UNIVERSIDADE DE LISBOA

Instituto de Geografia e Ordenamento do Território

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# Urban sound: territories, affective atmospheres, and politics

Daniel André Fernandes Paiva

Orientador:     Prof. Doutor Herculano Alberto Pinto Cachinho

Tese especialmente elaborada para obtenção do grau de Doutor em Geografia, especialidade de
Geografia Humana

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Abstract

This dissertation approaches issues related to the territories, affective atmospheres and politics of urban sound. The research methodology, underpinned by the concepts and methods of non- and more-than-representational theories, consists on a participatory approach in which research questions, data, and concepts were co-produced by the researcher and a group of twelve participants. I conducted two sets of experiments with the group of participants. In the first set, I conducted a series of sound diaries followed by conversations. In the second set, I conducted a series of go-alongs, which were followed by group interviews. In addition, I conducted two geoethnographic studies – one in Chiado, Lisbon, and another in Quinta da Piedade, Vila Franca de Xira – with the purpose of exploring the research concepts in ecological contexts.

The main objective of this thesis is to explore the phenomenology of the urban sonic experience, and the possibilities to intervene in urban territories through sound. By doing this, the thesis contributes toward advancing knowledge in the field of sonic geographies, namely by increasing knowledge about the urban sonic experience. I argue that the phenomenology of the urban sonic experience emerges from the simultaneity of listening and soundmaking, both of which are more-than-representational acts that intertwine affective sensing and ethico-political reasoning. Furthermore, I show that sonic interventions in urban space that engage with these more-than-representational acts, such as artistic practices or street football, have the capacity of altering urban territories by acting on the distribution of the sensible or by enacting worlds.

The thesis is composed by four individual but related studies. Study#1 aims to understand the phenomenology of moments of transition between sonic environments in the urban context through the analysis of a series of experiments conducted with the group of volunteers. I conceptualise the phenomenology of moments of transitions as sonic first impressions, drawing upon the concept of first impression by Tonino Griffero. Study#2 extends the exploration of the sonic first impression by investigating how it can be produced to change the way people understand and appropriate urban space. The study consists on a geoethnographic approach to music and dance performances in Largo do Chiado, Lisbon. I show how these different artistic practices, by producing sonic first impressions, alter the way individuals perceive urban space, and consequently, how individuals appropriate and contribute toward the formation of territories in urban space. In Study#3, I expand the phenomenology of the experience of urban sound by turning into the issue of soundmaking. The objective of this study is to understand the interaction between soundmaking and the situational relations between the individual and

the environment, both in terms of the personal or collective cognitive and emotional flows, and in terms of the ethico-political content. On the other hand, Study#4 addresses the consequences of the phenomenology of everyday soundmaking by exploring how it is used to generate worlds and territories in urban space. It consists on a geoethnographic study of street football practices in Quinta da Piedade, Vila Franca de Xira, which explores how soundmaking in urban space is employed by young people to generate micro-worlds and territories.

The findings of this research project contribute toward a deeper understanding of the act of listening in everyday life, and open new routes for research by conceptualising the nuances of everyday soundmaking.

# Resumo

Esta tese de doutoramento aborda a problemática do som urbano na sua relação com os territórios, as atmosferas afetivas e as políticas. A tese argumenta que a fenomenologia da experiência sónica urbana emerge da simultaneidade da audição e da produção sonora, sendo ambas atos mais-que-representacionais que misturam sensibilidade afetiva e raciocínio ético-político. Argumenta também que intervenções sónicas no espaço urbano, que atuam nestes atos mais-que-representacionais, tais como práticas artísticas ou futebol de rua, têm a capacidade de alterar os territórios urbanos ao atuar na distribuição do sensível ou por gerar mundos.

O racional epistemológico desta tese é inspirado pelas perspetivas que têm sido difundidas no âmbito das teorias não-representacionais, por vezes denominadas teorias mais-que-representacionais. As teorias não-representacionais têm-se destacado com uma das perspetivas dominantes na geografia cultural deste século, principalmente na sequência das obras de Nigel Thrift, Ben Anderson e J. D. Dewsbury. Mais concretamente, existem quatro noções epistemológicas que ancoraram a pesquisa realizada: o pensamento em ação, uma conceção expandida do campo, o foco em *matters of concern*, e a descrição espessa. Informado por estas noções, conduzi uma metodologia de investigação participada que teve o objectivo de explorar a problemática do som urbano a partir de experiências de campo sem as pré-definir ou pré-estruturar. Estas experiências de campo foram conduzidas com um grupo de doze participantes, e tiveram o objetivo de cocriar questões de investigação, dados empíricos, e conceitos explicativos. A partir das questões de investigação que emergiram, foram também conduzidos dois estudos geoetnográficos no Chiado, em Lisboa, e na Quinta da Piedade, em Vila Franca de Xira, que exploram os conceitos-chave a partir de uma perspetiva ecológica. Ou seja, enquanto os estudos com o grupo de participantes se focam nas geografias móveis do quotidiano de cada participante, os estudos geoetnográficos focam-se nos ritmos e mobilidades dos diferentes elementos em espaços urbanos específicos.

A tese divide-se em seis capítulos, além da introdução e conclusão. No primeiro capítulo, traço a evolução e o estado da arte das geografias sónicas, que compreende um vasto mas esparso conjunto de estudos geográficos sobre a miríade de modos em que o som se relaciona com os espaços e os lugares. Para atingir este objetivo, realizei uma revisão bibliográfica das geografias sónicas, contribuindo assim para colmatar a ausência de um texto dessa índole na literatura científica. Primeiro, tracei a evolução das diferentes conceções de som, e a sua relação com as diferentes perspetivas teóricas na geografia ao longo da sua história. Segundo, identifiquei os principais temas e ângulos mortos da pesquisa geográfica contemporânea sobre

o som a partir de uma perspetiva global. Após traçar a evolução e o panorama atual do campo, situo a contribuição desta tese e apresento os três conceitos fundamentais no âmbito da tese: atmosferas afetivas, territórios e políticas.

No segundo capítulo, explico a metodologia participada com o grupo de doze voluntários, e descrevo as experiências de campo ancoradas em diários sonoros e *go-alongs*, salientando o papel empírico da exploração de experiências metacognitivas e metaemocionais, uma das inovações metodológicas desta tese. De seguida, explico detalhadamente como foram concebidos os estudos geoetnográficos no Chiado e na Quinta da Piedade, os quais permitem uma leitura simultaneamente quantitativa e qualitativa dos ritmos urbanos, contribuindo assim para a construção de uma ponte entre as abordagens quantitativas e qualitativas a este tema. Ao longo deste capítulo, explico como emergiram e como foi dada resposta aos objetivos de investigação das fases 2, 3, e 4.

No capítulo 3, apresento o estudo #1, que se foca no papel que as transições espaciais e temporais entre ambientes sónicos afetam a sintonização dos indivíduos com as atmosferas dos lugares. A partir do material empírico das experiências conduzidas com o grupo de voluntários, conceptualizei estas transições como primeiras impressões sónicas, aplicando o conceito de primeira impressão desenvolvido por Tonino Griffero. Exploro a espacialidade e a temporalidade das primeiras impressões sónicas, bem como três fatores que afetam o ângulo de chegada a estas impressões sónicas: o cansaço, o humor e as expectativas.

No capítulo 4 apresento o estudo #2 que desenvolve a exploração do conceito de primeira impressão sónica ao investigar como artistas de rua as produzem para captar a atenção de pedestres para as suas performances. O estudo ancora-se no conceito de distribuição dos sentidos de Jacques Rancière, que se refere ao modo como a perceção e os sentidos são estruturados, e através dessa estrutura definem o modo como o mundo aparenta ser para o sujeito. O estudo baseia-se numa abordagem geoetnográfica no Largo do Chiado em Lisboa. Através desta abordagem, mostro que performances de música e dança neste espaço produzem primeiras impressões sónicas que mudam a distribuição dos sentidos dos indivíduos e, consequentemente, o modo como estes entendem e usam o espaço urbano, gerando assim novos territórios.

No capítulo 5, passo a focar-me na questão da produção sonora na vida quotidiana. Apresento o estudo#3, cujo objetivo se centra na compreensão da interação entre produção sonora quotidiana e as relações situacionais entre indivíduos e ambiente urbano, em termos dos fluxos cognitivos e emocionais, pessoais e coletivos, e do conteúdo ético-político. Enquanto o estudo das primeiras impressões sónicas contribui para um entendimento mais aprofundado sobre a

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audição no espaço urbano, é crucial ir para além da audição para compreender a experiência sonora urbana na sua totalidade. Com isso em mente, decidi examinar a produção sonora quotidiana dos indivíduos. Com isto, refiro-me a todo o conjunto de sons que os humanos fazem no seu dia a dia. Esta é uma atividade que acompanha todas as outras atividades humanas, mas é geralmente uma atividade realizada inconscientemente e não deliberada. Por esse motivo, é preciso abordar os aspetos mais-que-representacionais destas práticas, sem no entanto perder de vista a influência de éticas pessoais e coletivas acerca do som.

No capítulo 6, apresento o estudo#4, um estudo geoetnográfico numa praça sem nome na Quinta da Piedade, em Vila Franca de Xira, que visa explorar como a produção sonora por jovens que jogam futebol de rua cria micro-mundos e territórios. O estudo retoma a exploração conceptual sobre produção sonora quotidiana do capítulo anterior e desenvolve-a, aplicando-a a um contexto urbano ecológico. Discuto como a produção sonora quotidiana participa na criação de micro-mundos no dia a dia, sendo particularmente importante no estabelecimento de territórios espácio-temporais para o devir desses mundos.

Os resultados deste projeto de investigação contribuem para uma compreensão mais aprofundada sobre as dinâmicas da audição em ambientes urbanos ao dialogar com conceitos recentemente apresentados neste âmbito. Refiro-me à proposta do conceito de primeira impressão sónica que é vital para perceber as dinâmicas entre audição e sintonização com os lugares no quotidiano urbano. Os estudos #1 e #2 abordam o papel que a perceção sónica tem no uso quotidiano do espaço urbano. O conceito de primeira impressão sónica é central para se perceber o ato da audição como um ato expandido, mobilizando não apenas a cóclea mas também o corpo humano, o espaço e os seus materiais, incluindo objetos, superfícies e atmosferas, como autores como Michael Gallagher, Anja Kanngieser e Jonathan Prior sugeriram. É também central para entender o ato da audição como um ato mais-que-representacional, vital para o modo como experienciamos os lugares e nos sintonizamos com as suas atmosferas através de afetos representacionais e não-representacionais, e por este motivo contribui também para os debates sobre a fenomenologia da audição que se abriram na geografia pelos contributos de autores como Paul Simpson, Katy Bennet, ou George Revill.

No entanto, este projeto de investigação também abre novos caminhos de investigação sobre o som urbano ao explorar conceptual e empiricamente a fenomenologia da produção sonora individual no dia a dia das cidades. Pensar através da produção sonora, em vez da audição, providencia uma nova maneira de entender as questões territoriais, afetivas e políticas envolvidas no som urbano. É assinalável que a pesquisa geográfica se tenha até hoje focado quase exclusivamente na questão da audição, mesmo entre a miríade de estudos que foram

publicados nos últimos cinco anos. A mesma lacuna pode ser identificada no campo multidisciplinar dos estudos de som. O estudo da produção sonora encontra-se esparsa por estudos desconectados realizados por artistas sonoros, psicólogos, e sociólogos. Os estudos #3 e #4 contribuem para a colmatação desta lacuna ao providenciar conceitos guiados por informação empírica e ao abrir novas rotas para a pesquisa sobre este tema. Conceptualizo o ato da produção sonora quotidiana como um ato mais-que-representacional, criticando e expandido as abordagens representacionais à produção sonora nos estudos sobre música, voz, e protestos políticos. Também descrevo a produção sonora quotidiana como uma forma de feedback ambiental, em que os atos sonoros do indivíduo são afetados pelos fluxos sensoriais e conteúdo político das situações, mas também filtrados pela sensibilidade e pelos valores éticos do indivíduo.

A abordagem ao som urbano a partir da dupla perspetiva da audição e da produção sonora providencia um entendimento mais profundo da experiência dos territórios, das atmosferas afetivas, e das políticas relacionadas com o som da cidade. Nesse sentido, esta dissertação propõe uma compreensão da experiência fenomenológica do som urbano que não se cinja a um ponto focal único e que demonstre como os corpos que experienciam o som urbano são parte integrante do campo de vibrações que o constitui e não meros recetores auditivos.

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# Urban sound: territories, affective atmospheres, and politics

# Introduction

The research presented in this dissertation first sprouted in my mind during the morning of the 1st of August, 2013. I was at the Pulido Valente Street in the Colinas do Cruzeiro neighbourhood in Odivelas, located in Lisbon's Metropolitan Area. It was the second day I was doing fieldwork on the appropriations of public space in this neighbourhood, along with my colleague Filipe Matos who was working with me in the research project CHRONOTOPE[1]. Our purpose was to conduct a study on the speeding up and slowing down of the rhythms of public space, and in order to achieve this, we were writing a field diary of everything that took place on an area which encompassed one street and two squares in Colinas do Cruzeiro, at different times of the day. On that day, I realised that I perceived the rhythms of public space mainly through sound. The sounds I heard told me more about the pace of life in the streets than my visual perception; faster rhythms would produce noise, slower rhythms would weave together melodic tonalities.

After a short conversation about this with my colleague Filipe, who expressed the same notion, we conducted a short sonic exercise in which, for a few minutes, using only our hearing, we would describe what took place in public space. These registers are available in Table 1. The result was different from our fieldnotes, which were mainly visual. It had a different spatio-temporality: it collected events near and far; it mixed different kinds of sources and materials (machines, people, trees, animals, the ground); and it produced a non-causal temporal sequence, i.e. what we heard after a certain sound was not necessarily related to that sound. These descriptions illustrated how everything in that space was close, interrelated, and simultaneous. At the same time, this type of description also erased part of what was going on, as the sounds of some activities were masked by other sounds. From that moment on, I always tried to register something about sound in my fieldnotes.

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[1] The project CHRONOTOPE: *Time-Space Planning for Resilient Cities? New Means of Sustainable Planning in Societies of Consumption* (URBAN/002/2009) was funded by the Fundação para a Ciência e a Tecnologia. Besides the team I was a member of in the Centre for Geographical Studies of the Institute of Geography and Spatial Planning of the University of Lisbon, which was coordinated by Professor Teresa Barata-Salgueiro, this project gathered research teams from the University of Porto (Portugal), University of Malmö (Sweden), University of Barcelona (Spain), University of Western Brittany, University of Angers, and University of Maine (France).

Table 1. Auditory exercise. Terrace Dominó II, Pulido Valente Street, August 1, 2013.

[register of the auditory impression of Filipe Matos, listening with his eyes closed]

09:07 am. Motorbike, car getting close, a heavy sound of a truck, another motorbike, slight rumble of people chatting, flip-flops on the floor, car engine, the sound of a refrigeration system, now a coffee machine, more cars, birdsong and chairs being dragged on the floor, car passing by, city worker sweeping the floor, television inside the café, the sound of someone shaking a sugar pack, a child screaming, car passing by, more cars (interruption) people talking at the terrace and on the street, sound of car passing by, I can tell the difference when cars are passing and when they are not, sound of a lot of cars, cars passing by, car horn. 9:12 am.

[register of the auditory impression of Daniel Paiva, listening with his eyes closed]

9:13 am. People talking, car passing by, the coffee machine being hit by the handle, car passing by, chair being dragged through the floor, several people talking at the same time, car passing by, more cars passing by, the voice of a girl stands out, another car passing by, the sound of coffee cups inside the café, two conversations at the same time, car passing by, steps of someone entering the café and dragging a chair, car passing by, more steps, conversations in the terrace, car passing by, the voice of a child, car starting the engine, car passing by, door being slammed, cars passing by, people talking, a truck with a very heavy sound passing by, a lot of car noise, door being slammed, cardboard boxes being hit, it sounds like a truck being unloaded, the road has become quiet and I can hear the voices of people better, the voice of a child far away, the sound of coffee cups inside the café, cars passing by, people talking, car horn, car horn insisting, car horn insisting a lot, car passing by. 9:23 am.

On November 1st of the same year, I was once again in Colinas do Cruzeiro, during the second stage of field observation. While I took a break from taking field notes, I was reading research articles (namely Wunderlich, 2008; Vergunst, 2010; Revill, 2013; Lehtovuori & Koskela, 2013) and I realised that, although a significant number of studies on urban rhythms highlighted the

importance of city sounds in its rhythms, I could not find a study which focused on the relation between sound and the rhythms of urban space. That was the moment I decided I was going to approach this as my PhD research project. I wanted to know more about the strange actions of sound, which is at the same time a consequence of things happening, a thing that also happens, and a thing that makes other things happen. A few days later, I started a literature review on the subject of urban rhythms and sound.

From that day until the moment I submitted this PhD thesis in December 2018, the research project aimed at exploring urban sound through a close relation between theory and practice. The thesis stems from an epistemological perspective that promotes thinking-in-action and which underpins a participatory methodology in which research objectives were co-defined with a group of participants. In this introduction, I want to frame the conduction of the research project that led to this thesis. The remaining of this introduction is divided into four sections. First, I outline the epistemological perspective that underpinned research in this project. Secondly, I will briefly present the methodology and timeline of the research. Thirdly, the objectives and thesis of this research project will be stated. Lastly, I describe the contents of this thesis.

## Epistemological perspective

The epistemological rational of this research project was inspired by perspectives that became dominant in Anglophone cultural geography in this century, mainly what has been called non-representational theory (Thrift, 2008; Anderson & Harrrison, 2010), or more-than-representational theories (Lorimer, 2005), but also actor-network theory (Latour, 2005) and post-phenomenology (Ash & Simpson, 2016). There are four notions that stem from these perspectives which have been fundamental for this research project: thought-in-action; an expanded conception of the field; matters of concern; and thick description.

First, this research project stems from an interest in exploring sound in everyday urban life. In that sense, the production of knowledge is based on a notion of 'though-in-action' (Anderson & Harrison, 2010). That is, it is based on the notion that knowledge cannot be divided from the reality in which it emerges, thus contesting the classical Cartesian divide between abstraction and reality, which is also linked to a divide between the rational mind and the sensory body. From this perspective, the production of knowledge is seen as a more-than-mental act, which not only encompasses a thinking mind, but locates it within a sensory body, which is also located in a specific environment and society. Therefore, producing knowledge is no longer the act of a single mind, but that of an entanglement of minds, situated practices, the social

relations of the researcher, and the environments in which research takes place. A consequence of thinking-in-action is that some of the conceptual divides regarding geographical work fade away.

One of these regards the notion of field, one of the most fundamental in the practice of geographical science. The notion that the viewpoint of the geographer is a product of the relations he or she establishes both within the academy (with work colleagues, in meetings, or through reading other authors) and on the field (with the places he or she visits, with the people he or she talks to, or with the information that is gathered) is not new (Crang & Cook, 2007). But, recently, the sequential separation between spacetimes of theoretical exploration, data gathering, and data analysis, have also been criticised, due to the fact that these divides are based in the Cartesian divide between abstraction and reality, and between mind and body (McCormack, 2013). Thus, the notion of field is now extended and understood as

> "a distributed and differentiated space composed of practiced relations between bodies, texts, technologies, and materials. Rather than nuggets of information waiting to be discovered, data within this field are now understood as coproduced, affective materials" (McCormack, 2013, p. 11).

The conduct of this research project reflects this understanding. There was a continuous questioning, in which I intended knowledge to be produced reflexively, constantly creating echoes between theory and empirical data.

This idea is also linked to another fundamental epistemological notion, which is the focus on 'matters of concern'. This concept was advanced by Latour (2005) to define how research subjects should be defined in social science. For Latour (2005), social science has been traditionally focused on 'matters of fact', which implied defining research subjects or the field a priori, and isolating elements from the social world to determine facts. Latour (2005) argues that these matters of fact are only a small part of the social world, and it is also necessary to understand not only what makes them possible but also how they emerge. He then proposes a focus on 'matters of concern', that is, in social formations, in how actors (humans and non-humans) and actants (objects, technologies, discourses, among others) come together in the performativity of everyday life. For this reason, with this research project, I intend to produce knowledge on urban sound without defining a priori the contours of this reality, and exploring it through empirical experience.

To achieve this goal, it was fundamental to cultivate a reflexive practice sustained by two common instruments: description and concepts.

Description was always a fundamental method in Geography. One of the best vindications of the value of description is still Geertz's (1973), who further conceptualised what Gilbert Ryle had called 'thick description'. According to Geertz:

> "If anthropological interpretation is constructing a reading of what happens, then to divorce it from what happens – from what, in this time or that place, specific people say, what they do, what is done to them, from the whole vast business of the world – is to divorce it from its implications and render it vacant. A good interpretation of anything – a poem, a person, a history, a ritual, an institution, a society – takes us into the heart of that which it is the interpretation (1973, p. 18)

Thick description, therefore, has the purpose of exposing acts and practices that happen in such a way that it provides an interpretation that can explain those acts and practices. As Geertz (1973) argues, description should not intend to capture facts or events and merely reproduce them in another context. Instead, it should clarify what those facts or events mean. Katz (2001a; 2001b), on the other hand, argues that the power of description lies in its capacity to present explanation due to the freedom that the researcher has to adapt his or her research to what he or she proposes to discover. For Katz (2001a; 2001b), a luminous description implies that descriptive data is able to offer a clear understanding of a given reality, being simultaneously explanatory data.

Studies based on description have become dominant in contemporary cultural geography (J. Anderson, 2009), following arguments toward a geography that approaches the relational, performative and processual aspects of everyday life, generally within non- or more-than-representational theories (Thrift & Dewsbury, 2000; Thrift, 2011). The value of description not only lies in its capacity to provide explanation, but also to identify aspects that are not considered to be significant a priori (which reinforces the utility of focusing on matters of concern instead of matters of fact). As Stewart affirms, "things hanging in the air are worth describing" (2011, p. 447), because we cannot conceive the significance of each element in geographical action *a priori*.

Through this perspective, the production of knowledge, although it is done as close as possible to the experience of reality, is not an exercise stripped from theory or abstract thought. Even in the field, the use of concepts is fundamental for research reflexivity. Therefore, field observation, and the resulting descriptions, are closely guided by concepts. As McCormack argues,

"the aim is to enact a radical empiricism as an experimentalism insofar as it experiments with concepts, and thus re-creates them, every time they participate in making something of the world more tangible and palpable that it had already been. In the process, both experience and the concept are transformed" (2013, p. 8).

*Methodology and timeline*

Informed by these notions, I devised a participatory methodology that would allow knowledge to emerge from field experiences without being pre-defined or pre-structured. I was interested in applying participatory and more-than-representational research methodologies that have become popular in cultural geography in this century (Anderson & Harrison, 2010; McCormack, 2013; Vannini, 2015a; Dowling, Lloyd, & Suchet-Pearson, 2016; 2017a; 2017b). The reason for this is that I wanted to study different experiences of these issues of urban sound, but I also wanted to empower my research subjects by giving them the possibility to decide what was important to study. For this reason, research was not guided by a pre-set of questions, and there were no hypotheses about the study outcomes. The prior definition of a research question tends to point to the construction of a fact, and that was not the purpose of the investigation. A research question also defines a priori the main contours of reality (as it generally contains two or three keywords that will structure everything that follows), and, following Latour's (2005) arguments, I was committed to build reflexive and co-constructed knowledge, letting actors themselves define the contours of the field, instead of the researcher defining a priori what or how the field in which they act is. Thus, research questions emerged during field explorations done by me and the participants.

For now, I will briefly present how the methodology was conducted, and in the next section I will present the objectives that emerged from this methodology. The methodology of the project was divided in four phases (figure 1).

The initial objective of Phase One was to identify concepts and methods relevant for the study of urban sound. The work in this phase included a literature review of publications in the field of non- and more-than-representational theory, which has become a dominant perspective in cultural geography and the subfield of sonic geographies. From November 2013 to December 2014, I was mainly focused on establishing a solid epistemological perspective and defining a series of concepts to guide the study of urban sound. During most of 2015, the research project was on halt, as I was not awarded funding in the first time I applied. After the hiatus, from December 2015 and February 2016, I focused on exploring relevant methods for conducting a

participatory research on urban sound. It was during this period that I established the project's field methodology.

Figure 1. Research Project Timeline. Source: author.
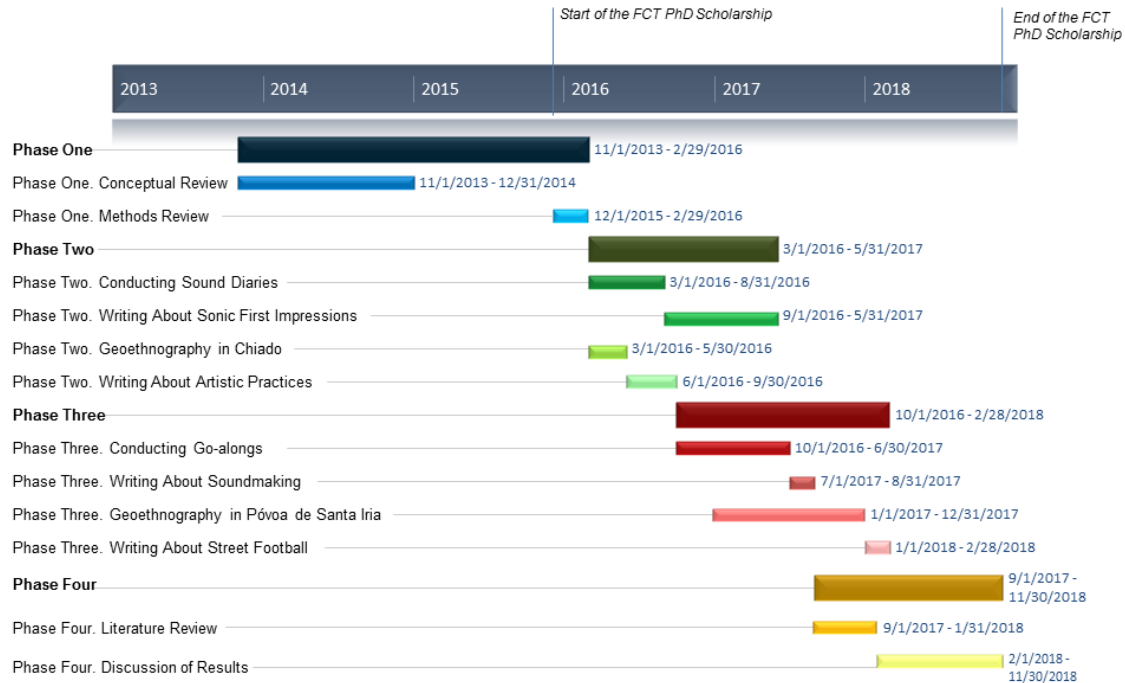


Phase Two ranged from March 2016 to May 2017. The starting point was a series of sound diaries conducted with a group of twelve volunteers. In these, the participants were asked to record the everyday sounds that affected them in any particular way, and a conversation took place afterwards. The research objectives of the project – which would correspond to four individual studies – were defined from the insights of these experiments. The first two studies focused on the issue of transitions between sonic environments. Study#1 investigated the phenomenology of transitions between sonic environments in everyday life, and included data generated through the sound diaries and interviews. On the other hand, Study#2 approached the active production of transitions in the sonic environment by street artists, through a geoethnographic study of Chiado, Lisbon, Portugal. The geoethnographic study juxtaposed a geographic survey of density of users in public space and sensory ethnographic observation. This study combines data that had been gathered since 2012 in the framework of project CHRONOTOPE (2011-2014), along with new data I gathered which also contributed toward the research project AGORA (2016-2019)[2].

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[2] The project AGORA – *Encounters between the city and arts: exploring new urbanities*, coordinated by Isabel André and Ana Estevens, is funded by the Fundação para a Ciência e a Tecnologia (PTDC/ATP-GEO/3208/2014).

Phase Three started in October 2016 and ended in February 2018. Its objective was to explore in greater depth questions that had been raised in Phase Two. Everyday soundmaking, by which I mean the entire array of sounds that individuals make during their daily lives, had been an interesting theme raised during Phase Two, but one which was poorly developed in the experiments we performed. With that in mind, I conducted a series of experiments with the group of participants that combined go-alongs with interviews in which I used some of the techniques of the Enhance Cognitive Interview. This led to Study#3. Simultaneously, I conducted a geoethnographic study on everyday soundmaking practices by young people playing street football in Quinta da Piedade, Vila Franca de Xira, Portugal. I was led to do a geoethnographic study in this place, because during the period I was conducting the go-alongs, while I wrote about my research in my home office, I could hear the kids playing street football outside, and I began noticing how the various sounds they made played a significant role in how the games they played unfolded. I saw in this an opportunity to study the political potential of soundmaking as a part of building micro-worlds in public space. This would be Study#4. The exploration of research questions was not done only through fieldwork. It also led me to survey significant literature on the subject. For this reason, each chapter in this thesis that presents an individual study will contain theoretical and empirical sections.

Phase Four started in September 2017 and ended in November 2018. Its objective was to assess the state of the art of sonic geographies and situate the main contributions of this research project within this field. It was during this period that I conducted a thorough literature review of the field of sonic geographies. I had studied sonic methodologies in Phase One, and the studies conducted in Phase Two and Phase Three directed me to a series of studies done by geographers and other scholars that were relevant for those specific cases. Despite this, I only conducted a thorough literature review on sonic geographies after the studies were almost completed because I wanted research in this project to be defined as much as possible by the field experiences that I had with the group of participants, and starting from a wide literature review on the subject might have led me to construct abstract questions, hypothesis, or mere preconceptions that would put me on a specific path to learn from experience and experiment. Instead, I explored literature that was specific to the questions that emerged during fieldwork I was doing for each study, and only conducted a systematic literature review in Phase Four. Moreover, as the number of publications on sonic geographies increased exponentially during

this research project, it was appropriate to conduct a thorough review at this point. Nevertheless, I was aware that examining the state of the art of sonic geographies was indispensable to understand how my research could contribute toward current issues in the research field. In the next section, I will discuss exactly how this thesis makes that contribution.

*Objectives and thesis*

The main objective of this thesis is to *explore the phenomenology of the urban sonic experience, and the possibilities to intervene in urban territories through sound*. By doing this, the thesis contributes toward advancing knowledge in the field of sonic geographies. The thesis expands current investigations on listening, especially those engaging with phenomenology or post-phenomenology (Gallagher & Prior, 2014; Duffy & Waitt, 2013; Revill, 2016; Gallagher, Kanngieser, & Prior, 2017), but also opens new ways to understand sonic experience by addressing the underexplored issue of soundmaking (Thibaud, 1998). Furthermore, the thesis applies knowledge on the phenomenology of the urban sonic experience to explain how specific sonic interventions in urban space, namely artistic practices and street football, are able to intervene in urban territories. With this, I contribute toward current investigation on urban life that understands urban territories as moving rhythmic formations (Brighenti & Kärrholm, 2016; 2017; 2018a; 2018b; Brighenti, 2010; Kärrholm, 2007; 2009; 2017). In order to achieve its wider objective, the thesis is composed by four individual studies that correspond to specific objectives.

Study#1 aims *to understand the phenomenology of moments of transition between sonic environments in the urban context.* To do so, I conceptualise the role that transitions play in the attunement of the body to urban spaces through the concept of sonic first impression. I am applying Tonino Griffero's concept of first impression, which refers to "an affective corporeal investment that, interrupting the habitual observational and pragmatic flux, can, for this very immediacy, represent for the subject an identity certificate much better than the cogito" (2014, p. 29). In other words, Griffero is referring to the way in which certain sensorial stimuli can interrupt ongoing fluxes of attentiveness in ways that surpass representation. These interruptions convey an immediate sense of what the atmosphere is, what Griffero (2014) refers to as an identity certificate. The aim of Study#1 is to understand how transitions between sonic environments can provoke sonic first impressions and what is involved in this process. The concept of first impression is key to Griffero's (2007; 2009; 2014) conception of atmospheric perception as it is a crucial moment in how bodies attune to the atmospheres of places. I argue that understanding the phenomenology of sonic first impressions is likewise crucial to

understand how bodies attune to the sonic environment of places, as they constitute a defining moment in how attention and practice will take place.

Study#2 extends the exploration on the sonic first impression by investigating how street artists produce them to capture the attention of passers-by into their performances. Thus, the objective of this study is to *explore how different artistic practices work to alter the distribution of the sensible, and consequently, the territories of urban space, by producing sonic first impressions.* Let me unpack this. My argument here is that the artistic practices I have studied in Chiado – music and dance – generate first impressions that change the way people sense and appropriate urban space. I am drawing upon Jacques Rancière's concept of the distribution of the sensible, which refers to the way that the system of perception and the senses reveals the world before the subject and defines the ideal distribution of people and activities through spaces and times. In Study#2, I will argue that musicians and dancers in Largo do Chiado provoke sonic first impressions that act on this system of perception and the senses of individuals. As they do so, the way that people perceive space, how they appropriate it and generate territories is also subject to change.

In Study#3, I expand the phenomenology of the experience of urban sound by turning into the issue of soundmaking. The objective of this study is to *understand the interaction between soundmaking and the situational relations between the individual and the environment, both in terms of the personal or collective cognitive and emotional flows, and in terms of the ethico-political content.* Whilst the study of sonic first impressions contributes toward a deeper understanding of everyday listening in urban scenarios, it is crucial to go beyond listening if we wish to grasp the whole of the urban sonic experience. Individuals are not mere listeners of the sonic environment, they are part of the sonic environment itself, and as such the sounds they make are an important part of their sonic experience. Nevertheless, everyday soundmaking is often a not-though and not-perceived activity, and as such, we must pay attention to the more-than-representational aspects of these practices, while not losing sight of the influence of personal and collective ethics about soundmaking.

I also wanted to extend my knowledge about the consequences of the phenomenology of everyday soundmaking by exploring how it is used to generate territories in urban space. This led to Study#4. Its objective was *to explore how soundmaking in urban space is employed by young people to generate micro-worlds and territories in street football practices.* In other words, I address how young people playing street football use soundmaking, including not only the voice but also the body, objects and the materiality of urban space, to make worlds and claim territories in urban space. In this sense, street football practices are a form of world-

making, in which sound is a crucial way to make sense of a certain use of urban space that in a way recreates its functions. As soundmaking is used to enact a certain world in urban space, specific territories also emerge. This study mirrors the concerns of Study #2 by examining how sound can be used to act on the territories of urban space.

Together, the four studies provide an in-depth exploration of the phenomenology of the urban sonic experience, and demonstrate that understanding this phenomenology is helpful to explain how sound acts on the territories of urban space. In sum, I propose the following thesis:

> *The phenomenology of the urban sonic experience emerges from the simultaneity of listening and soundmaking, both of which are more-than-representational acts that intertwine affective sensing and ethico-political reasoning. Sonic interventions in urban space that engage with these more-than-representational acts, such as artistic practices or street football, have the capacity of altering urban territories by acting on the distribution of the sensible or by enacting worlds.*

### *The contents*

This dissertation is organised in six chapters, followed by a conclusion. Chapter One summarises the literature review on sonic geographies conducted during Phase Four and situates the contribution of this thesis within the current gaps of the field. It is organised in four sections. In the first section, I address issues regarding the name of the geography subfield that studies sound. In the second, I approach the paradigms that have underpinned geographical research on sound, and I briefly discuss the dissonances of sound's polysemy in geography. In the third section, I divide current research in the field of sonic geographies into four main areas. First, I address the study of arts, media, and technologies, in which sound has been studied mainly as an aesthetic feature. Secondly, I approach studies of sound in relation to urban landscape, spatial representations, and identity, in which soundscape is a fundamental concept. I then discuss the sonic geographies of the body, presence, and affect, in which more-than-representational concepts such as affect and atmosphere have dominated the discussions. Lastly, I outline a number of different approaches in sound-related geographic research on policies, politics and power. Following this, I briefly identify and discuss four deaf spots in contemporary sonic geographies. In the fourth section, I outline the conceptual framing on the phenomenology of the urban sonic experience that this research project has developed, drawing upon more-than-representational approaches to affective atmospheres, territories, and politics.

Chapter Two presents the empirical methodologies of this research project, focusing on the innovative aspects of the conducted research. The chapter comprises two moments. In the first moment, I present the participatory research conducted with the group of participants. I address how sound diaries were conducted, and how metacognitive and metaemotional experiences were explored through this method in order to study sonic first impressions. Afterwards, I describe how go-alongs in urban space were conducted, and how techniques of the Enhanced Cognitive Interview were used to approach the issues of soundmaking in everyday life in greater depth. The second moment is oriented toward the presentation of the geoethnographies conducted in Chiado and Póvoa de Santa Iria. Here, I define geoethnography and the methodological issues regarding the study of urban rhythms that this methodology responds to, followed by the description of its application to the study of artistic practices in Chiado, Lisbon, and street football practices in Quinta da Piedade, Vila Franca de Xira.

Chapter Three presents Study#1 of the research project, entitled 'The sonic first impression in urban everyday life". The chapter is divided in three sections. First, I discuss the issue of listening in urban environments and the importance of first impressions in processes of attunement. Secondly, I present the empirical study's results, in which I approach spatial transitions, temporal transitions and the angle of arrival. Lastly, I discuss the study's conclusions and implications for current research on listening.

Chapter Four presents Study#2 of the research project, entitled 'Artistic practices and the redistribution of the sensible in Largo do Chiado'. The chapter is divided as follows. First, I discuss the role that artistic practices play in changing the distribution of the sensible in urban spaces. Afterwards, I describe Largo do Chiado and explain how performances by dancers and musicians alter the distribution of the sensible, and discuss the political implications of these events.

Chapter Five presents Study#3 of the research project, entitled 'Soundmaking in urban everyday life'. The chapter is divided in two main sections. In the first section I present the three main relations that underpin the processes of soundmaking in urban everyday life: the relation between sonic environment and soundmaking; the relation between attunement, ethics and soundmaking practices; and the relation between body consciousness and soundmaking. The second section presents and discusses the results of the series of experiments on everyday soundmaking conducted by me and the group of participants, in which we tried to register and discuss our awareness of our sonic presence, and the affects and ethics involved.

Chapter Six presents Study#4 of the research project, entitled 'Urban soundmaking and worldbuilding in street football practices'. The chapter is divided into three sections. The first

is a discussion of the role that everyday soundmaking plays in the emergence of everyday worlds and territories. The second section presents the findings of our study, in two parts. First, I present three different street football games and explain how soundmaking is used to make worlds in each of them. Secondly, I describe the interactions between the territories of street football games and the usual street rhythms of Quinta da Piedade. The final section presents a discussion that relates the conceptual discussion and the findings.

In the dissertation's conclusion, I reflect on the success and shortcomings of the research methodology, and I relate the conclusions of the four studies of the research project and examine how they contribute toward the advance of knowledge in the field of sonic geographies.

# Chapter One. Sonic geographies: the history, the state of the art, and my place in it.

Sound has recently become a relevant subject in geography and a series of concepts (Simpson 2009, Kanngieser, 2012; Duffy & Waitt 2013, Bennett, Cochrane, Mohan, & Neal, 2015, MacPherson et al. 2016, Revill, 2016; Gallagher et al., 2017) and methods (Butler 2006, Duffy & Waitt 2011, Gershon, 2013, Gallagher & Prior 2014, Gallagher, 2015a; 2015b; Duffy, Waitt, & Harada 2016, Saunders & Moles 2016) have been proposed advance knowledge on this subject. This geographical literature often engages with the multidisciplinary field of sound studies in which space has also become an emerging interest (Blesser & Salter, 2007; Henriques 2010, LaBelle, 2010; García Quiñones, Kassabian, & Boschi 2013; Born, 2013). Some works have reflected on the conception of sound in geography, yet they do not provide an extensive state-of-the-art or a historical overview (e.g. Wissmann, 2014; Gallagher & Prior, 2014; Revill, 2016). This chapter provides that much needed overview. However, its main purpose is to situate the conceptual perspective of this thesis. Thus, the chapter is divided in four sections. The first is a short reflection on the name of the subfield of geographies of sound. The second presents a historical overview of how sound has been thought of in geography. The third contains a state-of-the-art of the subfield of sonic geographies, and identifies a series of deaf spots in the subfield. The fourth section is dedicated to the conceptual framing on the phenomenology of the urban sonic experience that this research project proposes, drawing upon more-than-representational approaches to affective atmospheres, territories, and politics.

*Naming geographies of sound*
More than 20 years ago, Rodaway (1994) alerted geographers to the fact that, despite a growing body of studies, there was little agreement over what a geography of sounds would be called. He distinguished between aural geography, which would be "a sensuous geography derived from the ears" (Rodaway, 1994, p. 84); and sonic geography, which "would refer to the spatial organization of sounds and characteristics of places in terms of sound" (Rodaway, 1994, p. 84). He also proposed "auditory geographies", which would address "the sensuous experience of sounds in the environment and the acoustic properties of that environment through the employment of the auditory perceptual system" (Rodaway, 1994, p. 84), encompassing both hearing and listening. He did not consider the term acoustic, which has been used by

geographers (Gandy & Nilsen, 2014; Revill, 2014) and others (LaBelle, 2010), generally in a similar manner to what Rodaway called 'sonic geography'. In French geography, the term 'bruit', which can be translated both as sounding or noise, has been employed, along with the term 'geographie des milieux sonores' (geography of sonic milieux or geography of sonic places; for both uses, see Roulier 1999). In other communities, 'geography of sounds' has also been used (Alves 2016), roughly meaning the same as sonic geography. Since Rodaway's discussion, the term 'sonic geography' seems to have become more common in the Anglophone community (e.g. Matless, 2005; Boland, 2010; Boyd & Duffy 2012; Prior & Gallagher, 2014), but the term 'listening geographies' also emerged (Gallagher et al., 2017), meaning roughly the same as what Rodaway meant by aural geographies.

The choice of the term must not be taken lightly. While 'sonic' refers to sounds themselves – and in consequence their temporality, spatiality, and sociality –, the term 'acoustic' also refers to the physical properties of spaces that affect how sounds are made and propagate (e.g. in terms of echo or resonance), which is important if geographers wish to grasp how spaces shape and change sounds, and how this affects natural ecologies, landscape experience, social relations, political structures, cultural communities, economic spatialities, among others. Both terms may encompass the experience of sounds, so aural, auditory, or listening geographies would be a subfield of sonic or acoustic geographies. On the other hand, other possible terms seem to have been left out, such as noise geographies, or geographies of resonance.

The little agreement over what the field of the study of sound in geography should be called is both a consequence and a reminder that sound has not been a major concern of geographers until recent years. For this reason, while there have been significant theorisations of sound in geography in the last years (Gallagher & Prior, 2014; Revill, 2016; Doughty et al., 2016; Gallagher et al., 2017), there is still no significant discussion to how sound has been conceived throughout the discipline's history. In order to tackle this issue, in this article, I approach the different conceptions of sound – and its relations to the underlying scientific paradigms – that emerged through the history of Geography. In doing so, I attempt to reunite and compare conceptions of sound from different times and spaces, as geographical studies on sound are scattered historically and geographically. In the next section, I will address the paradigms that have underpinned geographical research on sound. After this, I briefly discuss the dissonance in the conceptions of sound in geography.

*The history of sound in geography*

It has often been noted that the visual has been a hegemonic sense in geography, and that this is the reason why sound has been a poorly studied subject over the course of the discipline (Tuan, 1979; Porteous, 1982; Pocock, 1989; Smith, 1997). Despite its marginality in the discipline, sound has been explored by geographers as a spatial, social, cultural and political phenomenon for some time, although this history is often not acknowledged in reviews of the subject. In this section, we will present three historical moments for the study of sound in Geography. First, I will approach the first approaches to sound within regional geography and theoretical geography, which had very different conceptions of sound. Secondly, I will present behaviourist and humanistic approaches to sound that have focused on the perception of sound by humans. Thirdly, I will approach performative approaches to sound including structuralism\post-structuralism and post-phenomenology.

## Geography starts to listen

Sound has been present since the birth of modern geography. von Humboldt (1850), in his descriptions of natural geographic processes, sporadically made reference to the sounds of places, as Malanski (2017) notes. However, the first geographer to have published a study of sound in geography seems to be Granö (1929), with a cartographic study on the sounds of the island of Valosaari in Finland, as Pocock (1989) and Revill (2016) refer. Beyond this contribution, studies of the paradigm of regional geography have privileged the visual study of landscape. While it has often been argued that the hegemony of the visual is the reason for regional geography to have overlooked sound, it should also be acknowledged that sociological (e.g. Simmel, 1981 [1912]) and ethnographical (see Howes, 2003; Pink, 2009) studies were already approaching the senses and music at the time, so geographers might have taken sound to be outside of the discipline's framework.

Over the course of the twentieth century, the several new paradigms that emerged in geography provided new perspectives on sound. Theoretical or quantitative geography never really grasped the issue of sound in a general manner. The few geographical studies under this paradigm occurred late in the discipline and focused mainly in the issue of noise. There are a number of works that were published across Europe during the 1970s. Labasse (1972) studied the geographies of airports and the issues of aircraft noise in European cities. Barceló Pons (1975) attempted to undertake a social geography of noise, as he studied the effects of air traffic noise from three European airports on human health and property values, departing from studies of noise by acoustic engineers and studies on the effect of noise on real estate by

economists. Ohlson (1976), on the other hand, focused on rural landscapes and studied the effects of climatic and topographic elements on the dispersion and level of different sounds. His main concern was however also traffic noise, in this case originating from boats, ferries and snowmobiles. The conception of sound in these studies is often poorly developed. Sound is reduced to noise, which is defined as a nuisance that can be perceived quantitatively. Sound, therefore, is taken as an abstract entity often reduced to numbers, and understood as objective and homogeneous. That is, this notion of noise cannot conceive different responses to the same sounds, or even differences in sound beyond volume or signal, such as timbre or rhythm. Geographers have since then seldom produced studies on noise, usually traffic-related (e.g. Birnie & Hall, 1981; Kariel, 1990; Tadeu et al., 1995; Bennett, 1997; Muscar Benasayag, 2000; Lam et al., 2010; Szeremeta & Zannin, 2015; Dobryakova & Kolesov, 2016). Once again, a possible explanation for this is the significant development of quantitative approaches to sound and noise in other scientific disciplines, in this case engineering (Ingerslev, 1952, 1972; Schultz, 1978), architecture (Maekawa & Lord, 1993), and psychology (Kryter, 1970). The production on noise or quantitative approaches to sound continues to be dominated by engineers, architects and psychologists to this day (Kang, 2007).

## Geography listens with people

In the 1970s, with the advent of behaviourist geography, humanistic geography, and time-geography, geographers were increasingly attentive to the spatial perspective of humans in their everyday life. During this period, a behaviourist approach to sound received some attention in Geography, focusing mainly in urban environments. A first seminal study was that of Southworth (1969) in urban planning, who conducted a field study on the perceived variety and character of city sounds and its influence on the perception of the visible city, which provided a starting point for behaviourist geographers. Southworth (1969) based his perspective on environmental psychology, thus establishing a behaviourist approach which was scarcely reproduced over time in Geography.

Works that followed this perspective mostly focused on the relation between the perception of sounds and the behaviour of individuals, using quantitative surveys to establish determinist causal relations between certain sonic stimuli and the behaviour of individuals. Some studies have approached how individuals perceive the sonic environment, such as Kariel's (1980) study on the difference in the perception of sounds by mountaineers and the general public, and López Barrio's (2001; López Barrio & Carles, 1997) studies on the sonic environment as a symbolic or signifying medium that influences human behaviour. Others have focused on

how the perception of sounds alters individual or collective behaviour. For instance, Hall et al. (1981) explored community responses to road traffic and aircraft noise; Lam et al. (2007) researched individual responses to noise in natural spaces; and Boubezari (2003) classified the strategies and techniques that individuals employ in order to seek for sonic comfort. This approach seems to have been abandoned in recent years.

It was with the advent of humanistic geography, which focused on the experience of places, that sound gained a more central role in geographic thought. Yi-Fu Tuan's (1974) seminal book on environmental perception, attitudes, and values focused on the senses as the fundamentals of perception, and as such approached hearing. Despite this, Tuan's take on the links between environment, culture, and personal perception and ethics remained primarily focused on visual cues such as landscape, architecture, colour, and symbols. Buttimer also argued that geography needed a "sensitivity to nature, sound, smell, and touch" (1976, p. 291) to grasp the dynamism of the lifeworld, and Seamon (1979) argued that the sound of the rhythms of place, which he called 'place ballets', could invite (or pull away) individuals to participate in social life.

This interest in sound was certainly not unrelated to the work being done in the emerging field of acoustic ecology at the time. During the 1960s and 1970s, at the Simon Fraser University in Vancouver, a number of scholars, led by R.M. Schafer, created the World Soundscape Project, an educational and research group. The group was concerned with the rapid changes in urban soundscapes, mainly with the increase in noise pollution. Their approach, however, partially differed from the studies on noise by engineers and architects, as they were primarily interested in understanding sound as a quality and not as a mere nuisance. Besides collecting and publishing recordings of environmental sounds (e.g. World Soundscape Project 1973), Schafer (1977) was dedicated to create and develop a series of concepts to address sound qualitatively, most notably the concept of soundscape (originally presented by Southworth, 1969) which refers to the set of sounds hearable at a certain location. For Schafer, soundscapes, like musical works, have a dominant keynote that gives them a sense of place, as well as recognizable soundmarks, which are the sonic version of landmarks. Besides this, soundscapes also contain a series of signals which provide environmental information. This issue was further developed by Truax (1978, 1984). The prime method of research developed by the acoustic ecology school was the soundwalk, which are excursions with the purpose of actively listening to the environment (Westerkamp, 1974). Schafer's perspective was not only inspirational for geographers, but issues of space and geography were also central for Schafer's perspective on sound (see Schafer, 1985). The first geographer to have engaged with the acoustic ecology

school was Lowenthal (1975, 1976) on his works on landscape and memory where he questioned the possibilities of recapturing soundscapes from the past.

After the calls of humanistic geographers, a number of geographers engaged in the study of sound as experience, but these also resorted to the concepts and language of Schafer's soundscape studies. The most significant approaches are those by Porteous and Mastin (1985), and Pocock (1989) in English, and by Nogué i Font (1983; 1985) in Catalan. Porteous and Mastin (1985) and Nogué i Font (1983; 1985) reflected upon soundscape and related concepts, and about how these could be used to expand landscape studies. On the other hand, Pocock (1989) provided a more significant discussion of the study of sound in Geography from the point-of-view of experience. Pocock reflected upon different aspects of sounds: its physical and cultural properties, its experience and the role that sound plays in environmental sensitivity, and the difficulties inherent to the description of environmental sound as a non-verbal phenomenon. These insights underpinned studies on sound as an aesthetic property of spaces linked to experience, contemplation, emotion, but also a sense of history (Johnston, 1986; Pocock, 1987; 1988). Soundscape was understood as the sonic equivalent of landscape, which would be a visual phenomenon. This relation was not criticised during this period, and a multisensorial understanding of landscape (such as the one that can be found in Prior, 2017) was absent from these works. Later, Smith (1994) also approached the concept, arguing for a broader attention to sound in space, but with little dialogue with Schafer's arguments.

During the 1980s and 1990s, French geographers, working together with architects and urban sociologists, also engaged with the concepts of soundscape (Cahen Salvador et al., 1980; Augoyard & Torgue, 1995). These works were however more closely related to issues of identity. Amphoux (1993, 2003) worked on the sonic identity of European cities, and Montès (2003) worked on the weaving of sound and collective identity. Amphoux also worked on the application of the concept of soundscape (translated into French as *paysage sonore*) in urban areas (Amphoux, 1997). More recently, in Germany, Wissmann (2014) focused on classifying and mapping types of sounds in urban spaces. Concepts of keynote, signal and soundmark also remain relevant for geographers today when the focus is on aural representations (Wissmann, 2008; Wissmann & Zimmermann, 2010; Hones, 2015).

### Geography listens to everything

During the 1990s, as geography turned to post-structuralism, attention has turned to the performativity of sound. Rodaway's (1994) reflection on auditory geographies was an important mark insofar as he discussed the concepts of the acoustic ecology school and

highlighted its limitations. Rodaway (1994) pointed out that the concept of soundscape is anthropocentric as it focuses on sound from the viewpoint of the human listener. He also criticised the language of acoustic ecology for its proximity to visual phenomena; e.g. it substitutes landscape with soundscape, or landmark for soundmark. Rodaway (1994) argued that it is not accurate to use a visual terminology to address sounds because while visual phenomena tend to be objects for contemplation, the sound experience is more of a "process of engagement with the environment", for three reasons. First, sounds change as individuals move through space. Secondly, sounds may change in the same space over time. Thirdly, the presence of the individual's body always participates in the production of sounds in a given environment. Although he does not propose alternative concepts, Rodaway's criticism of soundscape and related concepts is a significant act during a period in which the focus of social and cultural geographers switches from representation to performance. After Rodaway's work, Smith (1997, 2000) was one of the main contributors to think about sound in geography as performance. Although Smith (1997, 2000) focused on music, her discussion of performativity in musical acts was an important starting point to think about the performativity of sound in general. In her study on Renaissance Venice, Smith (2000) argued that performance matters in the study of music, and addressed musical acts in everyday life and ceremonies, and the political, economic and emotional implications of these events. Duffy (2000, 2003, 2005) was likewise interested in the performativity of music, and studied participation in music festivals as a practice of identity and community. Within this framework of performance, geographical studies start to focus on sounds beyond music, and eventually turned to the non-representational affects of everyday sounds (Anderson, 2005; Anderson et al., 2005).

With this, post-phenomenology became the most recent theoretical approach underpinning geographical studies of sound. Post-phenomenology gathered a fair amount of attention by geographers in the last decade (Ash & Simpson, 2016), especially due to the interest in exploring the significance of non-representational phenomena for explaining everyday life practices (Thrift, 2011). As geographical studies of sound started to explore the performativity of sounds, moving away from the study of sound as representation and identity, post-phenomenology became one of the dominant perspectives. The works of philosophers Jean-Luc Nancy (2007) and Don Idhe (2007) on the phenomenology of sound are the most relevant references. Nancy (2007) was concerned with the differentiation of the act of listening from the act of seeing, arguing that while visual forms are objective, persistent and mimetic, the practice of listening is always subjective, resonant, and methexic, i.e. it produces contagion, share and participation. Furthermore, he distinguishes between the act of hearing and listening

as passive and active forms of the sense. Nancy inverts the common understanding of listening as a distracted form of the sense and hearing as an attentive mode. He argues that hearing, even if in an attentive stance, is the passive mode of the sense, while listening (in French, *écouter*, which can also mean to eavesdrop, or to spy) is the active mode, when it is attentive to what he calls the 'beyond-meaning' of sound, which is to say the affective and more-than-representational aspects of sound. While Nancy is more concerned with the affectivity of sound, Ihde (2007) worked on the temporality and spatiality of sound. He argues that while sound has been understood by scholars as primarily temporal, it is significant to look at how sound is a product of space, as it emerges from shapes, surfaces, and fields. He approaches the experience of sound as a polyphony which resonates within the subject and shapes the representation of the world in what he calls the 'auditory imagination'.

Simpson (2009) debated the significance of Nancy's perspective to investigate presence and being-with, arguing that thinking about sound leads us to a decentralised subject that is "the relation with others itself". Revill has approached Ihde's thoughts on the auditory imagination, along with Schafer's (1994) and Nancy's (2007) idea of sound as a 'touch at a distance' to argue that sound plays a role in the mediation of social life, as "multiple registers which situate and shape existence and experience [which] can simultaneously help open up the black boxes of both affective and representational political processes" (Revill, 2016, p. 253). To put it simply, post-phenomenological perspectives on sound have pointed out that the cognitive-affective state of each individual body-mind is a product of the multiple relations he or she maintains with the environment. In this regard, sound mediates the relation between each individual body-mind and the surrounding environment by transmitting information, meanings, and affects across bodies and spaces. Sonic affects, or sound as affect, becomes a central concept (Duffy & Waitt, 2011; Boyd & Duffy, 2012). It has been pointed out that this means that sound has important social (Boland, 2010; Kanngieser, 2012) and political (Barns, 2014; Waitt et al., 2014) significance, besides its aesthetic role. Within this perspective, Gallagher et al. (2017) proposed the concept of 'expanded listening' to grasp the multiple effects of sound in the spatio-temporality of social life. Expanded listening "refers to the varied ways in which bodies of all kinds – human and more-than-human –respond to sound", and the purpose of this is to look

"outwards from the dominant anthropocentric understanding of listening, beginning by deepening and expanding human listening (in relation to landscape), then considering how sound moves bodies beyond cochlear listening and human consciousness (as affects and atmospheres), and finally exploring forms of

listening in which human bodies are marginal (vibrations in earth materials and machines)" (Gallagher et al. 2017, p. 618).

This concept has become popular to address the generative role that sounds plays in social interaction and micro-politics, by focusing not only on sound itself, but in how it relates individuals, objects, spaces, and events (MacPherson et al., 2016; Wilkinson, 2017; Mills, 2017; Kerr et al., 2018; Peters, 2018). The intention of going beyond a dominant anthropocentric understanding of listening, however, seems poorly achieved in these studies. Some authors have employed other perspectives to address sound and listening as performative acts. The works of Waitt with other authors (Duffy et al., 2010; Waitt et al., 2014; Waitt et al., 2017) have applied the feminist concept of visceral politics to sound experience. Affect theory (e.g. Clough, 2007; Gregg & Seigworth, 2010) has also been significant for conceptual advances focused on the atmospheric and affective nuances of sonic environments such as Kanngieser's (2012) and Revill's (2016).

A structuralist/post structuralist approach to sound has also been present in studies that seek to understand the significance of sound for political processes, events, and beliefs. A common philosophical starting point has been the post-structuralist writings of Rancière (2004) on the sensible, and the structuralist\phenomenological writings of Lefebvre (2004) on rhythms. To put it simply, Rancière (2004) advanced the concept of distribution of the sensible which refers to the system of perception and senses that reveals something in common and defines the structure of the parts and positions of what is common, distributing them through spaces, times and activities. For Rancière (2004), the distribution of the sensible creates a regime of identification, i.e., it delimits what is visible and invisible, hearable and unhearable, in a common space. He argues that some practices, such as artistic practices, can have a political effect even if they have no explicit political content, because they act on this distribution of the sensible (Rancière, 2004; 2011). Revill (2016), for instance, has applied this concept to the geographies of sound. On the other hand, Lefebvre (2004) advanced the notion of rhythmanalysis, that is, the study of bodily and spatial rhythms with the purpose of unveiling how power structures are reproduced in everyday life. He distinguished between cyclical natural rhythms and linear capitalist rhythms, arguing that the former have been progressively substituted by the latter with the aid of modern technologies. His views on the relation between rhythm and social structures have been criticised for its rigidity (Simpson, 2008), yet some authors still found his insights on the relation between body, rhythm, and power valid (Edensor, 2010; Tiwari, 2010; Reid-Musson, 2017). While Lefebvre's writings seem to have had a

considerable impact in geographies of sound shortly after his work was translated to English (e.g. Simpson, 2008; Duffy & Waitt, 2011; Boyd & Duffy, 2012; Wunderlich, 2010; 2013; Revill, 2013; Lehtovuori & Koskela, 2013), in more recent years his influence seems to have faded. However, in South American geographies, we can observe a growing number of works that mix structuralist and poststructuralist perspectives in the study of inequalities and social divisions regarding sound and sonic spaces (Alves, 2013; Creuz, 2014; Alves, 2016).

These two lines of works – post-phenomenological and structuralist\poststructuralist – have been influenced by a number of works in the multidisciplinary field of sound studies that have addressed issues of space and sound (e.g. Carlyle, 2007; Goodman, 2010; LaBelle, 2010; Born, 2013; Belgiojoso, 2014). Gender and postcolonial perspectives have mostly been absent from the geographies of sound, unlike in the multidisciplinary field of sound studies. A notable exception in gender is Waitt et al.'s (2017) recent study on car mobility, in which they investigate the feelings of men and women for cars and the motivations for driving them. Saldanha's (2007; 2014) long work on musical communities in India is the notable exception regarding postcolonialism.

Probably due to the marginality of the theme in the discipline, the dominant concepts were rarely critically assessed by more recent perspectives (with the exceptions of Rodaway, 1994; and Smith, 1997), up until recently (Boyd & Duffy, 2012; Bennett et al., 2015; Gallagher et al., 2017; Revill, 2016; Prior, 2017). For this reason, the conceptual vocabulary of sonic geographies remains scattered and at times unclear. The relations between concepts such as soundscape, acoustics, aurality, noise, silence, and listening must be addressed in further detail if the recently established field of sonic geographies is to have a common language.

### *The field of sonic geographies*

For a long time, sound was a marginal subject within geography, as geography was a primarily visual discipline (Pocock, 1989; Rodaway, 1994), but today the panorama is rather different. A large number of geographic studies have emerged in the last decades, and the literature on this subject is growing rapidly (Simpson, 2009; Gallagher & Prior, 2014; Wissmann, 2014; Doughty, Duffy & Harada, 2016; Gallagher et al., 2017). Many of these studies have been concerned with proposing new concepts and new methods to address the relation between sound and space, while also questioning traditional research methods that were mainly based on the verbal and the textual (Gallagher & Prior, 2014; Bennett et al., 2015).

Given the emergence of sound as a topic of interest, it is important to understand how research in this subfield has evolved, what are the main themes, concepts and methods, and how it fits

together. This section aims to do just that. It is the result of the literature review conducted during Phase Four of the research project, and it aims to provide an in-depth yet brief critical overview of sonic geographies, in order to situate the contribution of this thesis. To do so, I was not only paying attention to what geographers have been listening to, but I was also interested in noticing what has not been heard by geography: what I call the 'deaf spots'.

This overview intends to take a global perspective on geographic work on sound, although due to language constraints I was only able to review work published in English, French, Italian, Portuguese, and Spanish. Nevertheless, given the current international dominance of the English language, the works reviewed in this section stretch far beyond the countries in which these are official languages.

In the following subsections, I will present current research in the field of sonic geographies. I will divide it into four main areas, which correspond to the four main perspectives on sound: sound as aesthetics, soundscapes, sound as affect, and the policies and politics of sound. To conclude, I will present and discuss the four deaf spots I have identified.

## Sound as aesthetics

The line of works on sound that goes back further is undoubtedly the line of works on music. Since Nash's (1968) seminal study of regional music, the geographies of music have evolved to become a subfield of human geography on its own. For this reason, I will not focus on the subject of music in depth. There are plenty publications that do this already (see Carney, 1998; Leyshon et al., 1998; Whiteley, Bennett, & Hawkins, 2004; Krims, 2007; Bell & Johansson, 2009). In addition, many of the geographic studies on music do not focus on the experience of music itself as a sound, but on the social, economic and cultural phenomena associated to the practice of music. Despite this, a number of works do focus on the sonic and spatial experience of music. The main debate in this matter is the one focused on interplay between personal mobile stereos and the sounds of the city. It stems from the work of sociologist Bull (2000; 2007) who put forward the thesis that personal mobile stereos allow individuals to shut out the acoustic presence of the urban environment, and to generate a personal and customizable music world, which eventually makes individuals absent from the places they are in. For Bull (2000; 2007), the experience that personal mobile stereos allow is one that denies the city's physicality and sociality. Despite this, he does admit that the sound of personal stereos can be attuned to the visual qualities of the environment, but not the sounds of places themselves. This idea has generated some controversy, with Beer (2007; 2012), Barns (2014), and Watson and Drakeford-Allen (2016) arguing that the use of personal mobile stereos does not imply the

disappearance of the external urban sonic experience. These authors agree that the use of personal mobile stereos and related technologies is one part of a wider experience of the sonic ecology of the city, and that rather than denying it, these devices help individuals in the everyday task of managing the meaning, feelings, and intensity of the urban sonic experience. In addition, Watson and Drakeford-Allen (2016) have called our attention to the usefulness of the data generated by location-aware music exchanges and mediated social interactions for understanding the connections between mobile music listening, space, and place.

The study of music listening has however not been confined to public urban space. Anderson (2002; 2004) has studied the experience of music in domestic spaces, focusing on its relation to feelings of hope and personal memories. More significantly, Duffy and others have published a series of articles on the relation between sound and place in musical performance events, highlighting the production of meaningful memories and sense of belonging, and the strengthening of identity and sense of place (2000; 2003; Duffy, Waitt, & Gibson, 2007; Duffy & Waitt, 2011). Others have focused on how musical performances in public space can enhance conviviality, but also play a role in mediating macro-political issues of collective identity and social regulation through affective and performative micro-political practices (Doughty & Lagerqvist, 2016; Simpson, 2017).

The study of sound in arts has not been confined to music (Gandy, 2014a). One field which is often overlooked by geographers of sound which contains an interesting amount of conceptual and empirical material about the topic is the field of geographies of dance and other performative arts (McCormack, 2013; Atkinson & Scott, 2014; Pine, 2014; Külkhe & Pine, 2015). Research on this field has also been burgeoning, and geographers of sound will find interesting approaches to the flows between the rhythms of music, space, and the body (e.g. Saldanha, 2014; Edensor & Bowdler, 2015).

On the other hand, sound art has been a central focus of geographers of sound, mainly those interested in approaching landscape experience as more-than-visual, and addressing the corporeality and emplacement of the sonic experience, which is thought of as inherently spatial. Environmental perception, and especially sensibility toward environmental threats, have also been a central focus. This is the case of Cameron and Rogalski's (2006) work, in which they discuss how sound art installations can generate encompassing environments for visitors, and Butler's work (2006; 2007; Butler & Miller, 2005), in which he argues that environmental awareness can be promoted through artistic soundwalks in outdoor spaces that focus on the multisensory nuances of the embodied experience, and which can be either guided by personal stereos or field guides. The possibility afforded by sound art to represent landscape beyond

visual media is a common highlight in these studies. Geographers have investigated how sound art installations represent landscape and the memories associated with it (DeSilvey, 2010), how landscapes can be recreated through sonic work (Rich, 2017), or how national identities can be conveyed by the reconstruction of the sounds of landscape (Meyer, 2016). In addition, Revill (2012; 2014) has focused on how sound art explores the sensory aspects of landscape experience. The same concerns can be found in Ebbensgaard's (2017) study on landscape architecture, in which he explored how sensory experiences are engineered through the orchestration of sounds in landscape architecture projects.

Literature has also been receiving some attention in the last years. Hones (2015) reflected on the presence of the aural in literature and advanced a series of concepts to address this topic. She highlights the usefulness of the concepts of the acoustic ecology school, and also advances the notions of auralisation, point of audition, auscultation, and diffusion. Hones' main argument is that literary geographies have been mostly focusing on visualisation, and that auralisation also plays a significant role in the formation of a narrative 'here and now', as writers will engage with "assonance, alliteration, onomatopoeia, metre, stress, and rhythm" (2015, p. 80) to create literary worlds, events, and narratives. A work that demonstrates the value of attuning to the aural in literature is Gandy's (2014b) approach to the soundscapes of late modernity in J.G. Ballard's "The sound-sweeper".

In geographic studies of music, dance, sound art and literature, sound emerges as an aesthetic medium. From this perspective, sound is an element that connects and affects different bodies, including humans, animals and plants, and the spaces they inhabit. However, sound itself is also subject to mediation, especially in the case of the recording, editing, and reproduction of sound (DeSilvey, 2010; Duffy & Waitt, 2011; Barns, 2014; Meyer, 2016; Rich, 2017). Regarding this, there are significant overlaps in the way in which geographers of the arts and geographers of technology have conceived mediation and sound. This is most evident in studies on radio. Research on this technology has been varied, but it has mostly focused on the spatial diffusion of sounds through radio. Some works have mostly focused on the informational and affective flows of radio. Alves (2013) has approached how this medium is used to diffuse information, while McCormack (2013) and Wilkinson (2017) focused on the affectivity of the sounds and how it attunes bodies across space. Others have investigated the implications and potentialities of radio diffusion, namely Pinkerton and Dodds (2009) and Peters (2018) who have approached the geopolitical consequences of radio, and Rich (2016) who has focused on how radio has been used to communicate science in museums.

Geographers have also been exploring the use of technologies of sound for their own practice. A number of technologies have recently been proposed to enhance geographic practice. Pompeii (2015) wrote about public radio as a tool for qualitative geographic research. Wissmann (2008) discussed the potential of using podcasts as a pedagogical and scientific tool to create communities of professors, researcher, students, and practitioners. Lastly, Thulin has argued that online sound maps offer "opportunities for (re)thinking and practicing geography through a combination of visual and aural epistemologies and communicative strategies" (2018, p. 206). In addition, the use of phonographic and audio technologies in geographic studies has also been advanced as a way to generate new rich data about spaces, places, and landscapes (Gallagher 2015a; Gallagher, 2015b; Stevenson & Holloway, 2017). In a wider perspective, this overlaps with a general call for geographers to listen attentively to their subjects (Bennett et al., 2015).

## Sound as representation

Geographic works on sound have been often focused on sound as related to landscape and social representations. This line of works expanded during the 1980s and 1990s, and it is still relevant today. The common starting point has been the literature of the acoustic ecology school. The central concept of this perspective was Schafer's (1977) concept of soundscape, which was understood as a sort of sonic equivalent of landscape. European geographers were the first to apply this concept in their studies. French and Spanish geographers applied this concept in studies that were concerned with local identity (Nogué i Font; 1983; 1985; Amphoux, 1993). French geographers in particular have worked with architects and urban sociologists in studies that intend to explore how meaningful sound is for social and urban identities (Amphoux, 1993; 2003; Montès, 2003), which included some critical work about the potentialities and limitations of the application of this concept to urban areas (Amphoux, 1997). On the other hand, British geographers were focused on soundscapes as pertaining to the aesthetics of place, that is, its experience and the emotions it elicits, but also its sense of history and atmosphere (Pocock, 1989; Smith, 1994). To this day, the concept remains central in the discussions in France about the dichotomy between noise and silence in urban space. Amphoux has been engaged in the discussion of these two concepts along with other social scientists who have argued that noise and silence cannot be studied from quantitative perspectives alone (Amphoux & Thibaud, 2001; Amphoux, 2011; 2017). Instead, Amphoux (2011; 2017) argues that in order to understand noise and silence it is crucial to be critical about the conditions in

which listening takes places, and to how soundscapes are spatially and temporally differentiated.

The soundscape perspective has more recently been employed by Central European and South American authors with novel applications. One of the applications has been the exploration of the proximity between the socio-spatial structure of the city and the distribution of sounds. Wissmann's (2014) classifies and maps types of sounds in North American, British, and Portuguese cities, while Romanowska (2014) explored the spatial structure of sounds in the city of Warsaw, Poland, and the perception of residents on the adequacy of sounds. While Wissmann's qualitative approach differs from Romanowska's quantitative approach, both authors share the same concern with understanding how the spatial structure of the city is related to a spatial ordering of sounds. A similar approach is that of Alves (2016), who investigated the interplay between popular culture and everyday life by mapping nonschizophonic sounds (non-recorded sounds, a concept by Westerkamp, 1988, of the acoustic ecology school) in the city of Recife, Brazil.

Another recent application of the soundscape concept can be found in works on place and cultural memory. Torres and Kozel (2010; 2012; Furlanetto & Kozel, 2012; Torres, 2012) have explored how soundscapes are associated to the meanings and practices of local traditions and religious practices. On the other hand, Wissmann and Zimmermann (2010) have discussed how real-world places are reconstructed in audioplays through sound, and the relevance of Schafer's concepts of keynote and soundmark to explain how this is done.

While the concept of soundscape has been thoroughly discussed in other social sciences (e.g. Fortuna, 1996, Ingold, 2007; Fortuna, 2009; Kelman, 2010), there has not been much in-depth criticism by geographers of sound. Rodaway's discussion of the concept (1994) is to date the most thorough critique in our field. The author contested the use of visual terminology to address sounds (e.g. soundscape instead of landscape; soundmark instead of landmark), arguing that sound is experienced differently to visual stimuli. Although Rodaway's critique rightfully points out the limitations of the acoustic ecology school, no alternative concepts or reformulations are proposed. Those have mostly been done by French and Brazilian geographers who have been adapting the concepts and methods to geographic analysis. For instance, Woloszyn (2012) advanced the concept of sonotope to refer to the conditions behind the emergence of soundscapes. On the other hand, some Brazilian geographers have been adapting and reinventing the methods of the acoustic ecology school to study urban space (Torres & Kozel, 2010; 2012; Malanski, 2017). A rather different approach to how the relation

between sound and landscape may be conceived can be found in the Prior's (2017) recent work, where he discusses the aesthetic value of sound in landscape.

More recently, some studies have investigated issues of identity and social representations linked to sound without focusing on the concept of soundscape. For instance, Boland (2010) explored the spaces of diversity of the Liverpool football cultures, and Devadoss (2017) approach the spaces of the Indian diaspora in the United States. Rather than addressing issues of historical identity, these studies criticise the role that sounds plays in the racialisation of urban space.

## The body, presence, and affect

A different stream of geographic works on sound has focused on the relationships between sonic spaces and the body, with a focus on auditory practices. Initially, studies of this kind followed work being done by environmental psychologists from a behaviorist perspective (see Atkinson, 2011), which seems to have been abandoned in Geography, as the discipline turned to post-structuralism, and attention turned to the performativity of sound. Listening and the effects of sound on mind and body have become central aspects in sonic geographies, mostly within the frame of Non-representational Theory or post-phenomenology. The studies of Smith (1997; 2000) and Duffy (2000; 2003; 2005) on the performativities of music performance were seminal in approaching music not as mere representation but as a practice embedded in place and culture. Others also approached the act of listening to music in everyday life, focusing on the emotional and affective content of such practices (Anderson, 2005; Anderson, Morton, & Revill, 2005; Boyd & Duffy, 2012). These studies engaged in literature on sound beyond the acoustic ecology school, namely the anthropology of the senses (Feld, 1984; Stoller, 1989; 1997), cultural sociology (Martin, 1995, DeNora, 2000), political economy (Attali, 1992), and post-phenomenological philosophy (Ihde, 2007; Chion, 1994). All of these works could be framed under a sensorial turn in the social sciences that took place during the 1990s (Howes, 2005; Pink, 2009).

Through this lens, a number of studies have sought to unveil the sonic affects (i.e., affective phenomena transmitted by sound) between human bodies and different types of spaces. The main themes of studies concerned with the affectivity of sound have been the perception and emotional geographies of natural spaces (Duffy, 2010; Jones & Fairclough, 2016); the sensing of the rhythms, pace and qualities of urban space (Simpson, 2009; Revill, 2013; Lehtovuori & Koskela, 2013; Doughty & Lagerqvist, 2016; Wind, Lanng, & Jensen, 2018); sound as a significant element affecting bodies moving through space (Waitt, Harada, and Duffy, 2017;

Cox, 2018); the intimacy and personal narratives associated with dwelling and working spaces (Duffy & Waitt, 2013; Hemsworth, 2016; Kerr, Gibson, & Klocker, 2018; Perng, 2018); the role that sound plays in the activating of personal memories (Waterman, 2000; Desilvey, 2010; Duffy & Waitt, 2011); and the bodily reactions elicited by specific sounds (McHugh & Fletchall, 2012; Nixon, 2017).

A common concern within these studies is to explore what hearing or listening are and mean. Mainly drawing upon the works of Ihde (1976) and Nancy (2007), some geographers have taken up the responsibility to critically assess the nuances of the concept of listening (Bennett et al., 2015; Gallagher et al., 2016; Revill, 2016). A particular interest within the affective geographies of sound has also been memory. Duffy and Waitt (2011) have pointed out that sound plays an important role in remembering, especially in the case of bodily memory. They argue that hearing recorded sounds can enhance bodily remembrance, that is, the sensations, gestures, and feelings of prior emplaced experiences. In a different but related manner, Waterman (2000) and DeSilvey (2010) have explored the potential of recorded sounds to preserve the memory of landscapes which went through profound changes.

Within this line of works, some authors have attempted to create new cartographies of sound. This is the case of Berrens (2016) who presents fluid cartographies, and Duffy, Waitt and Harada (2016) who advance the method of visceral sonic mapping. Perhaps paradoxically, these cartographies do not produce traditional maps; instead, they are mappings of assemblages of sounds heard, feelings, thoughts, movements, objects, and places that come together in space and time to produce significant events in everyday life. Such cartographies, rather than delineating the steady presence of the material landscape, draw out the spatio-temporalities and affectivities of sonic experiences.

There have also been a great number of historical studies on sound which highlight sound as an affective force that shapes places, societies, and experiences. Hill (2015) investigated the 1952 flood event in Lynmouth, UK, and Mills (2017) studied children's sonic geographies of the 1960s, both anchoring their studies in archival work. These studies have in common the unveiling of significant affective content in archives, which may assist us in attuning to the memories, emotions, and affects of the past. Similarly, Holloway (2017) explored ways to reconstruct the sounds of past landscapes, by presenting an experimental methodology for resounding that attempts to connect the present and past soundscape, by eliciting the imagination of the past soundscape when experiencing historical sites.

This line of work on the affective and emotional geographies of sound has equally fomented studies in the subfield of health geographies that highlight the importance of sound as a

mediator between body and space. This is the case of Harold (2013) and Due and Lange (2017), who approached the everyday geographies of deaf people with a focus on how they navigate urban spaces designed for the needs of individuals with no hearing impediments; and Bell (2017), who explored the emotional geographies of individuals living with Ménière's disease, a long-term progressive vestibular disorder. While these authors highlight the need for sensory design of urban and other spaces to cater to the needs of people with hearing disabilities, MacPherson et al. (2016), in a participatory study with artists with and without learning disabilities, show how artistic practices can generate spaces of listening and dialogue, even if non-verbal.

The potential of the insights of this bulgeoning body of work on sound as affect for geographical pedagogy is beginning to be explored. Phillips (2015) opened this discussion as he pointed out the importance of taking into account the multisensoriality of fieldwork with students, and defended that attention to sound can lead students to learn creatively and can foster the acquisition of new skills.


### Policies, politics, power

The links between sound and the political have been a central concern for geographers in this millennium. But they have been so in three distinct ways. First, the policies and politics regarding the regulation of sound itself have been questioned by geographers. Secondly, the role that sound plays in the making and remaking of politics has gathered attention in more recent years. Lastly, some studies have approached the links between sound and power.

The first concern to emerge within geography was the issue of noise or sound policies. In other words, public policies that attempt to monitor, regulate, control, and harmonise the sounds of the city, often oriented towards reducing noise, i.e. lowering the volume or the number of sound sources in particularly bustling locations. These concerns can first be found in the quantitative studies of noise done by geographers in several countries (Tadeu et al. 1995; Bennett, 1997; Lam, Brown, & Marafa, 2010; Szeremeta & Zannin, 2015; Dobryakova & Kolesov, 2016), but they have been mostly undertaken by engineers and architects (Kang, 2007). By the end of the twentieth century, this purely quantitative understanding of noise went through a number of critical approaches by geographers.

In France, some geographers have attempted to bring noise studies closer to soundscape studies by discussing the relation between concepts of noise and sound, and its relation to politics and policy (e.g. Roulier, 1999; Montès, 2003). Amphoux and Thibaud (Amphoux & Thibaud, 2001; Thibaud & Amphoux, 2013; Amphoux, 2011; 2017) have questioned notions of noise

and silence regarding the contemporary city, arguing that noise pollution cannot be conceived simply as a nuisance, but instead it is necessary to compare and contrast physical acoustic data with sociological or cultural data due to the polysemy of notions of noise and silence. These authors have continuously proposed a sonic urbanism that seeks to manage the environment, place, and landscape, instead of simply reducing sound levels in urban space. Their proposals find an echo in Wissmann's work (2014), which discusses the management of noise in the urban environment, and argues that individuals have different responses to noise. He studies the branding of Austin, USA, as the Live Music Capital of the World as a case of urban policy in which loud sounds are taken to have a touristic value, instead of a nuisance to be eradicated, and he questions the notion of silence, arguing that while it can be fundamental for instance sacred places, silence, like noise, can also be unwanted in other places. Identically, Patsarika, Scheneider, and Edwards (2017) address the issue of noise (with a focus on car honking) through the qualitative study of an experimental sonic space in Delhi, India. They highlight not only that noise is perceived differently by individuals, but also that this differentiated perception is intimately related to habit, identity, and class inequality. On the other hand, Harold (2013) also pointed out that the rights of deaf people must be taken into consideration in urban sound design and policies.

Also concerned with policies regarding sound, Matless (2005) investigated the politics of sound in a nature region, showing the presence of competing cultures about how a nature region should sound like, and the debates about the presence and absence of sound. Matless' (2005) study is significant for being one of the first to go beyond policy and to address the politics surrounding sound. Prior to Matless, Kong (1995a; 1995b; 2006) had thoroughly addressed the links between popular music, nation-building, and cultural politics in Singapore. Only more recently this became a widely debated topic. Some authors have argued that sound has a political agency (Revill, 2016) and is significant for politics (Waitt, Ryan, & Farbotko, 2014), and in the last years, a number of studies have demonstrated the role that sound plays in the making and remaking of politics. There are a remarkable number of subjects that have been studied under this lens.

For instance, both Waitt et al. (2014) and Brown (2016) have explored how political protest make up sonic spaces in which individuals bodies are enmeshed in the affects and thoughts flowing in the atmospheres of the event. Waitt et al. (2014) argue that such spaces generate a visceral type of politics, in which the whole body is a participant in a politicised sensory experience. Some of these studies have taken a historical perspective. Both Larraín Donoso (2013) and Millar (2013) approached the use of sound in historical scientific endeavours, and

Simpson (2017) explored the politics of street music in Victorian London. All these studies show that practices regarding sound are profoundly enmeshed in cultural politics. Likewise, Ritts has studied whale music and argues that it is an invention that was made possible through a combination of "animal sounds, recording techniques, consumer trends, and pervasive beliefs about nature" (2017, p. 1109), and its meaningfulness is partially ideological as its success is interwoven with environmentalist movements. We can also find a gender approach in Waitt et al.'s (2017) study on car mobility, in which they investigate the feelings of men and women for cars and the motivations for driving them. On the other hand, a structuralist approach can be found in Brazilian works such as Creuz's (2014) research on the structural circuits of sound and musical activities in Brazilian cities, in which he draws a link between the economic structures of the city and the spaces of formal and informal musical production, or Malanski's (2016) who uses soundwalks to address the multiple territorialities and rhythms in pedestrian promenades in Londrina, Brazil.

In relation to the research on sound and politics, some geographers have also sought to uncover the ways in which sound is used as an instrument of power. Gallagher (2011) has described how sound is used by school workers in practices of surveillance and discipline of students, and Pinkerton and Dodds (2009) have explored the ways in which the spaces of radio, through the spatial distribution of its infrastructure and its affective power, are both a product of and a distributor of geopolitical ideologies. Gallagher (2016) states that sound as a "force that physically moves bodies of many different kinds" has the ability to "exercise power" due to its "affective potency, particularly when this operates in conjunction with conscious registers of sonic meaning" (2016, p. 47). He argues that while we know much about how discursive practices, visual techniques and institutional structures regulate life, there is still more to know about how power is exerted through sound. Consonantly, Kanngieser (2012) also attests sound, and more specifically the voice, as a form of power, declaring that the voice "expresses affective and ethico-political forces", and calling our attention to "[h]ow we say things, and not just what we say [due to its] significant effects on our capacities to listen and respond to one another, effects that also play out on the level of the political" (2012, p. 347-348).

## Deaf spots

Sound has been approached in a myriad of themes in Human Geography including arts, media, technologies, landscape, spatial representations, collective and personal identity, affect, emotion, the body, power, politics, policies, pedagogy, and research methods, among others. As such, sonic geographies not only have established themselves as a significant subfield, but

also as a transversal field of inquiry that resonates amongst the various subfields of geography, such as social, cultural, health, urban, rural, historical, and political geography. The field of sonic geographies has only recently grown to a state in which its main concepts can be discussed in detail. Sound has been approached in many different ways: as an aesthetic feature, as representation, as an affective force, or as an element in power structures. These distinct perspectives have used concepts which are often complementary but at times competing, such as soundscape, noise, silence, sonic affects, listening. We are at the moment in which it is necessary to think about the ecology of these sonic concepts. In doing so, it is necessary to think about the current deaf spots.

Sonic geographies have been deaf to a number of sonic or at least sound-related phenomena. What seems most obvious is the deafness to research undertaken beyond country and linguistic borders. There is little dialogue between researchers in Anglophone countries and other languages. Particularly in France, there is a significant amount of work, which has been done in dialogue with architects, which is not referred or refers work in the Anglophone community. European continental works seem to be more anchored in soundscape studies (e.g. Roulier, 1999; Montès, 2003; Amphoux & Thibaud, 2001; Wissmann & Zimmermann, 2010; Thibaud & Amphoux, 2013; Wissmann, 2014), while the Anglophone community seems more focused in developing a performative understanding of sound (e.g. Gallagher & Prior, 2014; Gallagher et al., 2017; Doughty et al., 2016). Works beyond these two geographies are more scattered, but in Latin America (Alves, 2013; Larraín Donoso, 2013; Cruez, 2014; Alves, 2016) there is a growing body of work on sound from a critical structural perspective. Also, a growing number of Brazilian authors are adapting and applying concepts and methods of the acoustic ecology school (Torres & Kozel, 2010; 2012; Furlanetto & Kozel, 2012; Torres, 2012, Malanski, 2016; 2017). Studies focused on Asia have privileged issues of identity in relation to sound and music (Kong, 1995a; 1995b; 2006; Patsarika et al., 2017; Devadoss, 2017). Work on the politics and policies of sound could benefit from a greater dialogue between these lines of research, considering the nexus between social structures, sonic representations and identity, and situated practices and performativities which come together to differentiate sounds, people, and spaces. On the other hand, while sound has been thoroughly analysed in most subfields of human geography, there is still little work on sound in economic geography, with the exception of music (Lange & Bürker, 2013). Despite this, there are profound links between sound and economy. Economic studies have for a long time put into evidence how noise affects housing prices (Boes & Nüesch, 2011), and recent studies have highlighted that the soundings of names provides grounds for racial and ethnic market discrimination (Acolin, Bostic, & Painter, 2016).

Sonic geographies must explore in greater detail the connections between the distribution of sounds, money, goods, and bodies, and their relation with practices of consumption, prosumption, financialisation, touristification and marketing.

A third deaf spot in which sonic geographies may incur is to treat sound as an isolated component through which the world is presented to us, in a similar manner to how visuality has been treated in geography. Since Pocock (1993) pointed out that listening is in constant interplay with the other senses, few works have situated listening or sound within larger human or more-than-human perceptual systems. Pocock himself was especially interested in the interplay between vision and sound, and other connections have also been explored, such as the interplay between temporal perception and sound (Anderson, 2004; Duffy & Waitt, 2011), or between kinectics and sound (Boyd & Duffy, 2012) but other connections such as those between sound, smell, taste, proxemics, or temperature remain underexplored.

Lastly, sonic geographies have mostly focused on the issue of listening. This issue has likewise been a significant topic in the philosophy of sound (Nancy, 2007; Ihde, 2007), architecture (Blesser & Salter, 2007), sociology (Bull, 2007), anthropology (Feld & Brenneis, 2004), and the multidisciplinary field of sound studies (Back, 2007; Voegelin, 2010; Sterne, 2012; Kassabian, 2013; Erlmann, 2014). Nevertheless, the geographies of sound surely stretch beyond what can be perceived by human ears. Sonic geographers have perceived this. For instance, Gallagher and others have argued for an 'expanded listening' attuned to "how bodies of all kinds – human and more-than-human – respond to sound" (Gallagher, Prior, & Kanngieser, 2017, p. 618; also Gallagher, Prior, Needham, & Holmes, 2017). However, there seems to be a lack of perspectives that are able to completely abandon the act of listening and search for other possible focal points. Recent work on the voice (Kanngieser, 2012; Mills, 2017) has begun to explore new grounds for sonic research but it is likewise trapped inside the human body.

Sound, as a set of vibrations with an almost infinite number of possible sources and which resonate across all types of materials, demands a wider understanding. Other centralities must emerge within sonic geographies, such as soundmaking (human verbal and vocal soundmaking, but also bodily non-lexical, technological, geological, or animal soundmaking) or resonance (semiconductiveness of affective phenomena across bodies and materials, amplification of sound and the role it plays in sonic competition; or sonic impedances).

This is where I situate the contribution of this thesis. While this thesis makes a contribution to the literature on listening by exploring the underexplored phenomenology of transitions between sonic environments, it also aims to expand how the sonic experience is currently

understood by addressing soundmaking in everyday life. Furthermore, I also seek to contribute toward the field of sonic geographies by exploring possible connections between the body, presence, and affect in sound, and the politics of sound itself. In the next section, I will lay out the fundamental concepts I drawn upon to achieve these goals.

*Key concepts for the study of the urban sonic experience*

This thesis is focused on the phenomenology of the urban sonic experience, namely the acts of listening and soundmaking as more-than-representational acts. My perspective on this issue, which I will outline in this section, departs from the post-phenomenological concepts of affective atmosphere and atmospheric perception. In addition, I also seek to understand how sonic interventions in urban space that engage with these more-than-representational acts have the capacity of altering urban territories. With that in mind, I will also outline my perspective on how affective atmospheres and atmospheric perception may relate to urban territories and politics.

The starting point for thinking about affective atmospheres is the concept of affect, which has been widely defined as an organism's capacity to affect and to be affected by other organisms. This stems from Spinoza's original definition, which was recovered and rethought by Deleuze (1988), and afterwards criticised and developed by several authors under affect theory (Brennan, 2004; Clough, 2007; Gregg & Seigworth, 2010), post-phenomenology (Nancy, 2007; Böhme, 1995; Stiegler, 1998), non-representational theory (Thrift, 2008; Anderson & Harrison, 2010), feminism (Thien, 2005; Tolia-Kelly, 2006; Colls, 2012), and political ecology (Bennett, 2010). Thinking from the lens of affect implies understanding that human action is not solely determined by conscious thought. It is also determined by several non-representational processes such as feelings, intuitions, affordances, drives, compulsions, sensations, habits, traumas, reflexes, automatic physiologic processes, among others (Massumi, 2002; Thrift, 2008). While some of these processes are unconscious personal phenomena that escape representation, others also originate in a series of environmental stimuli that are perceived consciously or unconsciously by the neurological system of human subjects. Affect scholars have focused on this constant interaction between consciousness, unconsciousness, physiology, and environment; an interaction that undermines the idea that the subject is contained. In other words, it undermines the idea that human experience is reducible to the human body and consciousness, and that we can understand the human subject without understand the environment in which he dwells and the events in which he takes part (Brennan, 2004; Clough, 2007; Thrift, 2008; Gregg & Seigworth, 2010). From the lens of affect, human

action is at the crossroads of the social and the biological, culture and nature, mind and body (Brennan, 2004).

While affect theorists have successfully argued that experience cannot be reduced to consciousness and representation, it has also been pointed out that thinking about the affectivity of bodies cannot lead us to reduce experience to the impersonal perceptions that surpass representation. Feminist and intersectional scholars such as Thien (2005), Tolia-Kelly (2006), Colls (2012), or Hayden Lorimer (2015) have argued that studies under this perspective often display a universalistic tone, and do not take into account social distinctions (such as gender, ethnicity, or social class) that might explain what takes place, or the different (and differing) ways in which space might be experienced by subjects. On the other hand, it has also been argued that non-representational processes take place in constant interaction with conscious and reflexive thought (Long & Moore, 2012; Blackman, 2010; 2012), and so experiences must be understood as relational, but reflexive (Wylie, 2010; Wetherell 2014; Simpson, 2015).

Geographic studies on affect have often focused on how affects are transmitted within certain spaces, through the concept of affective atmospheres. Ben Anderson (2009; 2014) defines affective atmospheres as what is 'between' in space, the shared ground in which affects are transmitted. However, these are not only transmitted across bodies. As Thrift states, affective transmission is also "a property of particular spaces soaked with one or a combination of affects to the point where space and affect are often coincident" (2008, p. 222), meaning that the non-human also plays a relevant role. For Stewart (2011; 2014a), individuals are always forced to attune to the atmospheres of the places that they encounter, due to the immediate impact on their body, but the atmosphere does not predefine human action. Rather, it generates choices (Ahmed, 2010; Stewart, 2011). The concept of affective atmospheres as outlined by Anderson (2009) has had a particular impact in human geography, motivating several empirical studies in diverse subareas such as economic geography (McCormack, 2015a), political geography (Fregonese, 2017), urban geography (Gandy, 2017), rural geography (Adams-Hutcheson, 2017), transport geographies (Bissel, 2010), digital geographies (Ash, 2013a), or social and cultural geographies (Edensor, 2012; Bille, 2015).

There have been different conceptions of what an atmosphere is, but the concept has become significant for contemporary cultural geography (Thrift, 2008; Anderson, 2009; 2014; Hasse, 2014), anthropology (Stewart, 2011; Bille, 2015), and philosophy (Sloterdijk, 2005; Griffero, 2014; Böhme, 2017a; 2017b), with significant overlaps.

Rather than outlining the different theoretical lineages of the concept[3], I will instead focus on situating the conception of affective atmosphere that underpins this thesis, which follows contemporary reworkings of the New Phenomenology of Schmitz (1980), especially that by Griffero (2014), but also Böhme (2017a; 2017b). For Griffero (2014), atmospheres are not properties of places or objects themselves, but a property of the encounter between bodies that perceive and perceived bodies and space. Griffero (2014) argues that there are no situations that are deprived of atmospheres, but the atmospheres of places are ever-changing. Both Griffero (2014) and Böhme (2017a; 2017b) refuse the idea that atmospheres are abstract semantics or pure metaphors. However, these authors differ regarding to how they perceive the vague character of atmospheres. While Böhme (1993; 2017a) argues that the vagueness of atmospheres must not necessarily lead to a vague conception of what is an atmosphere, Griffero (2014) argues that vagueness can be useful to understand the ever-changing character of atmospheres. Despite this slight disagreement, both philosophers place emphasis in the role that the body plays in the experience of metaphors.

For Griffero (2014), atmospheres can only be perceived as a whole, and they cannot be divided into individual stimuli, such as a sound, a sight, or a smell. Griffero (2014) argues that we must focus not on the physical body, but on the felt-body, that is, the way in which the body is activated by atmospheric stimuli. Instead of conceiving the body as a pre-established set of discrete organs, what this perspective demands is a partition of the body into 'corporeal isles', a concept that Griffero draws from Schmitz (1965) and which refers to the parts of the body that are activated by a certain experience. Griffero (2007; 2009; 2014) and Böhme (2017a; 2017b) conceive atmospheric perception as emerging from a plurality of 'sudden' environmental stimuli that precede meaning-making, yet they admit that the perception of atmospheres are also subject to a plurality of modes of perception. They distinguish between objective understandings of atmosphere (as in, 'the night') and more subjective experiences of specific atmospheres (such as 'this night for me'). I would add Ahmed's (2010) insight that the perception of atmospheres is also dependent upon the angle of arrival of individuals to it. In other words, bodily capacities, including permanent and temporary capacities, and physical and psychological capacities, change the way situations and their atmospheres are perceived.

Affective atmospheres have profound implications for how space is organised. A number of geographic studies have established a connection between the regulation and design of the atmospheres of certain spaces, such as airports, malls, football stadiums, videogame spaces,

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[3] For a good overview of the different approaches to the concept, see Gandy (2017).

and the behaviour of individuals (Adey, 2008; Ash, 2012a; 2013b; Anderson 2014; Miller, 2014; Edensor, 2015; Edensor & Sumartojo, 2015). Rather than proposing a behaviorist understanding of affective atmospheres, I want to address how atmospheres can act as generative force fields that provoke social action, but a social action that is substantiated by choices (Ahmed, 2010; Stewart, 2011).

I am especially interested in understanding the relation of affective atmospheres and the formation of territories in urban space. In this thesis, I follow Brighenti and Kärrholm's (2016; 2017; 2018a; 2018b) conception of territory as a socio-spatial formation. Instead of understanding territories as perennial entities, Brighenti and Kärrholm (2016; 2017; 2018a; 2018b) have proposed a closer look to how certain practices are territorialised, deterritorialised, and reterritorialized. It is clear in these terms that they depart from Deleuze and Guattari's (1987) philosophy, but their perspective incorporates different perspectives from human geography (e.g. Sack, 1986), poststructuralist philosophy (e.g. Foucault, 2004; Lefebvre, 2004), and social anthropology (Goffman, 1971). For Brighenti (2010), territory must not be confused with the space in which it takes place. He refuses an essentialist view of concept, in which territory would be a natural consequence of a certain spatial property or a certain form of social organisation. Instead, Brighenti (2010) argues that territory is an imagined entity with expressive and functional components. It is an entity which draws a boundary, which should raise questions about who is drawing, how and why the drawing is made, and what kind of drawing is being made. While they are imagined, territories are not purely imaginary. Instead, they have actual consequences in how spaces are used by individuals. The actuality of territories can be expressed through many ways, from active actions such as violence, or passive actions such as legislating or simply using and occupying space. On the other hand, territories also serve social and political functions as they enforce certain practices and exclude others. While Brighenti's (2010; Brighenti & Pavoni, 2017; 2018; Brighenti & Kärrholm, 2017) work has focused in demonstrating how human and human-animal collectives generate micro-territories in repeated yet generative practices, Kärrholm (2007; 2008; 2009; 2015; 2017) has called attention to the generative properties of the materiality of urban space in terms of co-producing territories by the different affordances of space.

Brighenti and Kärrholm (2016; 2017; 2018a; 2018b) are certainly not among the firsts to understand territories as temporal and spatially multiple (for an overview on this, see Haesbaert, 2004), but their understanding of territory as a formation is particularly helpful for understanding the fragile territories of everyday urban life. The territories of urban sound are

particularly volatile, as they require constant sonic production to be maintained (LaBelle, 2010).

A particular aspect of interest for understanding how affective atmospheres alter urban territories in Brighenti and Kärrholm's work on territories is the emphasis on the proximity of territory and (urban and bodily) rhythm (Brighenti & Kärrholm, 2018b; Kärrholm, 2009). Drawing mainly upon Lefebvre's work on rhythmanalysis, the authors argue that territories can be understood as rhythm formations in which their elements converge and interact in time and space. Furthermore, it is argued that rhythm provides a starting point to understand how the actions of specific assemblages of bodies can force other bodies in or out of the territories they make. However interesting, this starting point must lead us back to affect and to understand how exactly bodies can be forced in or out of territories. The question is: if affective atmospheres can act on the individual through ways that exceed but include representation, and urban territories are the result of ephemeral, yet expressive and functional, socio-spatial formations, what lies in between atmospheres and territories? In a clearer way: how does the affective charge of atmospheres on the body works to alter the territories of urban space produced by bodies? My proposal is to address what has been called visceral politics (Probyn, 2001; Hayes-Conroy & Hayes-Conroy, 2008; Longhurst, Johnston, & Ho, 2009; Hayes-Conroy & Hayes-Conroy, 2010; Waitt, Rayn & Farbotko, 2014). As Hayes-Conroy and Hayes-Conroy have put it:

> "politics refers to the everyday dynamics of power that emerge in the production of minded bodies, which are always socially labeled and always affected by labeling. Such affecting occurs in the visceral realm – the realm in which the whole molecular ensemble of the minded body feels the world, the realm from which life processes and events precipitate, and hence in which political activation materially unfolds." (2008, p. 462).

My argument is that visceral politics are at the heart of what goes on when changes in the affective atmospheres of urban space alter its territories. Atmospheric perception is political whenever the bodily changes it provokes generates new ways to attune to and appropriate space.

In the next chapter, I will present the research project's participatory methodology which led to the four studies that compose this thesis. As these studies intended to make significant contributions to the field of sonic geographies, each has its own theoretical framing that puts the empirical data into context. For this reason, the three key concepts I have presented here are not present in all the studies. However, I will return to them in the conclusion.

# Chapter Two. The methodology.

In this chapter, I will present the methodology that guided the studies of this research project. This methodology is informed by the approaches of non- and more-than-representational theories that I explored during the concept- and method-oriented literature review conducted in the Phase One of the research project. I was particularly interested in the possibilities of thinking-in-action, and I intended to create a participatory study that was based on the subjectivities of everyday living instead of being based on the objective perspective of an authoritative researcher. I wanted theory and findings in this project to emerge from the field, and to be co-created with research subjects, rather than deducing facts from previously defined data sets. I believed that the more-than-representational methodologies I had read about would provide the best ground to depart from.

I will begin by addressing the concept of though-in-action that guides this project. Afterwards, I will describe in detail the studies I conducted with and without the group of participants. This will provide practical information about the empirical studies that were conducted, how they relate to each other, how data was gathered and analysed in each of them, and how the main questions and the conceptual framework of this project were co-created with research participants in each study.

## *Thought-in-action*

Non- and more-than-representational theories have worked to produce situated knowledge, taking into account that thought does not occur apart from time and space. Instead of interpreting the situatedness of knowledge production as a danger for the objectivity of such knowledge, non- and more-than-representational theories see the embeddedness of the researcher in places and events as potential to register the subjective, the affective, and the relational of everyday events. Anderson and Harrison (2010) have referred to this mode of knowledge production as 'thought in action'. This concept is based on the notion that knowledge cannot be divided from the reality in which it emerges, thus contesting the classical Cartesian divide between abstraction and reality, which is also linked to a divide between the rational mind and the sensory body. Knowledge production, therefore, is not only concerned with the mental representations of reality (e.g. its discourses, images, structures, meanings, and

emotions), but also the way in which such representations are produced through the involvement of the sensory body (including practices, habits, affects, affordances) in the actions and interactions that the world is made of.

From this perspective, some of the conceptual divides in social science become blurry. Firstly, the focus on aspects beyond representation led to the consideration of physiological and neurological aspects in social action, thus diluting the division between the biological and the social. This insight originated in neurology (Damásio, 1994), social psychology (Brennan, 2004) and affect theory (Clough, 2007), and became widely diffused among cultural geographers (Thrift, 2008; Anderson, 2014; Spinney, 2015; Ash, 2015). This also relates to the critique of the conceptual separation between mind and body. Following critiques by phenomenologists (Ihde, 1979; Merleau-Ponty, 1962) and feminist thinkers (Haraway, 1988), the Cartesian separation between mind and body has been progressively substituted by a notion of embodiment in social science (Pink, 2009; 2017). This refers to how body and mind (or consciousness) are not opposable entities, as thought is generated *in locus* and *in acto*, and it is through the presence of the body in the world that the subject forms its consciousness and represents the world and him or herself. This also led to the blurring of another border; the one between subject and environment. The subject, as a form of presence in the world, is also an inseparable element of the world, a body-mind constantly penetrated by its elements in the most diverse ways: through air, water, food, light, sounds, vibrations, smells, bacteria, technologies, among myriad others (Anderson & Harrison, 2010; Greenhough, 2010; Posteraro, 2014). Pink (2009; 2017) has argued that this must give way to an emplaced perspective in research, which is one that goes beyond embodiment (the fusion of body and mind) to also include the environment, therefore addressing the fluxes between body, mind, and the environment.

These ideas force us to revise the notion of field. Regarding this, it is mainly the traditional division between: (a) spacetimes of theoretical exploration, in which the researcher reads the work of colleagues and talks to them, usually in the campus of academic institutions; (b) spacetimes of data gathering, in which the researcher goes to a place she or he considers to be the field of analysis; and (c) spacetimes of data analysis, frequently again in universities, where the researcher analysis, reflects, and writes about the data she or he collected in the field. This sequence of academic work is based in the Cartesian divide between representation and reality (McCormack, 2013), that is, in the rationalist idea that theories are formed as abstract representation, and that it is possible to gather real data that allow us to confirm or falsify theories. Feminist critiques of science (e.g. Haraway, 1988) have argued against this divide,

claiming that knowledge does not come from the abstract, as every thought is situated in a social, historical, and cultural context. Researchers working with non- and more-than-representational theories have designed their methodologies with these insights in mind (Anderson & Harrison, 2010). Thus, the field is now extended and understood as the totality of places and events that the researcher experiences and from which he or she produces knowledge (McCormack, 2013).

In this sense, ethnographic methodology has been explored with a renewed interest during the twentieth-first century (Vannini, 2015a), due to the possibilities that participant observation allows for exploring the geographic experience through the body. In particular, methodologies that allow the researcher to be put in 'risk', or at the centre of the action, and to be affected by geographic experience and practice have been valued (Greenhough, 2010; McCormack, 2013). This 'risk' does not specifically refer to a possible threat to the physical integrity of the researcher. Instead, it refers to an epistemological risk, in which the researcher must allow that the experience of the world (re)defines his or her concepts, through *in situ* reflections about what takes place, in order to bring academic knowledge closer to the practical knowing of the world, thus explaining what takes place without reducing it to static representations.


### *The starting point: sound diaries*

My first step in the empirical methodology was to create a group of participants that could conduct exploratory experiments and think-in-action with me. I recruited twelve participants. I invited several previous acquaintances whom I knew had an interest in exploring the sonic geographies of their everyday lives. For this reason, I challenged them to participate in a study of urban sound and I explained them the methodology. Twelve individuals accepted the challenge and committed themselves to the research. The number of participants was enough to generate varied data and allowed me to analyse the data in the time frame I had to conduct the studies. The participant's interest in exploring the sonic geographies of their everyday lives and commitment to the methodology were the sole reasons for recruitment. However, there was a concern to have some diversity, although this study does not intend to approach differences among social groups, nor the sample is big enough to test those differences. There is diversity in terms of age, gender, and place of residence, but not in terms of ethnicity.

The group can be briefly described as follows. The participants' gender is evenly distributed and their age ranges from 20 years old to 43 years old. Five participants reside in the city of Lisbon, five live in suburban towns in the Lisbon Metropolitan Area (henceforth LMA), and the remaining two live in peri-urban areas next to LMA. All of them are full-time workers or

students in the city of Lisbon. Their education level ranges from lower secondary education to completed PhD. None of the participants has received formation in Geography or other relevant field for this study. All participants are of white ethnicity.

The first experiment we conducted was a series of sound diaries. We conducted these in two rounds. The first round took place in December 2014. These were exploratory sound diaries in which I intended to get a grasp of what kind of data I would be able to gather and how I could make sense of it. The second round took place between March and August 2016. In this section, I will explain why I choose to conduct sound diaries, how they were conducted, and discuss the significance of the data obtained through this method.

Non- and more-than-representational theories in geography has caused a shift from a predominant analysis of language, in which the interview was a widely used method, to a predominant analysis of practices and performances which is mainly done through ethnographies (J. Anderson, 2009). The method of the interview has been criticised for not conveying the immediate and emergent character of emplaced everyday life rhythms and affects (McCormack, 2013). Thus, ethnographic and autoethnographic methodologies have become increasingly popular, because they allow the researcher to engage in the experience of everyday life practices, and thus approach the most elusive aspects of experience (Vannini, 2015a). These methods have been helpful in unveiling affective experiences and atmospheric relations in everyday life. Yet, they also pose the threat of blurring out the distinct interpretations that subjects make of themselves and their emplaced experiences. As we have seen, it has been argued that non- and more-than-representational studies often universalise subjective experiences, or fail to take social distinctions (such as gender, ethnicity, or social class) into account (Tolia-Kelly, 2006; Colls, 2012; Lorimer, 2015). The interview may allow a deeper understanding of such subjective experiences, and there has been a growing debate on how interviews may be approached to do so (Metz, 2008; Duffy & Waitt, 2011; White & Drew, 2001; Marling, 2012; Dowling, Lloyd, & Suchet-Pearson, 2016).

In my research, I engaged with the sound diary method, as a way to design interviews for the study of the affectivity of sound. This method, originally presented by Duffy and Waitt (2011), consists in two parts. In the first part, participants are asked to record the meaningful sounds they hear during a pre-defined period. In the second part, an after-the-event conversation with each subject takes place, and the recorded sounds are elicited as part of the conversation. For Duffy and Waitt (2011), the elicitation of sounds invokes what the subject felt during the experience, and allows a more profound understanding of emplaced experiences. While I followed Duffy and Waitt's (2011) conception of the method, the way I guided the interview

had some original elements, namely the exploration of the participants' metaemotional and metacognitive experiences. I will address this in the following subsections. I will argue that the gathering of materials by ordinary people during their everyday life activities and their elicitation during interviews triggers metacognitive and metaemotional processes which may unveil the emergent character of everyday life affects. With this, it is possible to undertake the fundamental task of re-approaching the subject as reflexive and meaning-making, while still situating the material-relational nature of his or her agency (Wetherell, 2014; Simpson, 2015). I will begin by presenting my study on sound affects conducted with the group of participants in Lisbon's metropolitan area. I will then discuss the usefulness of the methodology I have applied in three parts: (i) metacognition, metaemotion and its value for interpreting affective phenomena; (ii) the use of data gathering by ordinary people; (iii) the use of elicitation of materials during interviews.

### How diaries were conducted

The method I applied is a variation of the sound diary, one among many methodologies which have recently been proposed for reaching the goal of bringing the researcher closer to the experiences of ordinary people, while still putting the experiences of these people in first place. In my study, the sound diary method had three stages. First, I asked participants to record sounds they come across during a weekend day and to keep a diary of their activities. I asked them to record a minimum of three sounds, but most participants recorded more than three. They could record each sound for as long as they felt it was necessary, and they could use any type of recorder. Most participants used their smartphones. The recorded sounds should be sounds that participants feel that affected them in a particular way, either positively or negatively. With this, participants created a collection of materials for elicitation close to that of Duffy and Waitt (2011). However, the fact that they were collecting recordings for a whole day also induced the same understanding of sonic spatial changes that the method of soundwalking is known for provoking. The soundwalk method can be defined as an excursion with the purpose of listening attentively to the environment, generally with resource to phonographic or videographic recording (Westerkamp, 1974; Butler, 2006; Wissmann, 2014). Soundwalks are especially useful for understanding how sound relates to space and provides environmental information about where we are. As participants were paying attention to the sounds around them throughout an ordinary day, they also engaged with the changes in sound across different spaces.

After participants completed their sound diaries, I conducted an interview with each one. The first interview consisted on only two questions. First, I asked the participant to describe the day in which the recordings were made, based on the diary he or she created. Afterwards, the recorded sounds were played, and we talked about why he or she chose to record those sounds. In the first interview, some significant insights emerged and some of these became questions that I posed in the following interview with another participant, and so on with all participants. After all interviews were concluded, I talked again with all participants and posed the questions that I had not posed before. The final list of questions is available in table 2.

Due to this process, the direction of the study was not predetermined by me, but instead followed what the participants chose to highlight. Thus, the outcomes of these sound diaries generated a co-comprehension of the everyday sonic experience of participants. This co-comprehension unfolded mainly due to the exploration of processes of metacognition and metaemotions that emerged during the participant's data collection and the interview: as they questioned themselves about how they came to know urban space, a mutual sharing and understanding of affective phenomena occurred between researcher and ordinary people. In the next subsection, I describe the importance of metacognition and metaemotions in this process in further detail.

Table 2. List of questions posed in the sound diary interviews.

- Can you please describe the day in which you conducted the sound recordings?
- Can you play the sound recordings and tell me about why you decided to make these recordings in particular?
- Are there any sounds in particular that are important to you, but you could not record for some reason?
- At what period of the day do you think you are more attentive to sound?
- Are there any particular moments in which you feel more attentive to sound?
- Have the sounds you hear ever made you change your behavior?
- What do you think influences your predisposition to hear?
- What is your favourite place in terms of sounds?
- What is the place you like the least in terms of sounds?
- Are there sounds that you associate to specific places, or moments of your life?
- Are there sounds that you associate to certain feelings?
- Are you usually conscious about the sounds you make in your everyday life?
- Are there places in your life that you cannot act, or make sounds, the way you wish to?
- Have people ever commented on the sounds you make?

## What is metacognition and metaemotion

Metacognition and metaemotion are separate but similar processes. Metacognition can be defined as the "knowledge and awareness of processes [of cognition] and the monitoring and control of such knowledge and processes" (Tarricone, 2011, p. 6). It can also be defined in a simplistic manner as "thinking about thinking" or "cognition about cognition" (Tarricone,

2011). Metacognition, as knowledge about cognitive processes, plays a decisive role in the ability to learn, to remember, and to make decisions, and for this reason it has been studied mainly by psychologists and educational researchers (Koriat & Goldsmith, 1998; Stankov & Kleitman, 2014).

Likewise, metaemotion is generally recognised as "an emotion that has other emotional phenomena as an appraisal object" (Norman & Furnes, 2014, p. 3). For Mendonça (2013), metaemotion has a reflexive quality, meaning that it can change the ongoing emotional experience of the subject, either by enhancing, minimizing or redirect it. Similarly to metacognition, metaemotion is also broadly defined as "emotions about emotions" (Mendonça, 2013; Norman & Furnes, 2014).

Both concepts refer to processes of reflection which play an important part in the control of cognition and emotion, respectively. It has also been pointed out that metacognition and metaemotions are closely related concepts, not only because they are similar processes (Gottman *et al.*, 1996), but also because their differences are not always clear-cut, as metaemotion may involve cognitive processes and vice-versa (Norman & Furnes, 2014).

Flavell (1979) has distinguished three modes of metacognition: experiences, knowledge and strategies. Here, I follow the rationale of Norman and Furnes (2014), who propose that the same distinctions should be applied to the concept of metaemotion. First, metacognitive or metaemotional *experiences* are those that take place during ongoing intellectual or emotional acts. They are perceptions and evaluations of one's knowing and feeling, which often alter the cognitive or emotional experience. Furthermore, these processes often overlap, as metacognitive experiences may trigger feelings (e.g. of anxiousness or enthusiasm regarding one's learning) and metaemotional experiences may be accompanied by metacognitive experiences (e.g. one may not only feel angry for feeling frustrated, but also reflect on why the emotion of frustration surfaced) (Norman & Furnes, 2014).

Secondly, metacognitive and metaemotional *knowledge* refers to what people know about how they think or how they feel. These are organised sets of thought about the processes of thinking and feeling that, in everyday life, are mobilised to understand and guide one's thinking and feeling. It is therefore closely linked to metacognitive and metaemotional experiences. It is also closely linked to *strategies*. Metacognitive strategies are those which the individual deploys in order to control cognitive processes to attain a certain goal. Metaemotional strategies, on the other hand, are mainly forms of self-regulation or control. They are distinct from emotional intelligence, which is the management of emotions with the purpose of reaching a goal (Norman and Furnes, 2014).

During the sound diaries, some of the activities that the participants engaged in, such as identifying affective sounds, recordings sounds or remembering them, triggered metacognitive and metaemotional experiences. These were helpful in the unveiling of important affective phenomena regarding the participant's sonic experience. In the next subsections, I will further elaborate on this.

## Participants as data generators

In the first stage of the sound diary, I asked the participants to record the most affective sounds they come across during a week day, and to write down what they did during the day. This corresponds to the first stage of Duffy and Waitt's (2011) sound diary, but also reminiscent of an older tradition within ethnography of using native image making as a "artifacts of a particular time and place and as representations of how individuals who made them saw things" (Margolis & Pauwels, 2011, p. 55). For Bignante (2010), there are different levels in which native image making may be useful. On the one hand, it may simply function as an ice-breaker for a conversation. On the other, it can be used to explore the intentions of participants when they created the images and the meanings they attribute to those images. Bignante (2010) also adds that native image making gives the participant the ability to associate and elaborate meanings on the recorded images. This empowerment of the ordinary subject is most useful for research on everyday life. Sadly, until the last decades, the ordinary subject often played a marginal role in research, and could only have his or her own visions of the world interpreted by the geographer but rarely actively contributed towards that interpretation. However, recently, traditional methods in cultural geography such as the interview or surveys, as well as the process of "going out into the world, reporting back, and then analyzing events", have being criticised for being inadequate to "the task of apprehending the affective and processual logics of the spacetimes in which moving bodies are generative participants" (McCormack, 2013, p. 118). Hence, cultural geographers have been engaged in experimenting with methods and methodologies, seeking means to capture the dynamism of everyday life, and to theorise about sensorial fluxes, affective atmospheres, assemblages, rhythms, and events as they occur (Law, 2004; McCormack, 2013; Vannini, 2015a; Manning, 2015). Some traditional methods, such as the interview, have been revised in order to suit the study of affect, relacional materiality, and movement (Dowling, Lloyd, & Suchet-Pearson, 2016).

A central matter that must be highlighted in these methodological shifts is the emergent issue of intersubjectivity (Simpson, 2015). That is, when research is focused on the researcher's

experience alone, the whole diversity of affects and reactions to the events of the world remains unexplored. With that in mind, some studies have relied on participatory research, in which the research works closely with a set of participants that collect and discussion information along with the researcher (e.g. Duffy & Waitt, 2013; MacPherson et al., 2016; Dowling, Lloyd, & Suchet-Pearson, 2017b). In many of these studies, researchers have employed creative methodologies in order to let participants define their worlds and express their experiences more freely (Hawkins, 2015; MacPherson et al., 2016; Boyd, 2017).

In this context, native image making techniques have been used by geographers seeking to generate a more direct and co-produced knowledge (Dowling, Lloyd, & Suchet-Pearson, 2017b). Images in this case can be created in many forms. They might include paintings, photographs, objects, samples, or recorded sounds. Although visual, material, and aural media differ greatly in regard to the perception and meaning making they provide (cf. Handel, 2006; Nancy, 2007), asking ordinary subjects to create their own data always permits a more cooperative interpretation of what geographers usually refer to as 'the field'.

The literature on these techniques highlights the advantages of the elicitation of these materials produced by participants during interviews (Epstein *et al*., 2006; Bignante, 2010; Duffy & Waitt, 2011; Lenette & Boddy, 2013; Dowling, Lloyd, & Suchet-Pearson, 2016), but the event of data gathering itself seems to be less explored. I would argue that when research participants are given the task of collect data from their everyday life, they engage in reflexive thinking regarding their sensing of the world, and this provides a vital opportunity to explore affective experiences. Others have made similar arguments (Vannini, 2015a; Dowling, Lloyd, & Suchet-Pearson, 2017b). However, I would add that through metacognitive and metaemotional moments, participants can discover nuances of their relations with the surrounding environments that tend to not be consciously perceived in everyday life. Authors such as Howes (2005) and Pink (2009) argue that the individual mind and body is an emplaced one, i.e. it cannot be thought of without reference to the place where it is located because its stance, moods, thoughts and actions are continuously affected and modulated by the sensing of the environment, which has been framed as atmospheric relations (Anderson, 2014; Griffero, 2014) or attunement (Stewart, 2011). When research participants engage in an activity of gathering data which illustrates what they have sensed, they become aware of this emplaced position, which in turn leads them to question how they come to know their environment and how much of what they feel and do is a conscious or unconscious response to the conditions of the environment.

In the study I have conducted, this sudden awareness of the emplaced position of the research participant has prompted metacognitive and metaemotional experiences which proved useful to understand affective phenomena.

One of the ways in which metacognitive experiences were useful was by leading participants to reflect on which moments in their everyday life they were actively listening to sound or not. The words of Marta, a 24 year old female, are an example of this.

> "Sometimes it is like entering a whirlwind.[4] I always notice the transitions. (…) When I am going to Entrecampos, sometimes I am on the phone and as soon as I enter the station, it becomes difficult to talk on the phone and my head becomes very tired because I'm fighting a noise that I do not want to hear while I talk. And speaking at the same time that I hear noise, it is very hard to me. I notice that a lot. (…) From the street to the station, it doesn't affect me as much when I am walking because I am not doing anything in particular. But I still don't want to stay there."

This statement comes from the recognition that all the recordings she made were taken exactly when she arrived at a different sound environment. Marta then concluded that when she changes site, she becomes aware of the sonic difference, especially regarding the volume, as a part of "knowing" the new location. After these moments, the sensing of sound becomes passive, it fades to the background.

Another way in which metacognitive and metaemotional experiences were important was by leading participants to become aware how sound affects them even when they are not actively listening to the environment. For instance, Alexandra, a 22 year old female, realised that the quiet sounds of the train help her engage in reflection:

> "I always realise when it is noisy. But not so much when it is silent, except for when I wake up. During the day, when I'm on the train, my head is on other places when it is silent. But I have realised that does not mean it is not important for me. I am thinking about other things, but it also calms me down and it allows me to relax when it is quiet. That's one of the things that I like about the train."

In this case, the participant became aware of how the sonic environment is important for her physical and emotional state of relaxation in a specific situation. She understood that the train's sonic space affected her positively, and that she felt that was significant for her. Through an emplaced metaemotional experience, Alexandra unveiled an often obscure affective outcome.

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[4] Whirlwind. In Portuguese: turbilhão.

Finally, participants were also able to reflect on which ways they change their behaviour or location due to the affective experience of sounds. For instance, the 20 year old male Eduardo realised that, although he does not choose the places where he goes for their soundscape, in certain moments he would abstain to do something or even change place because of the affect of sound in his body:

> "When it's very, very noisy, for example I was reading a book in the book store and it was very noisy, I get tired. I cannot focus and read the book. I become a little anxious when that happens. So in this case I moved. I went somewhere else to read the book. But it is only in these specific moments, when I cannot concentrate."

These aspects tend to come up naturally during the interview. However, in order to bring up these experiences, I would ask some specific questions. A useful open ended question is why they have chosen to register certain sounds and not others. Another useful question is if the participant would normally notice the same sounds they have noticed during the day he or she conducted the diary. If necessary, I also asked more specific questions regarding how the participant came to know or feel the surrounding environment, but I was careful to not influence the answers of the participant.

## Sound elicitation and its usefulness

The second part of the sound diary method consisted in an interview in which I only had two initial questions. First, the participant's diary was used as the interview script, i.e., the participants were invited to describe and elaborate on what they had written down on the diary. After this, the recorded sounds were elicited as means to build a bridge between the field experience and the interview. While I piloted the interview, the fact that participants were following their own texts and using their own recordings provided a cooperative construction of the dialogue between us.

The elicitation of the recordings builds a bridge between field and interview on two levels. First, since the recordings were produced by the participants, they allowed me to grasp what kind of sounds the participants are referring to when they describe their affective experiences, which otherwise would be an elusive task. In addition, it helped me to obtain a comparable experience which I could share with the participants and discuss some aspects in further detail. On the other hand, the elicitation also provokes more intense acts of remembering among the participants (Harper, 2002; Arendt, 2011). This is particularly significant because, as Duffy

and Waitt (2011) have argued, sounds will not only trigger psychological memory, but also bodily remembering. This means that the emplaced character of the data gathering emerges once again during the interview, as the recordings emerge not as sonic reproduction or representation, but as traces of a past performance (Gallagher & Prior, 2014). Therefore, the interview is also a convenient moment for metacognition and metaemotion, as the recollection and description of the emplaced sound experience will at times induce those processes. For instance, Marta, a 24 year old female, realised during the interview that, as the day progresses, she pays less and less attention to the surrounding sonic environment. As she listened to the various recordings she had made, Marta noticed that she remembered fewer details from the later recordings. She then realised that, as she becomes tired during the day, she does not pay as much attention to her surroundings. This is an example of how metacognitive experiences can emerge post-event as a result of the elicitation of sound.

In photo elicitation interviews, the polysemic quality of the image[5] is usually highlighted (Harper, 2002). Here, the value of the recorded sound does not lie so much within the meaning, but rather in the distinct senses that people make of the sound. As Nancy (2007, p. 37) has put it regarding music, "beyond the codes that have linked some sentiment or other (…) to some musical mode or other (…), it is the nonmusical codification of affects themselves that we should be interested in (…)". This can be transposed to the listening to sound in urban contexts and its elicitation. It is the affective, performative sensing of the world that the elicitation of sound recordings provokes (Gershon, 2013). It can of course occur that this sensing leads to well-defined personal or collective meanings regarding sound and the urban experience. The case of Eduardo, a 20 year old male, is paradigmatic in this regard:

> "When I leave the train, I have to take my headphones off. I need to pay attention to all the sounds that are around me. The people I talk to, the announcements in the train station, the car traffic, the sound of people… It depends on how much confusing the space is, but I usually need to pay attention to sounds to guide myself in the city".

While in these words the sensing of sound is important at an affective-performative level, the chaotic sound of the city also becomes significant at a more personal, emotive note:

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[5] The polysemic character of the image refers to the multiple meanings that can be attributed to images, which vary according to each individual (Harper, 2002).

"Because I live in a place which is very calm, and nothing goes on there, I feel the need to come to a place with more movement. I like Lisbon because it has movement, confusion. It is natural here, the sounds."

The reflection of Eduardo regarding how sounds affect him has disclosed two different levels of importance. At a cognitive level, sounds are signals which can be used to guide the body through urban space. At a personal level, the city bustle and its sounds are an event to enjoy.

## How study#1 and study#3 were conceived

Taking the information generated with these sounds diaries into account, I decided to focus on the issue of transitions between sonic environments. Most of the recorded sounds took place in moments of transitions between places or times. Most participants also referred to moments of transitions as times in which they are especially sensible toward the sonic environment. These concerns led to Study#1, which had the following objective:

- To understand the phenomenology of moments of transition between sonic environments in the urban context and conceptualise the role they play in the attunement of the body to urban spaces through the concept of first impression.

In other words, I was going to focus on these spatio-temporal transitions that the participants had experienced and think about the role that sound played in them through Griffero's (2014) concept of first impression, which refers to the affective impressions that re-guide our attention into other environmental stimuli and simultaneously change our affective state.

At the same time, I felt uneasy with the information I had. While the data I had gathered had great depth and detail, my understanding of the experiences of the participants was still far away from the experiences themselves. This happened in September 2016. The decision I took was also triggered by a series of suggestions made at the 7th Doctoral Workshop of the Institute of Geography and Spatial Planning in February, 2016. I was presenting the exploratory sound diaries I had conducted in December 2014, and the researchers Eduardo Brito-Henriques and Eduardo Ascensão argued that it would be helpful if I were with the participants during data gathering and conducted background interviews. Taking this into account, I decided to conduct another experiment with the group of participants. This would constitute Phase 3. This experiment would involve go-alongs, which would help me to experience the same transitions between sonic environments that the participant's experience, and thus approximate my corporeal knowledge to theirs.

Conducting a second series of experiments was also an opportunity to explore interesting aspects of the sonic experience that are difficult to study through the method of the sound diary. An aspect I found interesting in the sound diaries data was that participants had much varied perspectives on their own soundmaking: one was very aware of it, and the others seemed to never listen to themselves. With this in mind, I decided to conduct Study#3, which had the following objective:

- To understand the interaction between soundmaking and the situational relations between the individual and the environment, both in terms of the personal or collective cognitive and emotional flows, and in terms of the ethico-political content.

For Study#3, it was necessary to conduct go-alongs in a manner that would allow me to explore the participants' perception of their own soundmaking. For this reason, after the go-alongs, I conducted a group interview with the participants of each go-along. These interviews included some of the techniques of the Enhanced Cognitive Interview that were designed to explore memories of past events. In the next section, I will explain what a go-along and the Enhanced Cognitive Interview are, and afterwards I will describe how I conducted the experiments.

*The second round: go-alongs*

A go-along in basic terms refers to any geographical excursion in which there are at least two participants, including one researcher (often a scholar) and one research participant (often a non-scholar). It can be performed by walking (walk-along) or riding in a vehicle (ride-along). Go-alongs have been presented by Kusenbach (2003) as a phenomenological methodology that seeks to approach the personal experiences of everyday practices, bringing together the experiences of the researcher and research subjects in a reflexive manner. Kusenbach (2003) was driven by the same limitations of ethnography or participant observation and interviews that I have previously outlined. She argued that participant observation provided significant insights on the performance of everyday life, but it was "not well-suited to access local culture as it unfolds through other members' experiences and practices" (Kusenbach, 2003, p. 460). The traditional interview, on the other hand, failed to provide the emplaced character of everyday practices. Go-alongs are an attempt to overcome these limitations by providing "a more systematic and outcome-oriented version of 'hanging out' with key informants" (Kusenbach, 2003, p. 463). 'Hanging out' refers to the act of spending time, performing everyday informal practices and talking to informants without scripts which has been a

technique used by ethnographers to access local cultures for a long time. Kusenbach (2003) argued that organizing systematic go-alongs with the purpose of 'hanging out' could provide access to the experiences and interpretations of ordinary subjects while observing their practices, and allow the comparison of such experiences, which would be instrumental for research on themes such as environmental perception, spatial practices, personal biographies, social architectures, and social realms.

While the method has been mainly developed by sociologist and anthropologists, go-alongs have been valued as a research method for instance in social and cultural geography (Warren, 2017), health geography (Carpiano, 2009), or the geohumanities (Heddon & Turner, 2010). In cultural geography and other disciplines, there have been a number of very similar methods that have been advanced to address the same methodological issues that the go-along was made to address. For instance, J. Anderson (2004) presented an open-ended method which he called, in a very self-explanatory manner, 'talking while walking'. Some geographers have also proposed the term 'walking interview' to refer to what Kusenbach called the go-along (Jones et al., 2008; Evans & Jones, 2011).

These methods are of course a small part of a larger interest in mobile methodologies that has emerged in cultural geography (Hein, Evans, & Jones, 2008; Büscher, & Urry, 2009; Merriman, 2014). But they are also part of a greater interest in walking and transect walks. The latter refers to walks that are attentive to how space and spatial experiences change during mobile practices, and especially how the spatio-temporal distribution of people, things, and meanings affect individuals (Middleton, 2010; Paasche & Sidaway, 2010; MacPherson, 2016; Jones & Jam, 2016).

### …and the Enhanced Cognitive Interview

While I was sure that the go-along was the appropriate method for understanding the experiences of the participants in greater depth, and that it would help obtain further significant data for Study #1, there was still an issue with the approach to soundmaking needed for Study#3. The problem was that soundmaking is a practice that people often do without noticing they are doing it or the effects it is having on others. And, if I made participants aware of their own soundmaking during the go-alongs, I would be guiding their experience and consequently also what they could say about it. The solution I found for this problem was to conduct go-alongs without referring soundmaking to the participants, and to find a way to lead them to reflect about their own soundmaking during an after-the-event interview. While the exploration of metacognitive and metaemotional experiences proved valuable for leading participants to

reflect on their listening experience, it was not so helpful in leading them to reflect on their own practices that they were not aware of. I needed a technique that would lead them to recall what they did and hear themselves from the ears of others. I found what I needed in the techniques of the Enhanced Cognitive Interview.

The Enhanced Cognitive Interview (ECI) (Geiselman et al., 1984) is one of the most successful methods for conducting witness interviews with the purpose of reconstructing events, and its main goal is to increase the quantity and quality of elements recalled by witnesses (Memon, Meissner & Fraser, 2010; Bensi, Nori, Gambetti, & Giusberti, 2011; Paulo, Albuquerque, & Bull, 2016). The method is composed by a series of mnemonic techniques that have the purpose of eliciting the memory of interviewees.

The first version of the interview script, at the date entitled 'Cognitive Interview', contained four techniques (Geiselman et al., 1984; Fisher & Geiselman, 1992). The first is the Report Everything (RE) technique, in which participants are asked to describe everything they remember, even unimportant or incomplete aspects. The second is the Context Reinstatement (CR) technique, in which participants are asked to describe the surroundings in which the event took place. The third is the Change Order (CO) techniques, in which participants are asked to describe the events again but in a different temporal order. Lastly, there is the Change Perspective (CP) technique, in which participants are asked to describe the event again, but from the perspective of another person present at the scene. The ECI was presented by Fisher and Geiselman (1992) and mainly included cues on how to improve rapport with the interviewees. It also included a fifth technique called Mental Imagery (MI), in which participants are asked to describe small details of the scene they are describing, such as a person's clothes or a certain object.

Many studies have pointed out the efficiency of the ECI in eliciting memories of past events, but there has also been some criticism by field practitioners. Some techniques have been considered less useful, such as the CO or the CP, and the script has been considered too time- and energy-demanding (Brown, Lloyd-Jones, & Robinson, 2008; Dando, Wilcock, & Milne, 2008; Memon, Meissner & Fraser, 2010; Bensi et al., 2011).

### How I conducted the experiments
The experiments of Phase 3 consisted in a series of go-alongs with groups of participants which were followed by a conversation in which we performed the Report Everything, Context Reinstatement, and Change Perspective techniques used in the Enhanced Cognitive Interview (ECI).

The go-alongs were conducted with the participants divided in four groups. Two of these were 'natural' go-alongs, in which the go-along followed a usual routine of the participants' daily life, and two were 'experimental' go-alongs, meaning that the go-along took participants away from their everyday life spaces (Kusenbach, 2003).[6] As the participants were in any case aware that they were contributing toward an investigation on sound and urban space, these go-alongs can also be seen as soundwalks, i.e. as excursions with the purpose of listening to the environment and self (Westerkamp, 1974, Adams, 2009; Wissmann, 2014). I divided the participants into groups in these experiments because I wanted them to be able to comment on the experiences of others when we discussed soundmaking.

After the go-along, a conversation took place. In this conversation we performed three techniques of the ECI in order to approach the experience of the go-along in depth, more precisely to provoke reflection on soundmaking practices that might have gone unnoticed by the participants. In this experiment, I used the Report Everything (RE) technique, in which I asked the participant to describe the whole go-along; the Context Reinstatement (CR) technique, in which I asked the participant to describe the environments in which the events he or she is referring to took place; and the Change Perspective (CP) technique, in which I asked the participant to recall the events from the perspective of another person that was present at the same place, in our case never the perspective of another participant. Taking into account the criticism made to the ECI, I only used these three techniques because I was concerned that the interview could become too energy-demanding, especially after a go-along. Many studies have highlighted the usefulness of the RE and CR techniques in enhancing memory on recently lived events (Bensi et al., 2011). While some studies have shown that the CP technique has been rated as one the least useful mnemonics of the ECI by field practitioners (Brown, Lloyd-Jones, & Robinson, 2008; Dando et al., 2008), I saw in this technique a good opportunity to enhance the participants awareness and reflection on their soundmaking practices by trying to feel them through the imagined perspective of others.

The application of go-alongs and the techniques of the ECI was useful in two ways. First, it allowed me to share and compare how I and the participants experienced the same sonic transitions, and how they affected our attunement to urban space. This provided a more in-depth understanding of first impressions that was helpful for Study#1. Secondly, it allowed me to explore aspects of everyday listening and soundmaking that escape representation. The

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[6] Some typologies of go-alongs or walking interviews have been proposed. See, for instance, Kusenbach (2003), or Evans and Jones (2011).

techniques of the ECI were particularly helpful in this, as they allowed me to counterpose the experiences that other participants described with my own perceptions, and in this way I was able to unveil the participants' distinct levels of awareness about soundmaking and discuss this issue. This provided the data needed for Study#3.


*Hearing the same concept from a different perspective: geoethnographies*

The outcomes of the sound diaries stemmed two significant research objectives which matched my initial interest in understanding how urban sound generates territories and affective atmospheres. Study#1 would contribute toward advancing knowledge on the atmospheric affectivity of sound, that is, how one attunes to each place's atmosphere though the experience of sound. Study#3, on the other hand, would contribute toward advancing knowledge on how sonic territories are formed in urban space, through the exploration of often disregarded everyday soundmaking practices that include unconscious non-representational bodily practices. Despite this, these studies could not afford to advance knowledge on the possibilities to intervene in sonic territories and affective atmospheres, which was also an interest I had. Another approach was needed in order to address these issues. In this section, I will describe how I studied the possibilities to intervene in territories and affective atmospheres. The section is divided into five subsections. First, I will describe how studies #2 and #4 were conceived. Secondly, I will briefly discuss the methodological issues in studying interventions in urban rhythms. Thirdly, I will define what a geoethnography is. After this, I will show how I applied this method in Chiado, Lisbon, and Quinta da Piedade, Vila Franca de Xira.


How Study#2 and Study #4 were conceived

The theoretical findings that studies #1 and #3 provided also held valuable insights on how changes may be provoked in sonic environments. On one hand, producing sonic first impressions could be a way to effectively change how individuals perceive and appropriate places. On the other hand, soundmaking is also a form of producing informal territories and claim spaces for specific practices. I wanted to understand how it works when people actively use these tools to intervene in space. I found a possibility to study each of these interventions in two places.

The first was Chiado, a consumption- and tourism-oriented neighbourhood in the city centre of Lisbon, Portugal. I had been studying the rhythms of Chiado since 2012 while I was working for project CHRONOTOPE. We had explored the rhythmic patterns of Chiado, especially the relation between the density of people on the street and the opening hours of retail and services

(see Kärrholm, Barata-Salgueiro, Soumagne, Fernandes, & Chamusca, 2017; Paiva, Cachinho, Barata-Salgueiro, & Amílcar, 2017). Although Chiado has quite rigid urban rhythms, in some streets there are events that are able to provoke changes in these rhythms, such as street protests, artistic performances, publicity stunts, among others. As I had become a member of the research team of project AGORA, which began in 2016 and focused on the relation between the arts and the city, I decided to focus on the artistic performances of Largo do Chiado, a small but very busy square in Chiado. Artistic performances use visual and sonic stimuli to capture the attention of passersby, and by doing this they affect how people experience and appropriate public space. I was interested in understanding these dynamics. This led to Study #2, which had the following objective:

- To explore how different artistic practices work to alter the distribution of the sensible, and consequently, the disposition, processes and practices of the territories of urban space, by producing sonic first impressions.

In this study, I drew upon Rancière's (2004) concept of the distribution of the senses to approach how the production of first impressions by street artists redistributes the subjective experiences of  Largo do Chiado, and by doing so, also alters the disposition, processes and practices of the appropriations of urban space.

The second place I studied was Quinta da Piedade, in Vila Franca de Xira, Portugal. As I said in the introduction, during the period I was conducting the go-alongs, while I wrote about my research in my home office, I could hear kids playing street football outside. On the southern side of the building where I live, there is a small plaza that was built over an underground garage. The plaza contains a few trees, some moveable public benches, a small stage, and two stores that were never open to the public. The plaza is almost never used for the community purposes that it seems it was made for, such as being a space for public sociality, retail and services, and occasional events. Instead, it is often empty, except when young people go there to play street football, skate, or smoke weed and drink beer. So, when I am writing at my home office, I usually hear kids playing outside during the afternoon.

One day, I believe it was around November 2016, I was writing about soundmaking. I was preparing a chapter proposal for an edited collection on more-than-representational approaches to sound and music, where I would present the results of Study#3. I began noticing how the various sounds that the kids made while playing street football played a significant role in how the games they played unfolded. I saw in this an opportunity to study the political potential of

soundmaking as a part of building micro-worlds and territories in public space. This would be Study#4, which had the following objective:

- To explore how soundmaking in urban space is employed by young people to generate micro-worlds and territories in street football practices.

In both studies, my purpose was to understand how these practices – artistic practices and soundmaking in street football – intervened in the territories and affective atmospheres of urban space. This meant an intervention in the rhythms of urban space, as it is through the rhythms of the city that both urban territories (Johansson et al., 2016; Kern, 2016; Kärrholm, 2017) and urban atmospheres (Simpson, 2008; Bissel, 2010; Lehtovuori & Koskela, 2013; Wunderlich, 2013; Gandy, 2017) emerge. So, I had to be able to capture both the patterns of urban rhythms and expose how these practices are able to break, interrupt, punctuate, hinge, intensify, or multiply them. In order to do this, I had to tackle some of the limitations of the methods that were being used to study urban rhythms. I did so by applying a geoethnographic methodology in these case studies. I will talk about this in the next subsections. First, I will discuss the methodological issues at stake. After this, I will present the case studies and how data was collected.

### The methodological issue: urban rhythms between patterns and flux

Studying the possibilities for sonic intervention in urban territories implies careful attention to the affective and rhythmic aspects of urban life. With this in mind, it was important to reflect on concepts of space and rhythms, before defining how observation would take place. In the next section I will briefly present this reflection. After this, I will present geoethnography as a method for studying urban rhythms that overcomes some of the common difficulties in approaching this subject.

The discussion in this and the following two sections stems from the discussions in which I participated in the collective research projects CHRONOTOPE – *Time-space Planning for Resilient Cities*, coordinated by Teresa Barata-Salgueiro, and funded by Urban-Net (URBAN/002/2009), and ÁGORA – *Encounters between the city and arts: exploring new urbanitie*s, coordinated by Isabel André and Ana Estevens, and funded by the Fundação para a Ciência e a Tecnologia (PTDC/ATP-GEO/3208/2014). In order to recognise the significance of those discussions for my own research project, in these sections I will switch from the singular (I) to the plural form (we) of the first person.

Geography has taken different perspectives on space over the course of the discipline. In this millennium, it became consensual that the concept of space should be expanded if we want to approach its life thoroughly. We may identify three complementary arguments in this sense. First, there is the argument for considering space and time as inseparable phenomena (Crang, 2012). Massey provides an excellent starting point for this discussion:

> But what if (...) the assumption is abandoned that space and time are mutually excluding opposites? What if space is the sphere not of a discrete multiplicity of inert *things*, even one which is thoroughly interrelated? What if, instead, it presents us with a heterogeneity of practices and *processes*? Then it will be not an already-interconnected whole but an ongoing product of interconnections and not. Then it will be always unfinished and open. This arena of space is not firm ground on which to stand. In no way is it a surface" (2005, p. 107).

The advantage of thinking in terms of spacetime, as Massey suggests, is that this allows us to approach space not as a stable form, but from the point of view of its mutability. Space as an unfinished and open product of interconnections and their absences is no longer a static stage for living subjects such as vegetation, animals, or humans. It becomes a part/icipant of/in the life of the world. Thinking in terms of spacetime allows us to be concerned with the life of places, a life which is shared and relational, instead of discrete. Combining extension and duration, it is also possible to think about distributed intensities (McCormack, 2013) as we move from the creation of 'dead geographies' that consist on immobile representation (Thrift & Dewsbury, 2000) toward an understanding of space as a "ongoing product of interconnections" (Massey, 2005, p. 107). This makes us think differently about place. Under this perspective, it has been pointed out that places are not pre-established entities. Instead, they can be seen as spatio-temporal formations or events, products of the interactive confluence of people, animals, flora, technology, materialities and geological forces (Thrift, 1996; Massey, 2005; Amin, 2008). The theorisation of spacetime, however, has often been chaotic, because space and time interact in myriad different ways. Crang (2012) points out that it is not possible, or at least it is limiting, to isolate spaces and times, or subjective spatialities or temporalities, because they are always attached to something else.

For this reason, a second argument emerges, which argues for considering space as an ecology of relations (Simpson, 2008, Cresswell, 2012b). The arguments in favour of the relational nature of spacetime follow distinct theoretical perspectives that seek to move the center of agency away from the subject or institutions. As we have seen before, the work of Latour (2005) and actor-network theory is fundamental in this matter. Latour (2005) argued that we must 'follow the actors themselves' and, at the same time, increase the spectrum of what can be considered an actor, including objects, materialities, animals, among others. These would

be called actants, in order to distinguish them from human actors. This way, social science can describe how the associations of diverse actors and actants become collective forms of agency. The focus on the concept of affect (which refers to the capacities to affect and to be affected) in poststructural philosophy (Deleuze, 1988; Deleuze & Guattari, 1987) and post-phenomenology (Henry, 2008; Griffero, 2014), and its influence on social science through what was been known as the 'affective turn' (Gregg & Seigworth, 2010), also contributed toward a greater interest in the relationships between subjects, and in particular in non-representational aspects such as atmospheres (B. Anderson, 2009; Anderson, 2014; Daniels, 2015).

Following the perspective on space as a temporal and relational continuum, there is a third argument which understands space as a form of movement. The emergence of this perspective is linked to the extreme development of transport technologies and the pervasiveness of communication technologies in everyday life, which have boosted the movement of people, objects, and representations through space, generating a movement-space largely dependent upon these technologies (Thrift, 2008). Initially, some authors considered the increase of spatial movements as a disruption of identity, social relations, and sense of place (Relph, 1976; Augé, 1992). More recently, it has been argued that, while this movement-space generates news forms of spatial consciousness, it does not mean the end of the relational nature of space or sense of place (Massey, 2005; Thrift, 2008; Amin & Thrift, 2017). It is also important to highlight that increase in movement does not imply the overcoming of space, nor that it becomes less relevant as subjects and objects become increasingly mobile. Geographic studies of technology (Dodge & Kitchin, 2011) and mobility (Cresswell & Merriman, 2011) have highlighted the profound inequalities in communication and movement that are caused by the spatial distribution of resources and their accessibility. As McCormack argues, "space is not reducible to the status of a passive, three-dimensional container within which the intentional action of an embodied, moving subject unfolds" (2013, p. 2). Instead, it plays a significant role in the dynamics of mobility. Not only it is altered by moving bodies, but it also affects movements in different ways (Amin, 2008).

These three related arguments have substantiated a body of literature devoted to spatial or urban rhythms. Lefebvre's (2004) discussion of rhythms has been the starting point for much of these studies. For McCormack, "rhythm provides a way of thinking the everyday as dynamic, processual, and relational" (2013, p. 6). Thus, it conjugates the three arguments I presented. Studies on urban rhythms been focused on: (i) how rhythms are distributed across space and time (e.g. Pradel, 2013; Rio Fernandes & Chamusca, 2013; Neuhaus, 2015; Mulíček et al., 2015; Mulíček et al. 2016; Kärrholm, 2017; Osman & Mulíček, 2017); (ii) how rhythms affect

spatial production (e.g. Wunderlich, 2008; Lehtovuori & Koskela, 2013; Sletto & Palmer, 2017); (iii) how rhythms affect mobilities and social relations (e.g. Vergunst, 2010; Vannini, 2012a; Goh, 2014; Prieto de la Fuente, 2015; Lager, Van Hoven, & Huigen, 2016); (iv) how rhythms shape sensescapes (e.g. Simpson, 2008; Lagerkvist, 2013; Wunderlich, 2013; Paiva, 2016b; Weir, 2017); and (v) how rhythms are marketed and consumed (e.g. Kärrholm, 2009; Degen, 2010; Kern, 2016; Sarmento, 2017, Mulíček & Osman, 2018). A central concern in the understanding of urban rhythms is the tension between structure and flow. Although urban rhythms are characterised by a quite rigid spatio-temporal structure (Zerubavel, 1985), they are also composed by temporary emergences that constantly interfere with that structure. In fact, when urban rhythms are closely observed, it often seems that lives are lived in an unpredictable continuous flow, given the small necessities and emergences that come up in everyday life (Crang, 2001; Edensor, 2010). It is only from a wider perspective on the use of space or time that stable patterns can be identified. As a result of this apparent contradiction, most studies on urban rhythms either focus on the rhythmic patterns and its predictability (e.g. Pradel, 2010; Marmolejo e Cerda, 2012; Pradel, 2013; Rio Fernandes & Chamusca, 2013; Neuhaus, 2015; Marmolejo & Torné, 2015; Mulíček et al., 2015; Mulíček et al. 2016; Kärrholm, 2017; Osman & Mulíček, 2017; Mulíček & Osman, 2018), or they stress the fluidity and the constant arrhythmia in urban rhythms (Simpson, 2008; Vergunst, 2010; Vannini, 2012a; Lagerkvist, 2013; Goh, 2014; Rodó de Zárate, 2015; Prieto de la Fuente, 2015; Paiva, 2016; Sarmento, 2017). The disparities between the results of these studies are a product of their perspectives: while the former depart from a macro perspective that seeks to see the city from the 'sky', the latter conduct ethnographic observation and build their knowledge from the 'ground'. Besides this issue of perspective and scale, there is also the issue of information. As Degen (2010) explains, urban rhythms are composed by a multiplicity of activities conducted in the urban environment. However, that ensemble of physical activities of humans, animals and objects generates a sensorial effervescence composed by the flows of information, affects, affordances, and meanings which are a fundamental part of urban rhythmicity (Degen, 2010; see also Simpson, 2008; Lehtovuori and Koskela, 2013; Dewsbury, 2015; Antchak, 2017). While studies focused on rhythmic patterns mostly approach activities, ethnographic studies of urban rhythms are often more concerned with issues of perception and sensing (e.g. Vergunst, 2010; Kullman & Palludan, 2011; Ortiz, Prats, & Baylina, 2012; Garrido, 2015). Due to these reasons, there is a gap in the literature on urban rhythms between studies focused on rhythmic structures and studies focused on rhythmic flows. Apart from our studies, the only exception to date is Sletto and Palmer's (2017) study of Monrovia.

In the next section, I will present geoethnography as an approach that integrates these different analytic dimensions, and allows us to approach urban rhythms as a set of spatio-temporal patterns, without denying the interventions and emergencies that break down those patterns. Thus, this method overcomes the current methodological limitations regarding the study of urban rhythms.


## Urban Rhythms and Geoethnography

In his work in rhythmanalysis, Lefebvre (2004) argues that rhythms should be approached from two complementary perspectives. On one hand, rhythms are perceived from the body, because the interior rhythms of the body (heart rate, breathing rate, etc.) are the reference that we use to perceive external rhythms, functioning "as a metronome" (Lefebvre, 2004: 19). It is from the rhythms of the body that exterior rhythms seem fast or slow, continuous or syncopated, confusing or harmonious. In addition, Vrobel (2013) also argues that corporeal rhythms are nested in social and natural rhythms, and must adjust to them. For this reason, as Lefebvre stresses, "[w]hen lives are lived and hence mixed together, they distinguish themselves badly from one another" (2004, p. 27). That is, in the everyday experience of rhythms, it is difficult to properly distinguish some rhythmic patterns from others, and the affects flowing through bodily, social, and natural rhythms. For this reason, the analysis of rhythms, especially urban rhythms, requires the ability to perceive rhythms from within, but also to take a step back from them. In Lefebvre's words, "[i]n order to *grasp* this fleeting object, which is not exactly an *object*, it is therefore necessary to situate oneself simultaneously inside and outside" (2004, p. 27). This necessity, although it is troubling for research, also makes the analysis of urban rhythms an instrumental tool to "overlay and juxtapose the various views of the city to understand and represent it" (Tiwari, 2008, p. 305). To juxtapose top-down and bottom-up visions of the city has been for a long time a goal of urban theory, yet one that is not often achieved (Lefebvre, 1991; de Certeau, 1984). As we have argued, current literature on urban rhythms has rarely achieved this feat. Instead, it is segmented into quantitative approaches that seek to identify structures and patters, and ethnographic studies that examine the sensitive aspects of urban rhythms. However, as Lefebvre argues, "rhythm reunites quantitative aspects and elements, which mark time and distinguish moments in it – and qualitative aspects and elements, which link them together, found the unities and result from them" (2004, p. 8-9). For this reason, we need an approach that is able to congregate the qualitative and quantitative aspects of urban rhythms in order to generate more complete analysis.

But how can we perceive urban rhythms from its inside and outside simultaneously? We took Lefebvre's advice, who said that "a balcony does the job admirably" (2004, p. 27), as a departing point. With this in mind, we envisioned a methodology that combines an aerial perspective from a high point, with an emplaced perspective in the street. This methodology can be characterised as a geoethnography, a term that has been proposed to refer to methodologies that combine a geographical (often cartographic) analysis with an ethnographic perspective. The definitions of geoethnography have been varied. Some authors consider geoethnography to be the use of information generated through ethnographic work as a complement to geographic information systems (Matthews, Detwiler, & Burton, 2005; Biffle & Thompson, 2006; Matthews, 2011; Milton et al., 2015). The term geo-narrative is also employed (Kwan & Ding, 2008). Less often, geo-ethnography has also been conceived as the creation of ethnographies with geographical purposes, with the goal of understanding how social groups appropriate space (Souza et al., 2009; Nofre, Malet-Calvo, Cássan, & Wodzinska, 2017). In these studies, however, it is often not clear how the method is distinct from traditional ethnography. It must be emphasised that geographers have engaged with ethnographic work since the advent of Vidalian regional geography (Velasco-Graciet, 2008), although this interest faded and was only revived in the last decades (J. Anderson, 2009; see also Crang & Cook, 2007). In our case, geoethnography was a way to integrate a geographical analysis from an aerial perspective, with an ethnographic approach anchored on an emplaced perspective. The two approaches inform each other mutually, and work to create a thorough understanding of urban rhythms. We argue that this complementarity between the aerial and the emplaced allows us to avoid the fallacy of the 'god trick' that Haraway (1988) warned us about. For Haraway (1988), science has been based on the principle that it is possible to generate knowledge from a neutral and purely objective perspective. She contends that perspectives that seek neutrality are nevertheless local and at least partially defined by the relationships, education, and cultural beliefs of the scientist. In Geography, the belief on neutral perspectives, or the 'god trick', has often been associated with rigid cartographic representations, and has been under criticism for some time (see Rose, 1997; Cope & Elwood, 2009; Thatcher, Eckert, & Shears, 2018). Geoethnography attempts to overcome the fallacy of the 'god trick' in the study of urban rhythms by countering quantitative measures of such rhythms with their emplaced experience, thus differentiating and diversifying numeric knowledge. But at the same time, the aerial quantitative perspective allows us to avoid the particularism and indeterminacy that sometimes hinders generic inferences in urban studies at the micro-scale (see Storper & Scott, 2016).

## A geoethnography of Chiado, Lisbon

Study#2 was conducted in the Chiado area, a well-known consumption- and culture-oriented area located in the city centre of Lisbon. Chiado is located in a hill West of Lisbon's Downtown, but its delimitation is not an easy one. Until 1880, Chiado was the name of the street that in that year became the Garrett Street (Rua Garrett). At this point, this was already one of the most important streets of the area and an historical centre of commerce and culture. After 1880, Chiado became the toponymy of Chiado Square (Largo do Chiado), which was until then known as the Largo do Loreto, because the Loreto Church was located there. In 1925, the statue of the poet António Ribeiro Chiado is placed in Chiado Square and becomes an important symbol of the urban landscape. Over the twentieth century, Chiado became a common term to refer to the area constituted by Chiado Square, Garrett Street and its transversal streets, as well as the Carmo and Nova do Almada streets that connect the area to Lisbon's downtown. The main reason for this is that the high-quality retail of Garrett Street expanded to the entire area, and so Chiado was seen as one of the main shopping districts of the city. During the second half of the nineteenth century and the first quarter of the twentieth century, a series of luxury boutiques opened in Chiado, including restaurants, pastry shops and cafés, glove and hat makers, clothing and tailor's shops, and haberdasheries. Some of these were exclusively dedicated to selling imported luxury goods, and many of them were owned by foreign retailers, usually from France or Italy. A few hotels also opened in the area during this period (Janeiro, 2006).

Chiado also became home to a series of cultural spaces, such as clubs, theatres, cinemas, book stores, and some gathering sites that became significant in the city's cultural history, such as the Grémio Literário, where the Portuguese romantic movement emerged, the Casino Lisbonense, where members of the realist movement would meet, or the café A Brasileira, an important meeting point for the modernist movement. The café A Brasileira is located in Chiado Square, and its terrace contains a very emblematic statue of Portuguese poet Fernando Pessoa. Many of these spaces, such as the tobacco store Casa Havanesa or the book store Bertrand, are still in business. As a place associated to luxury and culture, Chiado has been characterised in fictional literature as a space for ostentation, luxury, fashion, and consumption. Ramalho Ortigão referred to Chiado as the 'vain slope', and Fialho de Almeida would state that in Chiado we could find "the fine essence of elegance" (Janeiro, 2006, p. 183).

Chiado went through a period of decline that began in the 1960s, and was aggravated after a large fire in 1988 that destroyed several buildings in Carmo and Garrett Street. However, the retail decline in Chiado is not a mere consequence of that fire. It is a part of a larger decline of

the city centre of Lisbon related to loss of population and the rising competition of regional shopping malls in the city's periphery (Barata-Salgueiro, 2001; Guimarães, 2015). Since the beginning of the twenty-first century, a series of regeneration initiatives, which had the purpose of "transforming the area into an open air shopping mall" (Guimarães, 2015: 256; see also Balsas, 2007), have renovated its retail premises and buildings. At the same time, the increase in tourism in Lisbon also contributed toward renewing Chiado, which became a significant touristic attraction. In the last decades, several unoccupied apartments in Chiado have been converted into hostels and luxury apartments, and the building of a former large department store was converted into a hotel (Abrantes, 2016).

According to data from a 2012 survey (Paiva et al., 2017), Chiado contained 218 businesses. Most of these were retail stores (126), and these were dominated by fashion and clothing stores. Chiado also had 39 businesses of the culture sector, such as museums, galleries, ateliers, or book stores. There was also 44 businesses in the food and beverages sector, including restaurants, bars, and cafés. Lastly, there were 6 businesses of the accommodation sector and 5 businesses of the financial sector. A significant part of Chiado's retail is currently linked to global retail chains, such as the Inditex group, although several independent and historical shops remain.

When we started studying Chiado in project CHRONOTOPE, Chiado provided a significant case study because it is a lively public space, due to the presence of retail that makes this district live "to the rhythm of shopping" (Kärrholm, 2009). As the retail function predominates in most of its streets, Chiado frequently attracts a great number of consumers that walk up and down the streets, and go in and out of stores. Only one of Chiado's streets – Carmo street – is completely pedestrian. Due to this, road traffic, and the sound of trams in Chiado Square, is quite present and generates a high level of noise. On the other hand, the presence of material heritage, namely the churches, the public statues and the building's architecture, makes Chiado a quite visually attractive place. However, at the same time, a series of artistic performances which involve music and dance generate different socialities within this area. As a place linked to visual contemplation that is punctuated by sonic artistic practices, Chiado provides an interesting case study to address how sonic first impressions can act on the distribution of the senses in urban space.

Our geoethnographic study in Chiado took place between 2012 and 2016. It spanned through two research projects. The first research project was CHRONOTOPE, in which we were focused on mapping and characterising the daily and weekly rhythms of Chiado, in order to understand the relation between the rhythmic patterns of the area and the schedules of retail.

The mapping was made through photographies and videos from high places in the area such as windows or bridges. The second research project is my own doctoral research, which was connected to the collective research project AGORA. As I said, I had the objective of exploring how different artistic practices work to alter the distribution of the sensible, and consequently, the disposition, processes and practices of the territories of urban space, by producing sonic first impressions. The work we had previously done in project CHRONOTOPE provided an excellent basis for this, as I had an understanding of the rhythmic patterns of Chiado, and I could use this to understand how artistic practices affect those patterns. However, a perspective from the ground that could capture the sensory and affective flows of the artistic practices, and how they interrupt and alter the ordinary structure of Chiado's rhythmic patterns, was needed for me to reach my goals. With this in mind, between January and April 2016, I conducted field observations during long periods of the afternoon in Chiado. I will now describe these two periods of fieldwork in further detail.

The initial purpose of project CHRONOTOPE's study was to relate the rhythms of public space with the schedules of shops. To do so, we conducted two field surveys in Chiado in 2012 and 2013. In the first survey, we proceeded to identify and georeference every business open to the public and their working schedules. In the second survey, we quantified the density of people in public space, by counting the number of individuals in each street at given hours. We did so by photographing the streets from the windows of upper floors and the bridge that connects the Santa Justa lift and Carmo Square. These registers were conducted systematically at specific hours of the day (8 am, 10 am, 12 am, 1 pm, 2 pm, 5 pm, 8 pm, and 10 pm) in three week days (Thursday, Saturday, and Sunday). In each register, we took five photographies and we used the average value. We conducted these registers twice, in December 2012 and May 2013, in order to identify the impact of weather conditions in the rhythms of public space. We also used video recordings to identity the main pedestrian flows. We conducted three-minute recordings in each point in all hours.

We chose seven streets to represent the Chiado district: Carmo Street, Nova do Almada Street, Garrett Street, Sacramento Street, Carmo Square, Chiado Square, and Camões Square (see Figure 2). We chose these streets for the density of retail facilities, the meaning of these streets as places of luxury and consumption, and the presence of important landmarks such as the statues of poets Fernando Pessoa, António Chiado, and Luís de Camões, or the churches Loreto, Encarnação, and Carmo. We did not include the streets that cross Garrett Street due to the difficulty in accessing high points that allow us to capture the entire street. In order to conduct photography and video recording, we used the following high points: the bridge of the

Santa Justa lift over Carmo Street, the balcony of the shopping mall Armazéns do Chiado over Garrett Street, a window of the Hostel Lisbon Poets over Chiado Square, and a window of the Hostel Passport Boutique over Camões Square. In the remaining streets, we could conduct recordings from the street due to their steep slopes.

Figure 2. Photography and video viewpoints 'from the window' in Chiado. Source: Paiva, Cachinho, Barata-Salgueiro, and Amílcar, 2017.
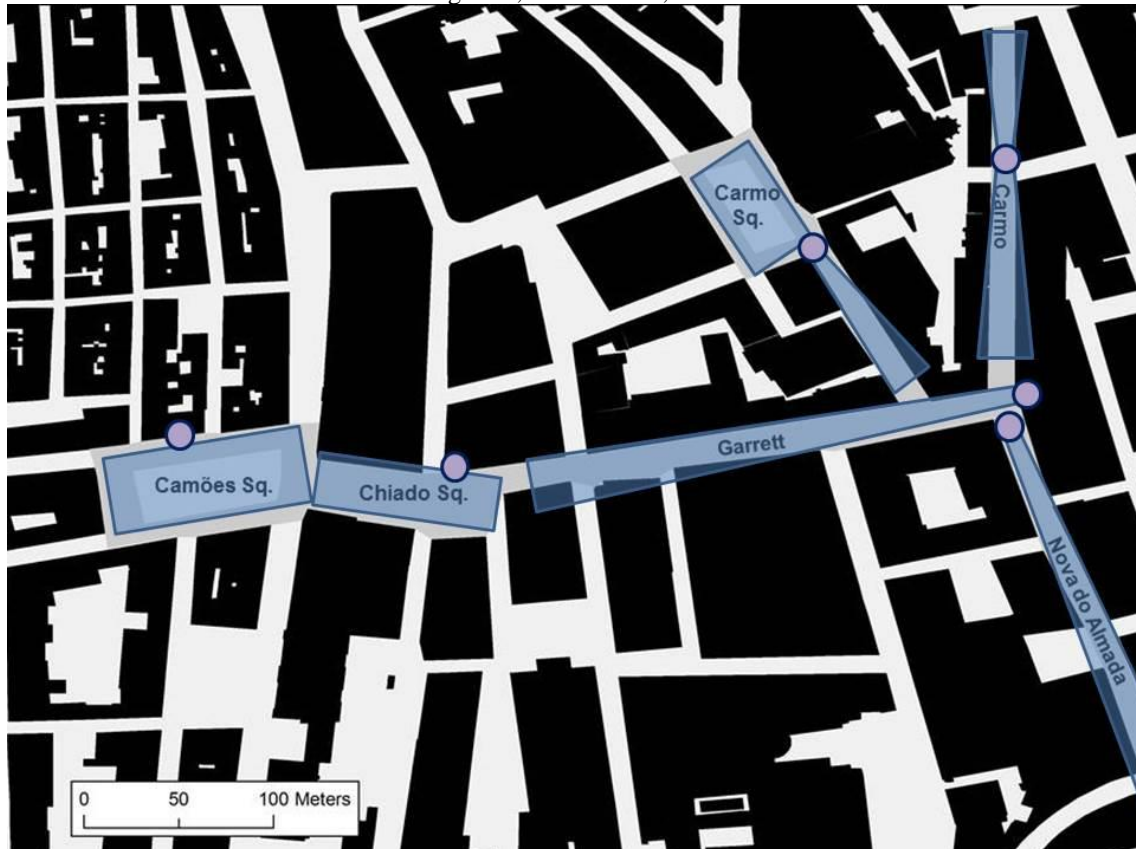


The data obtained through these methods allowed us to capture the rhythmic patterns of Chiado 'from a window', to use Lefebvre's (2004) expression. We produced a series of maps that show, at different hours and days, the businesses open to the public and the number of people in each street (see figure 3).

The data we collected also allowed us to get a glimpse of how the rhythmic patterns of Chiado change throughout the year due to weather change. Table 3 shows this relation in Largo do Chiado. We can observe that the hours of daytime and the difference in temperature partially explain the variations in the number of people in public space. We also observed that during December, the streets without retail shops have a very low density of individuals, but in April the same streets have a high density of individuals during the afternoon. We believe this is

because during Christmas season most individuals are in Chiado for shopping, but during Spring people also come to this place to spend time and stroll.

Figure 3. Rhythmic patterns of retail shops and public space in Chiado. Source: Paiva, Cachinho, Barata-Salgueiro, and Amílcar, 2017.
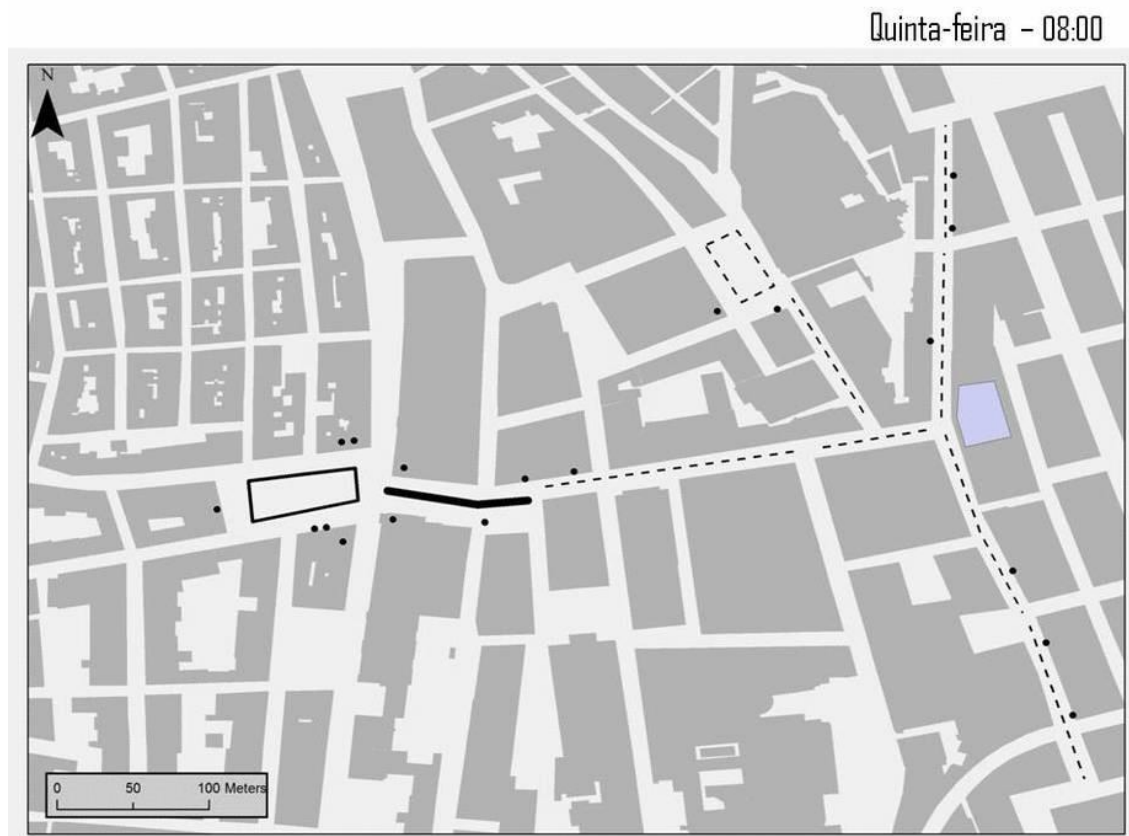


After this field survey 'from the window', we conducted direct observation from the ground. The first period of observation took place in 2014 and it was still under project CHRONOTOPE. Its purpose was to identify the main social groups and their practices in Chiado's public space, as well as the amenities they use, in order to enhance the characterisation of the rhythmic patterns of Chiado. In these observations, we wrote down what happened in public space during periods of ten minutes at each pre-determined hour (8 am, 10 am, 12 am, 1 pm, 2 pm, 5 pm, 8 pm, and 10 pm).

Table 3. Number of individuals in Largo do Chiado in several hours of the day in April and December. Source: Paiva et al., 2017.

| | | **Thursday** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 08:00 | 09:00 | 10:00 | 13:00 | 14:00 | 17:00 | 19:00 | 20:00 |
| April | Individuals | N\A | 48 | 38 | 42 | 37 | 96,8 | 163,2 | 159 |
| | Temperature | 16ºc | 18ºc | 19ºc | 25ºc | 25ºc | 23ºc | 21ºc | 19ºc |
| | Light | Day | Day | Day | Day | Day | Day | Day | Day |
| December | Individuals | 63 | 76 | 73 | 110 | 77 | 85 | 150 | 95 |
| | Temperature | 7ºc | 9ºc | 11ºc | 14ºc | 13ºc | 12ºc | 11ºc | 10ºc |
| | Light | Day | Day | Day | Day | Day | Day | Night | Night |
| | | **Saturday** | | | | | | | |
| | | 08:00 | 09:00 | 10:00 | 13:00 | 14:00 | 17:00 | 19:00 | 20:00 |
| April | Individuals | N\A | N\A | 57 | 44,4 | 51,2 | 142,8 | 162 | 256,8 |
| | Temperature | 10ºc | 12ºc | 13ºc | 15ºc | 15ºc | 15ºc | 13ºc | 12ºc |
| | Light | Day | Day | Day | Day | Day | Day | Day | Day |
| December | Individuals | 17 | 55 | 141 | 103 | 119 | 273 | 210 | 172 |
| | Temperature | 7ºc | 8ºc | 9ºc | 12ºc | 13ºc | 11ºc | 10ºc | 9ºc |
| | Light | Day | Day | Day | Day | Day | Day | Night | Night |
| | | **Sunday** | | | | | | | |
| | | 08:00 | 09:00 | 10:00 | 13:00 | 14:00 | 17:00 | 19:00 | 20:00 |
| April | Individuals | N\A | 69,2 | 76,2 | 80,8 | 78,8 | 60,6 | 60 | 71,6 |
| | Temperature | 8ºc | 10ºc | 12ºc | 14ºc | 14ºc | 14ºc | 13ºc | 12ºc |
| | Light | Day | Day | Day | Day | Day | Day | Day | Day |
| December | Individuals | 16 | 15 | 63 | 72 | 74 | 202 | 128 | 211 |
| | Temperature | 6ºc | 8ºc | 10ºc | 12ºc | 13ºc | 11ºc | 9ºc | 9ºc |
| | Light | Day | Day | Day | Day | Day | Day | Night | Night |

The written records were afterwards subject to content analysis. We segmented the texts into five semantic categories that characterise the main elements of urban rhythms: users; pace; spacetime movements, practices, and resources. The category *users* refers to all semantics used to describe humans in public space (due to the morphology of Chiado, we did not consider animals). The category *pace* encompasses all semantics used to describe the flow of urban rhythms, which can be fast, slow, or polyrhythmic (see Lefebvre, 2004; Paiva, Cachinho, & Barata-Salgueiro, 2016). The category *spacetime movements* collects all semantics that refer to the elements of urban space that are moving. The category *practices* refers to all semantics that describe the activities of users that are spending time in one location (that is, not moving). These two categories we constructed from Seamon's (1979) distinction between time-space movements and spatial practices as the two types of movements that come together to form urban rhythms, which he calls place ballets. Lastly, the category *resources* groups all semantics used to identify the various materialities of public space that are used by individuals, including

shops, urban furniture, monuments, transport, among others. Table 4 shows the main elements of urban rhythms in Chiado in 2014.

Table 4. Characterisation of urban rhythms in Chiado. Source: Paiva et al., 2017.

| | 8 am | 10 am | 1 pm | 5 pm | 7 pm | 10 pm |
|---|---|---|---|---|---|---|
| **Users** | Adults; Workers. | Adults; Children; Elder; Beggars; Street vendors; Tourists. | Adults; Children; Young people; Beggars; Street vendors; Tourists. | Adults; Children; Elder; Young people; Workers; Beggars; Street vendors; Performers; Tourists. | Adults; Couples with strollers<br><br>Children, Elders; Young people, Workers, Street vendors; Performers; Tourists. | Adults; Young people; Street vendors; Tourists |
| **Pace** | Fast | Polyrhytmic | Polyrhytmic | Polyrhytmic | Polyrhytmic | Slow |
| **Spacetime movements** | Walking. | Sitting; Walking quickly and slowly; Cars and trams. | Sitting; Walking quickly and slowly; Cars and trams. | Sitting; Walking quickly and slowly; Cars and trams. | Sitting; Walking quickly and slowly; Cars and trams. | Sitting; Walking slowly; Cars and trams. |
| **Practices** | Waiting for public transport;, Having breakfast or coffee. | Waiting for public transport; Having coffee or beverages; Talking; Watching the street; Shopping; window shopping. | Waiting for public transport, Having coffee or beverages. Talking; Watching the street; Shopping; window shopping. | Waiting for public transport, Having coffee or beverages. Talking; Watching the street; Shopping; window shopping; watching street performers. | Waiting for public transport, Having coffee or beverages. Talking; Watching the street; Shopping; window shopping; watching street performers. | Having coffee or beverages. Talking; Watching the street. |
| **Resources** | Sidewalks; Tram stop; Underground Entrance; Cafés. | Tram stop; Underground Entrance; Cafés; Churches, Statues; Shops; Urban furniture. | Tram stop; Underground Entrance; Cafés; Restaurants; Churches, Statues; Shops; Urban furniture. | Tram stop; Underground Entrance; Cafés; Churches, Statues; Shops; Urban furniture; Street Performances. | Tram stop; Underground Entrance; Cafés; Restaurants; Churches, Statues; Shops; Urban furniture. | Sidewalks; Tram stop; Underground Entrance; Cafés; Statues; Urban furniture. |

The data we collected up to this point was useful in terms of identifying and characterising the rhythmic patterns of Chiado. Figure 5 shows four moments I selected to illustrate the possible interpretations of these sets of data.

The relation between the rhythms of the street, the retail offer, and the amenities of each street is clear in all four moments. On Thursday morning, the place with the greater density of individuals is Chiado Square, where the underground station entrance is located. Most workers arrive at this area through the underground. The fact that most stores are still closed explains the low number of individuals in other streets. The situation is quite different during the lunch hour of the same day. Almost all stores are open and the streets are crowded. Chiado Square is again the place with the greater number of individuals, which can be explained by the presence of a series of important restaurants in the nearby streets. The situation changes once again on

Saturday afternoon. There is a high density of individuals in Garrett Street, Carmo Street, Chiado Square, and Camões Square. Whilst movement on Garrett Street and Carmo Street is generated by the presence of flagship stores, the density of Camões Square and Chiado Square is related to the use of public space mainly by tourists. On Sunday, by the end of the day, we find fewer individuals on the streets. In Carmo Street and Garrett Street, where some shops are still open, there is still a medium density. However, public space is mainly appropriated by families and tourists that promenade, especially in Chiado Square.

Figure 5. Number of people in each street and open retail stores in Chiado in diferent hours and days of the week. Source: Paiva et al., 2017.
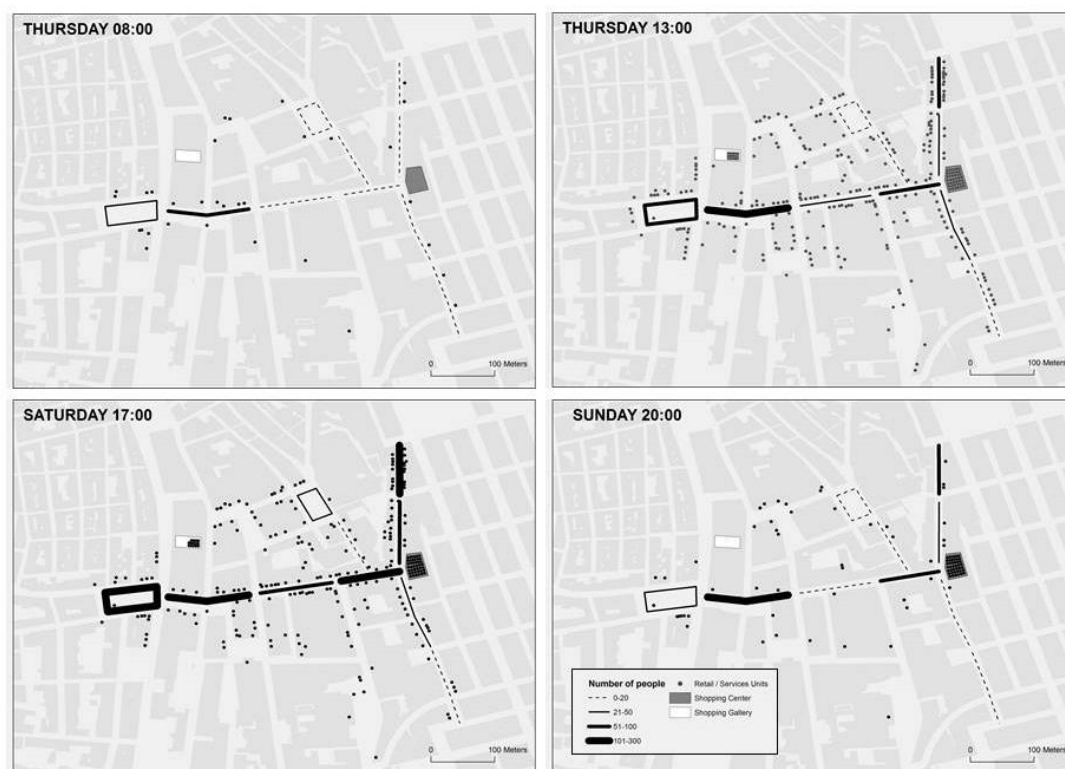


A second period of observation on the ground was conducted in 2016, as part of my doctoral research. By this time, I already had set one of the objectives of my research, which was to explore how different artistic practices work to alter the distribution of the sensible, and consequently, the disposition, processes and practices of the territories of urban space, by producing sonic first impressions. This objective pointed to a different approach to observation. I needed an approach attuned to the emergent, the interruption, the rhythmic anomaly that syncopates patterns. With that in mind, I conducted longer periods of direct observation, using written records, photography and video as complementary methods to capture "the flow of time

and space" of urban rhythms (Vergunst, 2010, p. 382). The observations were conducted during periods of two or three hours, between 12 am and 7 pm during weekdays, because it was during this period that artistic performances took place more often. I expected the temporal period of my observations to match the "significant turning points" of the distribution of the sensible in Largo do Chiado, therefore being possible for me to make causal inferences about the practices I observed (Katz, 2001a). I was looking for forms of emergent causality which provoked thresholds in the distribution of the sensible of Largo do Chiado (Anderson & Ash, 2015). With this I mean that my observations comprised a period that encompassed Largo do Chiado with and without the presence of artistic practices, and therefore I was able to perceive the changes in the sensorial and rhythmic flows of the place.

With this approach, I intended to take advantage of my own situated perspective, by mobilizing my own sensorium to understand the affective dynamics of urban space. My body is always a participant in urban rhythms. It is so not only because it is the medium that captures the affective flows of urban space, but also because I can never erase myself from the place where I am. So, I participate in urban rhythms in manifold ways: I am the subject that walks, I am the subject that sits in the terrace and has a drink, I am the subject that stands waiting for someone, I am the subject that takes a photograph. This approach to observation exposes urban rhythms and me at the same time, as I use my body to perceive urban rhythms (Greenhough, 2010; McCormack, 2013). By using my own sensorium, I am not only registering the sensorial stimuli that the atmospheres of the city generates, but also a series of possible corporal affects (including emotional, cognitive, or physiological) that each stimulus potentiates (Longhurst, et al., 2008). My observations and the use of my body during these observations therefore intended to generate "emphatic understanding" as a means to understand the sensations and behavior of other individuals (Longhurst et al., 2008; Spinney, 2015; Di Feliciantonio & Gadelha, 2016; Catungal, 2017).

I am mainly drawing upon the principles of sensory ethnography. According to Pink, sensory ethnography is a "critical methodology, which (...) departs from the classic observational approach (...) to insist that ethnography is a reflexive and experiential process through which understanding, knowing, and (academic) knowledge are produced" (2009, p. 8). Sensory ethnography makes use of the researcher's sensorial experience as a way to capture and understand "other people's experiences, ways of knowing and sensory categories, meanings and practices" (Pink, 2009, p. 46). It has been argued that the study of the senses must not be limited to the study of bodily and psychological reactions (Pink, 2009; Vannini, Waskul, Gottschalk, & Rambo, 2010). On the contrary, the senses must be understood from an emplaced

point of view. For Howes (2005), emplacement augments the concept of embodiment. While embodiment indicates the integration of mind and body in a single entity, the notion of emplacement calls for attention to the constant relations between body, mind, and environment. Photography and video were also helpful at the street level, but they played a different role. In this set of observation, photography and video were used as a memory trigger. Some authors have argued that recordings of image and sound are not mere representations of environments. They can serve to trigger memories, especially when it comes to bodily sensations (Duffy & Waitt, 2011; Gallagher, 2015a, Spinney, 2015). Recordings in this sense can be understood as an example of tertiary memory, a concept proposed by Stiegler (2010) that refers to the use of technologies as a repository of human memory. Tertiary memory adds up to genetic and somatic memory.

The use of photography and video was not structured. Photography was used to capture specific scenes in a quick manner, e.g. an interaction between subjects, or between subjects and environment. On the other hand, video was used to register significant events. Video was important not only for capturing events, but also registering the visual and sonic stimuli. In addition to this, I also conducted repeat-photography and repeat-videography as a means to grasp the situated perspective of others. This means during short periods of ten to fifteen minutes, I would imitate the photographs or videos that other people were taking. That is, I would either photograph or record a video of the same thing from the same perspective. This allowed me to understand how the attention of city users changed with the intervention of artistic performances. In order to quickly alternate between both, I used a digital camera with both modes.[7]

The experience at the street level allowed me to understand how artistic performances intervene in urban rhythms by redistributing the dominant senses in urban space. Artistic performances – which include music and dance – create a new sonic element that breaks with the dominant rhythms of the street.


A geoethnography of Quinta da Piedade, Vila Franca de Xira

Quinta da Piedade is a neighbourhood in Póvoa de Santa Iria and Forte da Casa, a parish in the municipality of Vila Franca de Xira. This municipality is located in the North of Lisbon's Metropolitan Area, in the North bank of Tagus River. The land use in this municipality is characterised by a predominance of industrial use in the South-eastern riverfront, and a

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[7] The camera was a Sony HDR-CX250E.

predominance of residential land use in the North-western area. In Póvoa de Santa Iria and Forte da Casa, until the 1980s the land use was limited to the riverfront where important factories were located, surrounded by old towns. Since the 1980s, urbanisation quickly spread to the North-western area. Quinta da Piedade was built in two phases during this period. Prior to this urbanisation process, the only construction in the area was a 16th century estate that contained a palace, a church, and small chapels and oratories (Plural, 2006a). Today, this estate is a municipal park where the parish public services are also located. The first phase of construction in Quinta da Piedade took place during the 1980s, and the second phase began during the 1990s and the last buildings were finished in 2001 (Plural, 2006b). Several other neighbourhoods were being built in the vicinity at the same time that Quinta da Piedade was built, such as Bairro dos Caniços, Bragadas, Casal da Serra, the CHEPSI neighbourhood, Quinta da Bolonha, and Pretas do Morgado. For this reason, strict delimitation of the neighbourhood is often difficult. Despite this, the urban landscape of Quinta da Piedade is characterised by tall white and red buildings (seven to twelve floors), large sidewalks, and small green spaces with autochthonous and exotic trees. All buildings are for residential use, but most have small shopping galleries in the ground floor.

In Chiado, we had to gain access to several high places from which to observe public space, in order to collect data on the entire area. However, in Quinta da Piedade I could capture the entire territories of street football from the window of my apartment, as these are confined to a small plaza. The area I delimited includes that plaza[8] and the streets that surround it, namely the roundabout that connects the Avenue Dom Vicente Afonso Valente, and the Avenue Ernest Solvay, a backstreet, and several pedestrian sidewalks next to buildings (see Figure 6). The choice of a smaller area limited the possibilities to examine how the practices in the plaza affect rhythms at the scale of the neighbourhood. However, given that my purpose was to understand how soundmaking in urban space is employed by young people to generate micro-worlds in street football practices, I could dispense the neighbourhood scale.

The geoethnographic study in Quinta da Piedade took place between January and December 2017. The observation was considerably shorter than in Chiado because the geoethnographic methodology I applied was the same, except for small details. One of these is that I decided not to use photography and video in order to protect the privacy of the users of Quinta da Piedade. This is because many of the users in Quinta da Piedade are underage, including many groups of children that (apparently) play without adult supervision. I felt it would be an invasion of

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[8] This plaza has no toponymy, so I will refer to it as 'the plaza'.

privacy to photograph or record videos of these users and reproduce them. Besides this, the density of people in the street in Quinta da Piedade is by far lower than in Chiado, so these technologies were not as necessary.

Figure 6. Viewpoint 'from the window' in Quinta da Piedade, and delimitation of the study area. Source: author.
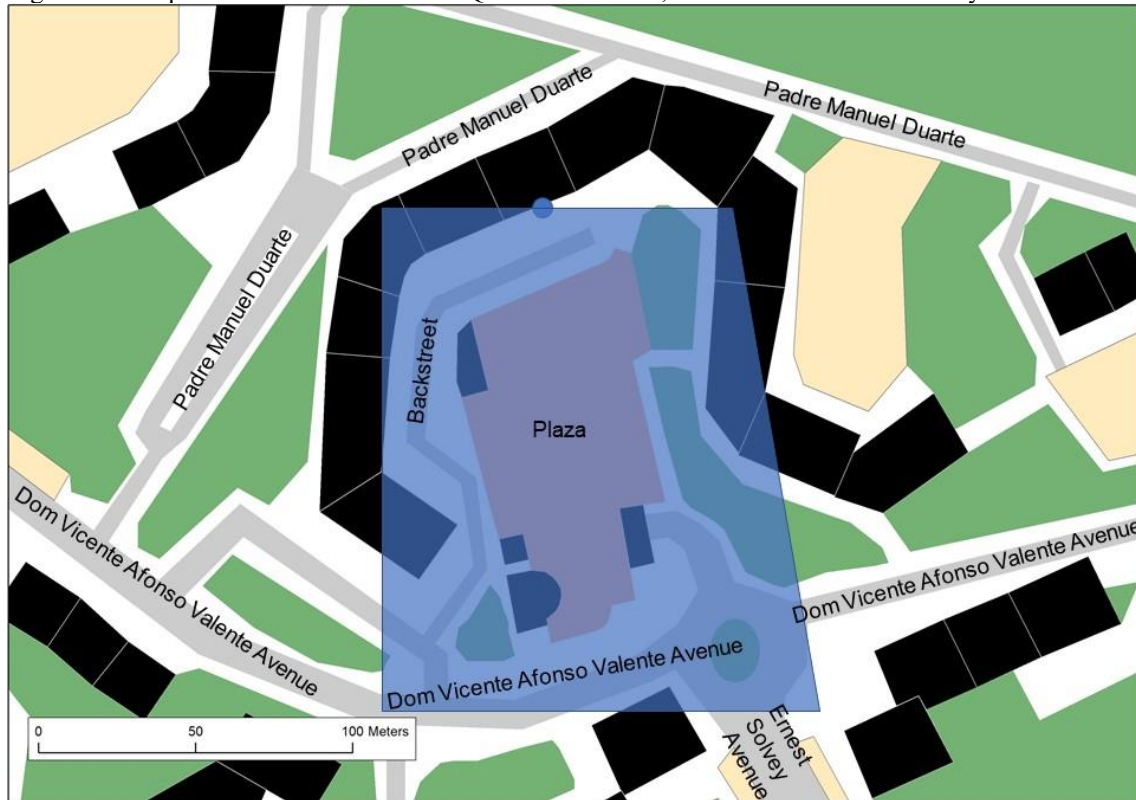


Another difference in the application of the methodology was that I conducted observation from the window and from the street during the same period. This actually overcomes one of the limitations of the Chiado study, which is the fact that the study of patterns does not coincide temporally with the study of interruptions. This is not too problematic in the case of Chiado, because the geography of the district remains the same, except for an increase of tourists that certainly has increased the density of users, but not the spatial or temporal patterns. Nevertheless, I believe that conducting observations at the same time from both perspectives has provided a clearer understanding of how street football practices intervene in the patterns of urban rhythms in Quinta da Piedade.

Tables 5 and 6 show the main rhythmic patterns and users of the Quinta da Piedade plaza. The objective of Study#4 was to explore how soundmaking in urban space is employed by young people to generate micro-worlds and territories in street football practices. The micro-worlds

of street football games, and the territories claimed by them, conflict and alter these rhythmic patterns. We will approach this issue in depth in Chapter Six.

Table 5. Number of individuals in Quinta da Piedade's plaza in several hours of the day in April and December.

| | | Thursday | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 08:00 | 09:00 | 10:00 | 13:00 | 14:00 | 17:00 | 19:00 | 20:00 |
| April | Individuals | 3 | 5 | 17 | 4 | 9 | 13 | 14 | 6 |
| | Temperature | 14 ºc | 15 ºc | 16 ºc | 20 ºc | 20 ºc | 20 ºc | 17 ºc | 16 ºc |
| | Light | Day | Day | Day | Day | Day | Day | Day | Day |
| December | Individuals | 9 | 7 | 11 | 5 | 15 | 20 | 2 | 3 |
| | Temperature | 3 ºc | 6 ºc | 7 ºc | 13 ºc | 14 ºc | 12 ºc | 10 ºc | 9 ºc |
| | Light | Day | Day | Day | Day | Day | Day | Night | Night |
| | | Saturday | | | | | | | |
| | | 08:00 | 09:00 | 10:00 | 13:00 | 14:00 | 17:00 | 19:00 | 20:00 |
| April | Individuals | 5 | 2 | 9 | 9 | 15 | 8 | 15 | 5 |
| | Temperature | 14 ºc | 15 ºc | 17 ºc | 21 ºc | 21 ºc | 21 ºc | 19 ºc | 17 ºc |
| | Light | Day | Day | Day | Day | Day | Day | Day | Day |
| December | Individuals | 3 | 5 | 8 | 5 | 6 | 15 | 4 | 0 |
| | Temperature | 14 ºc | 15 ºc | 15 ºc | 17 ºc | 17 ºc | 16 ºc | 15 ºc | 15 ºc |
| | Light | Day | Day | Day | Day | Day | Day | Night | Night |
| | | Sunday | | | | | | | |
| | | 08:00 | 09:00 | 10:00 | 13:00 | 14:00 | 17:00 | 19:00 | 20:00 |
| April | Individuals | 2 | 5 | 7 | 5 | 8 | 17 | 15 | 6 |
| | Temperature | 13 ºc | 14 ºc | 17 ºc | 21 ºc | 23 ºc | 24 ºc | 19 ºc | 17 ºc |
| | Light | Day | Day | Day | Day | Day | Day | Day | Day |
| December | Individuals | 0 | 0 | 5 | 3 | 7 | 11 | 0 | 2 |
| | Temperature | 15 ºc | 15 ºc | 16 ºc | 17 ºc | 17 ºc | 16 ºc | 16 ºc | 16 ºc |
| | Light | Day | Day | Day | Day | Day | Day | Night | Night |

Table 6. Characterisation of urban rhythms in Quinta da Piedade.

| | 8 am | 10 am | 1 pm | 5 pm | 7 pm | 10 pm |
|---|---|---|---|---|---|---|
| **Users** | Adults, Elders. | Children; Young people; Adults; Elders. | Adults. | Children; Young people; Adults; Elders. | Adults; Elders. | Adults; Young people. |
| **Pace** | Slow | Slow | Slow | Slow | Slow | Slow |
| **Spacetime movements** | Walking. | Sitting; Walking quickly and slowly. | Walking quickly and slowly. | Sitting; Walking quickly and slowly. | Sitting; Walking quickly and slowly. | Sitting. |
| **Practices** | None. | Talking; Playing Football; Playing with children. | None. | Talking; Playing Football. | Talking. | Having beverages; Smoking; Talking. |
| **Resources** | None. | Benches; Walls; Stairs; Stage. | None. | Benches; Walls; Stairs; Stage. | Benches. | Benches; Stairs. |

### A short note on the usefulness of photography and video for the creation of geoethnographies

Photography and video were use in the geoethnography of Chiado in both perspectives: seen from the window and seen from the street. Without these, my work would have been much more difficult. The use of registering technologies in ethnography has a quite long history and a very extensive debate (Rose, 2007; Pink, 2007), and its usefulness for the study of urban rhythms has been disclosed (Wunderlich, 2008; Simpson 2012; Kärrholm, 2015; Prieto de la Fuente, 2015). Several different technologies have been used to register experience in urban space, such as photography (Simpson, 2012), video (Lorimer, 2010; Varotto & Rosetto, 2016; Paterson & Glass, 2018), or phonography (Gallagher & Prior, 2014; Gallagher, 2015a). These are used as an auxiliary method to capture everyday life movements and sensorial flows. Such technologies are valuable for research for two reasons. On one hand, they register the participation of the researcher in everyday life events with the purpose of conducting a posterior analysis of the researcher's participation. Simpson (2012; 2013), for instance, used time-lapse photography to study how his own street performance affected the rhythms of public space and generated new socialities. On the other hand, these registers may provide elicitation of bodily memory as they allow reliving emergent affects when they are visualised or heard (Duffy & Waitt, 2011; Gallagher & Prior, 2014). The multiple possibilities that these technologies afford for studying urban rhythms are quite clear in this study. What is left to highlight is that these technologies always function as an extension of the researcher. I am drawing upon the arguments of McLuhan (1964) and Ihde (1979), who claimed that technologies are extensions of the human being as they extended our bodily capabilities or added new capabilities to the body. In this sense, photography and video have not been used as a *method*, but as an extension of the researcher's *capacity* to understand urban space. In the perspective from the window, photography and video allow the research to capture and thus understand as a whole the rhythmic ensemble that he or she cannot capture quickly enough through his or her senses. In the perspective from the street, photography and video function as extensions of the researcher's bodily capacity to affect and be affected, by providing tertiary memory, and thus allowing a more in-depth understanding of the sensory events taking place (Ash, 2012a; Simpson, 2012; Gallagher, 2015a).

# Chapter Three. The first impression in the urban sonic experience.

After I conducted about half of the sound diaries, I began noticing a quite specific similarity among the recordings that the participants had made. Almost all of them had been recorded just after they had arrived somewhere. One participant recorded the sounds of the street after she left home. Another participant recorded the sounds of her office after she stepped outside to take a break. There was a recording of a train journey that was done after the participant entered and sited on the train. There were recordings made after participants just arrived at work, home, supermarkets, buses, cars, showers. This curious similarity happened with all participants. While at first it seemed that all these are occurrences of movement, there were other recordings in which participants were immobile, but they also recorded a sound because something had changed: a machine started working, someone was trimming nails, a dog started barking. It had something to do with transitions in the sounds they were hearing. I started to ask participants about this, but not in a way in which I would point specifically to transitions. I asked them at what period of the day and what kind of moments they thought they were more attentive to sound. They usually answered with examples of moments that are some form of transitions: going into a bar or arriving late at home. When I asked why, the most common response was that sudden changes in what they hear always provokes some kind of bodily response to that change, such as annoyance, headaches, or excitement.

Driven by these insights, I decided to approach the phenomenology of moments of transition between sonic environments in urban settings and conceptualise the role they play in the attunement to urban places. In order to do so, I turned to literature on listening while I conducted and analysed the outcomes of the sound diaries. Recent studies have shown that listening is significant for well-being (Atkinson, 2007; Hall et al., 2013), emotional regulation (Davies et al., 2013; Cain, Jennings, & Poxon, 2013), social interaction and communication (Doughty & Lagerqvist, 2016), and personal and social identity and memory (Wissmann, 2014; Hill, 2015).

Despite this, studying the act of listening is still problematic, because the experience of the sonic environment constantly alternates between acts of attentive listening and passive hearing (Gaver, 1993a; Gaver, 1993b; Simpson, 2009; Duffy & Waitt, 2013; Boschi, Kassabian, & García Quiñones, 2013). Furthermore, the act of listening is a very messy and complicated

reality for social scientists to grasp (Gaver 1993a), for a number of reasons. First, sounds sources and the materialities through which sound travels or in which sound resonates are multiple. Secondly, listening takes place in all everyday situations which obviously can be quite diverse. Moreover, the act of listening is often more inclined towards affect and often unnoticed non-representational aspects of experience (Nancy 2007; Hill 2015), thus generating additional problems for analysis.

Listening has recently become a relevant subject in geography and a series of concepts (Simpson 2009; Duffy & Waitt 2013; Bennett et al. 2015; MacPherson et al. 2016; Gallagher et al., 2017) and methods (Butler 2006; Duffy & Waitt 2011; Gershon 2013; Gallagher & Prior 2014; Gallagher, 2015a; 2015b; Duffy, Waitt, & Harada 2016; Paiva, 2016a; Saunders & Moles 2016) have been proposed advance knowledge on the oscillations of listening in everyday life spaces. This geographical literature often engages with the multidisciplinary field of sound studies in which space has also become an emerging interest (Blesser & Salter, 2007; Henriques 2010; LaBelle, 2010; García Quiñones, Kassabian, & Boschi 2013; Born, 2013). Some of these studies have been concerned with how listening plays a central role in how we attune to places and situations (Simpson, 2009; García Quiñones, Kassabian, & Boschi 2013; Duffy & Waitt 2013; MacPherson et al., 2016). These studies highlight the role of listening in transmitting affective and cognitive flows that are central to the being-there and the being-with of everyday life. In this chapter, I want to contribute toward this lively debate that has emerged regarding sonic attunement, by exploring a particular moment in the urban sonic experience, which is the transition between sonic environments. Some of the literature on listening and soundscapes has mentioned that transitions between different environments tend to be moments when sonic perception and feedback is enhanced (Westerkamp, 1974; Wissmann, 2014), and it has been argued that looking at interruptions is a helpful way to understand affective phenomena (Dawney 2013), but so far no geographical study approaches these transitions in detail.

To do so, I propose the mobilisation of the concept of first impression, as outlined by philosopher Tonino Griffero (2007; 2009; 2014), which focus on affective corporeal involvements that interrupt the ongoing spatio-temporal attentiveness (Griffero, 2014). Following Griffero (2013; 2014), I argue that first impressions are fundamental to understand the urban sonic experiences as it is during these short interruptions that the human body adjusts itself and attunes to the surrounding environment.

The findings in this chapter stem from the participatory experiments conducted with 12 participants, which were described in detail in Chapter Two. The methodology included sound diaries (Duffy & Waitt, 2011) and go-alongs (Kusenbach, 2003). The findings of this study

highlight the importance of first impressions in attuning to urban atmospheres, and show how they may vary in regard to the qualities of the sonic environment and the body's angle of arrival. This chapter is divided in three sections. First, I will discuss the issue of listening in urban environments and the importance of first impressions in processes of attunement. Secondly, I will present the study's findings, and approach spatial transitions, temporal transitions and the angle of arrival. Lastly, I will discuss the study's conclusions and implications for current research on listening.

*Sonic Attunement and the First Impression*

Listening has recently been acknowledged as a more-than-representational act (Hill, 2015) that is central for how we experience places and attune to their atmospheres (Doughty et al., 2016; Gallagher et al., 2017). In order to grasp the full potential of listening, scholars have argued for an expanded listening (Back, 2003; Arkette, 2004; Simpson, 2009; Bennett et al., 2015; Revill, 2016; MacPherson et al., 2016) that encompasses not only the experience of the subject that listens but the assemblages of materiality and virtuality that make up the act of listening and the social and political consequences of such acts. Expanded listening could be considered as a form of embodied cognitive ecosophy (Jones, 2017), meaning that the affective-cognitive perception of sound is a product of ongoing flows between mind, body, and environment.

A first basic notion on listening, and sound in general, is that the production of the sonic is necessarily temporal and ephemeral (Ihde, 2007; Nancy, 2007). Kang (2007) defined sound in physical terms as a vibration caused by pressure waves that can be transmitted through gaseous, liquid and solid forms which propagate and fade away. There has to be a continuous production of such pressure waves in order for sound to exist. For this reason, sounds are local products, despite the possibilities of being registered or broadcast to other places (Leyshon, Matless, & Revill, 1995; McCormack, 2013). Due to this, the production of sound always generates a specific spacetime of shared acoustic events (LaBelle, 2010; Kanngieser, 2011; Revill, 2016). However, sounds can also reconfigure spacetimes in many ways. First, the way sound propagates makes it unlike other spatial phenomena that are bound by material or virtual borders, as sound can generate communicative channels between things that are near each other or far away (Doughty & Lagerqvist, 2016). For this reason, listening reveals things that are not available to the other senses (Gallagher et al., 2017). In addition, sounds can reconfigure space through its affective qualities (Blesser & Salter, 2007; Simpson, 2009; Gallagher & Prior, 2014; Hill, 2015; Gallagher, 2016). Henriques (2010) argues that sound is able to dominate human

bodies through rhythm, timbre and volume. It is important to underline that the bodily reactions to sound cannot be reduced to the reception of the aural stimuli by the ear. Instead, they are intensely visceral, and instigate several bodily reactions (DeNora, 2000). Current studies have paid significant attention to emotional reactions (Duffy, Waitt, Gorman-Murray, & Gibson, 2011; Duffy & Waitt, 2013), and these studies show that sounds are able to mobilise the entire body, especially in the case of music (DeNora, 2000; Anderson, Morton, & Revill, 2005; Duffy & Waitt, 2011). Sounds are also particularly associated with memory and nostalgia (Duffy & Waitt, 2011; DeSilvey, 2010).

However, the act of listening cannot be conscribed to the individual body. Listening is an intersubjective practice in which the social and cultural context shapes or directs the act of listening to certain sounds (Pratt, 2010; MacPherson et al., 2016). As many studies have highlighted, each sonic spacetime forms its own community of listeners (Morton, 2005, LaBelle, 2010; Simpson, 2017), and in turn these communities of listeners also produce their own specific ways of attuning to place and its sounds. Sometimes this opens up political debates on the sounds of a place, but in many cases it is a tacit understanding about listening that emerges (Smith, 2000; LaBelle, 2010; Waitt, Ryan, & Farbotko, 2014; Revill 2016). In any case, the sonic context mediates social action, and plays a significant role in how individual bodies will attune to place and take part in that place (Born, 2013; Bennett et al., 2015; Revill, 2016).

For this reason, a greater focus on how individuals attune to places through the sonic experience seems pertinent. This is not an unexplored issue. However, current studies have placed their focus on the experience of music (Henriques, 2010; Duffy et al., 2011; García Quiñones, Kassabian, & Boschi, 2013), and specific events such as festivals (Waitt, Ryan, & Farbotko, 2014), and the topic of sonic attunement in everyday life can be further explored. A series of studies have focused on the role that audio technologies play in everyday attunement (Bull, 2000; 2007; Beer, 2007; Barns, 2014), but these leave out a significant part of everyday listening. In order to approach the act of listening in everyday attunement, a more detailed examination of what sonic attunement means is necessary.

The concept of attunement has been recently employed to address the influent and communicational, albeit possibly non-cognitive or non-representational, relationships which individuals establish with their surrounding atmospheres (Stewart, 2011; Ash, 2013a; Griffero, 2013; Anderson, 2014). It stems from Heidegger's (1927) description of the processes of being-there and being-in-the-world; to put it simple: the process of being in relation to the world. Franck (1986) notes that attunement designates all phenomenon previously known as

disposition, feeling or affect and that it is a structure of the «there» which characterises the «being-there». In other words, attunement is the process by which one comes into being in relation to its environment. It is also an important part of the thrownness of the being (Franck, 1986). This means attunement is not only a matter of space but also a matter of time, as beings attune themselves to different atmospheres over time, making the atmospheric context an important variable in the changing of the being's dispositions.

Atmospheres, then, are not an inert context, but instead they are "a force field in which people find themselves" which has a "capacity to affect and to be affected that pushes a present into a composition, an expressivity, the sense of potentiality and event" (Stewart, 2011: 452). While individuals attune themselves to the atmospheres they are surrounded by, this does not mean the establishment of a deterministic relationship in which the individual's feelings and behavior become a by-product of the surrounding environment. On the contrary, as Stewart (2011) argues, the immersion in a place's atmosphere generates choices. Attunement can be understood as a coming into being in what Massumi (2002) refers as a field of potential. For Massumi (2002), it is important to acknowledge that experience is never pre-given. Given that experience occurs in relation to a spatio-temporal setting in which it emerges, and that there are countless relations that can be activated or remain inactive, this spatio-temporal setting always remains a field of potential. This is interestingly similar to the argument of LaBelle (2010: xvii) that auditory knowledge "opens up a field of interaction, to become a channel, a fluid, a flux of voice and urgency, of play and drama, of mutuality and sharing, to ultimately carve out a micro-geography of the moment, while always already disappearing, as a distributive and sensitive propagation". Likewise, Rawes (2008) has argued to the spatio-temporal experience of places is mediated by the sonic envelopes in which the human body is nested in.

Attuning to an atmosphere is therefore different than the process of entrainment which is often deployed to address the alignment of the human body to the rhythms of the sonic environment. According to Phillips-Silver, Aktipis, and Bryant (2010: 6), entrainment can be defined as a "spatiotemporal coordination resulting from rhythmic responsiveness to a perceived rhythmic signal". In this process, the body responds to rhythmic environmental stimuli that affect its auditory, motor and vestibular systems (Phillips-Silver, Aktipis, & Bryant, 2010). Although attunement to sound would include entrainment processes, when "soundwaves (…) lead us to try and make sense of (…) experience in terms of a pulse" (Boyd & Duffy, 2012), it can work through other means. For Nancy (2007), the affective qualities of sound are not only transmitted through rhythm, but also through timbre, which is understood as the sense that

stems from a sound. Timbre expresses qualities that resonate in the body, affecting its mood, but not in a way that transmits meaning. What is being communicated, for Nancy (2007: 41), is beyond meaning, it is a "sharing that becomes subject". On the other hand, Henriques (2010) also calls for attention to the affective qualities of sound amplitude, i.e. its loudness or volume. The effects of the loudness of sound on the human body and its health have been acknowledged for a long time (Kryter, 1970). Henriques (2010) argues that these are also affective when the impact and pressure of sound loudness is experienced as sensory qualities, as it is in Kingston's dance hall scene.

Henriques (2010: 63) goes on to argue that these three aspects – rhythm, timbre and volume – work together to produce what he terms as sonic dominance, i.e. the "intensive, immersive and visceral experience of the saturation of sound". I would argue, however, that this is rarely a useful concept to apply to urban spaces, as it has been regularly defended that sound is often passively perceived (Gaver, 1993a; Gaver, 1993b; Nancy, 2007; Simpson, 2009; Boschi, Kassabian, & García Quiñones, 2013). Instead, addressing how individuals attune themselves to or fall out of tune with their surrounding sonic environments may be a more useful means to attend to the oscillation of attention and energy caused by what Rawes (2008) calls the sonic envelope.

Sonic attunement must also be distinguished from what Vannini et al. (2010) have called the sonic alignment. Although these two concepts are closely related, alignment lays a greater focus on how individuals align with the somatic order of a certain place, therefore highlighting the political. Vannini et al. argue that alignment, which can be "symbolic, iconic, and indexical and take place through non-verbal acts" (2010, p. 344), takes place as a form of negotiation or manipulation of the sonic environment, rather than a deterministic top-down relation. Alignment takes place through sound acts which are a part of an "ongoing negotiation process whereby separate lines of action fit and merge" (Vannini et al., 2010, p. 344). Sonic attunement encompasses both the mental alignment with the somatic order of a place and the bodily entrainment of the rhythms of such place, because as it has been continuously argued, these mental and corporeal processes are not discrete and separable (Ingold, 2000; Thrift, 2008; Anderson, 2014). Sonic attunement can then be defined as the individual body tuning in to place through the rhythm, timbre, volume and meanings of the soundscape. While much has been written about tuning in or tuning out to the sounds of place, the debate has been centered on the role of music and audio technologies (Bull, 2000; 2007; Beer, 2007; García Quiñones, Kassabian, & Boschi, 2013; Kassabian, 2013; Watson & Drakeford-Allen, 2016) and less attention has been paid to everyday environmental sounds.

In order to understand the dynamics of sonic attunement, it is pivotal to look at first impressions and the attentiveness they generate. For Griffero, the first impression can be defined as "an affective corporeal investment that, interrupting the habitual observational and pragmatic flux, can, for this very immediacy, represent for the subject an identity certificate much better than the cogito" (2014, p. 29). The first impression, as an interruption, is thus a pivotal moment to analyze the dynamics of attunement in everyday life (Dawney, 2013). Psychological studies have been dealing with first impressions for some time. These studies understand first impressions as a period between 0,1 and 0,5 seconds in which information is received but not yet made sense of (Gilron & Gutchess, 2012; Wood, 2014), which has also been called the half-second delay (see Connolly, 2002; Anderson, 2014). However, the focus of these studies in visual stimuli such facial expressions (Willis & Todorov, 2006; Over & Cook, 2018), website design (Lindgaard, Fernandes, Dudek, & Brown, 2006), or retail design (Workman & Johnson 1991, Bhargrave & Montgomery, 2013) do not convey a rigorous framework for listening, because listening is a temporal act in which temporal delimitation depends upon the feature of sound itself. For this reason, the notion of Griffero (2007), who argues that the first impression ends when the individual that received that impression is able to engage in the act in which something is registered and understood, is more valuable for an approach toward listening. In other words, the first impression ends when the individual is able to make sense of it. For this reason, it is not possible to analyze the first impression itself, but only the first memory of such impression (Griffero, 2007).

It must be underlined that what emerges from the first impression is not universal. Instead, it is greatly dependent upon the angle of arrival of each body to a certain place and its atmosphere. Ahmed (2010) argues that what we receive as an impression depends on our affective situation. I would add that it also depends on each person's values and physical limitations. Individuals with health problems, for instance, may be more sensible toward soundscapes (Atkinson, 2007; 2011; Bell, 2017). This insight allows us to move away from universalistic understandings of non- or more-than-representational processes (Tolia-Kelly, 2006; Colls, 2012) to consider how personal and collective attributes shape the interruptions and encounters that make up first impressions. We could then say that the first impression emerges from the coupling of the feel of an atmosphere and the angle of arrival of the individual (Stewart, 2010). The angle of arrival is particularly significant for listening, as Simpson (2017) argues, because each person arrives with a certain predisposition for listening, and a certain expectation regarding the soundscape they arrive at (see also Bruce & Davies, 2014).

The effects of the first impression are, as Griffero argues, "certainly amendable" (2014, p. 29) as the "the second (and third, fourth…) impression (…) gives rise to a less intense atmosphere" (2014, p. 136). Nevertheless, the first impression gives us a sense of the chaotic totality that is the 'situation' (Griffero, 2007). In addition, the first impression is also significant because it plays a significant role in the formation of attentiveness to sounds in everyday life. Many authors have demonstrated that individuals constantly shift between moments of attentive and passive listening (Gaver, 1993a; Gaver, 1993b; Nancy, 2007; Simpson, 2009; Boschi, Kassabian, & García Quiñones, 2013), as it occurs with other senses (Middleton 2010). The first impression may include either attentive or passive listening, but more importantly it is a moment in which the nuances of attention are itself (re-)defined. Waldenfels (2004) distinguishes between creative attention, which refers to the 'making possible' of a field of experience, and repetitive attention, which can be described as the temporary focus on specific aspects of the visible (in this case hearable) world. The pivotal role that the first impression plays is not at this sublevel of what is momentarily focused, but at the creative level where experience itself is defined (see also Hannah, 2013). During the first impression, an attentiveness is created in listening and it may highlight certain sounds and leave others to the background of experience, which however does not mean they do not affect the body.

*First impressions in the urban sonic experience*

As I argued before, transitions – between places or atmospheres – are fundamental moments for sonic consciousness (Westerkamp, 1974; Wissmann, 2014), and they also provoke first impressions which are very significant for bodily atmospheric attunement (Stewart, 2011; Griffero, 2007; 2014). The experiments I conducted with the participants have unveiled a series of such moments, which often go unnoticed in the everyday lives of individuals. What is referred to as transitions in this case is not limited to transitions between different spaces based on movement. Many of these transitions are moments when the participants are immobile, but the sounds of a place change. The reasons are diverse: a machine is turned on, groups of people arrive, road traffic rises, among others. This type of transitions highlights the temporal and ephemeral nature of sound, which can make a place go through various atmospheres throughout the day (Ihde, 2007; LaBelle, 2010). It must be added that some sonic environments are mobility-based, in the cases of public and private transportation. In these, transitions are more felt between the interior and exterior of those transport modes, rather than between the spaces that those transport modes traverse. In the next subsections, I will explore in further detail what

happens during spatial and temporal transitions separately. After that, I will address the issue of the angle of arrival and how it shapes the experience of sound during first impressions.

## Spatial transitions

The identification of first impressions throughout an ordinary day tells us much about how individuals segment their everyday spacetimes. Generally, they match the moment of arrival at the most significant places, such as home, the workplace, or significant places of sociality. For most participants, first impressions emerge as temporary shocks that occur at the exact moment of arrival to such a place. Alice, a 29 year-old female explains the first impression with these words:

> "When one enters a place, we either come from a more silent place and go into a noisier place, or the reverse situation. But then, we go with the flow. That initial shock is what is more confusing. Then we get used to it. I notice that transition when I arrive at work. I even notice that on public transportation I sometimes feel that too. There are certain buses – I take two different buses every day – and one is more silent than the other. And that is confusing for me, because I am so used to it. The people there do not talk to each other, and I find that absence of more sound strange."

The words of Alice point to volume as an immediate impression of the atmosphere where one arrives. This sensation is shared by other participants as well. The immediacy of volume seems to fit into the concept of the first impression as a half-second delay (Connolly, 2002; Willis & Todorov, 2006; Anderson, 2014). However, a set of other sonic stimuli that surpass this half-second period are also perceived to take part in the first impression. Timbre and rhythm, as highlighted by Nancy (2007), are the other main affective forces of sound. But the affect of timbre and rhythm show that sonic stimuli are often not consciously perceived, and the experiments I conducted helped the participants to identify moments in their daily lives in which they non-consciously perceive spatial transitions through sound. Clara, a 33 year-old female, describes her morning trip to work:

> I happen to be very attentive to sounds. But I had never realised in which moment I stop hearing the birds. I left home yesterday and I was recording and suddenly it was clear. It was when I entered Home Street. And it changed, the atmosphere changed. I stop hearing one sound – by the way the recording shows that – and another sound emerges. And it changes. It's less pleasant when I arrive at Main Avenue and the cars are honking, and people are talking to each other.

Clara is describing her everyday walk from her house, which is located in a calm Lisbon neighbourhood where the soundscape is characterised mainly by songbird, to the subway station in the city centre where she leaves to work. In her everyday life, the transition from the pleasant and soothing timbre of songbird to a cacophony of cars and people marked the transition between waking up at home and the workday. But this transition has a strange temporality, one that lingers on the background of consciousness. The body knows through the sounds of the city that it has arrived at another space time, but not immediately. This sonic first impression takes place in an 'extended now' (see Vrobel, 2013, also Husserl, 2008) that encompasses both the non-conscious retention of recently heard sounds and the anticipation of a soon-to-come soundscape.   Nevertheless, this array of sonic stimuli that make up the first impression cannot be reduced to non-consciousness, as they inform individuals about the current atmosphere of the place. Miranda, a 40 year-old female, realises that the first impression of the various places she stops by during her early morning journey and at the end of the day tell her much about the atmosphere of those places:

> I perceive the change of spaces. Because I take the kids to school and leave them there, and it is chaotic, very, very noisy. With the kids all running around, and screaming. And then I arrive at work, and it is calm, because when I arrive there is no one here yet or there are few people, so it is tranquil. But then I go get the kids and it is not calm again. But this week they are with their father and I am alone. So I enter home and it is so silent… I notice that a lot. (…) But it is a good silence, I like it. Sometimes I don't even turn anything on, no radio, no television, nothing.

For Miranda, the volume, timbre and rhythm of the sounds she encounters at each place signal the usual atmosphere of the place: disarray and happiness at the school, calmness at the workplace. When something is different at one of these places, Miranda can tell right away when she arrives. Places sound different when the people in those places are acting different. At home, the presence of sounds is related with the presence of her children. The first impression of the house either communicates the warm but tiring presence of family, or the silent but relaxing emptiness of the apartment. Either way, this shows us that the first impression of a sonic environment can in fact be a valuable "identity certificate" of a place's atmosphere (Griffero, 2014, 29).

The first impression of a new sonic spacetime, and the affects generated by the volume, timbre, rhythm, and meaning of the sounds, provoke a sonic attunement that encompasses the body and mind. This can lead to a period of adjustment that we could call the second impression,

third impression, and so forth. Oscar, a 31 year-old male, reflects on this while he talks about the different types of sonic environments he encounters in his daily life.

> This place where we are right now is quite calm, but when I go out at night or when I go to a crowded sidewalk café, there is an impact on your head when you hear loud sounds. But, after a while, you align yourself with the ambience[9]. After a few minutes, you align yourself with the ambience. This takes less time, or does not happen at all, when the ambience is not as much imposing.

Following the words of Oscar, we could argue that the first impression is a force that catches our attention by affecting specific parts of the body. These affects also force the body to adjust to the rhythm, feel or meaning of the place or situation, a process which can take time depending on the difference between the angle of arrival and the ambience of the place. Sonic attunement, therefore, is also the process of a body understanding the atmosphere and how to play a part in it.

## Temporal transitions

So far we have been concerned with moments in which a person arrives somewhere. But sonic transitions also occur while individuals are immobile at a certain place. Sound is a product of the activities of humans and non-humans and as such sonic environments change when new activities begin or ongoing activities end. Changes of this kind have different temporalities: some emerge as abrupt interruptions, while others are slowly noticed, or sometimes not noticed at all. Like in the case of spatial transitions, volume is what draws most attention from the body. This is clear in the description that Lucia, a 39 years-old female, makes of her workplace:

> The other thing is fabrication. We make the products ourselves and we have generators. And the machine that fabricates the products is almost deafening. So as soon as they began making a product I went there with the recorder and then I went back to work. (…) Generally it happens every three hours for an half-hour. But it is so loud that when we are downstairs with the clients we ask them questions, we have to speak louder. And we have to ask people to repeat what they've said. It is so loud that you cannot abstract yourself. We have music downstairs to create ambience in the store, but when the machine and the generator are working, we really have to speak louder and ask the clients to repeat what they've said because it is a very disturbing noise.

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[9] Oscar used the Portuguese verb "ambientar-se", which comes from the word "ambiente" that can be translated as "environment" or "ambience".

In this case, the sounds of a machine irrupt abruptly and fill the air with a noise impossible to ignore. The perception of the sound is immediate due to the high volume of the sound, and it forces the body not only to adjust to the new sound, but also to compete with it when one communicates with other individuals. During the half an hour that the machine works, bodily stances change in Lucia's workplace: people speak louder, talk closer to each other, put on headphones, or close the doors if they can. When it's over, bodies relax. This transition is a paradigmatic example of how the atmosphere can act as "a force field in which people find themselves" and are forced to attune to (Stewart, 2011, 452), and the role that sound plays in generating "tipping points" in a place's atmosphere (see Anderson & Ash, 2015).

But temporal sonic transitions can be much more elusive. The description that Lucas, a 35 year-old male, makes of one of his workdays can serve as a starting point to discuss this:

> Sometimes there are busier days and people are really unbearable, speaking loud. There was one day, it was a training day, so there were more people there, and it became really unbearable. It got to a point that I was listening to heavy black or death metal at the maximum volume, and usually you can't tell what is going on around you, and I could hear people. So I took my headphones off, show them to them, and they could hear it like they were sound columns, and I told them: "Look, I can still hear you."

The effect that people speaking has on Lucas is temporally different to the one that Claudia describes. Here, the sounds of people speaking are constant but the intensity of the sound changes. The volume changes, but also the pitch or the rhythm of people talking or walking by can alter the sonic environment. These changes are not perceived immediately. Rather, what Lucas describes as changing is a level of irritability that increases or decreases with the intensity of the sounds. As he is focused on his work on his computer, Lucas is not actively listening to the environment, but he perceives the changes in his body that the sounds he does not pay attention to cause. So, in this case, we are presented with a first impression of the effects of sound on a body, rather than a first impression of sound itself. This highlights how sonic attunement can be elusive: it relates body and sound without active perception. It also does not necessarily relate body and sound immediately: there can be delays between the affect of the sound and the perception and reaction to a changed bodily state. Once again, these delays do not fall into the category of the half-second delay (Connolly, 2002; Willis & Todorov, 2006; Anderson, 2014). Instead, they vary in terms of temporality and are specific to the kind of bodily response that the sound stimulates. These can be considered as compensated delays, i.e.

cases in which the actual reception of stimuli is not perceived because the organism is substituting it with the retention of a prior perception (Vrobel, 2015).

## The angle of arrival

In the previous sections, I have discussed the spatialities and temporalities of the sonic first impression and its role in what I have called sonic attunement. At this point, it is important to address how these phenomena vary according to the angle of arrival of the individual. In this section, I will present three significant variables – tiredness, mood, and expectations – that I identified as affecting the sonic first impression and sonic attunement.

Firstly, I must highlight the importance of the daily cycle and, consequently, tiredness. Most of the study's participants manifested some kind of change over the day in respect to their body and mind availability to hear. The timing of the recordings they have made show precisely that: 28 out of 41 records were made during the morning. Yet, while some participants argue that they are "more sensible to sound when they wake up" because they are not tired yet (Oscar, Alice), because they are not yet used to the sounds of the day, or because they woke up at a silent place (Miranda), others state that they are more sensible to sound at night, because there is less noise, they are tired (Lucas), they are not stressed about their workday anymore (Penelope), or they are trying to sleep (Francisco). The daily cycle seems to be very important for every participant's availability to hear and sensibility towards noise, but the effect of tiredness is different according to each person. First impressions occur with greater or lesser frequency according to a person's tiredness, and the way one attunes to sound also changes. Tired individuals at night show much less availability to deal with sound and adjust to it than non-tired individuals.

Secondly, how one perceives and attunes to sonic environments depends much on the person's current mood. A significant insight that I withdraw from this study is that mood aggravates or diminishes the intensity of feelings that are elicited in first impressions. For instance, some participants (Penelope, Francisco) described entering places that were relatively calm but because they were either jaded, bored, or unmotivated, the sounds still felt confusing, annoying, or inconvenient for them. Contrariwise, some participants (Oscar, Alice, Lucas) described entering places such as coffee shops or events such as concerts that were very noisy, confusing, or bustling but did not strike them as such because their mood (e.g. cheerful, upbeat) matched the atmosphere. The encounter between mood and atmosphere during the first impressions has profound consequences for the sonic attunement, as it sets the tone for the ways individuals engage with sounds in a certain place. In some cases, the mood can also contribute for not

noticing sonic transitions and not tuning in to them. For instance, this is the case of being hurried or worried about events that took or are taking place elsewhere.

Lastly, the expectations of an individual are also very significant for what constitutes the first impression, as the expectations already direct the individual's attention toward certain aspects of the experience. Here, the multisensory character of experience must be underlined. The expectations of the individual about a given place do not necessarily encompass all senses: one might be expecting to see or smell something in particular, but have no expectations towards the sonic environment. At the same time, a certain sensory stimuli might elicit others. For instance, Clara, a 33 year-old female, stated that the sounds of the coffee shop remind her of the smell of the coffee, the taste of the food, and the sense of being with others. Expectations toward the places we arrive at form a sort of pre-determination of attention, a kind of creative attention, but one that is prompt to be redirected and redefined at the moment of the encounter with a new environment.

*Conclusion*

This study has enhanced existing understanding about the role that sound plays in how people attune to everyday urban spaces, by exploring the phenomenology of moments of transition between sonic environments in urban contexts. I conceptualised these moments as first impressions that interrupt the habitual observational flux and may generate new states of attention and different ways of attuning to urban place. By doing so, I have shown that first impressions can be sonic, and therefore may have specific temporalities not reducible to the half-second delay (Connolly, 2002; Anderson, 2014), thereby going beyond current psychological understandings of first impressions as purely visual (Workman & Johnson, 1991; Willis & Todorov, 2006; Bhargrave & Montgomery, 2013). The sonic first impression is an interruption that can be caused by different qualities of sound. Volume, as we have seen, interrupts the observational flux abruptly, but transitions in other sonic qualities, such as timbre and rhythm tend to be perceived in a non-conscious way, affecting the body without the individual realizing it, which can cause delays between the affect of the sound and the perception and reaction to a changed bodily state. Therefore, sonic first impressions can be seen as occurring in an extended now (Vrobel, 2013; also Husserl, 2008), which also means that they encompass both retention and protention, an insight that was further explained when I approached the angle of arrival (Ahmed, 2010; Stewart, 2010; Simpson, 2017), and may include delay compensations (Vrobel, 2015) that drive attention away from new stimuli.

We have seen that, besides the influence of the memory of the previous sonic environment, the tiredness and the mood of the individual that arrives at a given place are retentional aspects that affect what is perceived in the sonic first impression. This leads us to consider that not only the sonic experience of individual with health conditions is influenced by the bodily condition (see Atkinson, 2007; 2011; Bell, 2017), but also that the bodily condition of healthy individuals is significant in sonic perception. On the other hand, previous experiences of the same or similar sonic environments make the individual form expectations toward the place he or she arrives at. These are elements of protention that direct the individual's attention to or away from certain features of the sonic environment, despite being possible to redirect this focus. It has been previously acknowledged that expectations affect the experience of soundscapes (Bruce & Davies, 2014). The results of our study add the insight that expectations toward place are multisensorial, that some sensory stimuli may lead to others, and that expectation toward place may actually drive attention away from aural stimuli.

The sonic first impression is an interruption and, as such, it is a pivotal moment to observe the effects of the sociality of affect (Dawney, 2013). As we have seen, the sonic first impression also transmits insights on the meaning of certain situations or places, working as an "identity certificate" of what is going on (Griffero, 2014, 29). This implies that the sonic first impression is also a moment that partially defines how one is going to attune to and participate in a certain situation or place. Although the effects of these impressions are "certainly amendable" (Griffero, 2014, 29), they are the initial definition of what the 'situation' is (Griffero, 2007). As such, they are at the heart of what Waldenfels (2004; see also Hannah, 2013) calls the creative attention, because the sensory information captured in the sonic first impression directs the attention of the individual to certain objects, people or activities, as well as certain ways of being in place, generating a holistic notion of what the place or situation are. Secondary impressions can in turn be seen mainly as acts of repetitive attention (Waldenfels, 2004) as they redirect the focus of attention but do not recreate the perception of situations. A prime example of this is the situation of Lucia raising her voice and tilting her head closer to the client to hear him as the machines are working in her shop. Lucia's focus shifts from the sound of the machine toward the sound of the client, but the atmosphere cause by the noise of the machine remains the main affective force.

The sonic first impression is fundamental to understand sonic attunement, i.e. the individual body tuning in to place through the rhythm, timbre, volume and meanings of the soundscape. As we have seen, depending on the type of aural stimuli that affects the body, attunement to sonic environments may take place in a conscious or non-conscious way, with consequences

on the temporality and corporeality of the act. Transitions in the rhythm or timbre of sonic environments tend to have an effect on the body that can be understood as a process of entrainment. It is a process that is beyond meaning (Nancy, 2007), a process by which the mood of the body and the atmosphere of the environment slowly resonate in each other (Boyd & Duffy, 2012). On the other hand, transitions in which sound acts as a transmitter of meaning are closer to what Vannini et al. (2010) have called the sonic alignment. In this case, the sonic first impression transmits representational cues that inform the individual about aspects of the somatic order that he or she should align with. The main contribution of our study in this matter is the notion that sound always plays a role in attuning to place, a role that encompasses both meaning and affect, active and passive hearing, consciousness and unconsciousness, mind and body, psychology and physiology. A role that cannot be reduced to either of these poles, but that should instead be situated at a certain point of tension between them. By looking at the sonic first impression, we can understand from which point the process of attunement unfolds from, and thereby its phenomenological conditions. This perspective can provide a wider understanding of the myriad of ways of attuning to place through sound that occur in everyday life, not limiting attunement to a matter of 'tuning in' or 'tuning out' (Bull, 2000; 2007; Beer, 2007; García Quiñones, Kassabian, & Boschi, 2013; Kassabian, 2013; Barns, 2014; Watson & Drakeford-Allen, 2016).

## Chapter Four. Artistic practices and the redistribution of the sensible in Largo do Chiado.

I am in Largo do Chiado, sitting on the white wall of the subway entrance. It's about 2 o'clock and it's a sunny Wednesday afternoon. The square is rather empty right now. There are two women and one man on the terrace of the café *A Brasileira*. Two young girls are standing next to the wall of the subway entrance, with their bags on it. One man is standing next to his tuk-tuk, waiting for clients. Few people are crossing the square at this moment. Some seem to be workers, walking quickly on their lunch hour. Others are clearly tourists, looking at the top of the buildings, pointing to Camões Square and walking up to it. Around every five minutes, a large crowd comes out of the subway station, but they quickly vanish into other streets. A street performer arrives at the square. He puts a heavy black bag on the ground next to the statue of António Chiado. The impact is audible. He unzips the bag and takes out a couple of medium-sized sound columns. He then takes out a small grey rug and lays it on the ground. He goes back to the black bag and takes out a very small stereo. He connects it to the sound columns and starts playing some music. Some kind of instrumental hip-hop. I look around to see what everyone else is looking at. The people in the terrace are also looking at what the street performers preparing his makeshift stage. Yet, the people near the subway entrance seem to ignore him. They are looking at their phones, or down into the stairs. The performer starts warming up. A few minutes later, he stops the music for a brief moment, and switches to another track. He holds still for a second and starts to breakdance. Another large group of people comes out of the subway entrance. Some of them meet the people that were waiting by the white wall. I notice some of them point to the performer and say something about it. They walk up to the performance and stay there contemplating. While before, people just vanished into other streets after they got out of the subway station, now each time a large group comes out, four or five persons will stop at the performance. Fifteen minutes into the performance, there is already a large group around the performer. What happened in this space? How did the performance intervene in the way that people appropriate urban space?

I believe these questions can be answered by exploring how street artists produce first impressions that act on the distribution of the sensible in urban space. Departing from the assumption that artistic practices act on the distribution of the sensible not only by structuring the aesthetic unconscious over large periods of time, as thought by Rancière (2004, 2009), but

also by redistributing senses on the spacetimes they emerge in, even if only temporarily, I want to explore how different artistic practices work to alter the distribution of the sensible, and consequently, the disposition, processes and practices of the territories of urban space (Brighenti & Kärrholm, 2018a; 2018b). By doing so, I will also unveil a particular way in which artistic practices can play a role everyday urban politics. I use the term everyday urban politics in the sense that the everyday thoughts and actions that make up the appropriation of the city are the performance of political ideas about the city, and therefore participate in urban politics (Amin, 2008; see also Kerkvliet, 2009). As I will be focusing on the way artistic practices redistribute senses on the spacetimes they emerge in, I am also approaching a form of visceral politics (Hayes-Conroy & Hayes-Conroy, 2008; 2010).

Several recent geographical and sociological studies have been concerned with the relation between specific artistic practices and the state of affairs of places. The main concerns of such studies have been how artistic forms and practices emerge in dialogue with their places (McCormack, 2002; 2013; Hawkins, 2013; 2014; Brandellero & Pfeffer, 2015); the dialogic relations between bodies, materials, technologies and spaces during artistic creation and exhibition (Simpson, 2008; Henriques, 2010; DeSilvey, 2010; Hawkins, 2015; Edensor & Bowdler, 2015); and how artistic practices alter places' rhythms, atmospheres, economics, and culture (Butler & Miller, 2005; Markusen & Gadwa, 2010; Lees & Meluish, 2015; van Klyton, 2015). Despite this growing body of knowledge that highlights how specific art forms and practices change the state of affairs of places, there is still more to know about how different artistic practices can alter the distribution of the sensible of urban places, and thereby everyday urban politics. A first aspect of relevance in this is that each artistic medium stimulates, invokes and highlights specific senses while rendering others invisible. This causes shifts in bodily rhythms, mood and attention to details in urban space. A second aspect of relevance is that, as certain corporeal isles are enacted through contemplation, the experience and appropriation of urban space will be subject to change. A central tension in this matter is the fluctuation between visual and sonic stimuli.

In order to explore these concerns, I will draw upon the geoethnographic study of Chiado that I presented in Chapter Two. In this chapter, I will focus on the artistic performances that took place in the afternoons of April 6 and 7, 2016 in Largo do Chiado, a small square in the Chiado area. Largo do Chiado provides an ideal locus to explore the concerns of this article as it is a space in which different artistic mediums coexist, namely architecture (two neoclassical churches and two statues), music (street bands that play rock or folk music), and dance (different street performers from breakdance to more erudite forms).

This chapter contains five sections. First, I discuss the role that artistic practices play in changing the distribution of the sensible in urban spaces. Secondly, I describe Largo do Chiado. Thirdly, I explain how dance performances alter the distribution of the sensible in Largo do Chiado. Afterwards, I explain how music performances alter the distribution of the sensible in a different way. Lastly, I discuss the implications of these intervening events.

*Artistic Practices and the Distribution of the Sensible*

The presence of artistic practices in urban space has been subject to a great number of geographical studies, which have shown that whilst artworks emerge from or in relation with site-specific elements, they also alter the activities, sensescapes and politics of place (Cant & Morris, 2006). Artists not only take inspiration from the experience of spaces and places, but are also attentive to how their creations will adhere to and change the specific sites in which they work (Hawkins, 2013; McCormack, 2013). The perception of the potential of art to change urban states of affair has also sparked the interest of planners and urbanists to use arts to intervene in urban space, not only for its economic value, but for its social and atmospheric value (Pinder, 2008; Lehtovuori, 2012; André, Abreu & Carmo, 2013; Belgiojoso, 2014).

Within this context, geographers have unveiled how street performances interact with urban life. One form of interaction is the way in which artistic practices adjust to urban space and urban rhythms. Simpson (2010) has shown that street performers must attune to the environment in which they work in, and that the various features of urban space – architectural, geophysical, technological, territorial – interfere with the performance. Edensor and Bowdler (2015), on the one hand, have experimented with site-specific dance in public space, and show that dancers can enhance their performance by engaging with street materialities and other human bodies. On the other hand, artistic practices also intervene in a profound manner in urban space and rhythms. They do so by acting out different rhythms, contesting meanings and activities, or provoking new feelings and sensations (McCormack, 2004; Barbour & Hitchmough, 2015; Edensor & Bowdler, 2015; Simpson, 2017). In fact, several recent studies have highlighted the effectiveness of art in changing urban sociality, mainly through cognitive or affective phenomena (Belgiojoso, 2014; Doughty & Lagerqvist, 2016). Some of these studies have pointed out the role of the sensory experience of such practices, (Belgiojoso, 2014; Edensor & Bowdler, 2015; Doughty & Lagerqvist, 2016; Simpson, 2017), but it is still possible to further our understanding of these dynamics. In particular, how specific artistic mediums elicit different senses and how in turn these cause distinct spatial appropriations is a matter still underexplored.

With this in mind, this study draws upon Rancière's concept of distribution of the sensible to further our knowledge on how the arts can act on the experience and politics of urban places. Rancière's perspective differs from other perspectives that focus on artistic representations of political ideas or ideologies (Papastergiadis, 2014), because, for the philosopher, art is political even if it does not have a political intent, as it always acts on the distribution of the sensible, i.e. on how perception and experience are structured. By doing so, it determines what is visible and what is not, who can speak and who cannot, and therefore it plays a significant part in how politics will be structured.

Rancière departs from a perspective of aesthetics as a "system of *a priori* forms determining what presents itself to sense experience" that acts as a "delimitation of spaces and time, of the visible and the invisible, of speech and noise, that simultaneously determines the places and the stakes of politics as a form of experience" (2004, p. 13). The philosopher argues that there is a close relationship between aesthetics and politics through what he calls the "distribution of the sensible". This is defined as the system of perception and senses that reveals something in common and defines the structure of the parts and positions of what is common, distributing them through spaces, times and activities. Thus, the distribution of the sensible defines who has a share in what is common to the community and, consequently, their capacity to participate in the community, and thereby the distribution of the sensible promotes both inclusion and exclusion.

For Rancière (2004), the distribution of the sensible creates a regime of identification, i.e., it delimits what is visible and invisible, hearable and unhearable, in a common space. Artistic practices, as "ways of doing and making that intervene in the general distribution of ways of doing and making" (Rancière, 2004, p. 13), act on the distribution of the sensible and therefore in this regime of identification. For this reason, art is able to change the dissensus. Political dissensus for Rancière (2011) is not the confrontation between speakers and their interests. Rather, it is the conflict between who can speak and who cannot, and about what can be heard. So, the concept of distribution of the sensible points to how artistic practices, by acting on the senses, are able to create a regime of what is seen and heard, thereby leading to specific ways of living together.

Rancière's concept of distribution of the sensible, by putting emphasis on the senses and dichotomies of visibility and invisibility, also lead us to think about attention. Hannah (2013) argues that attention is fundamental to understand urban politics and power relations, because, as a limited resource, attention is at the core of the definition of what can be seen or heard. Hannah draws upon Waldenfels (2004) stratification of attention to argue that attention is

fundamental to what is experienced. Waldenfels (2004) makes a distinction between creative attention, which refers to the 'making possible' of a field of experience, and repetitive attention, which can be described as the temporary focus on specific aspects of the visible world. The fundamental role that attention plays is not at this sublevel of what is momentarily focused, but at the creative level where experience itself is defined. Each context has its own distribution of the sensible that leads our attention to a certain field of possible experiences. My argument is that artistic practices can alter these possible experiences in diverse ways, not only over large periods of time as Rancière argued, but even during specific events (what Waldenfels, 2004, would call 'intervening events') in which they redistribute the sensible. I would argue that a fundamental moment to explore shifts of attention that redistribute the sensible is to look at first impressions. The production of first impressions is very significant in a context of a space of consumption as the one which I will explore, given the value that capturing attention has been given in consumption economies. Under the context of the society of consumption, economic agents focused on providing meaningful experiences for consumers, generating what has been called the 'experience economy' (Pine & Gilmore, 1999). In a context of high levels of marketing competition in which most economic agents are able to provide such experiences, capturing the attention of consumers then becomes the prime objective. Thus, the main concern becomes the economies of attention (Beller, 2006; Terranova, 2012; Ash, 2012a). First impressions are fundamental to understand the dynamics of such economics. Artistic practices in Chiado are a part of a wider economic and political performance and thus contribute to the attention economy of this space when they generate first impressions. First impressions interrupt "the habitual observational and pragmatic flux", but they are also, as Griffero (2014, p. 29) points out, "certainly amendable". For this reason, while it is a pivotal moment for attunement as it directs our attention to something else, it can also be a temporary event with no enduring consequences (Stewart, 2011; Ash, 2012a).

The way that artistic practices are able to interrupt the habitual observational and pragmatic flux is very often by promoting different sensorial experiences, which what I will be exploring. Some works have already highlighted that artistic practices in urban spaces affect bodies and social action through the senses (Doughty & Lagerqvist, 2016; Simpson, 2017). However, these works have not yet began the task of exploring how different sensorial channels are activated and the practical implications of that. In some situations, some senses become more active while others seem to fade away, and this changes the bodily capacities of human beings as well as the meanings, ideas, and memories they form (Degen, 2008; Paterson, 2009; Henriques, 2010; Middleton, 2010; Edensor, 2012; McCormack, 2013).

A fundamental distinction that I will explore here is the one between visual and sonic experiences. Distinguishing visual and sonic experiences matter not only because some forms of art privilege one or the other, but also because these experiences provoke different spatialities in urban space (LaBelle, 2010; Wunderlich, 2008; 2013; Revill, 2016). Works in the phenomenology of sound have argued that sonic experiences are very distinct from visual ones, especially due to the fact that sound is a temporary, ever-changing event (Idhe, 2007; Bennett et al., 2015), while visual forms tend to be more stable and persist. For Nancy (2007), visual and sonic experiences also differ at the level of signification that is provided. Visual forms tend to be representational and convey meaning through form and composition, even if polysemic (Harper, 2002). On the other hand, due to the fact that sound is made up of vibrations in the air that the nearby ear cannot avoid hearing, sound is mainly affective and methexic (Nancy, 2007; Duffy et al., 2011) through rhythm, timbre and volume (Henriques, 2010). This means that while visual experiences allow observer-observed relationships, sonic experiences tend to be collective. So, sound highlights the 'being-with' of everyday experience and singular-plural relationships in urban space (Simpson, 2009). In a similar note, LaBelle (2010) and Boyd and Duffy (2012) argue that the ephemeral spatio-temporal nature of sound generates sonic communities in urban space, as individuals in the same place are forced to share the same sonic space. For Revill (2016), who also mobilises Rancière's concept of distribution of the sensible, this means that sound can be political not only through spoken messages but also through its phenomenological effects. Nevertheless, visual and sonic experiences cannot be fully separated from each other, as they are simultaneous processes in the coherence of everyday experience (Handel, 2006). This also leads us to acknowledge that as experiences are predominantly visual or sonic, they will also mobilise other types of senses. For instance, Duffy and Waitt (2013) highlight that musical experience mobilises the rhythmic body, while Väliaho (2014) argues that the experience of videogames generates a 'cerebral subject'. We can interpret this as what Griffero (2014, following Schmitz, 1965; and Böhme, 2003) calls corporeal isles. The concept of corporeal isles refers to segments of the body that are activated in certain experiences that do not necessarily correspond to discrete organs. As we will see, the elicitation of certain senses mobilise certain corporeal isles and this input changes the way individuals attune to urban space. This is a form of what some authors call visceral politics, i.e. the emergence of the political through bodily experience (Hayes-Conroy & Hayes-Conroy, 2008; Waitt et al. 2014).

*Chiado and the Everyday Appropriation of Largo do Chiado*

The Chiado neighbourhood, which is located West of Lisbon's Downtown, has been a core destination for shopping and entertainment in the city centre of Lisbon since the nineteenth century, and the history of this neighbourhood grants it a symbolic status for retail and culture (Janeiro, 2016). Historically, Chiado has been qualified as a consumption space where the trademark retail of Lisbon is located. A place set to 'the rhythm of shopping', but also a primarily visual space, as promenading and window-shopping are the main activities taking place in public space. Back in 1989, the Portuguese urban geographer Barata-Salgueiro stated that "up until 20 or 30 years ago, one would walk on Saturday afternoon in Lisbon's Chiado, where crowds gathered in the activity of seeing shop windows and people; to see and to be seen" (1989, p. 154). This description is still relevant. Yet, Chiado has also become an important touristic attraction in the last two decades. Thereafter, it also became dominated by the 'tourist gaze' that seeks monumental visual sites to witness, contemplate, and register.

Figure 7. Pedestrian trajectories in Chiado Square. Source: Paiva & Cachinho, 2018.
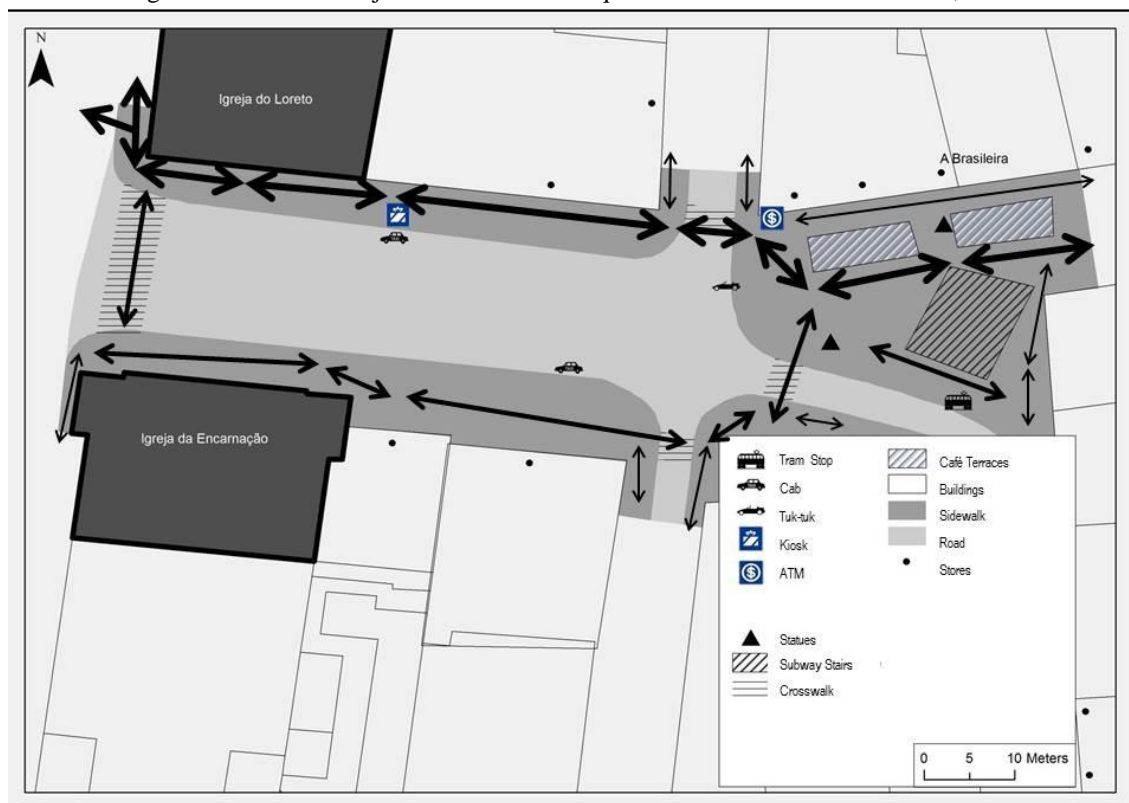


Largo do Chiado is an emblematic square within the Chiado neighbourhood which plays an important role in the neighbourhood's rhythms, first of all, for its location. The main shopping streets of Chiado – Rua Garrett and Rua do Carmo – are located East of Largo do Chiado, and

an important square – Praça de Camões – as well as significant neighbourhoods, such as Bairro Alto or Bica, are located West of Largo do Chiado. This means that the square is often crossed by individuals who are coming or going to one of these areas, so most of the pedestrian traffic is West-to-East and vice-versa (see figure 7). It also means that there is constantly car traffic that crosses the square, making it a very noisy place.

On the other hand, Largo do Chiado is also important for its transport provision. The Baixa-Chiado subway station connects two subway lines and so the subway entrance at Largo do Chiado constantly generates a lot of movement during the whole day. The subway entrance is not only important due to the traffic it generates but also as a meeting place, because its walls are used as seats by pedestrians either to rest or, more often, to wait for someone. A tram station is also located in the square, which generates some movement. There is also a taxi station and a tuk-tuk stop[10].

There are some shops in the square, but the main attractions are the two churches – Igreja de Nossa Senhora do Loreto and Igreja da Encarnação –, two neoclassical style churches restored by famous Portuguese architecture José da Costa e Silva, and the coffee shop "A Brasileira", known for being a meeting place for modernist writers and painters in early 20th century. In the "Brasileira" terrace, there is a statue of the Portuguese poet Fernando Pessoa, with a chair on its side where tourists sit to take photographs. There is also another statue in the middle of the eastern part of the square: a statue of 16th century satirical Portuguese poet António Chiado. These four attractions make Largo do Chiado an obligatory stop for those interested in urban architecture but, more than that, they turn the square into a particularly visual space, as pedestrians tend to stop only to momentarily contemplate or take photographs of these statues or churches.

Due to these characteristics, Largo do Chiado is a fast-paced space, constantly crossed by tourists and consumers that walk quickly to another location, stopping only momentarily to contemplate or to photograph visual attractions. However, materialities such as the "Brasileira" terrace and the walls of the subway entrance provide possibilities to stop and enjoy the scenery, but still a visual enjoyment. Within the consumerist and touristic city centre of Lisbon, Largo do Chiado is generally a place set to the 'rhythm of shopping' (Kärrholm, 2009), as the appropriation of this square, like many others in Europe, is submersed in consumption practices, and the rhythms of the street merge with the rhythms of shoppers within stores to

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[10] Tuk-tuk is a firm that provides personalised city tours in convertible cars or tricycles.

create an isorhythmia. The 'rhythm of shopping' also enhances the visuality of this space, as 'window shopping' is a major part of the consumers' practices.

During the afternoon, however, a series of artistic performances that include dance and music occur that change this state of affairs, even if only momentarily. This makes Largo do Chiado a strategic environment to explore how different artistic practices work to alter the distribution of the sensible, and consequently, the disposition, processes and practices of the territories of urban space (Brighenti & Kärrholm, 2018a; 2018b). Unlike in other European squares, such as Covent Garden in London (Simpson, 2008), performers in Largo do Chiado do not announce that their performance is about to begin, which allows us to grasp better how the artistic work itself is capturing attention and working on the senses. In the next sections, I will explore the effects of dance and music in Largo do Chiado, and afterwards I will discuss how everyday urban politics are affected by these phenomena.

### *Largo do Chiado and Dancers*

April 6, 2016. It's 2:34 p.m. and I am sitting on the wall of the entrance to the subway, along with some other people, mainly young adults who seem to be waiting for someone. It's a sunny but not very hot afternoon. As usual, many people are walking past Largo do Chiado. They come from Largo do Camões in the direction of Rua Garrett or the other way around, and most of them pass right by me through the middle of the square. They either look at the ground while they walk quickly, or they stop for very short periods of time to gaze into the buildings, or into the statues of Pessoa and Chiado. In the coffee shop terraces to my right around a dozen of people, apparently tourists, are having a coffee and talking to each other. The road traffic, punctuated by the red lights, dominates the sonic space.

Music starts playing. It's a 70's style disco soul song that comes from a small black stereo of a male performer that starts warming up for his show. The upbeat rhythm of the song matches the quick pace of pedestrians who cross the square, so it does not catch much attention apart from a small child that looks and gets closer to the source of the music, although the road sounds are less noticeable now. As the performer warms up, the music goes on for a few minutes. Suddenly, the performer changes the music. The stereo now plays a slow paced, very soothing piano piece that contrasts with the fast-paced rhythm of pedestrians. At the same time, he starts dancing, with very gentle and slow gestures that match the music's tempo. A minute after that, the music switches to a piano rendition of a well-known pop romantic ballad. The performers gestures remain slow, light and gentle, making his body seem very light.

As people recognise the music, the change in the sonic space gathers attention towards the body of the performer, the only body aligned to the pace and feeling of the song (figure 8). The attention of those in the terraces shifts from the conversations to the performer's gestures, and those who were facing their friends now turn to the performer's space. People walking by now slow down or stop completely and watch the performance for a while.

This performer was able to change the sense of time in Largo do Chiado by creating what Griffero (2014) calls a 'first impression'. Therefore, as the noisy sonic flow of Largo do Chiado is interrupted by a clear and gentle sound, and performer's gestures contrast with the fast paced rhythms of Largo do Chiado, the attention of pedestrians and consumers is drawn to these changes, and as they gaze and listen, their bodies attune to this new rhythmicity that is being designed by the performance.

Figure 8. Two frames from a video of a dance performance. The frame above is at the performers warm up, the frame below is at the beginning of the performance. Chiado Square. About 3 pm, April 6, 2016. Source: Paiva & Cachinho, 2018.



However, as this first impression is 'amendable', the individual's attention shifts in between moments. When the performance's song and dance changes, more attention is drawn into the

performance, creating a new 'first impression', and while it goes on the attention tends to fade away.

Figure 9. Pedestrian trajectories and appropriation in Chiado Square during dance performances. Source: Paiva & Cachinho, 2018.
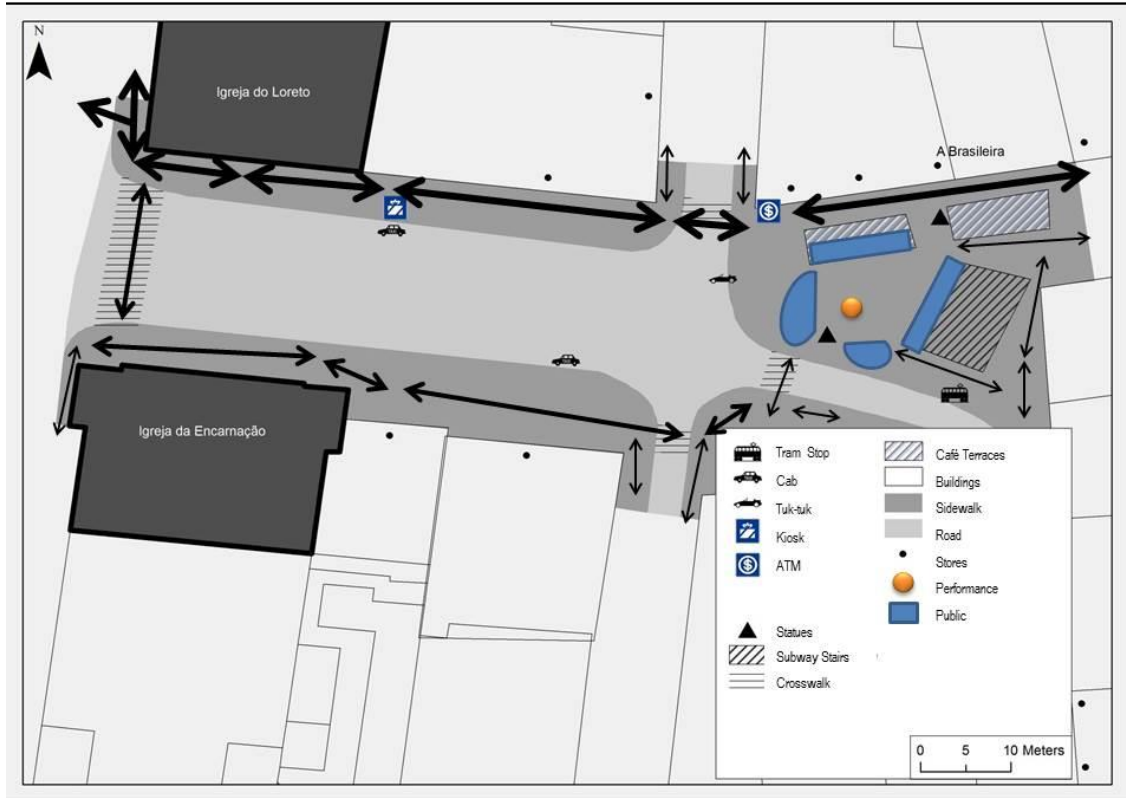


These shifts of attention are less noteworthy in the following performance. It is now past 3 p.m. as two female dancers starts their show. They are dressed with colourful clothing, including large scarfs that are used in the dance along with small plastic swords. Their clothing and accessories, along with the fact that there are two dancers now, cause a greater visual and spatial impact. While the first performer changed the pace of those in Largo do Chiado, this second performance is able to completely alter the spatial flows of the square (see figure 9). As they take up space for their performance in the center of the square, those who pass by are forced to do so through other routes. Due to the energy of the performance – transmitted through its music, the colours and accessories of the performance, and the energetic rhythms of the dancers – a great number of people stop to observe, forming a circle around the performance. During the twenty minutes that the performance lasts, this circle becomes a space for the activation of individual bodies. Pedestrians now not slow down or only stop to watch the performance but

some of them start to mimic the dancers. While some dance with no restrains, others only slight begin to move their head to the rhythm of the performance.

When the performance ends, the distribution of the sensible does not return to its initial state. Pedestrians now stay a while in the middle of Largo do Chiado, either chatting or waiting to see if there will be more performances, before they leave. Consumers in the coffee shop terrace are also socializing differently. While before they were either talking in a circle or contemplating the buildings, they are now attuned to the square's atmosphere. Almost all of them are facing the center of the square, where the performances took place, and they chat while they observe the movements of pedestrians and the traffic.

*Largo do Chiado and Musicians*

April 7, 2016. It's around 4 p.m. and the weather is sunnier and hotter than yesterday. The coffee shop terraces are filled with people who chat in groups and have some beverages under the shadow. At the wall of the subway entrance, however, there is no one, most likely due to the very hot sunlight. There is a building under renewal where a fast food restaurant is due to open which is very noisy at the moment as work is being done on the building's façade and one of the workers is using a drill. There is a lot of movement in the streets at this moment as tourists and consumers walk around in many directions.

A band starts playing at the middle of the square, between Chiado's statue and the coffee shop terraces, facing the consumers at the terraces (figure 10). The band consists in three musicians: a drummer with a small drumset, a bass player, and a guitar player and singer, and both of them sit on top of their instruments' amplifiers. They play pop rock songs. When they start playing, their music masks the noise from the construction work, lightening up the atmosphere. However, in contrast with the dancers' performance, they do not seem to immediately catch the attention of people sitting or passersby. The sonic nature of the performance, which lacks a noteworthy visual component, creates a different relation with the artistic practice, but there is still attunement. Nancy's (2007) arguments on the difference between seeing and listening help us understand what goes on. As the philosopher argued, while vision creates a one-direccional observer-observed relation, sound generates a methexic spatiality which encompasses bodies and transmits affections in all directions, that may however not be immediately noticed (Wissmann, 2014; Revill, 2016). As LaBelle (2010) and Simpson (2009) argue, this quality of sound provides possibilities for sociality.

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Figure 10. Two frames from a video of music performance. The frame above is at the beginning of the performance, the frame below is at the last song of the performance. Chiado Square. About 4 pm, April 7, 2016. Source: Paiva & Cachinho, 2018.



Henriques (2010) has shown that music affects and dominates the body through three distinct but always simultaneous channels: rhythm, timbre and volume. During this band's performance, the mild tempo of pop songs aligns itself with the pace of pedestrians, while the amplifiers volume is just enough to mask the sounds of the streets and, most importantly, the noise from the construction work. The pleasant timbre of the pop songs then becomes valued by pedestrians and consumers. In between songs, consumers at the terrace that were seemingly not paying attention start to clap. At the wall of the subway's entrance, pedestrians begin to sit down, listening to the sound of the music. They talk while they listen, or they move their bodies a little to the rhythm of the song. While music does not dominate their bodies in this environment, it does change their stance.
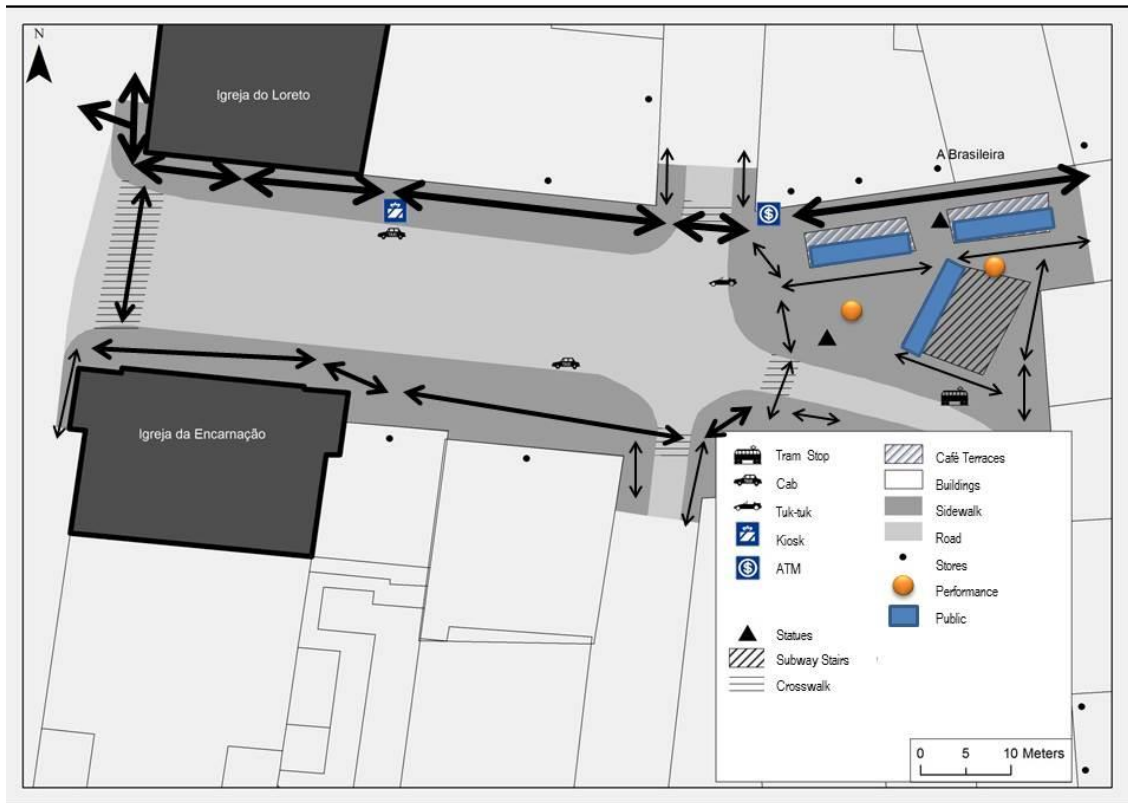
During the band's performance, the senses are redistributed in this space, illuminating different corporeal isles. While heat was avoided and engagements with space were primarily visual at the beginning of the performance, new corporeal isles are activated with the music: listening becomes a primary sense, and the music resonates in the body. Individuals clap, dance, and stand at the sun listening to the band and socializing. Between the end and the beginning of the performance, Largo do Chiado has a very different disposition (figure 11).

Relationships with technology also changed during the band's show, which illustrates this different sensibility towards urban space. While tourists who passed by Largo do Chiado used mobile phones and digital cameras to photograph the main visual attractions – nearly always the two churches and the two statues –, during the performance they switch to video and stand for a while recording the music and the atmosphere. It is noteworthy that these video recordings often do not focus the band; instead the moving camera captures the surrounding environment, someone dancing, or the group of friends as they listen to the music and react.

*Conclusion*

The results of this study have shed light on how different artistic practices work to alter the distribution of the sensible, and consequently, the disposition, processes and practices of the territories of urban space (Brighenti & Kärrholm, 2018a; 2018b).

Our case study Largo do Chiado is a prime example of a space that is set 'to the rhythm of shopping' (Kärrholm, 2009) and the 'tourist gaze' (Urry & Larsen, 2012). This means that the rhythms of public space are dominated by the quick pace of shoppers going from one store to the other, and tourists coming down and up the street. Due to its location near some of Lisbon's most important shopping streets, as well as the significant presence of car traffic and public transportation, Largo do Chiado is a fast-paced space. In result, it is also a particularly noisy space. Despite this, the presence of emblematic architecture and landmarks, as well as the *Brasileira* terrace, turns Largo do Chiado into a primarily visual space that caters to the tourists' desire to observe urban heritage (Urry & Larsen, 2012). Within the increasingly touristic and consumerist Chiado, Largo do Chiado is a space traversed by individuals going from point x to point y that only stop momentarily to contemplate or to photograph visual attractions, and cars that only stop at the red light.

The presence of dancers or musicians, however, changes this disposition. It does so firstly because the performances are intervening events (Waldenfels, 2004) that draw attention from consumers and tourists. This issue is still underexplored in urban space (Ash, 2012a; Hannah, 2013), but this study points out some ways in which attention is significant in everyday urban politics. We have seen how artistic performances provoke first impressions, i.e. affective corporeal involvements that interrupt the habitual observational and pragmatic flux (Griffero, 2014). By doing so, they also shift the city users' creative attention (Waldenfels, 2004; Hannah, 2013) from the visual panorama or the walking rhythms of shopping to their performance: their gestures, sounds, expressions, clothes, and instruments. It is no longer the window shops and the monument's facades that are at the heart of the field of experience, but instead it is the performances and the sociality that they generate. In this sense, they interrupt the performance of fast-paced consumption practices that dominate Chiado and open up a field of difference. As city users stop to observe performances, artists are quite literally – although not entirely – stopping the rhythms of consumption in Largo do Chiado.

As the attention of city users turns to the performers, their sensibility towards urban space changes. However, in the spirit of Rancière's (2004) arguments, it is not so much what is being expressed in the artistic performances that alters the sensibility of city users, especially if we take into account that the performances are mostly aesthetical in their purpose and do not

convey strong ideological content. Instead, it is the activation of the sensorial channels that performers are using that cause this rupture.

As we have seen, the artistic practices of performers act on specific sensorial channels, highlighting some corporeal isles while making others fade away. As Nancy (2007; see also Simpson, 2009) argues, each sensorial channel has an active and passive state. For Middleton (2010), the urban experience itself already accentuates certain senses in different situations. In Largo do Chiado, the agency of the work of performers has much to do with this. Musicians in special turn Largo do Chiado into a sounding space, grabbing the city users' attention through sonic vibration. Individuals switch from a passive hearing to an active listening. At the same time, what was before a primarily visual space turns into a primarily sonic space, as gazing becomes less dominant. The practices of individuals change: they dance, they talk, and they sit down and smile. It becomes a spacetime that reveals the qualities of sonic space as defined by Nancy (2007), LaBelle (2010), Belgiojoso (2014) or Revill (2016): a spacetime of share, of bodily involvement, of affective communication. Instead of x-to-y trajectories, there are certain places where individuals sit down to listen. On the other hand, dancers elicit both visuality and aurality, so they cause a different spatial appropriation. They also interrupt x-to-y trajectories, but they cause circles of individuals who attune to their performance and gather around forming circles temporarily.

Other senses are also highlighted during the performances. We have seen how dancers are able to act on sense of time, affecting the rhythms of passersby by playing with the rhythm and timbre of their performance. The presence of live music also generates a different relation between individuals and the sun and heat, as they come to enjoy the music in spots where no one would seat due to the hot sunlight. These different practices show how the rhythms and stances of the body changes as new corporeal isles are activated. While some studies already pointed out that artistic practices in urban space affect bodies and change spatial appropriation (Edensor & Bowdler, 2015; Doughty & Lagerqvist, 2016; Simpson, 2017), the case of Chiado clearly shows that distinct art forms activate different sensorial channels, which is politically relevant because it causes differentiated consequences. The activation of certain corporeal isles opens up a field of creative attention that encompasses a certain set of practices that people are likely to engage with: dance, sit down, stand up, talk, smile, walk slow or fast, etc.

As artistic performances redistribute the senses in Largo do Chiado, thereby also redistributing bodies through space and time, they are acting on the politics of Chiado by creating a space of difference. While Chiado is dominated by the rhythm of shopping (Kärrholm, 2009) and the tourist gaze (Urry & Larsen, 2012), the spacetimes of artistic performance interrupt that

process. They change the appropriation of space, the use of the body and create a space in which relations between urban materialities and city users, and between city users themselves, are slow, communicational and less mobile. In a way, artistic practices in Largo do Chiado are functioning as a form of resistance to the rhythm of shopping that encompasses the Chiado area. By changing the corporeal isles that individuals are mobilizing, they in turn generate new forms of spatial and temporal appropriation.

The results of this research contribute to the study of the underexplored role that attention plays in urban space (Hannah, 2013) by highlighting how artistic practices can recreate the urban experience by shifting the distribution of the sensible through first impressions and therefore the creative attention of individuals to urban space. The results of this study also contribute to the study of visceral politics (Hayes-Conroy & Hayes-Conroy, 2008; Gordon et al. 2014) by advancing insights on the helpfulness of looking at the elicitation of corporeal isles and its consequences in the appropriation of urban space to further our understanding of the role of the body in everyday urban politics. The same processes we identified here could be triggered by other interventions or stimuli, such as protests, technologies, urban materialities, events, so this approach would be pertinent in other contexts as well.

# Chapter Five. Soundmaking in everyday life.

In one of the conversations that took place after a participant made her sound diary, the following exchange came up:

> Me – Are there any cases in which you felt that what you were hearing made you changed your behavior?
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> Participant – Yes, sometimes I leave places, because I don't like the sounds there. For instance, coffee shops with a lot of noise. When they slam the coffee cups into each when they're storing them.
>
> Me – You'll go somewhere else?
>
> Participant – Yes, and with people talking too loud in restaurants also. I'll go somewhere else, I really do.
>
> Me – Have you ever tried to do something about those sounds in those situations?
>
> Participant – When I can!
>
> Me – And when is that?
>
> Participant – Well, I can get my children not to yell, to speak at a lower tone. I can get them to lower the volume of the TV.
>
> Me – So, you can only do it at home?
>
> Participant – Yes, mostly at home. Unless I am the one making noise. I am very aware of that.
>
> Me – When are you aware of that?
>
> Participant – When I am at the house, with the noise I make with my shoes, the TV, music… At work, when I am flipping pages. Even on the street, when my cellphone rings like in the postoffice.

While the small concerns of this participant about her soundmaking surely sound familiar to most people, I was intrigued by this exchange, because it did not occur with any of the other participants. In fact, as I heard the recordings of our conversations, I realised their descriptions of sounds never included their own, only the sounds of others. While on one hand a possible reason for this was that I asked to record the sounds that affected them, and so it was foreseeable that they would focus on sounds heard, our conversations went far beyond those sounds into discussions of sonic environments in general and how they affect us. It seemed odd only one of the conversations led to the participant's own soundmaking.

This curiosity led me to think about the presence of the issue of soundmaking, by which I mean the whole array of sounds that humans make in their everyday lives, in the field of sonic geographies. In fact, listening seemed to be the main concern among authors. Geographic work on listening has driven attention to how sonic phenomena affect human bodies through cognition (Paiva, 2016a), emotion (Duffy et al., 2011; Bell, 2017; Duffy, Waitt & Harada, 2016), or reasoning (Waitt, Ryan & Farbokto, 2014; Doughty & Lagerqvist, 2016). However, less attention has been paid to how human bodies contribute toward sonic environments and the affects and ethics involved, despite experts on sound studies arguing that understanding soundmaking is a fundamental task to overcome a purely representational approach to the dynamics of sonic environments (Thibaud, 1998).

With this in mind, I decided to investigate the act of soundmaking in everyday life. Soundmaking practices accompany every other kind of human practice, and so these are extremely variable practices not only in terms of the sounds that are produced, but also in terms of the affective situations and ethical stances that mediate their production. By this I mean that soundmaking is dependent upon the situational relations between the individual and the environment, both in terms of the personal or collective cognitive and emotional flows of the moment, and in terms of the ethico-political content of that moment, be it either the personal beliefs or the rules of a certain place about soundmaking. Taking this into account, the purpose of this chapter is to explore these affective and ethical processes involved in everyday soundmaking.

The chapter is divided in two main sections. In the first section I present a literature review on everyday soundmaking, focusing on the three main relations that underpin the processes of soundmaking in everyday life: the relation between sonic environment and soundmaking; the relation between attunement, ethics and soundmaking practices; and the relation between body consciousness and soundmaking.

The second section presents the findings of the experiments on everyday soundmaking conducted with the group of participants, which were described in Chapter Two. The outcomes of the study show that human bodies can be seen as simultaneously semi-conductive and value-governed, as their sonic presence manifests as a feedbacking filtered by temporary mood states, and personal and collective ethics on soundmaking.


*Soundmaking, sonic environments, listening, body consciousness*
Most studies on soundmaking practices are directed towards musical and verbal communication (Barrett, 2005; Young, 2005; McCartney, 2006; Kanngieser, 2011), and the

everyday dynamics of individual soundmaking has been less explored, but there are some important contributions. The first large scale study on human soundmaking was Ostwald's (1963) study on the acoustic communication of emotion in which he goes beyond spoken language and studies rudimentary soundmaking. Ostwalt considered soundmaking an activity necessary for human survival that accompanies every other human activity, and argued that the sounds humans make are always informative and meaningful signals, even though they may be sent unintentionally.

But it was Westerkamp's (1988) study on the dynamics between listening and soundmaking that paved the way for an in-depth understanding of soundmaking in everyday life. Westerkamp considered listening and soundmaking as ongoing activities that are dependent upon each other to create acoustic balance for the body. However, her main argument was that "there is a direct relationship between the quality of the acoustic environment and the quality of our listening and soundmaking" (Westerkamp, 1988, p. 5), meaning that some sonic environments provide better opportunities for listening or soundmaking than others. Westerkamp grounds her analysis on Schafer's (1977) and Truax's (1984) concept of hi-fi and lo-fi soundscapes. Hi-fi soundscapes are those which have a favorable signal-to-noise ratio, i.e. the listener can clearly distinguish each sound source he hears, whereas in the lo-fi soundscape there are too many sound sources that blur each other out. Westerkamp argues that the clarity of the hi-fi soundscape, that she identifies as the soundscape of natural spaces, sparks a desire to listen, and with that, a desire to make sounds also emerges. In these spaces, she argues that:

> (…) we become aware of the fact that we are soundmakers simply by moving through the soundscape. Many urban people are unaware of themselves as soundmakers on this basic a level. Yet our own sounds, such as walking, breathing, talking, and so on, tell us, via the feedback process, where and who we are in that place. We may even experience our sounds as being too loud. (Westerkamp, 1988, p. 15)

In contrast, lo-fi soundscapes, that Westerkamp associates with cities, have negative effects on our listening and soundmaking. Westerkamp argues that the loudness of urban sounds means that the listener cannot have a clear acoustic perception: there is a poor signal-to-noise ratio and high noise levels. This also means that soundmaking is reduced. First, it is reduced because as the sonic space is overcrowded one becomes less eager to make sounds, since they will not be heard. Secondly, the loudness of other sounds masks the sounds our own body makes, leaving few possibilities for feedback. Westerkamp calls this "'the silence of our cities', "an eerie silence that underlies the racket of the lo-fi soundscape. Human soundmaking is reduced

to the bare essentials, or needs to be shouted above the din" (1988, p. 18). She argues that this affects our sense of self, because our sense of self is a product of the relationship between our body and environment. In terms of soundmaking, this means that we can lose the notion of the quality of the sounds we are making and how they affect certain situations or spaces. The most common occurrence is when our hearing threshold shifts due to prolonged exposure to a loud environment, i.e. our hearing becomes desensitised by the loud sounds, and we are no longer able to hear the subtlest sounds, which can be a temporary or permanent condition depending on the length of the exposure period. When a person in this condition makes sounds in a quiet place, such as speaking, yelling, or clapping, these sounds are usually above the average sound level, and therefore do not correspond to the mood of the sonic environment.

While Westerkamp's association of hi-fi and lo-fi soundscapes with natural and urban spaces, respectively, can be criticised because it overlooks the diversity of sonic situations within both natural and urban spaces (and this dichotomy is itself unreliable), her analysis provides a significant starting point to think about soundmaking in everyday spaces from the viewpoint of the relationship between sonic environments and soundmaking. Since Westerkamp's seminal insights, there have been other works that provide significant concepts to think about this relation. The most significant concept is rhythm. Some works have showed that sonic environments affect the body and soundmaking through rhythmic entrainment. According to Phillips-Silver, Aktipis, and Bryant, entrainment can be defined as a "spatiotemporal coordination resulting from rhythmic responsiveness to a perceived rhythmic signal" (2010, p. 6). In this process, the body responds to rhythmic environmental stimuli that affect its auditory, motor and vestibular systems (Phillips-Silver, Aktipis, & Bryant, 2010). Drawing upon Lefebvre's (2004) conception of rhythmanalysis, it has been pointed out that the rhythms of certain places may affect human participation and soundmaking (Henriques, 2010; Lehtovuori & Koskela, 2013; Wunderlich, 2013; Simpson, 2017).

But the sonic environment does not determine directly how one will participate in that environment. Different forms of listening and attuning to the same environments will produce distinct outcomes. Like Westerkamp, Thibaud (1998) argues that listening and soundmaking are closely intertwined activities. Thibaud calls our attention to the fact that sound is embedded in gesture, but also soundmaking includes more than the sounds that transmit explicit information such as speech or applause; it includes those overlooked sounds that our body and our body in relation to the environment make which are usually "neglected by laymen and scientific discourse" (1998: 3). While Ostwald (1963) highlighted that these unattended sounds can tell us much about the psychological state of the body, Thibaud (1998) underlines the

relational and ecological significance of these sounds: they tell us how we move in accordance to the environment and how we cope with it. As Di Scipio argues, "listeners are never separate subjects that keep at a distance from objects listened-to, and (…) the sound event is never complete without the participation of which listeners are able" (2015, p. 285). Di Scipio (2015) calls our attention to the fact that the act of listening implies an "ability of response" because listeners do not simply occupy a space or context, they are instead a part of the very context of soundmaking. The voice, as Kanngieser argues, opens up "spaces for different ways of being through dialogue, through their anticipation of a response" (2011, p. 337). We believe this argument can be extended to soundmaking in general.

Taking this into account, it seems pertinent to consider how the attunement of bodies to sonic environments affects their soundmaking. This takes us to the issue of soundmaking as a "socially-coded behavior" (Thomas, 1987, p. 191). Thomas has noted that non-lexical soundmaking (such as coughing, throat-clearing, sneezing and sniffing) is subject to social rules and therefore it depends upon the social context. In certain situations, soundmakers may be self-aware and try to camouflage these sounds, or they may be commented or reprimanded by others (through language, or other non-lexical soundmaking such as laughter). This also occurs with the voice (Kanngieser, 2011). The opposite may also occur: in certain situations such as festivals, nightclubs, or soundwalks, individuals may be encouraged to make sounds (Henriques, 2010; Duffy et al., 2011; Järviluoma & Vikman, 2013; Waitt, Ryan, & Farbotko, 2016).

Such processes are a form of what Vannini et al. (2010) call somatic alignment. These authors argue that individuals align with the somatic order of a certain place, i.e. they try to correspond to the rules of soundmaking of each place (e.g. the workplace, a library, or a rock concert). Vannini et al. argue that alignment, which can be "symbolic, iconic, and indexical and take place through non-verbal acts" (2010, p. 344), takes place as a form of negotiation or manipulation of the sonic environment, rather than a deterministic top-down relation. This process, coupled with the affective influence of the sonic environment, generates certain forms of sonic attunement that ground soundmaking practices.

These relations have often been framed as a form of feedback. For Truax (1984), feedback is essential to the relations between individuals or between individuals and the environment, because it conveys awareness of the contemporaneity and co-spatiality of things. For this reason, LaBelle (2010) has argued that paying attention to feedback can promote environmental sensitivity through an audible understanding of subjects and environments as they flow together.

Attending to these aspects can however be tricky because, as Westerkamp has put it, "the body is often forgotten and neglected" (1988, p. 125) in everyday soundmaking. Similarly, Thibaud (1998) argues that there are several degrees of control and body involvement in human soundmaking. I would argue that this is an issue that is not limited to soundmaking, but to being in place in general. This is because, as Merleau-Ponty has put it, the body is a form of "silent consciousness" (1962, p. 402). By this, Merleau-Ponty refers to the perceptual flux of information about the world that precedes discourse and reflection that is commonly referred to as non-representational phenomena in contemporary geography (see Anderson & Harrison, 2010; Paiva, 2017; 2018b). This "silent consciousness" organises our experience of the world without conscious deliberation, making the several and distinct stimuli of the world appear as if it is a unique and coherent world.

According to Shusterman (2008), for Merleau-Ponty, the body has a limited capacity to observe itself directly and as a whole. Unlike external objects, the body and its parts are always looked upon from the same perspective in everyday life, except occasional situations in which a surface that reflects light is present. This perspective can be criticised if we think about the different senses we can use to perceive our own body besides vision, such as muscular perception, proprioception, sense of balance, respiration, or taste (Shusterman, 2008).[11] Despite this, absolute bodily self-awareness is rare and difficult in everyday life, despite recent somatologic attempts of training bodies to do so (see Whitehead et al., 2016). So, in the everyday experience of the world, we participate in the world with our body, but from the viewpoint of our consciousness, the body is transparent.

However, this transparency is itself a fundamental condition of the body's function as a cornerstone of observation and orientation of the self. In other words, the body is silent for the world to be heard. Most sensory organs cannot sense themselves, such as the eyes, the tongue, or the nasal cavity, because the act of sensing is directed toward the world beyond the body. In addition to this basic notion, following Vrobel's (2015) reading of Merleau-Ponty and Bateson, we could add that the body as a "unit of survival" is also generally blind to its own sensory emanation as whole, i.e. our smelling is not as attentive to our scent, and our hearing is not as attentive to the sounds we make.

Shusterman's reading of Merleau-Ponty also points out that the limitations of bodily perceptions are useful to apprehend the experience of the world which itself is vague and ever-changing. The body as a whole is silent, but certain stimuli (pain, pleasure) can make certain

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[11] A general criticism that can be made about Merleau-Ponty's theories is the insistence on visual processes.

parts of the body speak of a relation to the world. This transparency of the body is also practical in terms of doing. One does not think of the body moving before it moves in the world. The subject just does its movements in the world. This encompasses both practical and linguistic acts. As Merleau-Ponty (1962) argues, one looks for a word just like one looks for a part of the body that was harmed.

In short, we can identify three aspects of relevance to be explored in our study. First, there is an affective relationship between the quality of the sonic environment and our soundmaking. Secondly, we must take into account how we attune to sonic environments and how personal or collective rules about sonic environments affect our soundmaking. Thirdly, bodily consciousness, or the lack of it, affects soundmaking in the diverse situations in which our bodies find themselves each day.

## *Studying soundmaking in everyday life*

In the next sections, we will present the experiments' main conclusions in three topics: (i) sonic environments, affectivity, and soundmaking; (ii) attunement, ethics, and soundmaking; and (iii) body consciousness and soundmaking.

## Sonic environments, affectivity, and soundmaking

Individuals pass through several different sonic environments on each day of their lives. Most of them correspond to a specific and recurrent situation of their everyday life that takes place in a familiar space: sleeping in the bedroom, cooking in the kitchen, working at the workplace, chatting with friends at a bar, and so on. This correspondence between time, situation and place is normal in everyday life and it was easily recognised by our participants, as it is the fact that each of these spatio-temporal situations are constituted by a specific sonic environment more or less prone to fluctuations. Yet, in contrast, participation in each spatio-temporal situation was less reflected upon by our participants. Participating in everyday life events was generally described as automatic, or something one does not think about in general. Soundmaking was likewise understood as such. Some participants even initially argued that they do not make any sounds in their everyday lives except for talking.

However, when asked about certain acts of soundmaking, many participants immediately reasoned about those acts by focusing on the influence of the sonic environment. We provide three examples of such accounts:

> We entered the bar and it was like four o'clock, and when we arrived it was completely empty, or partly empty. So at the beginning I could understand our conversations better, and my own voice and sounds better, and I could distinguish between the conversations of the waiters, and other people. When it got noisier, it all seemed more mixed, like a pool of sound, so I had to raise my tone (Lucia, 33 years old, female).
>
> I notice that the lunch hour goes by or that a lot of time goes by, because the restaurant becomes less crowded and I notice that it is more silent. Then I start to hear myself talking, and I can hear people better, and I think it has to do with time (Celeste, 22 years old, female).
>
> The fact that the shop was serene and no annoying sounds, no background music, made us stay longer inside the shop. Not just because it was a shop of Brazilian products and we were curious, but because of the mood of the place, we stayed inside taking a look at the products, chatting about them and others things, commentating and laughing. If there were more people there, we would just get the tapioca and go away (Francisco, 25 years old, male).

These three descriptions, while they present very different sonic environments (a bar in a residential suburb, a downtown restaurant, and a small shop), they illustrate similar processes of matching the personal soundmaking, in terms of volume, rhythm, and timbre, to the sonic environment in which the person is in. Each situation has a distinct fluctuation of sonic intensity: the first quote describes a moment in which the sonic environment becomes noisier and lo-fi; the second quote describes the inverse sequence; and the third quote presents us with a comparison between the effects of an actual placid and serene situation and an opposite virtual situation. These descriptions of events in which the individual attunes and adjust its soundmaking to the environment over time can be conceptualised as processes of entrainment in which the body adjusts its projected energy to the sensed energy of the environment. At the same time, these descriptions illustrate Westerkamp's (1988) arguments about the relationship between the quality of the sonic environment and human soundmaking, and moreover, how this affects presence and communication. In these situations and others, noisy lo-fi environments reduced human communication to a yelling voice, while in other situations (e.g. public parks, living rooms) individuals used other communicative sounds (such as clapping, or laughing) to express themselves, and responded to some non-lexical sounds that individuals made (e.g. a man clears his throat and someone asks "is your throat sore?"). Participants also wished to spend more time in places where they could be heard, such as the case of the third quote.

In short, participants recognise that the rhythmic and volume intensity of sonic environments affects their soundmaking, and that they attempt to be in tune with the qualities of such

environment, but pointed out that it is not something they pay attention to in their everyday life.

## Attunement, ethics, and soundmaking

Something that was noticed in most conversations was the difference between descriptions among participants that took part of the same go-along regarding sonic environments. If most descriptions were very similar and participants concurred with others about the overall aural experience, often participants corrected each other in regard to what was more audible, or the extent to which other participant's soundmaking was hearable by other people present at the places we passed by. Regarding this matter, one participant stated the following:

> When one goes inside some place, we notice much more if that place is noisy or calm, and after that moment in which we sit at the table and we begin our conversation, we are either going to raise the tone of our voice or not, and then it seems that it is our conversation and the sounds of our conversation that we hear, and we don't hear much of what is going on around us. But the first impact, the first moment in which we enter some place we hear everything, especially small places or crowded places. But after this when it is us who are talking, the external noise does not bother us so much.

The words of Celeste, a 22 years old female, illustrate how sociality drags the focus of attention toward certain sounds. Inevitably, our soundmaking also attunes to the intensity of that continuous sonic production which is attended, and not others that may be present. While Celeste did not address this directly, it was patent in other conversations that, as Leonardo (24 years old, male), argues, "if I'm only paying attention to my group, it may happen that I can't tell if I'm bothering others".

While we and our participants were never approached by other individuals because of our soundmaking, the authors did register moments in which other individuals looked at us because of our soundmaking (possibly because the topic of conversation aroused their interest, or because our soundmaking was very audible at the moment) during our go-alongs. But since no individual approached us in any manner, it was not possible to address the issue of discipline through comments or reprimands. However, with two groups of participants, the issue of soundmaking ethics arose during our conversation.

One group highlighted that the rules of soundmaking in some places have immediate effects on the behavior of individuals through subtle acts of discipline. Jessica, a 42 years old female, describes her behavior when she enters her house with her children.

I can get my children to speak down, I tell them not to yell. I can get them to lower the volume of the television, or the volume of their music. I try not to make noise. I always take my shoes off when we arrive. They also put some socks or flip flops on in order to not make noise. I tell them not to slam the doors. I'm even conscious when I'm putting the dishes in the washer. The chairs, I tell them not to drag the chairs.

This case shows how Jessica soundmaking ethics influences her children's soundmaking by establishing rules and disciplining them, by educating them about how their soundmaking affects other people in their building. She states that she hates noise, so her children's soundmaking is often addressed in the house so that it becomes aligned (Vannini et al., 2010) with the house's established sound environment.

Another group highlighted that individual ethics regarding soundmaking in public will also affect behavior. As Nelson, a 37 years old male, states:

I'm not going to speak loudly inside a supermarket. At home I can speak louder, or I can yawn, and make sounds. In the supermarket there is a conduct to follow. There is like a posture that you need to carry in front of others, and it is a matter of education. At best I yawn when there is no one around me at the office.

But not only personal ethics about soundmaking itself affect soundmaking. Personal ethics about visibility or hospitality also affect individual soundmaking, even in cases when soundmaking is casual. This is for instance the case of Clara, a 27 years old female:

I only notice the sound that my shoes make when I wear high heels. But I try not to use things that make sound in my feet, because I don't want to draw attention to myself when I pass by someone.

This example illustrates how personal ethics about relations with strangers in public can also influence soundmaking, even if in this case soundmaking is a casual by-product of the simple act of walking, because it nevertheless sends a signal of presence to others.

## Body consciousness and soundmaking

Another significant aspect that emerges in most conversations was that self-descriptions of soundmaking practices, and more precisely regarding the impact of those soundmaking practices in the sonic environment, often differed from the accounts of other participants. A recurrent moment in which we identified this was the CP technique. Often other participants,

or the researchers, pointed out that the soundmaking of certain individuals had a greater impact on the sonic environment than the person describing the situation.

This leads us to think about the different levels of body involvement (Thibaud, 1998) and its relation to different levels of bodily transparency (Merleau-Ponty, 1962; Shusterman, 2008) in human soundmaking. As we already referred, the sound that all participants acknowledge they make and are almost always conscious about is their voice, even if sometimes they are attuned to certain sources of the sonic environment, and ignore others.

Other kinds of sounds that humans produce are less consciously performed, and sometimes even not perceived. Non-lexical bodily sounds, such as sniffing or coughing, were very often not remembered by the participants, unless in situations in which other participant addressed that sound, such as when one sneezes and another person says "bless you". A greater intensity of personal involvement when using the voice seems to be the most pertinent explanation for a lesser bodily transparency. Non-lexical sounds, often automatic sounds produced by the body, are more silent in terms of self-awareness.

Sounds produced when handling objects also vary in terms of bodily transparency. However, this is related to the type of involvement and not the intensity of involvement. Soundmaking in activities that are part of everyday life routines was less noticed than that which was produced in situations that are not so common, or new and different soundmaking in common situations. Two situations in the go-alongs can illustrate this dynamic. First, the case of a new sound in the supermarket:

> We went to the new products, and he showed some interest in the sneakers, and I said: "They're cute". And I was looking for his shoe size, and we could hear the sound of the plastic wrapper of the sneakers when we touched it looking for this size. It was that plastic that is kind of noisy, and a bit cheap. I realised I was making some noise. I also remember grabbing that new bread and touching it to see if it was soft. And it also has that plastic that makes some noise. I remember that sound. But the cotton and the bandages have that plastic wrapper that is more familiar, so it does not have the same impact as the sneakers, for instance (Barbara, 27 years old, female).

The small nuances of handling plastic are an example of how self-awareness about soundmaking relates to the familiarity and sense of placeness of sounds. While handling familiar plastic does not affect self-awareness, a different type of plastic stands out as a new sound, and triggers a temporary awareness about how others perceive our acts. A second case of entering a car and driving away from the parking lot highlights the same relation:

Yes, we make sounds with the car, with the doors, and the engine, and other things, but I would never remember those sounds. But yes, we made those sounds. But I actually was careful not to slam the door because I remembered the other day someone did that and it bothered me. I was careful not make that much sound, because it hurts the car and it sounds aggressive. (Lucas, 36 years old male).

In this case, routine sounds fall into the transparency of being, but a sound that stood out in a previous situation generates self-awareness about that specific soundmaking. Interestingly, all sounds produced during the act of entering the car and driving away were unnoticed, except for that specific one the participant was attuned to.

*Conclusion*

Everyday soundmaking is indeed an act of environmental feedback (Truax, 1984; LaBelle, 2010). We could however add that soundmaking, as an act of environmental feedback, is practiced through an entlanglement of semiconductive affective responses and value-governed experiences. Semiconductiveness is a concept advanced by Serres (1995) that can be described as "a capacity to pass on affects" (McCormack, 2013: 135-136), but this capacity not only involves the re-transmission of affects but also the individual filtering of such affective inputs. This conceptualises some of the processes we have identified along with our participants, such as hearing thresholds (Westerkamp, 1988) and rhythmic entrainment (Henriques, 2010; Phillips-Silver, Aktipis, and Bryant 2010). On the other hand, soundmaking is also an experience that is guided by a "concrete, value-governed architectonic" (Bakhtin, 1993: 61), meaning that it is mediated by a structure of ethics about soundmaking that comprises both social rules and individual thinking. We have seen that the recognition of situated rules about posture and soundmaking, personal ethics about visibility and bothering others, and small acts of discipline affect soundmaking in various ways, in what Vannini et al. (2010) call somatic alignment. This entanglement of semiconductive affective responses and value-governed experiences that makes up everyday soundmaking is a hazy process. As an act that includes representation but also surpasses it, everyday soundmaking is mediated not only by the way we – consciously or non-consciously – respond to such stimuli, but also our level of bodily involvement and bodily transparency (Merleau-Ponty, 1962; Shusterman, 2008) in those responses. As we have seen, there is a relation between personal involvement and bodily transparency in human soundmaking: higher intensity of personal involvement in making sounds (such as the use of the voice) tends to decrease bodily transparency, while automated gestures (esp. non-lexical sounds) increase it. However, sounds made while engaging objects seem to be more or less perceived according to the degree of familiarity of the act one is

performing and the sound which is produced. These insights highlight that the transparency of the body – a fundamental condition of the body's function as a cornerstone of observation and orientation of the self (Shusterman, 2008; Vrobel, 2015) – is subject to fluctuations in everyday life that are key to the balance between body and environment. Soundmaking as form of environmental feedback oscillates between moments of profound awareness about the sonic presence of the body that provoke self-awareness and reflection, and moments of absolute engagement with the world in which the body is transparent and the subjects feels the world presence before him. Both of these perceptual extremes – and every intersectional position in between – play a vital role in the actualization of the being-in and being-with of everyday life in the world.

# Chapter Six. Street football practices and world-building in Quinta da Piedade.

As usual on the afternoon of a weekday, a group of about six teenagers are playing football in the Plaza in Quinta da Piedade. Today, they are doing free kicks. They are using a small arcade that has nearly the same height and about half the length of a goal in professional football. Next to it, there is one of the vacant stores of the Plaza, which has a large window intended to be used as a showcase. At one point, one of the players kicks the ball but misses the goal. The ball goes straight to one of the top corners of the window, and hits it quite hard. The window makes a strong glassy noise on the impact, followed by a humming vibration that lasts for a few seconds. During these seconds all players stopped. They do not follow the ball, but they look straight to the window. I am sure they are trying to understand if the glass is broken. It sounded like it, but it kept vibrating. Without looking at each other, all players walk up to the window after it stops vibrating. They observe the same as I do. It did not break because that top corner is slightly bent inward. "Let's go", says one of the players in a quite calm tone. He slowly walks up to the ball and passes it to another player. His utterance put an end to the tense atmosphere that the sound of the ball hitting the window had installed. The sound of his pass and the ball rolling through the ground reinstate the mood of the previous atmosphere. They go back to playing the same game. What is interesting about this event is that it marked the interruption of a specific world that was being created by the game. For the few seconds during which the integrity of the glass was threatened, the arcade was not a goal anymore, and vacant store was not an off-goal limit anymore. It was a vacant store again. After the game restarts, these materials become goals and off-goal limits again. Sounds that are made during and after the game play a significant role in the making and unmaking of the worlds, and the territories they enact.

In this chapter, I want to direct the focus away from the act of listening and into the act of soundmaking to show that this can provide novel insights into the role that sound plays in making space and connecting subjects. In order to sustain this argument, I will make four related arguments. First, human soundmaking must be understood as a whole, including the making of lexical and non-lexical, representational and non-representational sounds. Secondly, human soundmaking is closely related to listening, even if this relationship surpasses consciousness, but it is by no means a mere consequence of listening. Third, human soundmaking generates worlds. Kanngieser (2012) has made this point about the human voice,

but her argument leaves out important non-vocal aspects of human soundmaking. Lastly, human soundmaking plays a significant role in the production of everyday territories. Some studies have approached this issue in specific contexts, such as public protests (Auer, 2013; Kunreuther, 2018), but these leave out the possibilities of interventions on everyday life spaces at a smaller scale, and through less deliberate means.

I intend to demonstrate these arguments through the findings of a geoethnographic study on street football games, which show how soundmaking in urban space is employed by young people to generate micro-worlds and territories in street football games. The study was conducted on a plaza in Quinta da Piedade, a suburban neighbourhood in the Lisbon Metropolitan Area. The plaza was not originally conceived for street football games. However, young people appropriate the space on a daily basis to play football as the plaza is not used for its original purposes, which included retail and conviviality. Street footballers make sound before, during and after football games through their voices, bodies, objects, and the materiality of public space. The sounds they make sometimes convey meanings, but they also often affect other bodies through more-than-representational cues. This generates an affective world that recreates the experience of urban space. Simultaneously, it also claims a space shared by other users and thus it creates an informal territory.

With this study, I intend to contribute toward the field of sonic geographies by providing a novel way to understand urban sound, shifting the focus from the act of listening to that of soundmaking. Simultaneously, I will contribute toward research on urban rhythms and the territorialisation of public space, a subject that has been widely debated in urban studies in the last years but in which the role that sound plays has been less explored (Brighenti & Kärrholm, 2016; 2017; 2018a; 2018b).

The chapter is divided into three sections. The first is a literature review in which I discuss our arguments on soundmaking and the role it plays in the emergence of everyday worlds and territories. While the chapter focuses on how soundmaking is employed in street football games to establish worlds and territories, it is vital to clarify what I mean by soundmaking in wider conceptual terms before I approach the subjects that will be analysed in the empirical study. For this reason, the first section of the chapter will review current literature on soundmaking in geography and other social sciences, including the multidisciplinary field of sound studies, before I address how soundmaking can be used to generate worlds and territories in urban space. This section revisits and expands some of the insights of Study#3 and due to this some repetition may occur. I am aware of this and I deliberately choose to return to these issues

because it is important to rethink the insights of Study#3 before applying them to a case in which soundmaking plays a part in making worlds and territories.

The second section presents the findings of our study, in two parts. First, I present three different street football games and explain how soundmaking is used to make worlds in each of them. Secondly, I describe the interactions between the territories of street football games and the usual street rhythms of Quinta da Piedade. The final section presents a discussion that relates the conceptual discussion and the findings, by addressing how the street football games I encountered in Quinta da Piedade demonstrate the value of addressing soundmaking as a whole, as an activity closely related to listening, and as an activity with the potential to generate worlds and territories.

### *Making sounds, making worlds, making territories*

Geographic work on sound has not completely excluded soundmaking. Despite this, the main focus has been the act of listening, and the act of soundmaking lacks significant theorisation. Work on soundmaking has been mostly limited to the production of two types of sound: music and the human voice. The study of music has a long history in geography (Nash, 1968; Carney, 1998; Leyshon et al., 1998; Whiteley, Bennett, & Hawkins, 2004; Krims, 2007; Bell & Johansson, 2009). Music has been studied from various perspectives: as an economic activity (Lange & Bürkner, 2013; Creuz, 2014), as a social and identity practice (Kong, 1995a; 1995b; 2006; Smith, 1997; 2000), and as an emotional phenomenon (Anderson, 2002; 2004; Duffy, Waitt, & Gibson, 2007). Bell and Johansson argue that music "actively produces geographic discourses and can be used to understand broader social relations and trends, including identity, ethnicity, attachment to place, cultural economics, social activism, and politics" (2009, p. 2). In fact, the geographic approaches to music often entail political insights, even when the focus is on the affective nuances of the music experience (Anderson, 2004; Waitt, Ryan, & Farbotko, 2014). These insights are most commonly associated with issues of identity (Kong, 2006; Doughty & Lagerqvist, 2016) and political protest (Duffy & Waitt, 2011; Brown, 2016).

More recently, the use of the voice received some attention by geographers. Kanngieser (2012) opened up the debate by emphasising the expressive and ethico-political force of the voice. She argues that the voice expresses more than language and rightly calls our attention to "[h]ow we say things, and not just what we say", adding that vocal inflections also have "significant effects on our capacities to listen and respond to one another, effects that also play out on the level of the political" (Kanngieser, 2012, p. 347-348). Subsequent work has demonstrated Kanngieser's arguments, by showing that proverbs, spoken words, questions, and conversations play a

significant role in the everyday creation of social life, place, and cultural memory (Brickell, 2013; Alderman & Modlin, 2016). Likewise, Finnegan (2017) has shown that paralinguistic communication, which refers to the elements of spoken communication that do not involve language, is fundamental for the performance of authoritative speech. Thus, the voice must be broadly understood as a form of expression that involves not just semantics, but also pragmatics and paralinguistics. In addition, the voice can be conceived as a political tool that can enforces, questions, or recreates social norms (Mills, 2017). Some geographers that share these concerns have been attempting to develop methods to disseminate the voices of research participants (Wissmann, 2008; Gallagher, 2015; Stevenson & Holloway, 2017).

Although geographic works on music and the voice have disclosed the ways in which these sounds can recreate space, other sounds made by humans have received very little attention. I am referring to things such as non-lexical bodily sounds (such as breathing, coughing, throat-clearing, sneezing, and sniffing), and sounds we make while handling objects (such as vehicles, household items, mobile technologies, etc.) or moving through space (including contact with clothes or pavements). These sounds accompany much of our everyday lives. In fact, despite sporadic calls for further investigation on soundmaking, many of these sounds have been "neglected by laymen and scientific discourse" until now (Thibaud, 1998, p. 3). Nevertheless, they can provide a great deal of information for geographic research. While this was approached in the previous chapter, I want to return to this topic in order to establish a bridge between the concept of soundmaking and the potential of this act to generate worlds and territories.

On one hand, it has been argued for a long time that non-lexical bodily sounds give us much information about the psychological state of the body, how we appropriate space, and how we cope with it (Ostwalt, 1963; Westerkamp, 1988; Thibaud, 1998). It is important to refer that non-lexical bodily sounds, just like the voice, are subject to or can be mobilised to break up with social norms, so they also entail a political potential (Thomas, 1987; Vannini et al., 2010). On the other hand, there are a myriad of sounds humans make unconsciously in their everyday lives that geographers have paid little attention to. Some geographers, especially those employing non-representational theories or post-phenomenology, have discussed the active and passive modalities of listening. It has been argued that listening is a more-than-representational act and that sounds may affect bodies even without active conscience of such affects (Simpson, 2009; Duffy & Waitt, 2013; Hill, 2015). It has also been argued that listening should be conceived as an act that is expanded beyond the cochlea or the human body: the act of listening emerges within ecologies of bodies, materials, and space (Gallagher et al., 2017).

Likewise, soundmaking is also composed by active and passive modalities, and should be conceived beyond the limits of the body. Indeed, a great deal of the sounds that saturate the sonic environment of cities are not intentionally produced, they are just a by-product of a certain activity being done, such as driving a car.

It is crucial to understand soundmaking as a whole, and to do so we must have a broad conception of what it entails. We must move beyond analyses of specific forms of soundmaking such as music or the voice, which can be seen as a form of sonic reduction, that is, "the tendency to constrain our understanding of sound through previously defined referents" (Eidsheim, 2015, p. 2). We must be open to the full potential of making sounds. Human soundmaking stems from the body, but it also a more-than-human practice that mobilises all sorts of objects, materials, and spaces. It is often intentional, but we make sounds unintentionally all the time. And it is limited and constrained by social norms, but it can also be used to contest, resist, or recreate those norms.

We should not fall into the easy mistake of classifying sounds made merely as originating from the body or not, or being intentional or not. Instead, these aspects are entangled in the flow of everyday sonic experience and often difficult to distinguish. Moreover, soundmaking cannot be fully separated from listening. This has been often highlighted in current work on different types of soundmaking. The obvious reason for this is that humans (and several other species) are both soundmakers and listeners. And, as Di Scipio argues, "listeners are never separate subjects that keep at a distance from objects listened-to, and (…) the sound event is never complete without the participation of which listeners are able" (2015, p. 285). Di Scipio (2015) calls our attention to the fact that the act of listening implies an "ability of response" because listeners do not simply occupy a space or context, they are instead a part of the very context of soundmaking. This "ability of response" has also been understood as feedback (Truax, 1984; LaBelle, 2010). For LaBelle, feedback "generates a locative sense for place and emplacement – how my own presence is an active participant within the larger acoustic ecology" (2010, p. 169). In other words, feedback forms a communicative channel and affords environmental sensitivity.

However, we should go beyond the anthropocentric idea of the listener-soundmaker as the sole connection between both practices. Following Eidsheim (2015), I propose that these practices are understood as intermaterial vibrational practices. First of all, this implies considering sound not as a discrete object, but as vibrations that move across all kinds of materials. The material that Eidsheim alludes to encompasses all of the world's materiality, including living bodies, air, water, buildings, etc. Thinking about sound thus implies thinking about the different

materials in which it emerges and resonates. At this point, Ingold's (2011) observations about materiality are helpful. Ingold (2011) draws upon Gibson (1979) to argue that materiality is made up by three things: (i) the medium, which is the larger material in which things exist, such as the atmosphere or the ocean; (ii) substances, which are the smaller materials within mediums, such as stones or glass; and (iii) surfaces, which are the points of contact between medium and substances. For Ingold (2011), the medium is often wrongfully dematerialised, and materiality is reduced to discrete substances. Furthermore, he argues that materials are often seen as homogeneous through the notion of the agency of materiality. That is, by focusing solely on the agency of materiality, scholars have neglected how different materials are transformed and transform other materials. This is especially important for the study of soundmaking, as sounds are not discrete objects that travel through space. They are vibrations that move across mediums, substances, and surfaces. From this perspective, soundmaking is not exactly the making of a thing. It is more like a node on a chain of transmission and transduction that crosses a plethora of materials (Eidsheim, 2015; see also Maier, 2016).

These intermaterial vibrational practices do not leave the world as it was. Instead, they recreate it every time. Kanngieser (2012) has made this point about the human voice. She argues that the voice creates, unmakes, and recreates worlds because the voice participates in the events of the world through dialogue. Notwithstanding, voices are also "deeply infused with social, political, cultural and economic histories and contexts" (Kanngieser, 2012, p. 345). In addition, she argues that the ability of voices to transform worlds is constrained or bolstered by spaces, materials, and relations between subjects. But Kanngieser's (2012) does not address the surplus of sounds that humans make in their everyday lives, and how these can also be transformative in different ways.

In order to understand the importance of this, we must first address what we mean when we say world, or worldmaking. Geographers have generally drawn upon Heidegger's concept of world as a starting point (Shaw, 2012; Stewart, 2010; 2011). Shaw argues that, for Heidegger, world is "the set of meaningful practices, equipment, and sayings that relate to a referential whole", in which we are immersed in our everyday lives (Shaw, 2012, p. 617). Therefore, everyday lives are lived in worlds, that is, there is a "relational space of activity" between self and space in which worlds emerge (Shaw, 2012, p. 617). Worlds are made of perceptions of reality, but also beliefs, ethics, and narratives. Shaw (2012) draws upon Badiou's concept of event to propose that geographers focus on the transformation of worlds by events. On the other hand, Stewart (2010; 2011; 2014a; 2014b) has been calling our attention to worldings, that is, how worlds emerge in our everyday lives. She argues that "[a]pproaching the generativity of

an emergent world requires attention to the way that subjects and objects emerge from a connective multiplicity of human and non-human forces, the power of which traverses people and matter in extensive, intensive, temporal and ontogenetic ways" (Stewart, 2014b: 120). Attuning to this generativity produces "openings", "potentiality", and "virtuality" which allow us to grasp the true force of these everyday worlds.

I would add that people are not only traversed by the power of emerging worlds. Instead, they actively or passively contribute toward them. Thus, we must also focus on worldmaking practices. The first extensive work on worldmaking was by Goodman (1978), who was concerned with how worlds are created in art. He argued that worldmaking "always starts from worlds already on hand", and identified a series of ways through which worlds can be made or recreated. These ways include the composition or decomposition of assemblages of things, the reordering or emphasising of certain things, the deletion or supplementation of things, or the deformation of things. Since this seminal work, the concept of worldmaking has become popular in social and cultural studies (Nünning, Nünning, & Neumann, 2010). Psychologists have argued that worldmaking is closely associated with personal identity (Bruner, 2001; Nicolopoulou, 2013). Moreover, social scientists have shown that worldmaking is also significant for collective identities, including racial and sexual identity (Buckland, 2002; Jerng, 2017). Some social practices, such as mothering, also heavily rely on worldmaking as a way to generate care, proximity, and affectivity (Lane & Joensuu, 2018). Everyone contributes toward worldmaking, despite the fact that some are professional worldmakers and others are not. But, as Saito (2018) argues, we all participate in worldmaking projects even if we are not aware of doing so. The author points out that our aesthetic preferences, tastes, and judgements result in various actions that constrain or potentiate societal projects of worldmaking. While Saito (2018) presents a universalist understanding of worldmaking, we would instead argue that everyday actions are also capable of making and remaking different worlds. Shaw and Warf (2009) have shown that games generate worlds that are not mere products of the creators of the world, but are also a consequence of the performative and affective appropriation of game worlds by players.

This notion that worlds do not simply emerge but are also made and recreated by the subjects that experience them, even if they are not aware of such participation, takes us to the need to understand how soundmaking as a whole participates in the creation of everyday worlds. Attuning to soundmaking acts provides greater possibilities to unveil the role that sounds plays in worldmaking than attuning to listening does, but only if we are able to consider the myriads ways in which we make sounds and what place do they have in making worlds.

The worlds we make have profound consequences in our everyday lives. One of the most interesting for geographers is the territories it produces. There is a significant line of works that approach how sounds makes or transforms space, yet these works have only highlighted two contexts: musical performances and political protest. Studies on musical performances have highlighted the role that the multisensory experiences of the body play and the possibilities for sociality and identity that musical performances provide (Doughty & Lagerqvist, 2016; Duffy, 2000; 2003; Duffy & Waitt, 2011; Duffy et al., 2007; Kong, 2006; Simpson, 2017; Smith, 2000). On the other hand, studies of public protest have focused on how the use of sound in public protests stretches beyond the verbal meaning of what is being said, shouted, or sang (Auer, 2013; Kunreuther, 2018). As LaBelle argues, "demonstrations produce an audibility that seeks to overturn or overwhelm the written record, the law, and house rule with a meaning determined by volume and the promise embedded in making a noise" (LaBelle, 2010, p. 109). For this reason, it has been argued that sound is fundamental to create alternative atmospheres during public protest (Brown, 2016; Goodman, 2010; Waitt et al., 2014). However, these studies do not address the possibilities of other types of interventions on everyday life spaces, such as those at a smaller scale or with less deliberate intentions.

Brighenti and Kärrholm's (2016; 2017; 2018a; 2018b; Brighenti, 2010; Kärrholm, 2007; 2009; 2017) insights into territorialisation and territorial stabilisation are a good starting point to think about these issues. The authors have argued that territories are not pre-given entities. Instead, they are the result of socio-spatial associations that do not include the work of humans alone, but also that of animals, plants, objects, and space itself (Brighenti & Kärrholm, 2018a). In this sense, all socio-spatial associations claim some sort of territory, but these territories must not be understood as something concrete, but rather as appropriations that become stabilised through re-occurrence (Brighenti, 2010). More importantly, these associations imprint a certain rhythm and expression into space, and it is that which stabilises everyday territories in urban space (Brighenti & Kärrholm, 2018b). The worlds created through street football practices can be understood as socio-spatial associations that generate territories. Soundmaking plays a significant part in this territorialisation, not only because it allows communication and sensemaking within a world, but also because all elements of the socio-spatial association (humans, clothes, footballs, the ground, buildings, urban furniture, etc) make sounds. By sounding the association of these elements, a boundary is drawn between what is part of this world and what is not.

To sum up, I have argued that human soundmaking must be understood as a whole, including all the sounds that humans make, even those that are made unintentionally. I also argued that

soundmaking is an activity closely related to listening but not reducible to reactions towards sounds heard. I believe that it is vital to study human soundmaking because, as a node in intermaterial vibrational practices, it has the potential to generate worlds and produce territories. For this reason, it is a central practice to take into account in the study of urban life. In the next section, I will present a geoethnographic study on street football games in Quinta da Piedade. The findings of this study not only illustrate the arguments we presented, but also provide cues for further discussion about the new routes for research that everyday soundmaking presents. The findings are divided in two sections. The first addresses how soundmaking is used in street football as a way to create a practical-affective micro-world in several street football games. The second presents a series of moments in which the territories generated by street football clashed with the everyday territories of other pedestrians.

*Making worlds in Quinta da Piedade*

While worldmaking is present in all moments of everyday life, playing games are moments in which the making of worlds is particularly important. Games imply a certain set of rules and the occupancy of a certain space. Playing, on the other hand, is a performative worlding task through which the rules and spatial appropriation gain sense and meaning (Shaw & Warf, 2009; Teo & Neo, 2017). At the Plaza, it is common to observe young people playing street football all days of the week. Ages of the players range from about 10 years-old to about 26 years-old. Sometimes families with older people and very small children also gather at the Plaza to play football. Street football sometimes takes place during the morning, but it is more common to take place between 2 and 7pm. Other activities that take place in the Plaza include: (i) walking, which takes place with different intensities all day long every day of the week; (ii) chatting, which takes place all day and night long every day of the week but with few intensity; (ii) skating, which usually takes place during the weekend; and (iv) drinking alcohol and smoking, which usually takes place during the night between Wednesday and Saturday.

Several street football games are played in the Plaza, and they are often assemblages of different elements, such as bodies, clothes, objects, urban furniture, sound, light, water, or the morphology of urban architecture. As such, they create and recreate worlds, not only through the enactment of a certain practice or narrative, but by physically transforming space itself. I will demonstrate how such games make worlds, and focus on the role that soundmaking plays, as I present the three of the most common games: 'D-D-A', 'râbia' or 'meínho', and 'playing the wall'.

D-d-a is a quite complex game played with three or more players. There is only one goal and one penalty area. The plaza has no football goal, so players use one of the entrances to a closed store which has a shape that is similar to a goal. There is nothing physical to mark the penalty area, so this limit is imaginary. In this game, one of the players starts as a goalkeeper, and if he saves one shot, the player who tried to score then becomes the goalkeeper. Inside the penalty area, players are only allowed to touch the ball once and can only score with their heads or heels. Every player starts with 21 points. Players gain points from scoring goals, and they lose points from missing goals or suffering a goal as goalkeepers. When a player loses all points, the game enters a second stage and he can eliminate other players. To do so, he has to grab the ball with his hands. Everyone can run from him until he catches the ball. After that, plays are not allowed to move their feet. With the ball on his hand, the eliminated player can take four steps and throw the ball with his hands at one of the players. If he hits him, he is eliminated. The game generally ends when everyone is bored.

The two stages of this game generate very different worlds. The first stage of the game has players attuned to the goal and conscious about the imaginary limits of the penalty area. The sounds of the players movements are gentle, and the rhythm of play is slow. Players give short indications to each other about where they stand, or how they are doing in terms of points. Only occasionally a yell abruptly interrupts this calm atmosphere when someone has a chance to score, but the placidness quickly settles once again. As players are attuned to the goal, they are close to each other, so this world occupies little space. However, when the game moves on to its second stage, the game world changes tremendously. As players must run away, the game now occupies a much larger area. The heavy steps of running announce this change right away. Players are now attuned to features of space that allow them to hide; they look for bushes, lamp posts, benches. They yell out to each other, laugh, scream. It becomes quite obvious everyone is excited about the situation, nervous about the possibility of being eliminated, but amused with the possibility of seeing others being eliminated. This transition shows how the game is anchored in a world constituted by elements of the physical space that are resignified, rules that define and redefine imaginary borders, and the sounding physicality of voices, movements, and objects being moved.

'Râbia' or 'meínho' is a game in which players form a circle around one of the players. The player in the middle must try to get the ball while other players pass it around. One afternoon, however, a group of teenagers decided to play this game with a twist. They climbed the stairs to the stage in the Plaza, which is surrounded by a fence made of horizontal metallic cylinders. They left their schoolbags on the stairs, preventing anyone from sitting there or entering the

stage. Each player approached the fence and grabbed one of the cylinders with their hands. Only one player stood in the middle with the ball at his feet. While they were playing, they kept their hands on the fence, which undermined their ability to move. Also, they only touched the ball once. Not surprisingly, they were making a lot of mistakes, and the player in the middle could easily catch the ball, which is unusual in this game. In order to overcome this limitation, they used the fence to bounce off the ball toward another player. They had to kick the ball hard to do so. The impact of the ball on the fence made a loud and metallic sound. After a few rounds, the players on the fence started to collaborate more. They gave instructions to each other about how to pass and to whom. Their voices sounded more and more nervous over time. They started to shout to each other if they missed. Some of them complained that others did not try to enough to receive the ball. After a while, all became silent. But this silence sounded like frustration. Players who missed passes did not complain anymore. They went to the middle slowly without making a sound. Everyone seemed tense, and after a short time they stopped playing. The game world that these players created generated a tense atmosphere that could be sensed from the sounds made. The frustration of the players was expressed not only in their impatient instructions, but also from their quick steps, the hard kicks on the ball, and the audible tight grasp of their hands on the metallic fence which produced a squeaky noise. Thus, soundmaking not only plays a role in the establishment and enforcement of the rules that make up a world, but also in the emotional expression of that world's atmosphere.

Playing the wall is a game in which players take turns to kick a ball against a wall. They lose if they do not hit the wall, hit other players, or touch the ball when it is not their turn, even if it they do not do it on purpose. The players usually choose the largest wall in the Plaza which is between the Plaza's stage and a small building. After the game starts, it doesn't take long until plays do the usual tricks to make other players lose. There are two of these. One of them is to kick the ball very lightly so that the ball touches the wall but doesn't bounce back. The player who has to kick the ball afterwards will have trouble kicking it without making it bounce against himself, which will make him lose the game. The other trick is the exact opposite. It involves kicking the ball very hard, so that it bounces far away from the wall. It also helps if the trajectory of the ball is diagonal, because the player who has to kick it afterwards will have difficulties in arriving at the ball before it is too far away. Since the game revolves around kicking the ball, the sounds of the ball become very important for two related reasons. First, the sound that the ball makes in the instant in which it is kicked tells the players how fast it will go before the eyes can tell. Because of this, they must be very attentive to that sound in order to react quickly to the tricks I described. This also means that these sounds can be used to

intimidate other players. During one particular game, one player did the trick of getting the ball too close to the wall, but the ball bounced back enough to let the following player kick it hard. He did not miss the chance, the ball made a sound that was similar to a stomp, and the ball bounced back around twenty meters from the wall. "You'll see", says the following player. He puts some space between him and the ball, starts running toward it, and kicks it with an even louder sound, a sound which communicated more than the speed of the ball. It sent a message that a trick like that would not be enough to prevent him from hitting the wall. In this sense, soundmaking plays a complex role in the making of a world as it communicates several things at once: information about physical movements, emotions and affects, and social communication beyond verbality. Even if unaware of this, players are able to use soundmaking as a way to communicate which is specific to this world.

In sum, street football games create worlds constituted by physical and imaginary space, temporary rules, the player's and the balls movements, and sounds of each interaction. The sounds made can function as a way to enforce the world's rules and to express the world's atmospherics, and they are used by the players to gain advantages within these temporary worlds. In the next section, I will explore how these worlds are territorialised and how they fit into or contest the rhythms of Quinta da Piedade.

## *Making territories in Quinta da Piedade*

The Plaza I am describing is an important crossing path for residents of Quinta da Piedade. Residents walk through the Plaza for various reasons. They might be going to shop or work, walking their dogs, or just walking around (see figure 12). Often, the space that street footballers appropriate interrupt the usual walking paths, generating moments of conflict which unveil the role that sound can play in the territorialisation of worlds.

In the middle of the Plaza, two of the moveable benches have been put in front of each other at about fifteen meters. The benches are quite minimalistic. They are about fifty centimetres tall and two meters wide. They have two legs but no back. This makes them quite good to be used as very small goals, and the two benches in front of each other are enough to create a sense of a football pitch. Every afternoon, teenagers play short matches there with teams of two to four players. The pitch is delimited by imaginary lines of the goals, and the limits of the Plaza. The pitch that emerges during these matches is the territorialisation of a world which overcomes other territories in the Plaza.

**Figure 12.** Usual pedestrian paths in the plaza. Source: author.

First, it interrupts the main trajectory of those who are crossing the Plaza from south to north or vice-versa (figure 13). When a match is taking place, people avoid stepping into the pitch and try to find a way to go around. Besides noticing where the ball and the players are in the pitch, the sounds made by the players tell people how much they can trespass the pitch. If they are being rowdy or intense in their movements, laughing out loud or yelling, one becomes less confident to step into the pitch to pass by and prefers to go around. On the other hand, if the match is at a low pace, and the sounds of steps, skids, voices, and the ball rolling and bouncing are less noticeable, it feels like it is alright to walk right through the pitch.

Next to this imaginary pitch, there are two benches were adults sit with their kids to play. It is in the middle of the Plaza, so it is the most distant point from the road, and parents want to keep their kids far away from the road. However, if a match is taking place, parents must come either to the northern or the southern part of the Plaza. Matches usually take place during the afternoon, so during the morning the parents are in the middle of the Plaza. However, if there is no one playing football, parents will generally sit in the middle of the Plaza.

Sound is a successful means to claim territory. While humans who cross the Plaza are already aware of the street football territories and know how to avoid them, their reactions do not demonstrate the full capacity of sound to claim urban territories. But the reactions of other

beings do. Take this scenario. Two groups of young people are playing football in the street (figure 14). One of the groups is playing a match with two teams of three very young players in the middle of the Plaza. The other group is doing free kicks on the improvised goal near the vacant store. This group is older, so they kick the ball quite hard. There is little space between the two territories they are occupying.

**Figure 13.** Pedestrian paths during football games. Source: author.



A woman with a dog crosses the Plaza from north to west. She must walk by the two groups of young people playing. She walks very confidently on a straight line, which lies carefully in between the territories of the games being played. Her dog, however, is not so confident. At first, he seemed excited to see so many people running around. He tries to run towards them, but the woman tightens the leash and pulls him back. But as he approaches the middle of the Plaza, he becomes nervous. He jumps scared by the sound of the ball hitting a wall and the older teenagers screaming 'goal'. He stops and looks at them, but the loud laughs of the kids playing a football match grab his attention. He then steps back again because he notices those kids are running towards him. The woman notices that he has stopped moving and is now just stepping back and forth. She pulls the leash and calls him by the name. He looks at her, and

starts moving with her again, but only for a second. The steps of the teenagers running make him run against his owner's legs. The leash becomes entangled in the woman's leg. She struggles to free herself and starts moving again. The dog goes along, but anxiously looks right and left until they leave the Plaza. The nervousness and confusion of the dog demonstrate the affective power of the sounds made during football games. Those sounds generate an effective territory, one could perhaps say a solid territory, which is imminently perceived.

**Figure 14.** Pedestrian paths during two football games. Source: author.



However, the territories of street football are not always respected by individuals crossing the Plaza. In such cases, the players also purposely use soundmaking to enforce that territory. This may take different forms depending on the person who is being forced out of the territory. When other teenagers that are playing in the Plaza trespass the pitch, for instance, while playing another football game, cycling, skating, or running around, they are vocally warned not to trespass. Generally, warnings are not explicit. They are often monosyllabic complaints such as "C'mon' or 'Look [what you're doing] man'. In many cases, they yell out such warnings without facing the trespasser directly. However, when the trespasser is older, these warnings are not made. One afternoon, a group of teenagers was playing a football match. Two older men, I would suspect they were in their seventies or eighties, are slowly walking and talking.

They are talking in a calm, but very serious manner. They follow the usual south to north trajectory, eventually step into the pitch. Not only they step into the pitch, but they stop right in the middle, and keep talking. The teenagers are used to stop matches for short periods of time to let people who might have mobility issues pass by. I have seen them stop for women with strollers or people with wheelchairs. This case was no different. They stopped and waited for the old men to leave. But they did not. They kept talking to each other quite enthusiastically. Some of the players walk toward the old men, but they do not speak to them. Instead, they stare at them, silently, and cross their arms. They stare at them with an upset look, but the old men do not notice them. However, I find the contrast between the buzz of the game and the silence of the teenagers waiting quite noticeable. In fact, the silence of their look, and their impatient posture, communicates their claims quite well. The silence sounds just like an interruption. Nonetheless, it falls into deaf ears. The two old men keep talking for almost a minute, until they start walking again, not acknowledging the presence of the players and their world.

It is clear that sound plays a significant role in making territories out of the worlds of street football games. Sounds not only communicate the presence of those worlds but also its rhythms, thus providing important information about the possibilities for trespassing. The sounds that players make have an impact that goes beyond representational information. It is likewise constituted by affective, bodily, and emotional cues. For this reason, the territories it makes are immediately perceived not only humans but also by other beings that might use this area. These territories, however, can be contested. When they are so, it is striking that the use of sound, be it through the voice or through silence, is actually the only resource that young people use to enforce the territory.


*Conclusion*

I made four arguments that sustain the thesis that shifting the focus from listening practices toward soundmaking practices can provide novel insights into the role that sound plays in making space and connecting subjects. In this final section, I will approach them individually and discuss how the findings of my study demonstrate my propositions.

I have argued that soundmaking must be understood as a whole, including the making of lexical and non-lexical, representational and non-representational sounds. To date, geographical studies of soundmaking singled out certain sounds such as the voice or music (Carney, 1998; Bell & Johansson, 2009; Kanngieser, 2012; Brickell, 2013; Mills, 2017), and ignored the value of non-lexical bodily sounds and the sounds we make while doing things, despite some calls to address these sounds (Ostwalt, 1963; Thomas, 1987; Westerkamp, 1988; Thibaud, 1998;

Vannini et al., 2010). Addressing human soundmaking in all its potential in the case of street football games allowed us to unveil ways in which worlds, atmospheres, and territories are generated through soundings that are assemblages of words, utterances, sounds of movements, clapping, kicking objects, among other things. Although some of these sounds are not made deliberately, players are nevertheless aware of their affective potential and will use them to achieve certain goals or to communicate in a non-verbal way. In this way, attuning to soundmaking as a whole is valuable for geographic research that seeks to understand the performativity of everyday life, especially the performance of social relations and political acts. Attuning to the myriads ways in which sounds are made by humans can tell us more about how they interact with space, and what they feel and wish to communicate.

My second argument was that human soundmaking is closely related to listening, even if this relationship surpasses consciousness. It is obvious that soundmaking occurs in ecological contexts where there is an expectancy of being heard. However, it has been less obvious that there is much to gain if we understand sound as a vibrational field that connects bodies instead of focusing on subjects as mere sources and receptacles of sound. Following Eidsheim (2015), I understood sound as intermaterial vibrational practices in which subjects can be thought of as nodes. Subjects are simultaneously listeners and soundmakers (Westerkamp, 1988; Di Scipio, 2015) that are capable of acting on the continuous sonic production of places. However, their ability to listen and make sounds is interwoven with the kind of materials that they engage with. In the case of street football practices, it is very clear that players not only use their body to make sounds, but also play with the sonic possibilities that materials (such as metallic fences, walls, or the floor) provide. Some of these interactions are premeditated, but others fall into the background of experience and are nearly automatic, such as the movements players make while dribbling the ball. Therefore, we must take into account that human soundmaking, like human listening (Simpson, 2009; Duffy & Waitt, 2013; Hill, 2015), is a more-than-representational act in which thoughts, emotions, affects, and automatic bodily responses occur simultaneously. Therefore, attuning to soundmaking practices not only opens up a new subject for research within sonic geographies, but also contributes toward a more nuanced understanding of the geographies of hearing and listening.

The third argument I made was that human soundmaking generates worlds. The three street football games I presented illustrate how soundmaking can participate in the creation of micro-worlds in urban space. While the cases I presented could not be considered as lifeworlds since they are limited to specific spacetimes, they can be characterised as micro-worlds that match the Heideggerian conceptualisation of world by Shaw (2012; also Shaw & Warf, 2009) and

Stewart (2010; 2011; 2014a; 2014b), in the sense that they constitute a series of meaningful practices that connect and immerse human and non-human bodies in a relational space of activity, generating affects and narratives. Soundmaking is a vital part of worldmaking in street football practices because it works to enforce the world's rules and to express the world's atmospherics. The imagination of players adds a layer of virtuality to urban space in which objects are resignified and imaginary spaces emerge, and such processes are continuously reinstated by the sounds made. Players also know this, even if subconsciously, and they use the possibilities of soundmaking in order to gain advantage within these micro-worlds. These insights provide interesting lines of research to undertake in other geographies. How does soundmaking participate in the everyday worldmaking processes in relation to personal identity (Bruner, 2001; Nicolopoulou, 2013). collective racial and sexual identity (Buckland, 2002; Jerng, 2017), or social practices (Lane & Joensuu, 2018)?

The same question could be posed in terms of everyday territories, which takes us to my last argument, which is that human soundmaking plays a significant role in the production of everyday territories. Street football games provide an interesting case to think about this issue because these practices are distinct to those that have been on the spotlight, such as musical performances or public protest (LaBelle, 2010; Duffy & Waitt, 2011; Brown, 2016; Doughty & Lagerqvist, 2016; Simpson, 2017; Kunreuther, 2018). Street football games allow us to understand how everyday practices can generate territories and stabilise them through sonic production. Following the arguments of Brighenti and Kärrholm (2016; 2017; 2018), I consider that this sonic production imprints certain rhythms and affective expression onto spaces, thus claiming a territory for the world at play. In this sense, the territories of street football games are not stable, or pre-given. Instead, they are performative reiterances of a certain world that demand constant soundings.

# Conclusion

The main objective of this thesis was to *explore the phenomenology of the urban sonic experience, and the possibilities to intervene in urban territories through sound*. Before I get into how this was achieved, I will begin by discussing the value of the methodology I undertook. Afterwards, I will reflect on the findings of the four studies, focusing on how they complement each other and how they contribute toward progress in the field of sonic geographies.

All research questions emerged from the sound diaries I conducted with the participants, which were very fruitful in terms of co-producing research questions. When I say that research questions have been co-produced, I realise now that this actually means two things. The obvious one – which was what I initially meant when I said that research questions would be co-defined – is that in this project there was a group of ordinary people that were able to state what is important for them within the realm of their urban sonic experience. This does not mean that the participants and I, the researcher, participated in the decision process in equal terms. All the research questions were defined by me, but they all stem from something that came up in the sound diaries. The issue of the transitions between sonic environments, which I conceptualised as sonic first impressions, emerged in all sound diaries (even in the exploratory phase) and it quickly became an obvious choice for an in-depth study. The issue of everyday soundmaking emerged in only one diary, but I chose to address it for two reasons. First, it was very interesting that one participant spoke about it while all other participants seemed to completely ignore their own everyday soundmaking. Secondly, the issue also seemed to have been to be largely ignored by scholars. Many overlooked everyday gestures have been addressed by geographers working under the perspective of non- and more-than-representational theories, such as habits (Bissel, 2015; Dewsbury, 2015) or automatic gestures (Ash, 2012b; 2013a). Geographers were likewise increasingly attentive to passive forms of listening (e.g. Simpson, 2009; Duffy & Waitt, 2013), but everyday soundmaking practices as more-than-representational practices seemed largely ignored. There were other issues proposed by the participants, but I chose not to address them because they were not within the scope of this research project, or because they would imply a whole different set of methods. These can be summarised into three subjects: (i) the relation between poverty, space, and sound; (ii) why

certain sounds are more annoying than others; and (iii) the relation between sounds and the spatial structure of the city.

However, I realise now that research questions have not only been co-defined by the participants and me, but they have also been co-defined in the sense that they do not stem from rational questioning alone. The research questions emerged from the everyday sensing of the world by ordinary people, from moments that were singled out as significant by individuals. They originate from things that happened, sounds made from materials that vibrated, sounds heard by ears that were searching or perhaps not, and from the thoughts, ideas, feelings, and emotions they provoked. In this sense, this project's research questions are, using Howes' (2005) and Pink's (2009) concept, emplaced. They were not posed by minds alone; they were posed by bodies deeply immersed in the mediums, materials, surfaces, flows, and sounds of the world they inhabit. They were co-created by empirical bodily experience and rational mental questioning, not as separate acts, but as enmeshed particles of more-than-representational worldings.

The participatory methodology allowed participants themselves to research and to gather their own set of data, and to participate in the analysis of such data. I followed an emergent interested in working with data created by ordinary people (Latham, 2003; Duffy & Waitt, 2011; White & Drew, 2011; Marling, 2012). For Epstein *et al*. (2006), allowing participants to gather their own materials gives them control and the power to decide what they feel is important. In a similar note, Harper (2002) has suggested that photo elicitation interviews can be regarded as a dialogue based on the authority of the subject instead of the researcher. In addition, Marling (2012) and Lenette and Boddy (2013) argue that participatory methods can provide researchers the multiple interpretations that different subjects make of the urban experience. With this, everyday life experiences open themselves up to be understood in greater depth, through a detailed and shared reading of empirical data.

This research project demonstrates that using techniques that give voice to ordinary people and their experiences is useful for overcoming the limitations that traditional methods such as the semi-structured interview have in terms of the interpretation of affective phenomena. The most original element that this research project provided in this regard is the exploration of the role that metacognition and metaemotion can play in such interpretation. While participants gathered their own research materials, they became aware of planes of corporeality that are generally unperceived. They became aware of their emplacement in the environment, i.e. of how their mental and physical states depended very much on external conditions. This discovery led participants to engage in reflection about how they came to know urban space,

and at which moments they were actively listening or not. It also led participants to reflect on their knowledge and what they feel about the ways in which urban sound influences them physically, cognitively and emotionally. Participants often realised that sound affects them in many ways, even when they are not attentive to the sounds of the city. These reflections provide important information for those who study affective phenomena in urban space as they are produced in practice. In addition, the elicitation of the recordings can also produce metacognitive and metaemotional experiences, even if these are post-event. As the examples I have presented show, these tend to be general reflections on how one attunes to urban space and makes sense or meaning of the experiences. As a more conscious retrospective thinking, it provides the researcher important information to understand how the unconscious affective-reactive sensuous embodiment is interwoven with the reflexive and self-critical individual. While there has been a debate regarding the problem of this theoretical duality (Wylie, 2010; Wetherell, 2014; Simpson, 2014), there is still few empirical studies that address this issue. Focusing on metacognition and metaemotion both in the field and interviews can provide important insights on these dynamics.

The experiments I conducted generated interviews deeply rooted in what happened in the everyday life of ordinary individuals. Regarding the sound diaries, the moments of data gathering, the use of the diaries as points of departure for interviews, and the elicitation of sound recordings created bridges between what happened in the life of individuals and the dialogue which took place between participant and researcher. Regarding the go-alongs, the co-presence of researchers and participants in the field allowed us to exchange experiences and discuss practical insights about our theoretical objectives. The techniques of the ECI that we used in the after-event conversations were helpful to compare and discuss individual experiences, and to lead participants to reflect in-depth about their own experiences. In both sets of experiments, there is no clear separation between a moment of data gathering in the field and a moment of objective data analysis, a notion that has been criticised due to the conceptual weakness of such separations (McCormack, 2013). This makes the interviews I conducted especially useful for those interested in contributing toward a "geography of what happens" (Thrift, 2008) or anyone who wishes to address the performative aspects of urban cultures.

Just like any other methods and techniques, these experiments have their own limitations. First, they are rather time-consuming. Not only they take a significant amount of time to the researcher but also participants must contribute with their time. This means that it might not be fruitful to engage with these experiments if there is not some previously built rapport with

participants. On the other hand, due to the situational character of the gathered data, it may be difficult to withdrawn solid conclusions when dealing with very scattered sources. It is therefore necessary to structure the methodology in spatio-temporal, social or categorical terms in order to achieve a more luminous set of data, or to predefine a certain concept to guide the conversation or the analysis.

Besides these technical limitations, there were, however, limits to the co-production of knowledge. I felt the need to undertake observational methods that could not be accomplished with the group of participants, in order to understand certain nuances of the concepts I was studying. I conducted Study#2 and Study#4 because I realised that I had to understand how the concepts of first impression and everyday soundmaking could be applied to specific territories and how they could be used to intervene in such territories. It was not possible to assess this with the experiments I conducted with the participants, and it would be exaggerated to demand more from them.

In order to reach the goals of Study#2 and Study#4, I had to be able to understand how first impressions and everyday soundmaking make and remake rhythms and territories in urban space. To do so, the applied methodology had to address two issues: (i) the patterns of urban rhythms, that is, the everyday appropriation of spaces by city users; and (ii) how some practices are able to intervene in urban life and change those patterns. This is difficult to do for two reasons. First, each issue has its own scale. The patterns of urban rhythms are multiscalar, and so it is important to work at the level of neighbourhood, or at least the quarter, in order to have a broad notion of urban rhythms. On the other hand, interventions on urban rhythms can take place in very small scales. Second, understanding rhythmic patterns can be achieved through quantification, but in order to grasp the effects of interventions in urban rhythms, a qualitative performative-affective approach is necessary. So far, studies on urban rhythms had either employed quantitative or qualitative methodologies. For this reason, I had to create a specific methodology for the study of urban rhythms, one that could overcome the limitations of current approaches. I departed from the notion of geoethnography, a term which had been employed by different authors to refer to studies that mix techniques of geographical information science and ethnography (Matthews, Detwiler, & Burton, 2005; Biffle & Thompson, 2006; Matthews, 2011; Milton et al., 2015). I resorted to emplaced observations, video recording and photography to create detailed registers of what took place at specific hours of the day in the case studies. With these records, I was able to understand not just what was taking place, but how it changed the wider urban set, even if ephemerally. I was not only witnessing and registering the movements, gestures, sights, sounds, sensibilities, and presences that made up

urban space at each hour and explaining how it all fit together in that scenario. The geoethnographic approach allowed me to situate that scenario in a wider urban perspective. When I say wider urban perspective, I mean two things. First, I could situate the interventions I was exploring in the rhythmic patterns of the local area. Secondly, I was able to situate the interventions within the wider practical-political scenario. I am alluding to Kerkvliet's (2009) notion of everyday politics, that is, the idea that what people do in their everyday lives is always political, because it is the performance of a certain way of life, and a choice of a certain type of social practices, social organisation, etc. In both case studies, one of the first conclusions that can be withdrawn is that both interventions – artistic practices and street football – are alternative spaces and rhythms in both the spatial and the political sense. In other words, they are more than just another practice that occurs in those places, they are practices that are able to interrupt and change the flows of people and goods, the gestures and affects of bodies, and the territorialisation of space that is common to a wider urban area and which is part of an established way of using and experiencing the city (tourism and consumption practices in Chiado, everyday practices in Quinta da Piedade). These events imprint new territories, invoke new practices, and ascribe new meanings to space.

But I am already getting a little bit ahead of myself, so let's take a step back. It's now time to address the main challenge to this participatory methodology and answer the question: how was it useful for exploring how urban sound generates affective atmospheres, territories and politics? In order to answer this question, it's now time to reflect on the findings of the four studies, on how they complement each other, and on how they contribute toward progress in the field of sonic geographies.

Table 7. The research project's concepts, methods, and studies. Source: author.

|  | Sonic First Impression | Everyday Soundmaking |
|---|---|---|
| Participatory Methods | Study#1 | Study#3 |
| Geoethnography | Study#2 | Study#4 |

Table 7 shows the relation between the four studies of this research project. The first two studies focused on understanding the concept of first impression. While Study #1 aimed to provide an understanding of the phenomenology of moments of transition between sonic environments and the role they play in the attunement of the body to urban space, Study#2 aimed to understand how these moments of transitions can be created by artistic practices in urban space with the purpose of intervening in the distribution of the sensible and the territories of urban space. This set of two studies provide an in-depth overview of the role that sonic perception plays in the everyday use of urban space. The concept of sonic first impression is

key to understand the act of listening as an expanded act, encompassing not only the cochlea but also the whole human body, space and its materials, including objects, surfaces, and atmospheres, as Gallagher and others have proposed (see Gallagher & Prior, 2014; Gallagher et al., 2017). It is also key to understand the act of listening as a more-than-representational act that is central to how we experience places and attune to their atmosphere through representational and non-representational affects, and for this reason it contributes to the debates on the phenomenology of listening that were opened up in geography by Simpson (2009), Bennett et al. (2015), Hill (2015), and Revill (2016). The concept of sonic first impression is key to this because it unveils the dynamics behind a pivotal moment in the experience of urban sound. Approaching moments of transitions allows us to understand how different qualities of sound (volume, pitch, timbre, rhythm) affect the body in multiple ways and generate new ways of attuning to space. The experience of these moments of transition is constituted by passive and active forms of listening and mobilises both the representational and the non-representational body. By doing so, they also provide non-representational 'identity certificates' (Griffero, 2014) that will affect how attention is created and attunement is experienced (Waldenfels, 2004). In Study#1, I explored the spatio-temporality of these transitions, and we approached three factors (tiredness, mood, and expectations) that influence the angle of arrival of the individual and thus the experience of first impressions. In Study#2, I took a step further and explored how the generation of these sonic first impressions can be used to intervene in the appropriation of urban space. The study approaches a series of music and dance performances in Largo do Chiado and shows how they capture the attention of city users by producing sonic first impressions. The study extended the conceptualization of the sonic first impression by approaching how the performance's sensorial stimuli mobilise the human body. The concept of corporeal isles, advanced by Schmitz (1965) and recovered by Böhme (2003) and Griffero (2014), is helpful for explaining how certain stimuli activate parts of the human body and lead the subject toward specific practices. This can have a great impact on how people experience and appropriate urban space. In both studies, it became clear that it is not possible to think about atmospheric transitions, even if the only element that changes is sound, only in terms of hearing. The phenomenology of transitions is a multisensory one. This is not only to say that all senses function at the same time, the important insight to bear in mind is that certain senses will mobilise other senses while at the same time render others invisible. We have seen this take place in Chiado in Study#2. For this reason, it is useful to think about interventions that provoke sonic first impression through the notion of the redistribution of the sensible, applying Ranciére's (2004) philosophy. The findings of Study#2 show that the idea

of redistribution of the sensible also works at the local scale, an argument also advanced by Tolia-Kelly's (2017) study on museums.

In addition to contributing toward current debates on listening geographies, the findings of these studies also contribute to current research on atmospheric design. They may be useful for designers, planners, or artists who wish to engage in the production of first impressions to improve health or well-being in public space, workplaces or at home. Current debates about atmospheric design have been focused on visual stimuli (see Bille, 2015; Bille, Bjerregaard, & Sørensen, 2015; Edensor, 2015; Edensor & Sumartojo, 2015) except for Ebbensgard's (2017) study on landscape architecture, despite wide acknowledgement of the importance of sound for urban atmospheres (e.g. LaBelle, 2010; Gandy, 2017). To date, policies regarding urban sound have likewise mostly focused on noise reduction (Kang, 2006), with the purpose of improving public health, although there have been interesting experiments done by sound artists (Belgiojoso, 2014; Castro & Carvalhais, 2014; 2017). Hopefully, the findings of these studies can spark a wider debate about the possibilities of sound for engendering urban atmospherics. More specifically, there is still much to learn about the multiple ways in which sound can create alternative social, economic and political spaces within the city and how this can be used by practitioners in the field. Nevertheless, sound must be understood from a multisensory perspective, as its experience is intrinsically connected to the other senses and human perception as a whole. In Chapter One, I noted that sonic geographies have rarely adressed the relation between hearing and the other senses. Throughout my research project, this insight proved valuable. While Study#1 and #3 are mostly concerned with the nuances of the experience of sound itself, Study#2 and #4 situate sonic perception as a part of a wider phenomenological experience in urban space and address specific relations between sounds and other senses, especially vision and kinesis.

The second pair of studies that compose this research project focused on the concept of everyday soundmaking. While the first two studies had the purpose of contributing toward an already established body of literature on listening geographies, the latter studies intended to provide new routes of research within the subfield of sonic geographies by exploring the overlooked issue of making sounds. It is striking that geographic research on sound has always focused almost solely on how sounds are heard, but not on how sounds are made. Returning to the historic background on geographic studies of sound in Chapter One, although sound has been understood quite differently by the different paradigms that underpinned geographic studies, it was always studied from the perspective of who hears. From the study of regional sounds to the post-phenomenology of sound, not forgetting the noise indexes and the

soundscapes that attracted spatial scientists and humanistic geographers, sounds heard have always taken front stage. Even in the recent boom of literature on sonic geographies, listening is often the main keyword (Kanngieser, 2012; Duffy & Waitt, 2013; Gallagher & Prior, 2014; Bennett et al., 2015; MacPherson et al., 2016; Gallagher, Kanngieser, & Prior, 2014; Gallagher et al., 2017). This includes my own first study on this matter (Paiva et al., 2018). Geographers have of course not been oblivious to this issue. Taking it into account, different versions of post-phenomenological perspectives that consider the role that technologies, objects, spaces, and other materialities play in listening have been presented (e.g. Simpson, 2009; Revill, 2016; Gallagher et al., 2017). However, decentring the study of sound from the human ear demands a more radical approach. It demands that we think about other ways to engage with sound. Soundmaking is a good starting point.

Geographers were not the only ones to ignore soundmaking. The study of soundmaking (with the obvious exception of music) is scattered through isolated studies conducted by psychologists (e.g. Oswalt, 1963), sociologists (e.g. Vannini et al., 2010), and sound researchers (e.g. Westerkamp, 1988). For this reason, the literature on the subject is not yet comprehensive, and detailed accounts of soundmaking as an activity on its whole is still missing. Westerkamp (1988) provided an interesting starting point, but the subject has rarely been taken up by other scholars (Thibaud, 1998; Kanngieser, 2012; Di Scipio, 2015). Studies #3 and #4 had the purpose of contributing toward providing helpful empirically-driven concepts and opening new routes for research about this subject. I addressed the interaction between soundmaking and the situational relations between the individual and the environment in Study#3, and I set out to investigate how soundmaking practices are used in everyday world-making and spatial appropriation in Study#4. I followed the same logic of the first pair of studies, conducting one phenomenological study to develop the concept theoretically, and a geoethnographic study to understand how it is being used to intervene in ecological contexts.

Study#3 allowed me to conceptualise soundmaking as a more-than-representational act of environmental feedback. I call it more-than-representational because soundmaking practices accompany every other kind of human activities, and sounds are often made in a non-deliberate manner. I explored the issue of bodily transparency with the participants and we were able to identify a series of situations in which individuals were unaware of the sounds they were making. This happened, for instance, while using objects such as cars and plastic bags, but also in the case of sneezing and coughing. Everyday soundmaking therefore includes the making of a vast array of sounds, some of which are deliberately made, such as the use of the voice, and others which are not, and fall to the background of experience. I also argue that soundmaking

practices are a form of environmental feedback because soundmaking is very much related to the sonic environment and the atmosphere of the place where one is. This relation takes place on two levels, which are themselves intertwined. First, the affective, emotional, and sensorial emanations of place play a very significant role in the bodily responses of the individual. As we have seen, individuals tend to align with the type of sonic environment. That is, they tend to be louder when the place is noisy, or they are more aware of themselves when its silent. Secondly, individuals also police themselves and others in relation to sound. Such policing stems from personal and collective ethical considerations about the proper or the good type of sonic environment, and about the type of sociality one wants to establish in a certain place. For this reason, I considered soundmaking as an entanglement of affective and ethical responses. These affective responses can be thought of as semiconductive, a concept that refers to a body's ability to pass on affects but not without filtering their content while doing it (Serres, 1995; McCormack, 2013). The ethical responses can be understood as a "value-governed architectonic", a concept that refers to the way in which ethics structure everyday experience by pre-defining the understanding of certain situations (see Bakhtin, 1993).

However, individuals are not merely reacting to the sonic atmospheres they encounter in their everyday life. Soundmaking is used all the time in people's lives with specific objectives. I was interested in understanding how everyday soundmaking, as a more-than-representational environmental activity, can intervene in urban territories. Study#4 provided a case study on this, by showing how young people playing street football can generate micro-worlds and territories through soundmaking. Study#4 revisits and expands the conception of everyday soundmaking of Study#3, by addressing how everyday soundmaking might generate worlds and territories. I have drawn upon the Heideggerian conceptualisation of world by Shaw (2012; also Shaw and Warf, 2009) and Stewart (2010; 2011; 2014a; 2014b) as I observed the street football games that young people play in a plaza in Quinta da Piedade. The soundmaking practices that young people employ, which include not only the voice, but also the body, objects, and the materiality of space itself, play a significant part in the creation of micro-worlds during these games. Those practices transmit rules, meanings, and affects, creating a spatio-temporal consistency that stabilises the micro-world. As the micro-world is stabilised, it also claims a territory for itself. Drawing upon concepts of territorialisation as advanced by Brighenti and Kärrholm (2016; 2017; 2018a; 2018b), I have argued that the sonic production during street football games imprint certain rhythms and affective expressions onto spaces that conflict with the usual everyday rhythms of the plaza. Football players can use sound as a way to claim a spatio-temporal territory, but this is dependent upon the affective potential of those

sounds, which can be ignored by passers-by. The findings of this study portray a situation in which soundmaking must be understood as a more-than-representational practice in order to explain its effects on the sociality of place. In this sense, they open new routes for research that shifts the focus from deliberate soundmaking (e.g. LaBelle, 2010; Duffy & Waitt, 2011; Brown, 2016; Doughty & Lagerqvist, 2016; Simpson, 2017; Kunreuther, 2018) to more nuanced understandings of the affective-political potential of soundmaking.

There have been important first steps in research on soundmaking (e.g. Kanngieser, 2012; Alderman & Modlin Jr., 2016; Mills, 2017), but the true potential of research on this phenomenon is yet to be explored. Studies #3 and #4 provide new concepts to tackle this issue. I hope that these will open new routes for research on the role that sound plays in everyday life, especially for those working in the fields of social, cultural, and political geography.

Studies #3 and #4 complement studies #1 and #2. Thinking about urban sound through soundmaking practices provides another way to look at the issue of territories, affective atmospheres, and politics involved in urban sound. By focusing on the sonic first impression and soundmaking, this research project has provided a wide perspective on the experience of urban sound in everyday life. We could perhaps return to Eidsheim's (2015) understanding of sound as intermaterial vibrational practices in which listening and soundmaking are nodes on a permanent yet always-changing field of vibration. By focusing on both listening and soundmaking, this research project has provided an in-depth perspective on the everyday experience of that field of vibration.

To conclude, I want to revisit the thesis of this research project and how it connects to its key concepts. My main argument is that *the phenomenology of the urban sonic experience emerges from the simultaneity of listening and soundmaking, both of which are more-than-representational acts that intertwine affective sensing and ethico-political reasoning.* In addition, I have shown that *sonic interventions in urban space that engage with these more-than-representational acts, such as artistic practices or street football, have the capacity of altering urban territories by acting on the distribution of the sensible or by enacting worlds.*

These findings amplify the role that sounds play in the perception of atmospheres, the formation of urban territories, and the role of visceral politics in these dynamics. Although atmospheric perception is a multisensory one, as it was pointed out by many phenomenologists and cultural geographers (Anderson, 2009; 2014; Bille, 2015; Böhme, 2017a; 2017b, Edensor, 2015; Griffero, 2007; 2009; 2014; Miller, 2014), specific stimuli within atmospheres can emanate a stronger affective charge, which in turn will evoke and activate certain parts of the sensory body (Griffero, 2014). This thesis has explored how the timbre, rhythm, volume, and

meanings of sound activate certain parts of the body, or corporeal isles, and how this changes how individuals make sound and appropriate space. By doing this, I have unveiled affective dynamics that have political consequences in urban space, a matter that so far had been unattended. I have discussed this and I do not want to go back. I am reinstating it to turn your attention to what this means in terms of urban territories and its politics, and more precisely to how attending to the phenomenology of urban sound has shown that there is much to gain from investigating the relation between the territorial and the visceral. Brighenti and Kärrholm (2016; 2017; 2018a; 2018b) have argued that territories are unstable entities that require constant production through the appropriation of space by collectives of bodies. These collectives of bodies draw boundaries within which certain practices are included and excluded. On the other hand, feminist geographers, such as Hayes-Conroy and Hayes-Conroy (2008; 2010) and Longhurst, Johnston, and Ho (2009), have argued that politics are visceral in the sense that it is through the body that the world is felt and made sense of, and that it is in that bodily sensemaking that the political – understood as "the everyday dynamics of power" – emerges (Hayes-Conroy and Hayes-Conroy, 2008, p. 462). I argue that this visceral aspect of everyday politics is crucial to understand the everyday formation of urban territories. I have shown how artistic practices can act on urban territories and rhythms by changing the dominant sense in an urban square, and how street football practices can claim territories by mobilizing the whole body to enact a particular world in an urban plaza. Post-phenomenological studies of everyday life have much more to explore in this regard. As the burgeoning literature on affective atmospheres attests, urban atmospheres affect human bodies through a multiplicity of ways, generating myriad visceral responses. The affectivity of such atmosphere not only works within contexts of controlled spaces such as the ones explored by Adey (2008), Miller (2014) and Edensor (2015), but also in everyday urban spaces where multiple territories succeed each other or co-exist. Attuning to the role that visceral politics play in setting urban territories will expand current knowledge on the affectivity of atmospheres.

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