journalist's distorted compositions:

At the end of the recording we hear the beginnings of a resistance: the community creates a way so that sounds cannot be chopped out of their content. So what do they do? They make music with these sounds. They found a way to create an encrypted

recording which cannot be falsified. That is the reason why the composition stops as soon as the music starts: because [this music] cannot be falsified, and therefore it disrupts the journalist's recording.

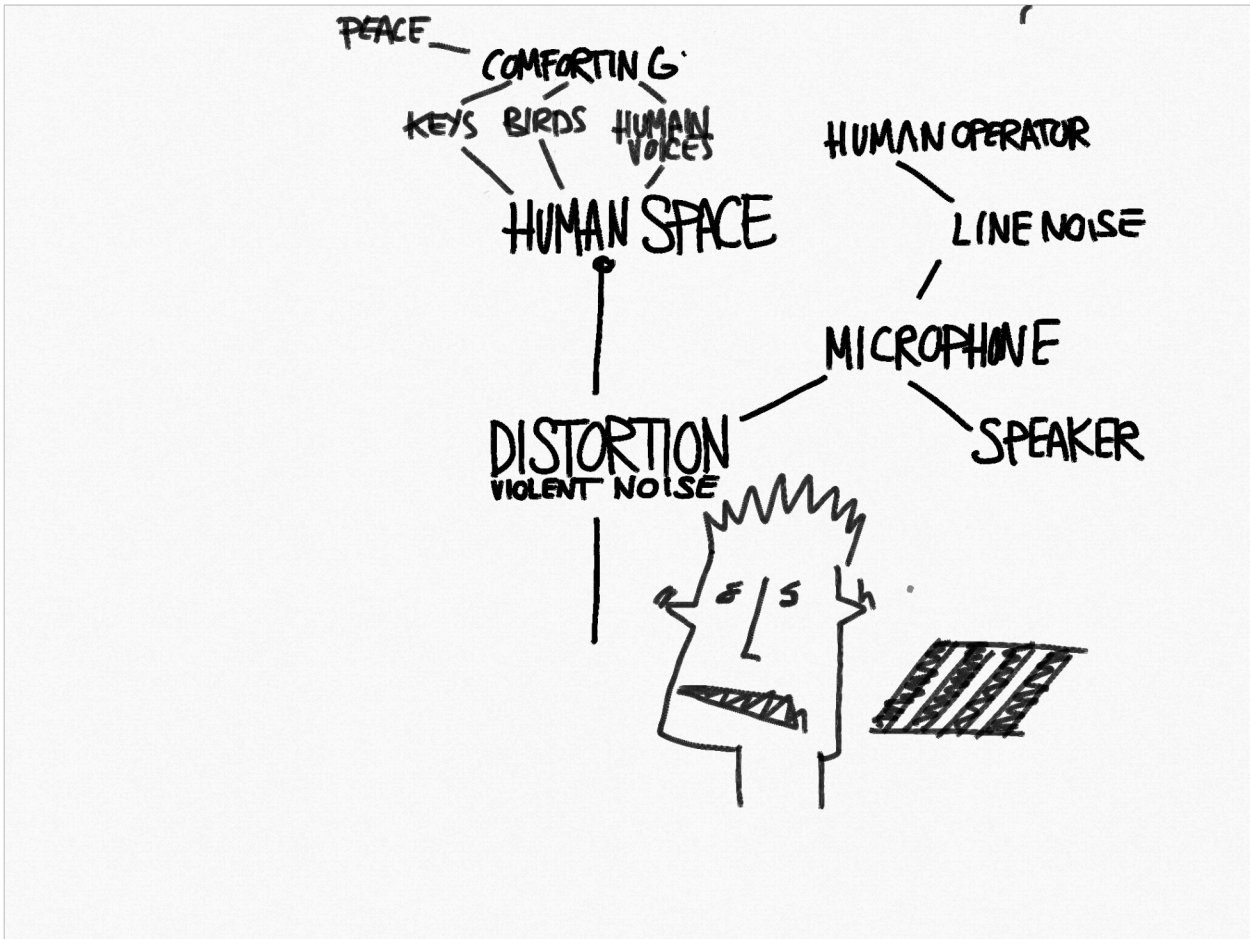
The recording apparatus was a constant preoccupation of this group; they have listed it in different points of the map as a source of interference, as a hidden device and therefore not triggering suspicion, or directly placed at the center of the recording itself. The device with which one records those sounds shifted the perception of how and where the sounds were captured from, as well as the types of social behaviors they might have triggered and conveyed; more importantly, they conceived the recording devices to be the source of different types of distortion depending on how they were deployed to gather the sounds in the first place. This is evident in their story, insofar as they imagined all devices to be concealed within urban furniture or infrastructural cables inside the community.

Thus by imagining the composition they were presented to as being a recorded narration of a distorted reality, they envisioned the sounds of *Algerinha* to be significantly different from those they were listening to. They decided that those sounds, in that particular place and order, as well as with those specific sonic character, represented a distorted version of reality, which was the result of a covert surveillance operation. Much like the account around the earbuds in *Ruídografias*, the sounds featured in that three minute-long piece were used as a device against the community; they also perceived this collection of sounds to be potentially threatening and, more importantly, unwanted by the residents as a type of 'sonic portrait' of their lives. Yet, rather than focusing solely on the *earview* of the journalist, they hinted at a possible moment of resistance as an emerging story, that could be unfolded towards different ideas, different perceptions of (non-distorted) reality, and perhaps even different outcomes.

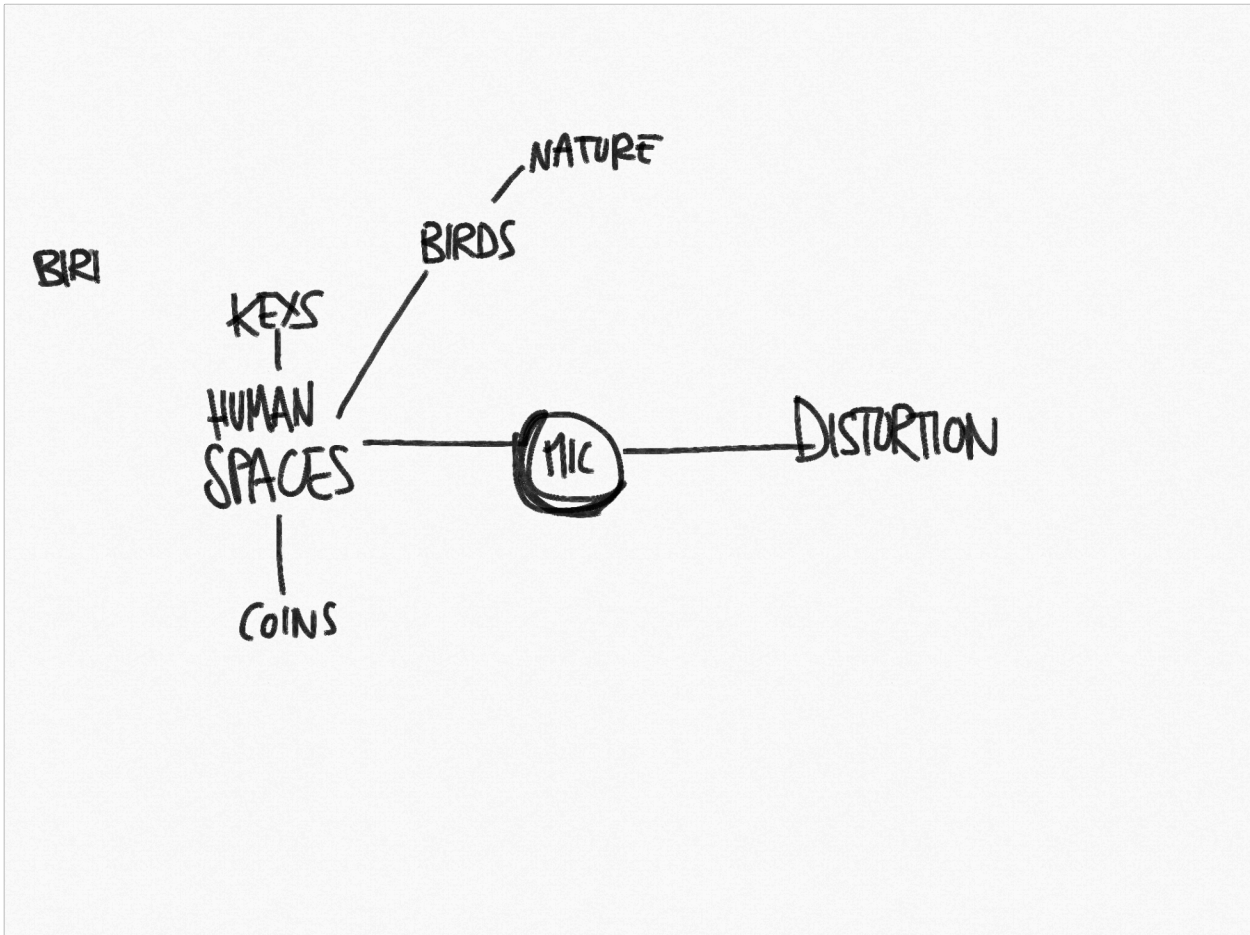
### **Design and the domestication of otherness**

While seemingly obvious in the context of a fictional story such as *Algerinha*, the instrumentalization of these local markers and practices, as well as the duality they engender when used otherwise within local contexts, is a common narrative found in socially-oriented design endeavors. Together, these objects show a comprehensive effort on acquiring as much sound-based data as possible from the occupation: overhead soundscapes, long soundwalks, and a taxonomy of acoustic events that are unique, discrete, and particular of that places. In crafting the story in this manner, we wanted to create a situation uncanny enough to open up a discussion around the ethics of sourcing bodies from underprivileged contexts as 'data miners.' In doing so, we argue that this sourcing from within is employed for pinpointing behaviors considered different enough to create a fissure in the everyday practices around it, which in turn elicit the design of artifacts and policies that tend to domesticate these practices towards a form of consensual pluralism. Put differently, it ultimately validates a process of silencing by design.



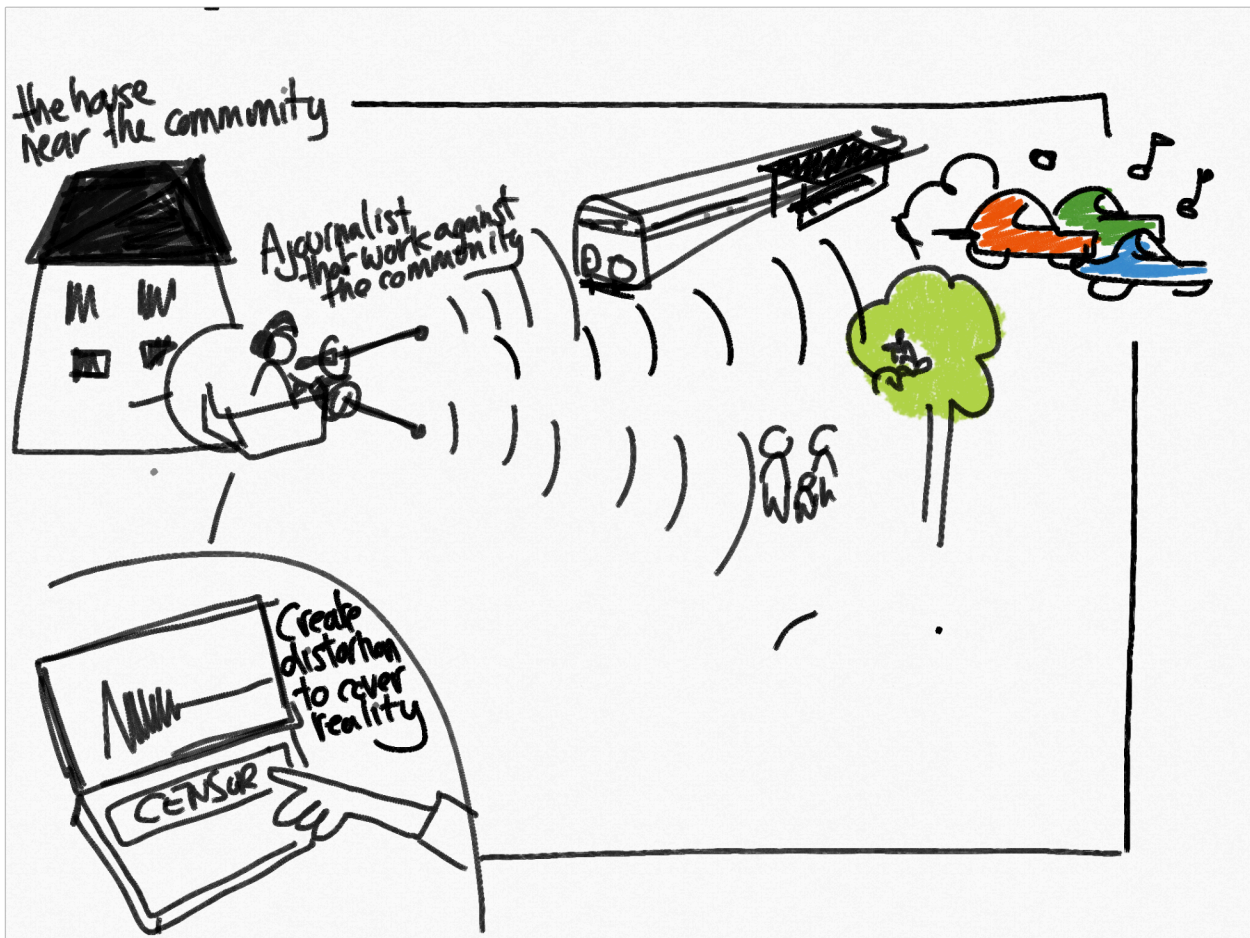


Figs. 46-47: Maps from one of the groups at the CLB session. These maps focused on "distortion."





Figs. 48–49: Fabulations from one of the groups at the CLB session.



Ruidografías is thus an example of designing the surface layers in order to cover up for the deep social, economic, and political holes caused by design itself. The context for which we imagined Ruidografías to be in was aimed at showing how social design is often understood and practiced as a universal set of methods which gets adapted to local needs and desires, rather than performing the opposite. In other words, social and co-design activities more often than not attempt to accommodate difference by trimming that which stands out from places and bodies which do not conform to the status quo. Socially-oriented design, often commissioned and/or supported by public or private institutions that serve the dominant political order, often instrumentalizes counter-hegemonic practices to become themselves assets in favor of the very hegemonic narratives they want to tackle. This unwillingness to critically examine design's role in the enforcement of discriminatory systems is not fortuitous, nor unintentional; rather, it derives from the perception of design as an activity (and field of study) that adapts to the problems faced by society, instead of actively questioning why these problems exist, or which power dynamics make them exist in the first place. Instead of focusing on design's ability to reconfigure ontologies anew, socially-oriented design usually waits for a problem to be created in order to develop a way to live with it. As Walter Mignolo elicits,

You can still argue that there are 'bodies' and 'regions' in need of guidance from developed 'bodies' and 'regions' that got there first and know how to do it. As an honest liberal, you would recognize that you do not want to 'impose' your knowledge and experience but to 'work with the locals'. The problem is, what agenda will be implemented, yours or theirs? (Mignolo 2009, p.20)

Thus the assumption that there are communities which 'need' the expertise of a designer to tackle a given 'problem' immediately opens up the question of who holds the power over the crucial decision-making aspects of such expertise and such problem. Rather than designing non-complying artifacts that would expose the flaws and setbacks of the increasing policing of (gendered and racialized) bodies, or making space for other designs to emerge from the very places in which the policing of bodies is visible and tangible (such as occupations, underprivileged communities and so on), socially-oriented design projects direct their efforts towards a notion of 'preferability' already prefigured into the objects by the morals and values of a colonial/modern, conservative mentality. Even when participatory and/or co-design projects delegate ideation and learn from the needs and desires of the local population, there is still the question of how and why certain bodies are entitled to speak for the entire community, and what are the politics at play for such a decision (Keshavarz 2016).

Moreover, 'social,' 'sustainable,' or 'empathic' design, in truth still define those who are entitled to determine the future, and those who are condemned to enact it. The design or design group is still largely perceived as the expert authority and the holder of a tacit knowledge that may or may not be shared by the local representatives participating in the activities. The space in which participatory and co-design unfolds ends up becoming too disconnected from reality via the ideation processes coming from 'somewhere else' that impose a

certain logics of materiality that do not necessarily mirror nor match those of the community in question. Rather, what is needed is that design speaks to the necessities of a given community by directly engaging the members of that community in what design processes are, or, in other words, by fostering local solutions to local problems rather than to, paraphrasing Walter Mignolo, 'global designs' (2000).

Similar to *Ruídografias*, the acoustic wall of *Maré* was also promoted as a design endeavor whose ultimate goal was to benefit the residents of that neighborhood. Yet the practices of design, and the sonic affordances of the designed artifact in question, were instrumentalized as a device for enforcing the already much segregated populations of the *favelas* in Rio. Design thus should not be deployed in an "interventionist [...] approach" deciding what others — particularly disenfranchised communities — should adopt as more "sustainable lifestyles" (Björvingsson et al., 2012). In evincing the physical *otherness* of *Maré* within the visual fabric of the city, the acoustic barrier does not invite for the *favelas* to co-exist with the city in their very difference; rather, it prescribes this difference as *alien* and therefore argues for its domestication. As Brazilian educator Paulo Freire remarks,

The 'fear of freedom' which afflicts the oppressed, a fear which may equally well lead them to desire the role of oppressor or bind them to the role of oppressed, should be examined. One of the basic elements of the relationship between oppressor and oppressed is prescription. Every prescription represents the imposition of one individual's choice upon another, transforming the consciousness of the person prescribed to into one that conforms with the prescriber's consciousness. Thus, the behavior of the oppressed is a prescribed behavior, following as it does the guidelines of the oppressor. (Freire 2000, pp.46–7)

This is the reason why the mainstream discourse around the wall was to find and persuade local voices to echo and repeat the hegemonic *earview* of the barrier: to promote the image that those pointing out its segregating designs were nothing but troublemakers. In that sense, design cannot be thought of as a 'go-to solution' for issues that are ingrained in questions that go way further than mere participation or a closer engagement with stakeholders. What is needed is a deep inquiring on what is prescribed by design, or in other words, *what design designs*. Be it through the very idea of a wall as a designed object, or the insertion of an alien object within a given social order as a device for promoting a techno-solutionist approach, the *earview* fostered by material-discursive designs such as these is the one which sustains difference by segregation rather than inclusion, and therefore instrumentalizes *otherness* towards enforcing narratives of domestication and exclusion.

## Final Remarks

### Decolonizing the Earview of Design

Vibrating bodies only become *listeners* from the moment they are granted agency to codify acoustic phenomena into a morphology of auditory events. These understandings are, too, bound by historical, colonial, and racialized categorizations of human beings — what defines them as subjects and objects of listening practices. Such subjectification does not necessarily explain design-driven decisions that define what this research has presented as the Apparatus of Auditory Governance in a correlation-causation relationship, nor the specific articulations that constitute it as such. Rather, they are but resonating and reverberating patterns which become ingrained in the constitution of any apparatus of observation and experience of auditory events. Therefore, a careful attention is necessary in order to not take for granted assumptions about how different bodies experience the world through listening, and how said bodies interpret these encounters with acoustic events as constituent of our social and bodily experiences. Instead, listening practices are themselves constituted by the colonial matrix of power as a system for the control of knowledge and subjectivity that determines the agency given to the elements of an apparatus. Notions about listening do not precede apparatuses, but rather are both part and constituted by it, reverberating throughout histories and experiences within a world shaped by coloniality.

Auditory governances instrumentalize listening by turning it into a device of hearing. In doing so, acoustic phenomena are codified into a morphology of auditory events. This process of instrumentalization, in turn, demands the creation of a category — "the listener"; this is the body able to discern and rank auditory events into "wanted" or "unwanted" sounds, signal and noise. Noise is, conversely, weaponized, made unwelcome, ugly, unwanted, outlawed, or, in extreme cases, used *against* the 'noisy' body itself to "dissolve" or "rupture" their subjectivities (Cusick 2006, 2013). It designs the auditory space as a space of violent confrontation and ongoing antagonism. Conversely, those allowed to occupy the auditory space are granted security by design, in the shape of technologies that grant said 'listener' the ability to subtract themselves from the soundscape, micro-managing other privatized sonic realities. This subtraction may happen through sonic codes — e.g. language — architecture — e.g. concert halls — or re- and fine-tuning auditory events — e.g. noise-cancelling headphones.

The work presented and discussed in this research deals with the violent consequences of an imposition of normative practices of listening. This is a narrative that has been constant throughout this text: how something usually regarded as harmless or ingrained into the politics of everyday, and therefore usually perceived to be a minor concern of design has in fact severe political, social, and physical impacts on certain bodies. When design sets itself to address only the normative *earview*, the field and its practices become an active agent for this impact. This does not imply, however, a linear logics of how design contributes to (auditory and political) violence. Yet this mode of acting in the world, which ignores the con-

tingency of material-discursive practices, permeates, validates, and actively creates room for these violences to be enacted and to grow roots. In other words, design and designing reinforce the recurrence of these patterns and therefore enables narratives that perform violence rather than directly combat them.

Moreover, I have not attempted to portray in here an "auditory theory" of disenfranchised populations in Brazil. Rather, throughout this work I engaged with how their listening practices are represented by the current discourse of media, institutions, and designers, and used the academic and design work as platforms for a better equalizing of these practices. The *earview* of those in control of these narratives is seldom oriented towards the experiences of these populations; this happens due to a number of facts – which this research has attempted to bring to the forefront –, but one of them being that these bodies are rendered silent and invisible either by segregation or by assimilation, and therefore are for the most part absent from or minimized in processes of decision-making. In that sense, in the analyses and exegeses presented in this dissertation, the *earview* is always positioned at the aftermath of these auditory and political violences. Put differently, the way this research has dealt with this material was to unravel it backwards and from bottom to top, as a form of 'reverse-engineering,' if you will, the 'congealing' of a given state of the auditory space.

In putting together three different approaches to storytelling — personal stories, fictional depictions, and designed systems – I demonstrate how they articulate different installments (or instances) of auditory governances. In other words, they demonstrate different — albeit not divergent — layers in which a designed set of practices, performances, and policies act to establish a contingent set of behaviors which read as auditory governances. In that sense, my intent is not to theorize upon these different modes but to use them as diverse arrangements — or *agential cuts* — which are able in and by themselves to evince their material-discursive performativity. By drawing them close to one another I create a temporary boundary through which they are perceived to be of similar matter, but not of similar nature. I use these three different layers to create and demonstrate a theory which is contingent and constrained to their very coming together as such, thereby revealing the scope of design's agency in configuring auditory governances. This theory is, on the other hand, already present in the enunciation of these accounts; it is by drawing them closer and making connections that the theories they speak of are switched on and made visible as well as listenable.

In occupying certain (many) spaces of privilege within my own country, my own *earview* can be oftentimes aligned with hegemonic discourses of power, and these discourses might be inevitably reproduced in my research and practice as a designer. Yet throughout this work I have learned how to pinpoint times in which the hegemonic *earview* dictated my own decisions; this is one of the reasons why my theory of auditory governances is ultimately enunciated by other *earviews* and how they come in interplay with mine. In working together and across their differences, they sediment the grounds for a decolonizing research apparatus that 'lends an ear' towards an intervention on the politics of design and design-

ing. These other *earviews* come from the anecdotes, opinions, theories, reports, videos, musics, and sonic fictions that are featured all over this research; my job as a design researcher was to observe the connections happening in there in order to create a parallel scenario for the design projects to unfold. In creating a fictional scenario for the provisional enactment of these multiple *earviews*, my research has run *nearby*, in parallel to what is considered to be the truth, and in doing so offered a re-framing of design practices under a contingent and provisional, but nevertheless different, set of political conditions. My work proposes a shift on the *earview* of design towards dwelling in the borderlands of different discourses, proposing therefore a de-linking and a decolonizing of normative listening practices and the violences they sustain — or, in other words, a decolonizing of the Apparatus of Auditory Governance.

With that, this research offers a re-framing of design and listening as fields connected by the very contingency of their discursiveness; rather than applying design to create a form of sonic practice, I find what is particular of design and designing within these auditory governances. The use of design's own ability to articulate materialities in settings which are commonly perceived as outside the scope of design itself, is a way to re-frame the social and political accountability of design as being a practice which can be performed under a different political order. In other words, in this research we "switch on" new theories and use their own frameworks to re-contextualize what design and designing might mean; however, we perform this task with extra care so as to avoid instrumentalizing these frameworks for design's own ends.

#### **A decolonizing redirection for speculation? (Revisited)**

In this work I hope to have demonstrated how design, and in particular Speculative and Critical Design, reproduces and perpetuates coloniality by subscribing to modes of representation founded in colonial understandings about the world. Within the format created during and for this research, the "Yarn Sessions," a few things became evident both as assets and shortcomings of this approach. There was a clear dissonance between different bodies who perform different identities and the politics embedded within said identities; this, I hope, has been clear enough for the reader during the discussions in part two of this work. My attempt at shifting the geopolitical location of the *Algerinha* occupation and *displacing*, or one might even say *misplacing* these realities in order to generate a moment of estrangement was not at all times successful. Oftentimes I believe it might have triggered participants to *over-perform* their own identities and in that sense it might have backfired as to my intentions. Nevertheless, I decided to keep those performances within the text exactly to evince how these excessive performances of privilege — of race, ethnicity, gender, class, and so on — work within design, even if my initial intention with this format was to foster an otherwise environment. In that sense, Yarn Sessions have somehow reversed the logics found in Participatory or co-design, in which we as subjects from *elsewhere* performed our experiments with European subjects in order to confirm (or sometimes even expand) our hypotheses.

On the other hand, these cultural dissonances have also drawn attention as to the urgency of the subjects being discussed; European participants were often taken aback by statements or historical minutiae that are common ground for Latin Americans. Still, one drawback of these sessions concerns this disconnection between the bodies creating the stories and the bodies present in the stories created — with the exception being the session in Brazil in which students had had a close encounter with the violent techniques deployed by the Military Police in the streets. The "speculative" aspect maintained within the Yarn Session is perhaps a strong factor in this disconnection — for it fosters such a disconnection as a form of storytelling in its very enunciation; in that sense, Yarn Sessions should either a) take more than one day in order to prepare participants to shift their locus of enunciation when speculating towards creating stories more akin to "carrier bags," even if provisionally; or b) balance the speculation aspect with a stronger pedagogical approach, perhaps giving more value to the conversational and relational aspect than fabulation.

Good design practice should not only be speculative, but also encourage its audience to be critical and speculative in return (Tonkinwise 2015). One of the points I wanted to make in this dissertation was, strictly speaking, design should make an effort to historicize itself before devising new artifacts that will be inevitably contained within the same problematic logics, and would therefore inhabit the very same power configurations already in place in the world. Moreover, there is a need for design to think of new practices that precede making, in order to produce new understandings and new reconfigurations of the world that are, in itself, new *ethico-onto-epistemologies* (Barad 2007) with which to radically redirect, shift, or reconstruct these forms of knowledge altogether.

Border subjects that are designers — or designers that become border subjects — have to develop novel *conocimientos*: recognizing the emergence of patterns and points of contact between different ontologies; differentiate the acquired from the imposed, the "imported magic" from our own devices.<sup>91</sup> The decolonization of design processes requires negotiating the existence of multiple perspectives within the same project while avoiding hierarchies; listening to one's surroundings and adapting communication accordingly; discussing how one's social and cultural position informs how one engages with the material world. Moreover, the designer has the task of communicating and accommodating these novel understandings to their peers and audiences. This happens through actions that acknowledge and demonstrate how bias is a "pathological condition" in some research contexts, and in turn may directly inform a group's perception of reality (Sheehan 2011, p.79); or by de-centering ontologies to critically inquire what constitutes knowledge or what validates certain knowledges above others.

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<sup>91</sup> This term was first used by Brazilian engineering students in the 1970s to describe computers that always "came from somewhere else" (Medina et al. 2014, pp.1–2).



## Healing from "sustos" and embracing our "wild tongues"

This work was written in the course of early 2014 to early 2017. In these three years, much has changed in the way we — privileged subjects within academic institutions — have come to see the world. We were, too, taken aback; there was a moment in which we were all confronted with the tangibility of our privileged realities, and how they seem to be, for at least the bare minimum, at threat by the shifting configurations of the political order. Yet for the most part of the *earviews* presented in this research, nothing in fact was new: it was only the "mainstream confirmation" of the realities other populations know all too well; other realities that have been put in place by similar systems that have always lurked at the fringes of society, and now start to sharpen their claws. The "progressive," or "leftists" in Europe, the US, and the Global North were all of a sudden shocked by the inevitable realization that dystopia was not something far away or delegated elsewhere, but rather knocking on their very door. This realization was, at least for me while writing this dissertation, a "susto," in the words of Anzaldúa – moments in which your body becomes hyper-visible to the others because of your own identity (2015). I was also caught "lookin' at the world like, 'where do we go?'" as Kendrick Lamar would say. This work is not only a reflection of such an unsettling but also a suggestion of other possible, divergent and perhaps even forking paths.

Lastly, there is a sensible difference between what is heard, and what is interpreted as that which was heard. There are sonic imaginations, fabulations, and surpluses which exist only in the individual experience alone; notwithstanding, there are also the listening practices which help one to selectively listen to things, while cancelling others out. This work is about that which is left out. Put differently, this work is about the *byproduct* of design, when it designs the auditory space. It is a work around what design effectively *designs*, but not so much about *what* is designed, but rather about what is *left behind*. If the ear is trained into a form of "acoustic reason" (Gautier 2014) — that is, how we interpret sounds as words, sentences, ideas, melodies, harmonies, pitches, amplitudes, timbres and so on — it is then also trained to perceive deviation from the norm as something unwanted, the sonic information as being incomprehensible. Hence the accent that extends beyond formal grammar, the musical note that evades harmony, the syncopated rhythm that skips a beat, but also the perception and value added to those deviations and understandings of them as proper messages, are effectively *byproducts* of designed things, systems, places, and institutions.

This work is about that which may not be perceived as designed, but should nevertheless. It is about the strategies, borders, practices, and assemblages that 'hurt the ears,' that defy imposed normativities. It is then of utmost necessity to decolonize the listening practices that make the Apparatus of Auditory Governance: to "learn to unlearn in order to relearn" (Wasi cited in Mignolo, 2007a, p.69) the sonic affordances of an inherently violent acoustic regime, and thereby remove the "mark of otherness" (Stoeber, 2015, p.147) that constitutes hierarchies of the auditory space. As designers, we must misuse the colonizing devices of our field. We can start by looking for practices that break with the imposed order

and promote a re-arrangement of the political order; those that re-appropriate “the cold technologies created by coloniality” (SCZ, 2015), as exemplified by the sound bomb in *Branco Sai, Preto Fica*, or the Jukebox of *Lins*. We can redirect our efforts not to appropriate these practices into our own and in turn *reform* the auditory space, but to design it completely anew, to transform it into a continuum of plural *earviews*. To give voice, reclaim, and redistribute the soundscape, to trespass the acoustic borders that were not defined by us in the first place. If, to quote Anzaldúa once again, “activism is engaging in healing work” (2015, p.90), let us engage in *healing through hearing*, listening to the voices and groans from the flesh (Weheliye 2014). In other words, let us learn from other ways of unearthing knowledge and, in turn, embrace many ‘wild tongues’ (Anzaldúa 2007[1987]), plural languages. By becoming proficient in these other languages — a decolonizing and a sonic language being two of them — it may be possible to acquire a more profound knowledge on the political and cultural accountabilities of design, and with that, promote a radical re-framing of what design is, and what it might become for the future.

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## Appendix One

### The Story of "Ocupação Algerinha"

The "Ocupação Algerinha" (*Algerinha* occupation) or "Vila Algerinha" (*Algerinha* neighborhood), formerly known as "Ocupação Dona Algerinha" (*Mrs. Algerinha* Occupation) was one of the biggest occupations in South America in the first decades of the twentieth-first century. During its five-year existence, the occupation was home to around 120.000 people, distributed over an area of approximately 1.33 square kilometers in Southeastern Brazil. The exact origins of the occupation are unknown, but it is believed that the families were initially part of a transmigrational group in Latin America which, in itself, was dissident from a larger group of families directly affected by the housing crisis that followed the wave of Coups d'Etat all over the continent. Due to increased incentives to real estate markets, progressive gentrification in big cities, and the suspension of most social housing programs in South America, thousands of families — many of whom also unemployed — were forcefully expropriated from their homes, and hence started waves of peregrination and demonstrations all over the continent, particularly in the Southern Cone and Brazil.

#### I. Beginnings

The first occupation took place in an abandoned industrial park, owned by ATAS-GAS – a water and waste management conglomerate. The area had already been inactive for more than twenty years, at the time of the first settlement; after a failed attempt of allotment motivated by the increased interest in the neighborhoods around the industrial park, the area was ultimately abandoned and the company ceased paying taxes to municipal administration. With that, a few squatters — around twenty families — started living inside most of the empty sheds, and improvised, impromptu renovations immediately took place to make the space inhabitable. In only a few months in, the industrial park was almost entirely covered with illegal energy supplies, water, TV, and Internet. At the same time, around three hundred more families from the aforementioned transmigrational groups slowly started to arrive at the industrial park, occupying not only the few spaces left within the buildings but also the open spaces around and within the park. Soon enough, an official community was established with elected leaders, small associations, a few churches, and other small businesses such as bars or repairing workshops. With the allocation of so many people in such a large, abandoned but privately-owned area, the municipal administration and the conglomerate attempted to negotiate with occupation leaders the dismantling of this settlement — to no avail. A few weeks later — around fourteen months after the families arrived — a tentative expropriation took place, and the violence surrounding this episode eventually ended up giving the occupation the name it was known for. Argélia Sousa, a seventy-two year old woman, was murdered at the front door of her makeshift home by a stray bullet, in front of her two daughters and sister-in-law. Occupation activists blamed the Military Police for the incident, and the case gained media attention. Public outcry demanded quick action from the municipal court, and in collaboration with the Military Police's own internal investigation, Camilo Dias, leader of the insurgent group that tried to counteract the

forced eviction, was framed as the perpetrator. The massive coverage of mass media used the image of Mrs. Argélia, known in the community as “Dona Algerinha,” as the martyr of an illegal struggle; hence the occupation came to be known publicly as “Ocupação Dona Algerinha.”

Connected to such an unfortunate event, the first tentative eviction did not go through. There were several casualties, and human rights groups as well as activists were pressuring both city council and conglomerate to seek other means of accommodating the continuously growing families in the area. In the meantime, similar occupations were taking place all over South America, inspired by the struggle of *Algerinha*, not only due to housing shortages but also motivated by political demands. Thus schools, universities, city councils, and churches were constantly taken over by activists and demonstrators, only to be forcefully evicted by a militarized police; activists’ demands were more often than not dismissed, and met with severe violence. Many of these occupations lasted only a few weeks due to media pressure and forced evictions; however, several persisted amongst waves of mistrust, hate speech, and segregation. This period of uprising and massive occupations all over South America came to be known in the media as the “year of occupations,” or sometimes “occupation crisis”. A good number of “neighborhood watches” and self-proclaimed “moral vigilantes” started acting on these occupations, with due attention from South American mass media.

Public opinion on the subject was inflamed, and in the case of housing, occupation leaders were particularly keen on creating a good image of their communities. Despite their efforts, media focused on the tensions and prejudices arising from the neighborhood around *Algerinha*. The legality of these occupations was subject of long discussions in the media; little attention was given to the occupation’s voices, except for when they lost their temper. Conversely, most of the inhabitants from the neighborhood surrounding the *Algerinha* grounds had their complaints amplified by the public opinion, connecting an alleged increase in petty crime, violence, loitering, loudness, and drug use, as well as blaming the decreasing value of the real-estate, to the presence of the ‘*Algerinha* people’. In contrast, information from and about the struggles of the occupation flooded online discussions.

## II. The "Vila Algerinha" Project

With the upcoming election of a new mayor, negotiations around the occupation were suspended during the campaign. Candidates had strong opposing views on the subject, and the case of *Algerinha* was continuously brought up in online and televised debates. Apart from one or two candidates with radically conservative or liberal opinions, most favored negotiations, with varying degrees of tolerance as to the alleged legality of the occupation and the motivations of its inhabitants. When Sonia Shayeb, the so-called “progressive” candidate was elected, negotiations took a different turn: she vouched for more integration of the community into the city, and slowly attempted to promote a “renovation” of the public opinion towards the occupation. Her project was branded to investors, policy makers, and civil society as the “Vila Algerinha” project, a multi-purpose initiative to integrate and turn



the occupation into a proper neighborhood in the city. The project's final aim was to open up the space for external investment and infrastructure, as well as to promote entrepreneurship within the community from both members and outside initiatives. This project was developed together with the urban planning and infrastructure department and the neighborhood association, and had supervision and full strategic support from her administration's partnership with the Latin American Hub for Social Design – also known as *¡Hubla!* — a public-private innovation hub focused on designed solutions for urban planning and socially-oriented politics in South America.

The Hub developed the *Algerinha* 'integration' project over the course of eighteen months. The project had several outlets, spanning from media campaigns and community-led parties to re-painting the façades of the occupations' buildings, attempts of urban signaling and mapping, design contests on the internet, as well as participatory design activities with both occupation members and outside volunteers. It was during this time that "Ocupação Algerinha" came to be known as "Vila Algerinha," a carefully orchestrated media campaign towards domesticating public opinion by perceiving *Algerinha* as a neighborhood rather than an occupation. The purpose of this partnership, as well as the question of what were its real goals, are still subject of high controversy today. The amount of influence the Hub had in the occupation has led to contrasting views on its efficacy; while many believed it helped the occupation strive further, sociologists and political scientists claim that in fact it fostered a mass surveillance operation, aimed at slowly dismantling the community from the inside out.

*¡Hubla!* tried to engage with the community by promoting activities within and outside it. A "pop-up Lab" was built inside the *Algerinha* grounds, and a few community members took part in design-driven workshops aimed at understanding and improving the occupation's living conditions towards social inclusion, and the development urban planning policies. Among these workshops was *Ruídografiás* (roughly translated as "noiseographics"), a transnational endeavor in order to tackle issues of noise pollution by raising awareness for and improvement of listening practices within occupations in large cities. The workshop was marketed by the media and the Lab:

In this week-long Workshop led by the Latin American Design and Innovation Research Lab, in collaboration with the urban development council, we will create playful devices with which to locate, measure, and map the loudest and quietest places in our neighborhood. With that we want to empower the inhabitants themselves to become aware of their own sonic footprint, and develop a better listening experience for families and businesses both inside and outside the community.

However, the arrival of this pop-up Lab in the occupation was met with varying degrees of mistrust, and occupation leaders were in constant (often heated) debate as to whether or not to permit the Hub designers to have full access to the occupation's infrastructures (both physical and social).

### III. The seven-days massacre and the aftermath of *Algerinha*

A few weeks after *Hubla!* moved out of the *Algerinha* grounds, a tragic event triggered what would be the demise of the occupation. Three teenagers were shot, right at one of the entrances to the occupation, by an older man from the neighborhood surrounding *Algerinha*. Two of them did not survive the wounds, while the only survivor suffered severe brain damage. According to witnesses both from within and outside *Algerinha*, the shooting took place after a heated discussion over the loudness of the music played by the teenagers in their own personal stereo speakers. Accounts diverge, however, as to which party was the first to engage in physical violence, as well as to whether the teenagers complied with or defied the complaints of the shooter. The forty-three year old was arrested but soon released; rumors started circulating in the media that he belonged to the self-proclaimed “vigilante group” targeting the inhabitants of *Algerinha*.

The murder of the teenagers created enough tension to take community leaders, inhabitants, and activists from social movements to the streets in protest. Military Police immediately blocked the area, employing so-called “non-lethal” devices such as LRADs (Long Range Acoustic Devices), Teargas drones, and other tactical maneuvers to prevent protesters from occupying the streets. Their actions, while drawing enough attention and support from outside, are not fully effective. After seven days of protests and violence, Military Police is finally able to lead the protesters to a dead end near the occupation’s borders. Trapped in a corner and away from journalists, a massacre ensues. Several protesters and community leaders are shot dead by the Police, while a good number of activists go suspiciously missing. Attending to public outcry from social movements and online media, Military Police starts an internal investigation on the actions of the officers on duty during what came to be known as the “seven days massacre”. Other media outlets and activists start drawing connections between a leaked receipt from a large acquisition of low- and high-frequency oscillators by an anonymous buyer, to the effectiveness of the Police tactics, implying an active collaboration and direct participation from the vigilante group. However, the investigation is not further pursued, and nothing is proven in the eyes of law and media.

Following the massacre, the tension within *Vila Algerinha* reached its peak, and several streets were blocked, activists engaged in often violent acts of resistance, and new community leaders were as loud as ever on mainstream media. One night, a fire starts within the community, and slowly destroys the majority of houses and structures created during the five years *Algerinha* was active. After a few days of unsuccessful attempts of extinguishing the fire, little to nothing is left standing, and families start to slowly move out of the former industrial park. The majority of the families end up reallocated in new development projects undertaken by the municipal administration; others move to smaller occupations or join transmigration activist groups. The cause of this fire generates even more controversy in public opinion: while “official” accounts place it as an accidental fire, the new *Algerinha* spokesperson, Gabriel Castro also known as “Chacal,” publishes several articles and interviews calling the event a deliberate arson, and demanding further investigation and

reparations. In the meantime, Chacal runs for city counsellor in the upcoming municipal elections, but ends up not being elected. Slowly, the story of *Vila Algerinha* fades out of public attention.

#### IV. Of New Beginnings

While browsing for old records at a pawnshop in the countryside of São Paulo State, Brazil, we have come across a small box containing an old Walkman, a tape, and a curious little 3D-printed object. Intrigued by the apparently anachronistic character of its contents, we ended up buying the box and taking it home. The tape, labeled “Algerinha Vive” (“Algerinha lives on” in English), revealed a universe in the shape of short compositions, partly documentary and partly aesthetic. The 3D-printed object, however, was very cryptic; we took a picture and posted it in a game design discussion board, in an attempt to get some clues as to its origins and uses. It ultimately led us to a person whose mother had a similar object, and from her we learned about a particular playground game, in which sounds made through and by the object played an important role. The game, called “O Jogo do Tarréfono,” with the Tarréfono being the 3D-printed toy, employs this device in several distinct ways; based on our findings, we came up with a possible schematics for how the object somehow guides the players through the game routine. Both objects trace back to the same, long-forgotten place: Vila Algerinha, the largest occupation in Latin America after the housing crisis and the series of Coups d’Etat all over the continent.

While the story of the occupation is easily traceable via news pieces and media reports, we believe that the sonic narratives of both tape and game construct an alternative set of events that led to the occupation’s tragic demise and its aftermath. More than that, we believe that these other stories directly confront the “official” account we both knew and found online. However, many links are missing from what connects the mixtape and the game together, and for how long they have been in that box. Our own assembled story is, after all, as speculative as we found the “official” one to be.