Two sides of the same coin:

Opinions and choices of users and non-users related to mobile music listening

Submitted by Eva Schurig,
to the University of Exeter
as a thesis for the degree of
Doctor of Philosophy in Sociology,
in September 2018.

I certify that all material in this thesis which is not my own work has been identified and that any material that has previously been submitted and approved for the award of a degree by this or any other University has been acknowledged.

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Abstract

Mobile music listening has been explored from several perspectives, however, not much is known about the choices mobile music listeners have to make. Moreover, feedback from non-listeners on music listening has only been given anecdotally and not in the context of research. The aim of this thesis is therefore to investigate what motivates listeners to engage with mobile music and to discover more about the social and personal aspects that influence this engagement, as well as to explore views of non-listeners on mobile music listening.

Employing a mixed-methods approach, interviews and participant observation were carried out with eleven mobile music listeners to investigate their thoughts and motivations regarding mobile music listening, and to verify these in practice. Eleven people who do not use portable listening devices were also interviewed about their opinions on mobile music listening.

The most striking finding of this thesis is that listeners are not always listeners since they sometimes turn off their devices. The interviews with non-users of portable listening devices confirm that mobile music listening is not always seen as positive but has negative aspects as well, which add an important perspective to understanding this behaviour. Results reveal that mobile music listening is a complex cultural practice that connects to many parts of everyday life. Thus, mobile music listening, and similar practices, need to be studied in context to fully grasp everything that is happening. The new method applied in the first study proved to be beneficial in studying everyday behaviour as it occurs. It helps to gain valuable in-depth information in a short amount of time which is useful for future studies of everyday practices. Finally, results show that mobile music listening is simultaneously more sociable than previously assumed but also perceived as unsociable, which contributes a new perspective to studies of urban behaviour.

Acknowledgements

This thesis would not be there in its present form without the following people, whom I would like to thank for their direct and indirect contributions:

- My first supervisor Prof. Tia DeNora, who generously supported me through every small and big step of this thesis, encouraged me throughout, and added valuable insights that took this work to a whole new level.

- My second supervisor Dr. Tom Rice, who helped me make sense of the thesis as a whole, and spent time concentrating on the small details that form the thesis into what it is now.

- My participants, without whom there would be no thesis, who offered their time and access to their thoughts and behaviours, and let me follow them around.

- My family, who offered a listening ear whenever necessary, acted as a sounding board when I needed to try out new ideas, and generally helped me keep sane throughout my work.

- My friends, who patiently let me talk about my thesis again and again, who encouraged me, stood by my side when I felt down, and were happy with me for every new accomplishment.

- The people I met at conferences who were interested in my studies and, through their questions, helped me see things more clearly.

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Introduction

General area of research

Solitary listening did not start with the invention of headphones. It is not a creation of our time but developed out of a history of listening that started, according to Sterne (2003), with the invention of the stethoscope in the 19th century. It was the first device that divided “interior” and “exterior” sound (ibid., p. 111) and doctors had to learn “to restructure their auditory space“ (ibid., p. 128) and adapt to the possibilities and characteristics of this new device. The stethoscope provided a basis for solitary listening where sound is exclusive to the listener. This quality is perpetuated through headphones whose users also need to find their own way of balancing the sound heard through their headphones and the environmental noises. The stethoscope, and today the headphones, thus enabled particular listening practices for many people.

Listening practices depend on the cultural values and practices of the time and are therefore culturally determined (Rice, 2015). They are “also shaped by technologies and their interfaces and affordances” which increase the listening possibilities (ibid., p. 102). Every new practice and technology needs to be adapted by the users and understood by the non-users in order to be accepted. Non-users also need to know how to interpret the users' behaviour with the technology in order to react accordingly (ibid.). Technology itself is also constantly subject to change and is influenced by cultural, social, political and economic factors (Winston, 1998, p. 341). Because of the constant change of technology, studying listening practices and user adaptation of devices today might not yield the same results as studies from several years ago.

Mobile music listening can be seen in that context. Mobile music listening in this thesis is going to be understood as using a portable listening device with headphones while moving around in public, i.e. private mobile music listening as opposed to playing music through speakers. The devices studied in this context are, for example, iPods, MP3-players and smartphones with music capabilities. They stand in the tradition of solitary listening, although the first Walkman was originally “provided with two headphone sockets” (Urry, 2007, p. 171) for shared listening which most users did not use, and thus subsequent versions of the Walkman were launched with only one headphone socket. This

technological development shows that mobile listening devices are culturally determined, too. Users adapt devices to their needs at the time, which are produced by the cultural context they live in, and producers equally take these needs into account when developing new devices (Baudrillard, 1988); thus creating a Walkman with one headphone socket after that became the prevalent application method. Mobile listening devices have not stopped in their development. Today the ability to listen to a large range of music anywhere and anytime is taken for granted. Listeners are spoiled for choice of what to listen to, which only increased with the invention of mobile listening devices with internet capabilities opening up infinite listening possibilities. New functions constantly change experiences for the mobile music listener, which is also a reason why there is always something new to explore when studying mobile music listening.

Mobile music listening represents a certain lifestyle. Advertisement of portable listening devices and headphones often depicts people who are pleasurably caught up in the world of their music, representing a form of escapism from the real world and its annoyances (e.g. Du Gay et al., 1997). Often mobile music listening stands for the freedom of choice, freedom of movement and the removal of boundaries with regards to place and time for music listening. This is not a new development. Sterne (2003) shows advertisements from the early 20th century where stationary music listening over headphones was presented as the choice for people who wanted to increase their sonic enjoyment and step away from the noise of their environment and the presence of other people (ibid., p. 87). The impression of mobile music listening as flexible regarding the time and place, its ability to offer a kind of barrier against the outside world (e.g., Bull, 2006), and its perception as a pleasurable experience has been corroborated through research (e.g., Dibben & Haake, 2013; Richmond, 2006; Skånland, 2013) proving that the billboard pictures are not just pure invention but reflect actual user experience.

Many people seem to be unable to live without their portable listening devices anymore and they want to shut out everything else to be able to solely concentrate on their music and their own experience (e.g., Bull, 2000). This demarcation of the listener from their surrounding reveals why solitary music listening in public is often seen as a contribution to coldness of cities (e.g., Bull, 2005). Cities already have a reputation for being unsociable and negative

environments that promote detached behaviour (e.g., Milgram, 1970, Sennett, 1977, 1992) and this is enhanced and endorsed by the behaviour of mobile music listeners. Seeing the dependency of some listeners on their devices could be interpreted as a victory of the cultural industry (Adorno, 1991), painting a rather negative picture of mobile music listening.

However, research on mobile music listening has not only had negative connotations. The increasing number of studies on this topic have examined other angles, too. Music, especially mobile music, has been found to have positive implications for health (Skånland, 2012) and exercise (Karageorghis, 2008), for example. It has been observed that music listening, especially to self-chosen music (Krause, 2015), is employed to change mood and increase energy levels (e.g., Thayer, 1994). Nevertheless, there are still many open questions that should be explored before an informed judgement regarding the social and psychological impact of mobile music listening can take place. The present thesis takes a closer look at the function music listening over headphones serves for people, exploring potential risk and reasons for non-use, as well as questions regarding sociability in relation to mobile music listening. Thereby the interplay between context, activity, affect and mobile listening behaviour is taken into consideration.

Aims and contributions

The focus of this thesis is on mobile music listening because it illuminates the connection between music listening and the environment as well as all the people in this environment – listeners and non-listeners. The topic of mobile music listening lends itself to the study of music in a wider context than homes or concert halls. Many activities in everyday life happen in public, in the streets and on trains, and music, through portable listening devices, permeates this sphere, too. Whether it happens purposefully or not, the practice of mobile music listening affects everything that comes into contact with it – be it commuting, shopping, walking or running – and should therefore be studied in order to better understand everyday life, its emotions, activities, contained thoughts and intentions.

There are still several unknown or largely disregarded aspects of mobile music listening. Many details about this phenomenon that has taken over our streets have not yet been studied. Together with Small (1998, p. 10) I ask, “What's really going on here?” I aim to reveal more information on mobile music listeners' actions and their decisions by getting as close to their “real” behaviour as currently possible. How do listeners feel about their behaviour? Where does mobile music listening start and end? Does choice of device matter and, if yes, how? What kind of decisions need to be made during mobile music listening? So far, studies have focused on certain angles, as mentioned above and will be discussed in the literature review, using mostly interviews and questionnaires. These methods have their limitations and do not allow for a closer examination of behaviour as it is happening, for example. This thesis will try to rectify this to some extent, especially with regards to choice of music and the factors that influence it. A new method will be employed to delve more deeply into the behavioural aspects of mobile music listening.

Another question that this thesis dedicates itself to answering is whether the effects of mobile music listening are caused through using the device or through the music that is listened to. Participants themselves seemed to have attributed the impact to the music, but the researchers have directly or indirectly claimed these effects for the devices (e.g., Bull, 2000; Prior, 2014) with the argument that it is possible to distinguish between both (Bull, 2000). In this thesis, I argue that the differentiation between devices and music is not as clear-cut as it seems. In addition to the phrasing of interview questions, the importance attributed to either the device or the music depends on situational, social and personal factors (which will be explored in detail) and cannot be easily distinguished.

Since it is such a prevalent topic, the question of sociability of mobile music listening will, of course, be part of this research, too. As mentioned before, mobile music listening is often seen as unsociable behaviour (e.g., Bull, 2000; Garner, 2012; Hosokawa, 1984) which has mainly been discovered through looking at mobile music listeners' thoughts and behaviours, which were explained as producing a request for privacy and isolation from the environment. Rarely has mobile music listening been seen as anything other than entirely unsociable (e.g., Bergh et al., 2014; Prior, 2014). Through taking

the perspective of non-users of portable listening devices into account, an additional angle will be added to the sociability debate which will illuminate factors that have only been inferred from answers given by mobile music listeners so far. It will be shown that users demonstrate sociable behaviour or think more about the impression they make on the surrounding people than has been found so far. However, this is not detected by non-users, which therefore leads to very different impressions about the sociability of mobile music listening depending on whose views are taken into consideration. Reasons for this divergence will be discussed in the seventh chapter.

A wider approach to studying mobile music listening will be adopted in the present research including a perspective that has not been given before. The views of people who do not use mobile listening devices but have observed that behaviour in their environment will be taken into account. This inclusion will broaden the knowledge about mobile music listening and make it more ecologically valid, because it will show how mobile music listening really is experienced by an onlooker in everyday life and will therefore provide a more complete picture of this practice. Mobile music listening has only been studied from the point of view of the listeners before, which paints a rather biased and one-sided picture. Including non-listeners (people who do not generally listen to music over headphones but might have done so some time ago) will dissolve that. It will also provide the means to discover whether the ideas that have been taken for granted about mobile music listening up until now will prove to be valid when including another perspective on the subject. This new perspective will provide a better understanding of what is happening in our cities, what effects mobile music listening truly has on its environment and whether they are as detrimental as they seem to be. Studying this will provide a starting point for a dialogue between the parties involved – the listeners and the non-listeners, which can influence future research. Specifically, this thesis is going to examine the reasons for non-use of mobile listening devices and non-listener's view on mobile music listening.

Overview of thesis

Throughout the thesis the interconnected topics are attended to separately so as to consider each in turn although they are of course linked in practice. This

thesis will start with a literature review which will comprise the first three chapters. In the first chapter general information on cities and music listening will be presented, which is the backdrop from which mobile music listening emerged and is therefore important to take into consideration when studying mobile music listening. The prevalent sociological opinions on city life will be summarised which provides a perspective on the current understanding of behaviour in urban environments. An examination of reasons for music listening in general and information on music and emotions as well as musical preferences will follow, explaining the important role of music in everyday life, which prepares the mindset for the next chapter which will explore these topics against the background of mobile music listening.

The second chapter of the literature review will provide an overview over the history of portable listening devices and theories of technological development which will show that mobile music listening is not an isolated phenomenon that exists outside of social and cultural influences. Reasons why mobile music listeners engage in this behaviour will be summarised from existing research, which will lead into a closer examination of the sociability debate that revolves around mobile music listening. The section about mobile music listeners will end with a presentation of research results concerning potential dangers connected with mobile music listening. After starting with a summary of the main topics, discussions and research findings on the usage of portable listening devices, a review of the small number of existing sources on the topic of non-users of technologies and anecdotal information on non-listeners will close this chapter.

With this information in mind, the aims and research questions of the thesis will be presented in the last chapter of the literature review. The juxtaposition of the different views of researchers and the results of their studies will have indicated gaps in the literature, and this chapter will explain how the thesis aims to fill some of them. This thesis is comprised of two studies – one focusing on mobile music listeners and the other on non-listeners – the latter study arising from the former, so research questions for both will be displayed.

Following the literature review a presentation of the methods used in the present research will ensue. Information on the recruited participants and the applied methods will be given to provide the necessary background knowledge

to correctly interpret and understand the results that will be presented in subsequent chapters. In the first study a new method was used, so this method's origin and an evaluation of its success will be included in this chapter which will allow future research to build on the present studies.

The results and discussion part of the thesis is comprised of six chapters, each illuminating different important findings while referring to the other chapters because of the aforementioned interconnection between the topics. Each of these chapters highlights different aspects of mobile music listening while being so thoroughly linked that any separation made for the purpose of this thesis is an artificial separation. The order of chapters is also just one way of sequencing them and generally the order of chapters does not influence the understanding of the results. I arranged them in a way that made the most sense to me, i.e. starting out with the reasons for listening and not listening to mobile music, then focussing on mobile music listening more specifically in illuminating the choice of music and the ways these pieces of music are listened to, followed by chapters that concentrate on the listener's engagement with their environment, particularly their social and their physical environment.

In the first chapter the reasons for mobile music listening discovered in the present study will be shown and compared to existing findings. Since the effects of mobile music listening depend on the activities that are carried out simultaneously as well as the reactions to music already present in the environment, these topics were included in this chapter too. First findings from interviewing non-listeners indicate that there are reasons and circumstances in which they might wish to engage with mobile music listening themselves. This new knowledge expands the information given by the listeners and provides a first glimpse into the non-listener's way of thinking.

An important finding indicates that there are circumstances when listeners wish to turn off their music. However, most of the time they try everything possible to keep listening to their mobile music. The strategies employed to reach this goal will form the second chapter of the results and discussion. Since these strategies are not always successful it can happen that a mobile music listener is suddenly unable to use their device. The interviewed listeners had different ways of managing these situations. While reactions to being forced to carry on without music reveal information about the importance of mobile music

listening in the listener's lives, there are situations when listeners feel that mobile music listening is not required or appropriate. Discussing non-listening offers the perfect opportunity to round off the chapter by talking about the reasons non-listeners have to not engage in mobile music listening.

The third chapter of the results and discussion focusses on the content of the portable listening devices, i.e. what kind of music is listened to. A theory developed by Greasley and Lamont (2011) about the possibility to differentiate between music listeners by looking at their engagement with music will be taken on and further explored. Their idea helped to explain the findings of the first study, while the findings of this thesis in turn expand the researchers' theory and prove that it is applicable for more than one kind of music listening behaviour. The chapter will conclude by discussing the sources which listeners mentioned using for finding new music to store on their devices. This preparation indicates that mobile music listening cannot be compartmentalised into a specific time a day or environment, since it needs to be prepared and thought about even when the listener is not visible in the streets.

Another topic that emerged during the analysis of the first study is the focus during mobile music listening. Participants did not always seem to focus on the music but on other aspects, such as their thoughts or the environment, too, which will be presented in the fourth chapter. The need for control which is influenced by the focus is also closely connected with the way music is listened to, be it shuffle mode or playlists, so an explanation of the findings in that regard will also comprise part of the chapter. Since the mode of listening is, in turn, dependent on the device and software used by the listener, the last section of this chapter will be dedicated to exploring the devices and software used by the participants of the present study.

The fifth chapter will wholly focus on sociability during mobile music listening. It will present the answers respondents gave with regards to social interaction, concentrating on their thoughts and behaviours. Additionally, non-listeners' views on social behaviour of listeners will be taken into account and contrasted with the listeners' opinions. As mentioned above, contrasting listeners' and non-listeners' views will reveal differing opinions on the sociability of mobile music listening behaviour which will provide a starting point for discussing possible reasons for this difference. This discussion will attempt to

bridge the gap between listeners and non-listeners by helping them to understand each other better.

Finally, the last chapter will address the dangers associated with mobile music listening. The listeners' awareness of these dangers led to specific strategies to stay safe, be it while cycling in traffic or worrying about hearing loss. Possible dangers are prevalent in the thoughts of non-listeners when asked about mobile music listening. Because of the potentially grave consequences for the listener this is a topic that every listener needs to deal with and should therefore be of interest in all studies that explore mobile music listening in its practical application.

1 Literature Review

1.1 Cities and music listening

1.1.0 Introduction

In this first chapter I will give an overview of the main topics that need to be considered for any music listening situation, to contextualise the next chapter which will focus more specifically on mobile music listening. This thesis will focus on behaviour in cities by exploring the prevalent sociological opinions on this topic. Cities are often portrayed as negative in sociological literature (e.g., Proshansky, 1978). They are described as cold, unsociable places (Milgram, 1970) which have negative effects on the people dwelling within them (Seligman, 1975 and 1992). Furthermore, a connection between environment and behaviour is made (Stokols & Shumaker, 1981), explaining that negative urban experience leads to adverse behaviour (Kim et al., 2014) which in turn affects the perception of cities (Simmel, 1997 (1903)). People try to deal with this unfavourable experience by employing coping mechanisms (Whiting, 2009).

This is where music comes into play. The second part of this chapter will dedicate itself to the investigation of general information that has to be considered when exploring music listening. Listeners are described as aesthetic agents (DeNora, 2000) who use music to control their environment and themselves (Frith, 2003), which hints at the ability of music to change experiences in the city. Mood can influence perception (Stewart, 2007), as will be expounded below, and is in turn impacted by music (Saarikallio & Erkkila, 2007), which partly explains why mood management is one of the most often mentioned functions of music listening (North & Hargreaves, 1999). How emotions are changed and impacted depends on a host of determinants, such as age and musical training (Juslin et al., 2011), and the mechanisms that elicit emotions through music are topic of discussion in music psychological literature (e.g., Västfjäll, 2002). Apart from mood management music has many other functions that can occur concurrently (Lonsdale & North, 2011) and can impact each other, which is why the music listening experience is different for everyone. Listeners as aesthetic agents are aware of the power of music and seem to have clear ideas on how to utilise it (DeNora, 1999). The power of

music, however, is largely dependent on musical preferences without which a piece of music will probably not have the desired effect. Therefore, musical preferences have to be taken into account when exploring any music listening situation and its effects. Taste in music also depends on many interacting factors which range from person specific (LeBlanc et al., 1996), to music specific (Boyle et al., 1981) and situation specific (Schaffrath, 1978), all of which, taken together with functions of music, factors impacting emotional reactions to music and other influencing determinants, explain why music listening situations are generally very complex and why these different factors should not be ignored in studies about music listening.

1.1.1 A sociological picture of city life

Cities are characterised as places “in which strangers are likely to meet” (Sennett, 1977, p. 39) where there is a “large, heterogeneous population” that “has to be packed together rather densely” (ibid., p. 39). Compared to smaller, more rural environments, cities have tended to be regarded as “noisier, dirtier, and more crowded” (Proshansky, 1978, p. 148). The crowdedness of cities often leads to an invasion of privacy and consequent over-stimulation that is perceived as stressful (Evans, 1978, p. 297). Stress is often experienced in conjunction with commuting because it involves moving in and through this urban environment filled with strangers, particularly on trains where strangers are forced into close proximity for a certain amount of time (Urry, 2007). These thoughts and theories have informed the work of psychologists, sociologists and geographers working on topics of urban life (e.g., Evans & Wener, 2007, Holahan, 1982, Mohd Mahudin et al., 2012) and have consequently helped to draw a rather negative picture of living in cities.

One of the key topics in the discourse of city life is its social structure and its influence on individual behaviour often discussed in contrast to living in rural environments (e.g., Simmel, 1997, (1903)). While cities are attributed with some positive aspects, for instance, intellectuality (Simmel, 1997 (1903)), privacy and tolerance towards individual behaviour or appearance (Milgram, 1970), they are often also mentioned in connection with information overload that leads to a “blasé attitude” (Simmel, 1997 (1903), p. 14) towards other people, and a less

friendly, inclusive and courteous demeanour than can be found in towns (Milgram, 1970, p. 1463f.). A later theory is that this detached behaviour is not solely due to the information overload but also to the way cities are built. Sennett (1992) explains that the protestant belief (specifically in America) of the importance of inner development of a person in opposition to a lesser significance of the surroundings led to the focus on the home while the environment was kept and appears to be neutral. He gives two reasons for the development of neutral environments. Firstly, people fear exposure and therefore favour monotonous surroundings that make them feel safe and convey the impression that nothing unexpected will happen (ibid., p. 65). Secondly, “the perception of outer emptiness reinforces the value of turning within” (ibid., p. 46), i.e. the emphasis is once again directed towards focussing on oneself. The values of modernity are also found at fault for the building practices in cities, especially in America (Kunstler, 1993). Kunstler (1993) argues that modernity “did its immense damage“ (ibid., p. 59) by not taking social needs into account in building practices and “failed to respect the limits of scale, growth, and the consumption of natural resources“ (ibid., p. 59). Modernity and its standards, according to Kunstler, resulted in large-scale buildings that are unattractive, override the natural environment that was once there, and are not conducive to social life. Modernity in addition to economic and political developments also plays a part in creating non-places (Augé, 1994). Non-places are places like airports, train stations, motorways, and refugee camps (ibid., p. 44), that are characterised by individuals who stay apart, where no identity or relation but rather isolation are created (ibid., p. 121). Non-places are therefore usually not conducive to social life and this could influence people's preference for detachment in cities where non-places are mostly found. Thus, the often still prevailing opinion in urban research is that city dwellers are less courteous and more concerned with themselves, as a coping mechanism against the information overload they are exposed to (Milgram, 1970), and because of the unsocial and monotonous environments in which they find themselves (Kunstler, 1993) which results in them turning inwards in their search for fulfilment (Sennett, 1992). Hence a connection between the urban environment and individual behaviour can be identified.

One of the characteristics of urban life is crowdedness, as has been mentioned before, and crowdedness is not only a concern for individuals (Arefi & Meyers, 2003) and their immediate behaviour (e.g., Milgram, 1970) but can have far more extensive consequences. Crowdedness is defined as the presence of too large a number of people in a relatively confined space that was not made to contain that many people comfortably (Ittelson et al., 1974, p. 148). It can cause arousal (Aiello et al., 1975), increased blood pressure (D'Atri, 1975), stress (Coelho & Stein, 1977), decrease children's performance at school (Goux & Maurin, 2005) and their general wellbeing (Solari & Mare, 2012) and even lead to learned helplessness, i.e. the impression that a situation is beyond one's control (even if it is not) and thus giving up earlier than other people normally would in the same situation (Seligman, 1975 and 1992). Crowdedness causes these reactions for several reasons: firstly, because it involves the close proximity of people to each other which means that they cannot maintain their personal space (Bechtel, 1997) and manage their privacy (Altman, 1975); secondly, and closely related to the first point, an invasion of personal space causes arousal which is then attributed to the crowded situation and experienced as negative (Worchel & Teddlie, 1976); thirdly, although an individual's information processing behaviour increases with environmental complexity, this process is reversed if there is too much information to consider (Schick et al., 1990), i.e. information overload affects an individual's efficiency and hinders them from using the available information to its full potential (Bawden et al., 1999); and lastly, the coexistence of many people in a small space limits the behavioural choice (Proshansky et al., 1976), leading to less control over the situation and therefore more stress (Hui & Bateson, 1991).

Several coping mechanisms have been discovered that are utilised to reduce the negative effects of crowding, for example reduced eye contact (Argyle & Dean, 1965), avoidance behaviour (Kim et al., 2014), making a plan of action, rationalising the situation, escape, confrontation and emotional support seeking (Whiting, 2009), as well as not talking to people, using portable listening devices and being blasé (Urry, 2007). The last point brings us back to the topic of detachment and individual behaviour as a response to urban environments and their characteristics. A vicious circle emerges when connecting all the theories and research concerned with city life (see figure 1):

crowdedness is a part of city life (Proshansky, 1978) and could be described as the starting point of this vicious circle. Crowdedness leads to negative responses (e.g., Coelho & Stein, 1977) which elicits avoidance responses (Kim et al., 2014) and a blasé attitude (Urry, 2007). This behaviour leads to the experience of cities as cold places (e.g., Milgram, 1970) and because of this experienced coldness, people turn inwards (Sennett, 1992) which makes cities appear even more cold. Thus, people feel the need to turn inwards even more and so on.

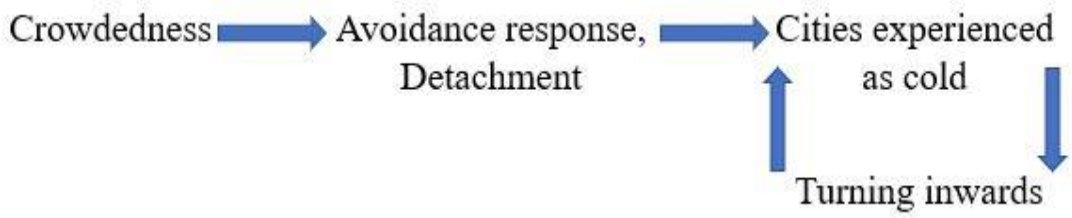

Figure 1 Vicious circle concerning city life

Despite these negative research results and theories, cities are not always perceived as negative. Tourists, for example, might like the experience of crowdedness in the city they are visiting depending on their motivations and expectations, their nationality and their length of stay (Neuts & Nijkamp, 2012). Additionally, the physical setting one lives in was shown to be important for the development of identity since it can carry meaning for the individual or their culture (Proshansky, 1978). Proshansky also points out that people would not be living in cities if they found it so awful. On the contrary, cities offer security, entertainment, and various environments in close proximity (ibid., p. 152). Thus, cities can be positive and negative environments concurrently, depending on the focus, for example, entertainment can be seen as positive, while buildings for entertainment could be perceived as negative.

1.1.2 The relationship between environment and behaviour

A phenomenological approach to living in the city claims that space is subjective and therefore experienced differently by different people and so the experience of space is by no means determined by the physical properties of a space (Arkette, 2004). Places have varied affordances for the people that use them

(Stokols & Shumaker, 1981), while the perception of the surroundings affects how we engage with them (Clarke, 2003). The ecological perceptual theory focusses on the relationship between perception and action, saying that the perceiver learns how to perceive their environment and that action follows from perception (Clarke, 2013). DeNora (2014) argues that much more emphasis should be put on how people create reality, their environment and shape their experiences through their practices (ibid., p. xx) because these practices change the environment, which again changes the practices, therefore forcing people to constantly make sense of their continuously changing surroundings in their everyday lives. All these ideas have in common that there is a close connection between the environment, perception and action which should be taken into consideration when exploring any of them.

This connection can be observed through the example of rhythm. Repeated or repetitive actions in cities create a kind of rhythm in the environment (Lefèbvre, 2004). Walking in the city is rhythmic in itself and if an individual subscribes to that activity it automatically contributes to the creation of rhythm in their environment (Smith & Hetherington, 2013). A person's body takes part and is influenced by the rhythm surrounding it (Revill, 2013) and the experience of time is changed through walking (Lehtovuori & Koskela, 2013). Thus, a person behaves rhythmically, which changes the environment to be 'in rhythm', too, which in turn influences how the person perceives it (although rhythms are often unconsciously perceived or occur involuntarily, e.g., breathing and walking (Smith & Hetherington, 2013, p. 9)). When studying rhythm in urban environments the close connection between perception, action and the environment is noticeable.

By examining affect a second example for the relationship between perception and environment emerges. Besides being exchanged between people and influenced by emotions of other people with and without their knowledge (Brennan, 2004) affect can change the perception of the surroundings. Stewart (2007) claims that “ordinary affects” are “in a state of potentiality and resonance” (ibid., p. 3) which influence how a person perceives and relates to things, in other words, what a person feels can influence how they experience their environment. On the other hand, the environment also influences affect because it has an inherent energy that can be felt and that can

alter emotions (Navaro-Yashin, 2012). It has been found, for instance, that emotions during commuting create and change social space on trains which then in turn influences the emotions and experiences of the commuter (Jensen, 2012). This example clearly demonstrates that a connection between the environment and a person within it can exist through several mechanisms, namely rhythm and emotions.

Another example for the relationship between these factors can be found in music. It can, in the shape of sound, demarcate and guide the listener (Atkinson, 2007) and can, as musical practices, form “social and aesthetic geographies” that are connected with the “production of space and place” (Leyshon et al., 1998, p. 2). “Music plays an important role in the narrativization of place, that is, in the way in which people define their relationship to local, everyday surroundings” (Bennett, 2004, p. 2), i.e. not just musical practices but musicking (Small, 1998) in all its shapes can influence the environment and how it is perceived (Whiteley, 2004). On the other hand, musical practices are also shaped by the environment they are enacted in; music can be and is developed in cities (Barthelmes, 2002), and the environment can enrich the consumption of music (Bennett, 2004, p. 2). Therefore, musicking is one action that stands in close relation to perception and environment, which should be considered when studying music in any of its forms.

Music is a powerful tool, as has been described, which can change the relationship between the listener and their environment. It evokes affect (Crozier, 1997) and is partly constituted of rhythms (DeNora, 2010, p. 171) which in themselves already build a strong connection between the person and their surroundings. Apart from influencing perception, music has many more functions which will be explored next.

1.1.3 **Functions of music**

Music is very versatile in that it can serve several needs at once (Lonsdale & North, 2011). As will be discussed in the next chapter (1.2) music listeners often know which needs they have and how to fulfil them. Music can be consciously and actively used, depending on the context it happens in (North et al., 2004). Active use of music turns the listener into an “aesthetic agent”: “Music is a

device or resource to which people turn in order to regulate themselves as aesthetic agents, as feeling, thinking and acting beings in their day-to-day lives." (DeNora, 2000, p. 62). The listener can utilise music for their own needs because it affords certain actions (DeNora, 1999) and by acting on and with as well as reacting to these affordances they become agents who use music for their own purposes. What listeners do with the affordances of music seems to depend on their personality. For instance, studies have shown that people scoring high on neuroticism tend to like music for its emotion regulation function, while conscientious people prefer to use music more rationally (Chamorro-Premuzic & Furnham, 2007, p. 177). Music can trigger memories, have aesthetic value and contain implicit and explicit messages (van den Tol & Edwards, 2015) and is therefore a powerful tool in everyday life. This effect was also discovered in marketing because music can trigger "nonrandom affective and behavioral responses in consumers" (Bruner, 1990, p. 99).

Since music is effective in different ways, it can serve several functions simultaneously or depending on the situation. Merriam (1964 cf. Sloboda et al., 2001) compiled a list of ten of these functions of music, one of them being communication. Communication or managing interpersonal relationships through music (North & Hargreaves, 1999), "mediati[ng] between self and others" (Clayton, 2009, p. 41), is possible because "music enhances and refines our affective capacities and empathic relatedness "(Kruger, 2013, p. 178). In other words, music allows the listener to practice emotions and work on their "social intelligence" (Kruger, 2013, p. 188) as well as actively shaping their relationships (although North and Hargreaves (1999) and Clayton (2009) do not say exactly how that would work). In a social environment it is also possible to utilise music for the coordination of action (Clayton, 2009), for example, through dance, or organisation of experience (DeNora, 2011c). Music can also contribute to the feeling of connectedness to each other or the world in general (Berland, 2012).

Creating a sense of connection is one means through which music gives the individual the tools to manage their self-identity (DeNora, 2011a) which can be seen most clearly with adolescents who often use music for this purpose (Saarikallio, 2011). Managing self-identity through music can be "produced as presentation of self to other(s)" (DeNora, 1999, p. 45) because it "signals many

other non-musical aspects about ourselves“ (MacDonald et al., 2009, p. 17), such as our likes and dislikes (ibid., p. 12). Music can also be “a presentation of self *to* self, the ability to mobilize and hold on to a coherent image of 'who one knows one is'” (sic) (DeNora, 1999., p. 45), for instance, by listening to music of a social group or with a specific message to remind oneself that this is who one is or where one belongs.

Another function of music is the regulation of cognitive and physiological states (Clayton, 2009) which can be of benefit during exercise. Music is generally very helpful for sports because it lowers the perception of exertion by distracting from it (Boutcher & Trenske, 1990; Karageorghis & Priest, 2008; Nethery, 2002). The musical tempo can influence physiological responses to music (Bernardi et al., 2006; Karageorghis et al., 2008), and the rhythm helps to synchronise patterned movement (Priest & Karageorghis, 2008) which can influence performance, for example, during sprint (Simpson & Karageorghis, 2006), although the latter has only been found to happen with specific instructions (Leow et al., 2018). One of the main reasons for listening to music during exercise is its motivational use (Laukka & Quick, 2013) which was discovered to be so fundamental (Karageorghis et al., 2006) that an inventory was designed to help people select music for their own workout (Karageorghis et al., 2006). These helpful effects seem to have been discovered by amateur runners, too, most of which can be seen in the streets wearing headphones, listening to music during their exercise.

Additionally, music, particularly self-chosen music, can help with pain management as has been discovered in experimental studies with cold pressor trials (Mitchell & MacDonald, 2006; Mitchell et al., 2006). Participants listening to self-chosen music as opposed to experimenter-chosen music, watching stand-up comedy or completing a cognitive task showed a higher pain tolerance as well as increased perceived control in the situation. A study with chronic pain sufferers (Mitchell et al., 2016) found that music listening can distract from the pain and help with relaxation, especially if they listened to music frequently. Thus, music is not only able to enhance physical and cognitive performance, but help with negative physiological states, too, therefore contributing to health management.

Music also has the capacity of being conducive to well-being (Batt-Rawden & DeNora, 2005) in helping the listener create “self-knowledge”, (re)gaining control over the situation (ibid., p. 295f.). It also provides the space for rituals that help with relaxation and healing (ibid., p. 295f.). Especially older adults tend to use music for well-being purposes (Laukka, 2007). One function of music that is utilised when trying to improve well-being is the influence of music on emotions. Music can be used to regulate emotions (Saarikallio & Erkkila, 2007; Thayer et al., 1994), mainly because it expresses and produces emotions itself and thereby allows the listener to manage their emotional states (as will be discussed later in this chapter). Managing emotions through music involves “regulat[ing] moods and energy levels, [enhancing] and maintain[ing] desired states of feeling and bodily energy (e.g., relaxation, excitement) and [diminishing] or […] modify[ing] undesirable emotional states (e.g., stress, fatigue)” (DeNora, 2010, p. 171). Utilising music to regulate emotions is the function mentioned most often in connection with music in everyday life (e.g., (North & Hargreaves, 1999; Sloboda et al., 2009).

There are many more situations in which listening to music can be beneficial, some of which shall be mentioned here in passing. Often music is present as an accompaniment which makes mundane and even disliked tasks more enjoyable (Sloboda et al., 2001), but music can also be listened to as the main activity for entertainment (Saarikallio & Erkkila, 2007). Listening to music can have the added effect of changing the perception of time particularly when waiting (Areni & Grantham, 2009) and it can help to pass time, for example, during commuting (Sloboda et al., 2009). Music can be used for relaxation purposes and can decrease stress, especially in combination with other relaxation techniques (Pelletier, 2004). Its ability to block unwanted thoughts (Herbert, 2011) can aid relaxation as well.

In summary it can be said that one of the main functions of music is control (Frith, 2003). Music was shown to help with the control of emotions, time, exercise, interpersonal relations, health and wellbeing, self-identity and chores. It is a very versatile tool which can serve several needs at once and helps the listener achieve goals that would be difficult to reach in any other way. There are other functions of music that are particularly relevant specifically to mobile music listening which are going to be discussed in the next chapter (1.2).

1.1.4 Music and emotion

Mood management is one of the main functions of music which was, for instance, proven by Saarikallio and Erkkila (2007) who found that music serves this function because it can provide entertainment, revival, strong sensation, diversion, discharge, mental work, and solace (ibid., p. 96).

One of the earliest experimental approaches to the mechanisms for musically evoked emotions was taken by Pike (1972). He discovered that music is often perceived as pleasurable which he ascribed to the movement and the contrasts between density and relaxation in music. Since 1972 studies about music and emotion have developed further and new insights have been gleaned. It has been confirmed that generally positive emotions are felt in response to listening to music, although it is possible to feel negative emotions, too (Juslin et al., 2011). The most often reported affects when listening to music were "*happiness, sadness, calm, nostalgia, love, interest,* and *longing"* (sic) (ibid., p. 196), although not everyone experiences the same emotions in the same situations (Sloboda, 1992). The emotional effect of music on the listener can also be discovered through physiological measurements, for example, skin conductance levels or heart rate (Grewe et al., 2009). One of the strongest responses to music are chills (e.g., Blood & Zatorre, 2001; Goldstein, 1980; Panksepp, 1995) - "frisson manifested as goose bumps or shivers" (Grewe et al., 2011, p. 1) – which occur especially during "emotionally powerful pieces of music" (Rickard, 2004, p. 381). Chills persuasively demonstrate that music can elicit emotional reactions in people.

The emotions (and chills) felt when listening to music were found to be influenced by several factors, namely personality, age, musical training and musical genre (Juslin et al., 2011), as well as prior mood, arousal, personality and context (Västfjäll, 2002). The tempo of a piece of music (Radocy & Boyle, 1997) and the musical structure (Jackendoff, 1992) have also been shown to influence emotional reactions to music. Vuoskoski and Eerola (2015) discovered that background information about the piece of music influences the emotional response it evokes. Other kind of information, for example, feedback about the own physiological responses to music, has been found to determine the intensity of felt emotions (Dibben, 2004), and feedback of other people to the piece of music one is listening to can also change the emotions elicited by it

(Egermann et al., 2009). Listening to music privately as opposed to in a group also influences the intensity of evoked emotions (Egermann et al., 2011). Interestingly, the pieces of music that elicited the most intense emotions are remembered best (Baumgartner, 1992; Jäncke, 2008; Kensinger, 2009) which shows that music has a longer lasting effect than just in the situation it is listened to.

Knowing about the aspects that influence emotional reactions to music is a starting point for the main question that occupies researchers regarding this topic nowadays. Their quest is to discover the mechanisms that elicit emotions through music (Juslin & Västfjäll, 2008), which has been successful insofar as several mechanisms have been identified already. Västfjäll (2002), for example, put forward the theory that music causes memory and imagery, which then creates the emotions, which Colling and Thompson (2013) agree with. Cochrane (2013) on the other hand, argues that listeners perceive emotions in a piece of music that are then felt, for instance, through emotional contagion (Davies, 2013) or through the physical impact music has on the listener, which creates emotions that are then attributed to the music (cognitive appraisal) (Robinson, 2013). A third idea is that listening to music will lead to rising dopamine levels in the brain (Menon & Levitin, 2005) that are experienced as rewarding and pleasurable (Salimpoor et al., 2009). Juslin and Västfjäll (2008; Juslin, 2013) collected the mechanisms known to them in a framework Juslin (2013) called BRECVEMA, which includes eight mechanisms such as brain stem reflexes, rhythmic entrainment, episodic memory or musical expectancy. A mechanism missing from this list is the “facilitation of pre-existing emotions (disinhibition)” (Scherer & Coutinho, 2013, p. 132), as Scherer and Coutinho (2013) point out. Juslin et al. (2010) make sure to mention that not all mechanisms apply to every piece of music and that various mechanisms can be active at once, leading to different responses to the same piece of music (Sloboda, 1992).

Seeing all these mechanisms, it seems to be obvious that music can elicit emotions. However, there are still some researchers who believe that music can only express and not evoke emotions (e.g., Kivy, 1990). One the one hand, theories say that music seems to express emotions because of its similarity to the human voice (Leech-Wilkinson, 2013) and body movement (Molnar-

Szakacs & Overy, 2006). The latter argument, on the other hand, can also be used as an argument for music's capacity to elicit emotions since rhythmic entrainment is part of the BRECVEMA framework (Juslin, 2013) known to cause a feeling of togetherness by synchronising to an “internal rhythm” (ibid., p. 7). Even the idea that music represents emotions because it involves an “ebb and flow of tensions and relaxations” (Dowling & Harwood, 1986, p. 205) has been an argument for music eliciting emotions (Pike, 1972). However, when comparing felt and expressed emotions in music it could be difficult for the listener to tell them apart (Juslin & Laukka, 2004, p. 231) which might be a reason why the mechanisms showing emotions in music and evoking emotions in the listener are so similar. Thus, most of the researchers nowadays believe music can do both – express and create emotions (e.g., Gabrielsson, 2002; Juslin & Laukka, 2004; Kreutz, 2011; Krumhansl, 1997). While music can both express and create emotions, it does not mean that these have to be the same. Studies illustrated that music rated as expressing pleasant emotions can still be disliked (Ritossa & Rickard, 2004), and there is an increasing popularity of research about reasons for liking sad music (e.g., Garrido & Schubert, 2015; Schellenberg et al., 2008; Spitzer, 2013; Taylor & Friedman, 2014; van den Tol & Edwards, 2013).

Apart from the debate about elicited and expressed emotions in music, researchers do not agree on the difference between everyday and musical emotions. Some say they are the same (Juslin & Västfjäll, 2008; Sloboda & Juslin, 2004), while others oppose this notion, for example, Martindale (1984 in (Schubert, 2013), who explains that everyday emotions are usually goal-oriented and therefore different from musical emotions that are more aesthetic. Thus, musical emotions are “qualitatively different to everyday pleasures where motives may be involved” (ibid., p. 13), which is one of the reasons Schubert (2013) gives for being able to enjoy sad music. Scherer and Coutinho (2013) write that many theorists disagree with the notion that everyday and musical emotions are the same, because even though the eliciting mechanisms might be the same it does not conclude that the emotions are the same (ibid., p. 124). When studying the mechanisms and characteristics of emotions elicited by music, the difference between everyday and musical emotions is an important

topic to consider, which explains why opinions in this debate diverge so drastically.

Discord also dominates the debate revolving around the definitions of emotions (Scherer, 2005). Many different terms have been used, sometimes synonymously, e.g., 'affect', 'emotion', 'mood' and 'feeling' (Juslin, 2013, p. 2), which raises the difficulty of comparing studies (Juslin & Zentner, 2002). However, as Juslin (2013) writes, there is an “increasing consensus in the affective sciences” (ibid., p. 2) so this will likely not be an issue for much longer.

Despite all this research and all that is known already about music and emotions it is not possible to predict with any certainty which effect music will have on the listener in everyday life (Sloboda, 1992) since there are too many factors that need to be taken into consideration, such as the presence of other people or the surrounding environment. However, for the everyday listener of music it is not crucial to predict their exact reaction to music. It is enough for them to understand through experience that they can use music to manage their mood, and it has been shown that listeners seem to know which music they need in specific situations (Saarikallio, 2011) even if they cannot express this in words.

1.1.5 Musical preferences

The effects of music on emotions seem to be especially pronounced if the piece of music is liked (North & Hargreaves, 1997). Therefore, musical preferences should be taken into consideration when looking at everyday music listening behaviour, especially since musical preferences will likely influence what a person is listening to, which does not only affect emotional responses but also other factors, for example, building of self-identity.

Many factors have been explored in relation to musical preferences. Many of these factors are dependent on the listener themselves. Age is one of the most often mentioned determinants that influence musical preferences (e.g., Bersch-Burauel, 2004; Hunter et al., 2011; LeBlanc et al., 1996). It has been found in the USA, for example, that liking for fast music is relatively high in first grade, is at its lowest in 6th grade, peaks in college and then evens out during adulthood (LeBlanc et al., 1988). Social status (Behne, 1975), educational

background (Institut für Demoskopie Allensbach, 1980), experience and training (McMullen, 1996), mood of the listener (Chen et al., 2007), stress (Flath-Becker & Konečni, 1984), and knowledge of the listening conventions (Crossley & Bottero, 2015), which also influence each other to some extent, can change the enjoyment of particular pieces of music. Personality is one of the best studied factors in relation to musical preferences (e.g., Delsing et al., 2008; North, 2010; Rawlings & Ciancarelli, 1997; Rentfrow & Gosling, 2003; Schwartz & Fouts, 2003) and even a liking for sad music was found to be related to personality factors like openness and empathy (Vuoskoski & Thompson, 2012). The gender of the listener is also important to consider when looking at musical preferences (Christenson & Peterson, 1988), because this factor also impacts general involvement with music, i.e. in England, teenage girls seem to like music activities more than teenage boys although this changes with age (Crowther & Durkin, 1982). A host of other influences that have been studied in the context of musical preferences are, for example, relationships, beliefs and crime (North & Hargreaves, 2007a), media and leisure activities (North & Hargreaves, 2007b), and travel, employment and health (North & Hargreaves, 2007c). Since all these factors influence musical preferences to some extent it is not surprising that many individuals show big differences in their relationship to music (Greasley & Lamont, 2006) and their musical taste (Greasley et al., 2013; Lamont & Webb, 2010).

Musical preferences are not only determined by the listener's characteristics, but also by factors intrinsic to the music itself, for instance, melody, rhythm, expressed mood and lyrics (Boyle et al., 1981) can also have an impact on the preference for a piece of music. Preferences change relatively quickly (Lamont & Webb, 2010) especially for artists, while genre and style preferences are more consistent (Mulder et al., 2009). The artists' sex is another determinant that can influence listeners' choice for particular music, i.e. male musicians seem to be preferred especially by men (Millar, 2008).

Apart from factors intrinsic to music and the listener, there are other components that influence musical preferences. It has been shown, for example, that a greater familiarity with a piece of music leads to an increased partiality towards it (Sommerer, 1994), although there is a turning point at which over-familiarity can lead to dislike. Just being exposed to music can therefore

influence the preference for it (mere exposure effect) (Zajonc, 1980). The listening context is important to consider (Sloboda, 2010), especially since sound can also be out of place (Leyshon et al., 1998). Background information about the piece of music one is listening to can influence whether it is favoured or not (Rittelmeyer, 1971; Schaffrath, 1978), for instance, more knowledge about the conventions of the particular style can increase the liking for it (Larson, 1971; Schmidt, 1975). The opinions of other people can also influence the listener's decisions regarding music listening behaviour, be it parents or peers (Troué & Bruhn, 2000).

While certain factors like age and gender can give indications about an individual's musical preferences, musical preferences can also say something about a person. Heavy metal, for example, has the reputation of having aggressive fans (e.g., Mast & McAndrew, 2011) although this finding has been contradicted by other research (e.g., Kilthau et al., 1997), but generally a person's musical preferences can convey other kinds of non-musical information about them since “our broad patterns of preference, and indeed even our transitory likes and dislikes, form part of our musical identities” (MacDonald et al., 2009, p .12).

This part of the chapter shows that musical preferences depend on a large number of determinants, some of which might not even be known yet. More than one of these factors is active at a time and they influence each other as well (Mulder et al., 2009, p. 68). This makes any attempt to predict a listener's musical preferences close to impossible since it would be difficult to find all the factors that influence the listener and weigh them according to their impact on each other and the musical preferences. Because of this difficulty it is (still) necessary to ask the participant directly to discover their musical taste. However, even if a participant is asked directly, a difference has been found between preferences when pieces of music were verbally presented or heard (Müller, 2000), which implies that research methods regarding this topic should be carefully examined before they are applied, and results compared. Nevertheless, it is important to consider musical preferences when studying behaviour in relation to music since they are affected by so many determinants and also influence factors, such as emotions, which can considerably change music listening behaviour (as has been mentioned above).

1.1.6 Conclusion

In summary, sociological literature gives a generally negative impression of life in cities (with few exceptions). Cities are seen as cold, unsociable and crowded places, which has an adverse impact on people's health by causing stress. The environment also has a direct impact on people's behaviour and mood which, following this line of thought, is therefore equally negative as the urban surroundings. One of the ways of coping with this situation introduced in this chapter is through music. Music can serve many functions, such as relaxation, managing personal wellbeing and mood. It has been shown that listeners are aesthetic agents that are aware of the consequences of their own music listening behaviour and can therefore manage themselves and their situation accordingly. Musicking can shape social environments and influence people's relationship to their surroundings. Thus, music can counter the negative effects produced by being in urban environments and can enhance positive characteristics. It gives the listener control over aspects of their lives they would not have that much control over otherwise.

Many factors influence the emotions a person feels when listening to music. They are as varied and as hard (or even harder) to predict than musical preferences and their extent shows that the music listening experience does not just take place at a certain time in a specific location but that it is intertwined with the listener's own experiences, the situation (and therefore the environment) and the music itself, as are musical preferences. Therefore, a listening situation should always be examined in its specific context because this would add insight into the listener's perception and the factors influencing the listening experience.

1.2 Portable listening devices, users and non-users

1.2.0 Introduction

The aim of this thesis is to discover more information than already accessible about mobile music listening, so after illuminating general music listening behaviour in everyday life and theories on cities, space and place in the previous chapter, this chapter will focus specifically on mobile music listening. Additionally, time will be spent on discussing existing information on non-use of technology, since this will inform the second part of this thesis.

Solitary mobile music listening is not a completely new idea that started when the first device was invented, rather it can be traced back to travelling musicians and doctors using a stethoscope (as will be explored below). These early forms of solitary listening and mobile listening influenced the development of behaviour that can be seen nowadays and should therefore not be discounted when studying mobile music listening. When looking around in the streets the impression that mobile music listening is ubiquitous suggests itself. However, studies comparing the prevalence of music listening devices in everyday life came to opposing conclusions (e.g., Greasley & Lamont, 2011, Krause et al., 2015), i.e. that mobile music listening is not as prevalent as it seems compared to other forms of listening to music, although this research takes into consideration that mobile music listening exists and should therefore be included in studies about general music listening practices. With the recognition of the importance of mobile listening devices in everyday life the question arises why listeners feel the need to engage in this behaviour. General reasons for listening to music were discussed in the previous chapter, so specifics regarding mobile music listening will be brought up here, which mainly relate to the change of the perception of the environment one is moving through and to the control over one's personal space. The functions of music are different depending on situation and listener, just as the modes of listening vary between listeners, too. Depending on their wish for control, listeners, for example, choose their next song specifically instead of relying on the shuffle mode of their device.

Sociability in relation to mobile music listening is such a prevalent discussion in related literature, that it shall be addressed in this chapter, too.

Two parties participate in this controversy: the opponents, who say that mobile music listening is isolating and alienating and hinders communication, and the proponents who mainly argue that listeners are aware of potential adverse effects of their behaviour and therefore adapt their practices accordingly to behave more socially, for example, through sharing earbuds. As a result, it is suggested in this thesis, that use of devices should be studied directly instead of building theories without any empirical evidence. Theories based on research of use of technology, which will be introduced below, for example, describe users as active people who know their needs and utilise technology accordingly. Through their behaviour they have the power to change the meaning and the use of technology.

Apart from the potential negative impact on sociability in public urban life, mobile music listening also creates very real dangers for the listener and surrounding people. Too high sound volumes can lead to hearing loss and listening to music over headphones while taking part in traffic (as a pedestrian or cyclist) can lead to accidents or even death. It is therefore comprehensible why some people might not want to engage in this behaviour. Theories of non-use of technology offer various other reasons for the existence of non-users and even suggest that there are differences between them. Primarily, this literature shows that viewing non-users as potential users means missing out on many nuances and rationales for non-use.

1.2.1 The development of mobile music listening

“[L]istening on the move” (Gopinath & Stanyek, 2014., p. 7) first existed in the shape of travelling musicians long before someone even thought of the modern mobile music listening devices. However, even though mobile music listening was known before, the origin of technologised, privatised mobile music listening is often said to be the Sony Walkman which was launched in 1979 (e.g., Bull, 2006b; Du Gay et al., 1997). The invention of new music media led to the development of mobile devices that could be used to listen to these new media, so the Discman (1984) and the MiniDisk Walkman (1992) were introduced (Sony, 1999). Later the MP3-Player (1998 - Kaufman, 1998) and the iPod (2001 - Computer Bild, n.d.) were launched. With the development of smartphones

there is no longer the need for listeners to have separate devices for music listening and telephony (Gschweidl, 2017), since the smartphone has the capability for both. In fact, a study discovered that reviews of smartphones focus on their music capability and sound quality (Lever-Mazzuto, 2014), which shows how important this function is for potential users. Mobile listening devices nowadays are small and wearable (Griffiths & Cubitt, 2011), have a high storage capacity – the MP3 format was invented particularly to store a lot of information using little space (Sterne, 2013) –, can connect to the internet at any time, and often integrate several functions into one device and therefore have more to offer to the user than could ever have been dreamed of in the 1980s. In fact, music listeners are now able to carry a whole range of music with them (Bull, 2005) without having to transport a bag of CDs or cassettes, too, and they have additional choices of music through online music streaming services (Krause et al., 2014).

Solitary listening, a main characteristic of mobile music listening, does not just exist since the invention of the Walkman. Sterne (2003) argues that it first started when doctors learned to use a stethoscope. They had to negotiate a completely new way of hearing, since they had to grasp the concept of hearing something nobody else could perceive (Rice, 2013b). The acquired practices connected to the stethoscope slowly developed and were adapted to subsequent solitary listening devices (Sterne, 2003), and nowadays it is normal to see people wearing headphones to listen to mobile music alone in urban public places.

The prior existence of early forms of mobile and solitary listening shows that technological progress is not a revolution but an evolution (Winston, 1998, p. 1). Just as other types of technology did not just jump into existence, mobile listening devices can be traced back to earlier practices and technologies that have shaped the modern devices (MacKenzie & Wajcman, 1999). Technological development of portable listening devices has not stopped today, which is the one of the reasons the present studies did not focus on one particular device lest it should be outdated in a couple of years' time and the results not completely applicable any longer.

1.2.2 The prevalence of portable listening devices in everyday life

Studies about music listening in everyday life have come to different results regarding the prominence of the use of portable listening devices. Greasley and Lamont (2011) for instance, discovered through the use of experience sampling (i.e. asking people at random times during the day to answer a questionnaire about the studied behaviour) that mobile listening devices were the least used music listening devices. Only 6% of the 25 participants (18-29 years old) listened to music in this way, while computers were by far the most common listening devices (39%).

Krause and North (2014) on the other hand, came to a different conclusion. Through questionnaires they revealed that 33,8% (of 342 respondents, 16-72 years old) liked to use mobile listening devices, closely followed by computers (32,6%). Another study carried out by Krause et al. (2015) using experience sampling with 177 participants (17-75 years old) revealed that mobile listening devices only came second (after the radio) in the list of devices used for music listening in general. When looking at all these results the question of the prevalence of the use of portable listening devices in everyday life is still not answered. Which of these studies is right? The fairest answer to the latter question is that all the studies are correct. The differences in their results could be due to the different years they were carried out, the age and number of participants or the method used. While questionnaires rely on participants' memory, experience sampling taps into occurring everyday behaviour. Additionally, Krause and North (2014) focussed on the duration for which a device was used, while Greasley and Lamont (2011) and Krause et al. (2015) concentrated on incidents, which explains why they came to different conclusions. Therefore, these results should be read and compared with caution, but the point can be made that mobile music listening devices are part of everyday life, which research is taking into consideration, and should thus be considered when looking at music listening behaviour.

1.2.3 Functions of mobile music listening

The reasons for music listening in everyday life in general have already been discussed in the previous chapter, however, the question arises why people

would want to listen to music through portable listening devices when they are on the move. To answer this question, it is necessary to look at theories about the environment listeners are travelling and commuting in, since, as Krause and North (2016) discovered, the reasons for listening to mobile music depend on the context and the concurrent activity.

As described in the previous chapter (1.1), the terms that are often used in connection with city life are 'crowded' (Evans, 1978), 'stress' (Saegert, 1976), 'need for privacy' (Proshanksy et al., 1976), 'unsocial' (Milgram, 1970), 'meaningless' (Simmel, 1997) and 'neutral' (Sennett, 1992). All in all, this paints a sad, desolate picture of living in cities. Nevertheless, this environment influences the behaviour that happens in it (Sanoff, 1974), and people prefer environments that are 'complex', 'stimulating', 'sensuous' and 'dynamic' (ibid., p. 252). It is therefore not surprising that people are trying to change their perception of the environment, if the existing surroundings so directly contrast the needed and preferred ones.

One way to directly change the perception of the environment is through listening to music. Yamasaki et al. (2015) discovered that positive music can make the listener feel more positive about their surroundings. More indirectly, music is also able to create “an embodied but imaginary space that mediates our feelings, our dreams, and our desires - our internal space - with the social, with external space” (Berland, 1998, p. 131) and can therefore be used as a means to control the surroundings. Listeners use music to create the private space they need when it is not physically present (Bull, 2006a; Rice, 2013a), which represents a “nesting of the private auditory space of individual earphone use within the public soundscape” (Born, 2013, p. 57). Bull (2005) coined this 'auditory bubble', while participants call it “my own little world” (e.g., Bull, 2000, p. 37). The idea of a bubble around a person demarcating their private space can be traced back to the 1970s, were theorists like Hall (1974) and Sommer (1974) described personal space as “the emotionally charged space bubble around each individual which is regarded as private and personal” (Sommer, 1974, p. 204). The difference between personal space and the auditory bubble is that the latter is not a physical but an imagined space, which cannot be physically breached by another person.

Existing research suggests that the need for privacy met through the auditory bubble is one of the reasons why mobile listeners use their devices. Privacy allows the listener to manage their space (Bull, 2001), control their surroundings to a point (e.g., Bull, 2006b; Dibben & Haake, 2013; Weber, 2009), and gives them back the choice in the situation they are in (Krause et al., 2015). Mobile music listening serves as a kind of retreat from social life (Richmond, 2006), an absence during physical presence (Turkle, 2006), that allows the listener to disconnect from their environment (Bull, 2000) and isolates them from their passers-by (Bull, 2004). Women sometimes use the detaching ability of their mobile listening device to ward off unwanted attention (Prior, 2014) by pretending not to have noticed the other person. The devices can also be used to block out unwanted stimuli in general (Skånland, 2011) by allowing the listener to regulate their listening experience – the "sonic interchange" (Thibaud, 2003, p. 334) between foreground and background noise and sound. Interestingly, while the auditory bubble created through music can serve as isolating it can also provide social warmth (Bull, 2007) and make the listener feel less lonely (Heye & Lamont, 2010). Another advantage of mobile music listening, especially to positive music) is that it reduces the size of the private space that the listener would normally require (Tajadura-Jiménez et al., 2011), therefore making the listener feel less crowded (Sommer, 1969). In other words, listening to music seems to distract from crowdedness, which makes cramped urban conditions seem less confining.

Apart from creating an auditory bubble that benefits the listener in several ways, there are other functions of mobile music listening that listeners regularly draw on, which correspond with the reasons for general music listening that have been mentioned in the previous chapter (chapter 1.1). Mood management (e.g., Bull, 2000, Skånland, 2013) is mentioned in most of the studies that look at reasons for mobile music listening and should therefore be acknowledged here. Apart from that, music during commuting changes the listener's perception of time (Heye & Lamont, 2010) and helps them manage themselves (Bull, 2001). Music can assist relaxation (Skånland, 2012), alleviate boredom, block thoughts, and provide a sense of security (Bull, 2000). It is helpful that mobile listening devices are very small and light-weight nowadays, since many people like to run and take their music along because it energises and motivates them

(Gopinath & Stanyek, 2013). A very important reason that should not be forgotten is that mobile music listeners use their devices because they enjoy listening to music and want to take it with them wherever they are (Simun, 2009). Thus, solitary mobile music listening, while having the same benefits stationary music listening has, also has added advantages because of its flexibility and portability, which can aid the listener anywhere and at any time.

1.2.4 Modes of listening

While listening to music on the move can have different benefits for the listener, the way the device is used specifically can differ from listener to listener although the advantages might stay the same. Devices usually offer several functions and it depends on the user which of them is applied. There are controlled methods, for instance, choosing what to listen to directly, and less controlled methods, such as, “shuffle, radio, and using online recommendation services” (Kamalzadeh et al., 2012, p. 377). Research has suggested that more control is required during passive listening, when music serves as an accompaniment to an activity (Kamalzadeh et al., 2012). Also, men appear to want more control over their music listening than women (Kamalzadeh et al., 2016). The most common mode of listening is choosing playlists closely followed by selecting an “artist, album, or genre” (Kamalzadeh et al., 2016, p. 62). Bull (2014) clarifies that shuffle mode is not as random as it sounds, because the songs were already selected by the user beforehand and only their order is not influenced. The method used to select the music was found to be important, since control affects the mood of the listener – the less control they have over their listening experience the more negative their mood (Krause et al., 2014). Users seem to be unconsciously aware of that, because they spend a lot of time creating playlists at home (Bull, 2014) according to mood or planned activity (Cunningham et al. 2006). Some listeners also use intelligent music suggestions, however Beer (2010) points out that these services are often monitored and store their users' data so using these suggestions means having to keep data protection in mind as well.

1.2.5 The sociability debate

Just as critics of urban life have suggested that cities are unsociable places, so too have commentators suggested that mobile music listening is anti-social. Du Gay et al. (1997) explain that the cultural criticism of Adorno and Horkheimer (1991) has influenced the views of later scholars on mobile music listening. Cultural criticism assumes that the production of the cultural products can and will influence the consumer of these products, basically (and crudely) saying that the consumer is a mere puppet without a will of their own. Later sociologist often adhere to this line of thinking saying that mobile music listening is an unsocial (Bull, 2007), isolating (Small, 1998), alienating (Cook, 2013) and a basically private experience (Gergen, 2002), that transforms the urban space into non-space (Bull, 2013) where users operate on the assumption that they are treated as "anonymous" and "disembodied, privileged with a certain suggested absence" (Turkle, 2006, p. 221). Chambers (1990) illustrates that mobile music "serves to set one apart" while also "simultaneously reaffirm[s] individual contact to certain common, if shifting, measures (music, fashion, aesthetics, ...)" (ibid., p. 2). He argues that it is socially isolating, but he also concedes that mobile music confirms social values, which can be interpreted to mean that this behaviour is not completely negative.

The argument for mobile music listening as sociable can be traced back to Baudrillard (1988), a supporter of the notion that consumers are by no means without will, but are active in constructing their consumption. Hosokawa (1984), the first author to address the Walkman, points out that the distance created through mobile music listening does not isolate the listener but rather "decontextualises the given coherence of the city-text, and at the same time, contextualises every situation which seemingly does not cohere with it" (ibid., p. 171). In other words, the listener and their surroundings are connected because the listener constantly negotiates their understanding of the environment. The supporters of the point of view that mobile music listening is not isolating found that listeners think about "the ethics of sharing a communal space with others" (Prior, 2013) and are therefore more socially inclined than it seems (Prior, 2014). They share their earbuds with others as a sign of group membership (Bickford, 2014), use shared music experience over headphones as a

conversation starter (Bergh et al., 2014) and refrain from use when with friends (Bergh et al., 2014).

Proponents of the idea of mobile music listening as isolating argue that listening to music alone in public is detaching because people would ideally communicate with each other (Gergen, 2002). Listening to mobile music therefore contributes to the anti-social urban environment. Opponents such as Souza e Silva and Frith (2012) reason that public space is defined by being filled with strangers who do not usually communicate with each other. Listening to music, therefore, would not change that. This argument between the two parties basically revolves around the question whether mobile music listening contributes to the unsociable impression of public urban space or whether these spaces do not encourage socialising anyway.

An argument that arose out of the debate about the sociability of mobile music listening concerns the permeability of the auditory bubble. People arguing against the permeability say that mobile music listening is isolating, because it shuts the listener off from their surroundings. On the other hand, more permeability seems to imply more sociability, which is why this discussion contributes to the overall controversy of the isolating or connecting characteristic of mobile music. Looking at Bull's descriptions it seems that the auditory bubble resembles a shield that comes up at the same time as headphones are plugged into the ears, just like an “audio-visual pair of sunglasses” (Bull, 2007, p. 32). Beer (2012), however, sees the auditory bubble not as an impenetrable wall but rather “as a means of escape or momentary security that is easily open to interruption or invasion by our surroundings” (ibid.) which has also been empirically proven by Heye and Lamont (2010). Prior (2014) agrees and claims that “its boundaries are leaky, dynamic and guarded” (ibid., p. 32). Since Hall's (1974) claim for personal space that “[p]eople affect their communications with others by the way they handle this space” (ibid., p. 215) is valid for auditory bubbles, too, how mobile listening is interpreted is strongly affected by the way the researcher views the auditory bubble – whether it is permeable or impenetrable.

An important difference between the proponents and the opponents of the sociability debate is that only Bull (e.g., 2000) carried out empirical work and argues that mobile music listening is isolating. All the other supporters of this

view mentioned here only reflected theoretically on this subject. On the other hand, all the researchers whose opinion tends towards mobile music listening as sociable carried out studies that verify their hypothesis and offer arguments for this point of view. It could therefore be concluded that theoretical contemplations of this topic likely lead to the idea of mobile music listening as isolating, while research into behaviour will provide reasons to believe the opposite. Du Gay et al. (1997) agree, arguing that “[i]n order to do a cultural study” it is necessary to look at the way the products are used and the meanings that are attached to them (ibid., p. 95). Only then will the researcher understand what is really going on.

1.2.6 Users and technology

To do as Du Gay et al. (1997) suggested, it is necessary to look at theories that explain the use of devices. One of these theories is the idea that devices afford certain actions (Gibson, 1979) which influence how the mobile music listener behaves. In fact, this notion seems so essential to some researchers that they do not talk about the music having the effect on the listener, but the device (e.g., Bull, 2000).

The relationship between users and devices is more generally explained in theories relating to media usage. A pervasive theory about this topic comes from Katz et al. (1973). Their Uses and Gratification approach treats the media audience as active people who know that they can receive gratification from the media and who can decide which media to utilise depending on their needs, which they are aware of (Rubin et al., 2016). This gratification “can be derived from at least three distinct sources: media content, exposure to the media *per se*, and the social context that typifies the situation of exposure to different media” (Katz et al., 1973, p. 514). Translated for music listening this would mean that the listener can satisfy their needs through the music itself, by using their device, and through the situation they are in when listening to music on the go. Each source can serve multiple needs, i.e. it does not have one pre-set gratification. These needs are not controlled by the producers of the media (at least not solely) but are socially constructed (Baudrillard, 1988).

A second closely related theory is the idea that users utilise technology and thereby give it meaning beyond its functions (Katz & Aakhus, 2002), e.g., as a status symbol or as a soothing tool (Weber, 2009). This Apparatgeist theory focusses more on the interpretation and adaptation of the device through use rather than what the device can afford for the user (which is the focal point of the Uses and Gratification approach), although it also assumes that the user is active (Lever-Mazzuto, 2014). It takes on Giddens' (2006) idea of structuration and appropriates it for technology. By using technology people shape it, while, equally, technology shapes human action, which means that technology is socially constructed and can influence behaviour at the same time (Katz & Aakhus, 2002). Users appropriate technology for different situations and thereby influence what it can be used for (Wiredu, 2007), for example, “[t]he original Sony Walkman was provided with two headphone sockets so that, used indoors and in a stationary mode, two people could listen together. However, it soon became clear that the Walkman would be used more individualistically especially outdoors as people were on the move, walking, travelling by train, plane and car” (Urry, 2007), p. 171) which led to the development of devices with only one headphone socket. Technology and society are therefore shown to be “mutually constitutive” (MacKenzie & Wajcman, 1999, p. 23) and not just “separate spheres influencing each other” (ibid., p. 23) which does not only impact on the technology that already exists, but the future development of technology, too (ibid.).

While users associate meaning with the devices, this does not mean that all users attach the same signification to them. The Social Construction of Technology (SCOT) approach was coined by Kline and Pinch (1999). They support the notion that different social groups associate different meanings with technology, which leads to an “interpretative flexibility” (ibid., p. 113) because there is not only one but several meanings for one product. While social groups shape technologies they are themselves “reconstituted in the process” (ibid., p. 114), which again conforms with the Apparatgeist theory.

Thus, technology and society as well as technology and users are closely intertwined. All the illustrated theories above demonstrate this and therefore indicate that the use of devices should be studied in connection with the wider social context.

1.2.7 Dangers of mobile music listening

The topic of data protection is becoming an increasingly pervasive issue of public interest, especially in Europe, as the latest General Data Protection Regulation (European Commission, 2018) suggests. Beer's (2010) worries related to data protection when using online streaming services are not unfounded and yet, there have not been any specific studies connecting music listening and data protection. However, data protection is not the only issue when using mobile listening devices.

Hearing loss is a danger that is more specifically related to mobile music listening. Since people seem to prefer listening over headphones to speakers (Kallinen & Ravaja, 2007) (and the mobile music listening covered here is characterised by using headphones) hearing loss is a very real worry that should be taken into consideration when studying it. As was explained above, one of the reasons for mobile music listening is wanting to mask disliked sounds from the environment. For that reason, mobile music listeners sometimes have to turn up the volume of their music to high levels to block out other sounds. Hodgetts et al. (2009) carried out an experimental study where they measured music amplitude during listening over headphones in relation to the loudness of background noise while exercising in a gym. Their results show that the "thresholds for noise induced hearing damage could be reached relatively rapidly in noisy conditions" (ibid., p. 830) and most listeners were not aware of how high the volume of their music was. A study looking at real-life noise exposure levels discovered similar results (Levey et al., 2011). The researchers measured sound levels of mobile music listeners and found that most participants exceeded the recommended listening volumes. Portnuff et al. (2013) compared self-reports and measured instances of listening levels of 52 young adults and concluded that, firstly, these two different measurements correspond with each other, and that, secondly, "a substantial percentage of individuals who use PLDs [portable listening devices, *author's note*] are at risk for MIHL [music induced hearing loss, *author's note*] from their PLD use alone if they continue to use their PLDs in the same way over a span of years" (ibid., p. 38). Loud music can not only damage the hearing of the listener, but has been found to cause aggression in the passive listener who is exposed to tinny music that "leaks from headphones" (Thorley, 2011, p. 86), indicating that it has wider

consequences than just for the listener alone. Only Keith et al. (2011) concluded that most of their participants did not exceed the recommended listening volumes, which could have been due to social desirability, i.e. participants did not listen to loud music because they knew that this is not a recommended practice, or because of the absence of background noise. Thus, their study might not accurately reflect the respondents normal listening behaviour, and high sound levels, as shown in the other studies, are prevalent after all.

Apart from hearing loss, another danger of mobile music listening, that can have grave impact on the listener and other people and has therefore been studied intensely by researchers, is safety in traffic. Listening to music while taking part in traffic can be dangerous, because it distracts the listener from the task at hand and it also masks other sounds that could be important (Lichenstein et al., 2012), although self-chosen music can also improve performance in a driving game (Cassidy & MacDonald, 2009). Additionally, Furnham et al. (1999) found that, while extraverts improve their reading performance with music, introverts' performance is impaired by background music, especially so if it contains vocals. These results were further affirmed in a study by Cassidy and MacDonald (2016) who discovered that while introverts perform better in cognitive tasks with low-arousal music, high-arousal music refutes that effect, which shows that different people are affected differently by listening to music, which could also affect their behaviour in traffic.

Participating in traffic while listening to mobile music can occur in different ways. One of these ways is walking with headphones which is often compared to walking while using a smartphone. Research has come to different conclusions comparing these two modes, mainly supporting the notion that headphones are safer than hand-held devices, although none of the researchers deny that headphones are risky in traffic. Through an experimental study using a virtual environment, Schwebel et al. (2012) found that mobile music listening is more dangerous than texting or talking on the phone when crossing a street. These results, however, contradict studies that showed the opposite, for example, Neider et al.'s (2010) experiment that also asked participants to virtually cross a street while either talking on the phone (hands free) or listening to music. They discovered that mobile music listeners were

more likely to successfully cross the street, therefore deeming it safer than talking on the phone. Another study was carried out by Nasar et al. (2008) who observed pedestrians crossing a street and payed particular attention to those using a mobile phone or listening to mobile music. They noticed that people talking on the phone showed far riskier behaviour than listeners wearing headphones (only a small number of these were observed though) which makes them more prone to accidents than other pedestrians. Similar results were achieved in a study observing cautionary behaviour before crossing the road with specific consideration given to users of portable listening device in comparison to users of smartphones (Walker et al., 2012). Here, mobile music listeners were found to show more watchful behaviour (particularly men) when crossing the street, which was not the case for people texting on their phone. The researchers conclude that “that cell phones and PMDs [portable media devices, *author's note*] are two different types of distractions, and this needs to be considered when developing methods to prevent pedestrian accidents in the future“ (Walker et al., 2012, p. 123). One approach to prevent accidents is already applied by the state of Utah (USA) where people can be fined for “distracted walking” (Henderson, 2014) near the railways, which includes mobile music listening (Davidson, 2012).

Considering that walking during mobile music listening already entails certain risks, cycling while wearing headphones is probably even more dangerous, seeing that they travel at a greater speed than pedestrians and often share the road with cars. Therefore, countries like Germany and the UK have rules for cyclists, saying that listening to music is generally not an offence as long as the cyclists can still hear their surroundings (Heuping, 2014), it does not impact on the cycling behaviour and the listener is still “deemed […] to have proper control of their vehicle” (PNLD, n.d.). In a large survey with 2553 respondents, Goldenbeld et al. (2012) asked for Dutch cyclists behaviour in traffic, discovering that over 70% of them sometimes use mobile technologies on their bike (ibid., p. 6) and concluded that, although around 60% of the participants compensate for using the devices in some way, for instance, through wearing a helmet or “paying better attention to traffic” (ibid., p. 7), “it appears that compensatory behaviour is not enough since device use while cycling was a significant and independent risk factor for bicycle crashes for

young cyclists" (ibid., p. 7). De Waard et al. (2011) carried out a study observing cyclists' behaviour while listening to music to discover which factors made this activity dangerous. It was found that cyclists wearing earphones in both ears missed audio signals significantly more often (ibid., p. 634) and had a longer response time when the music was loud and quick (ibid., p. 636) than cyclists with only one earphone, which did not impact the behaviour. The literature thus shows that the impression that cycling with mobile music is more dangerous is based on facts.

In conclusion, users of mobile listening devices are exposed to certain risk, such as hearing loss or having an accident in traffic. This was proven in several studies, even though some of the results contradict each other. Still, the main idea is conveyed that mobile music listening can be dangerous and that it is up to the user to behave responsibly. The user exercises their agency by negotiating between the risk that automatically comes with the use of these devices and the risk that gets added through the user's own way of consumption.

1.2.8 Non-users

After having considered users of mobile music listening devices, the question arises as to why there are so many people in the streets who do not show this behaviour. What are the reasons for not using mobile listening devices? Not much is known about that yet.

Theories about non-use of technology might reveal a first insight into this topic. Not using certain technology, resistance to it, has been shown to be normal and even necessary because it helps to negotiate the meaning of technology (Kline, 2005). Non-use is a choice that influences the "design and (de)stabilization of technologies" (Oudshoorn & Pinch, 2005, p. 19). It can be seen as a sign that the user is not adapting to social changes either, and mostly happens if the person's or group's values and needs are not met (Laegran, 2005). Non-users are important because they are the group countering users (Wyatt, 2005). Wyatt differentiates between different kinds of non-users: those that actively do not want to use the technology ("resisters"), people who have stopped using devices voluntarily ("rejecters"), groups of people who never had

access to the technology for a variety of reasons (“excluded”), and the people who were somehow forced to stop using the technology (“expelled”) (ibid., p. 76), which shows that there are different reasons for users to be non-users and not all non-users are potential users, which is often the prevalent approach to non-users (ibid., p. 68). Wyatt also gives reasons why people might not want to use the internet and mobile phones, for example, not having the need, having an alternative option, and finding it too difficult or too intrusive. These reasons could be valid for non-users of portable listening devices, too. Willingness to try out new technologies also depends on personality – people who are open to experiences are more likely to use new technologies, while its opposite, resistance to change, will probably be found in people who do not want to try new technologies (Nov & Ye, 2008).

A different reason for non-use of mobile listening devices specifically, can be found when taking a closer look at studies focussing on the negative impact of mobile music listening for the user. Safety in traffic and sociability are the main topics that stand out. One of the compensation methods of Goldenbeld et al.'s (2012) cycling participants was to not use their devices when the situation seemed especially dangerous or difficult to manoeuvre through. Other non-users might have tried mobile music listening and discovered that it affected them negatively in their sense of safety, which made them stop again, which would not be reported in any research studying use of technology. Garner (2012) carried out a study which discovered that the perception of people wearing headphones as less sociable is not just a myth perpetrated in sociology but can be empirically proven, too. Thus, a person might decide not to listen to mobile music to not appear unsociable.

The technological affordances of mobile listening devices might also limit the group of people who want to use these technologies. For instance, the sound quality of the music they hear through their headphones might not be to everyone's liking. ‘Audiophiles’ are listeners who prefer a high sound quality when listening to music and spend a lot of time and money on finding the right high-end technology for their purposes (O’Neill July 2004). They would therefore probably be less inclined to use mobile music listening devices. However, this would only account for a small number of non-listeners and not the majority of them.

Another reason for not wanting to listen to music on the move could be that the listener does not like to listen to music in general. Musical anhedonia – not deriving pleasure from listening to music – in healthy people was discovered to be separate from general anhedonia which often accompanies illnesses of some kind (Mas-Herrero et al., 2014). However, since this is likely to occur only in 5% of the population (Mas-Herrero et al., 2012) musical anhedonia cannot be a main reason for not listening to mobile music.

The only information regarding reasons for non-use of mobile listening devices particularly comes from an informal online blog where people were asked to give their reasons for using or not using mobile listening devices (PaulKTF, 2010). Among the most mentioned reasons for non-use were the dislike of headphones, the insufficient sound quality, the effort it requires to transfer the existing music library onto the computer or the device, the lack of opportunity for usage and not wanting to constantly listen to music anywhere and anytime. This feedback was anecdotal and not controlled in any way, but it still gives a first glimpse into non-use of mobile listening devices, which researchers still need to study and find more information about.

Thus, although non-use of mobile listening devices has not been a topic of academic research so far, first impressions on this theme can be gleaned from theories of non-use in sociological literature related to technology in general and also from studies carrying out research in connection to negative impact or missing abilities of portable listening devices.

1.2.9 Conclusion

This chapter started with an overview over the history of portable listening devices, showing that their development was not as sudden as it might appear at a first glance but rather a development and evolution. It was then illustrated that these devices have found their place in everyday life and therefore need to be considered when looking at music listening in general. Several reasons for mobile music listening were mentioned, explaining the concept of the auditory bubble in detail within this context. These reasons are very similar to general reasons for music listening but are also specific to mobile music listening in that they relate to the environment. Relating to the environment was also the

discussion how this behaviour is perceived. Two main lines are found in research of mobile music listening – the idea that it is unsociable behaviour, and the view that it is more sociable than it appears to be. General ideas about technology and media usage were discussed, focussing on the approach of an active audience that can shape the technology in the same way it shapes their behaviour. From this interactive view of users and technology the topic of how the portable listening devices are used was brought up. Control seemed to influence how listeners utilise their devices, which is also dependent on the activity that was carried out at the same time. Despite all the positive results mobile music listening can have for the listener, it also involves risks. In this context the danger of potential hearing loss and safety in traffic were discussed, where research illustrated that this should by no means be underestimated. It is a very real danger, which rules and regulations are already trying, albeit to a somewhat limited extent, to control.

After looking at literature related to mobile music listeners it seemed important to reflect on possible reasons for non-use of portable listening devices. Some of these reasons could be consequences of the dangers and unsociable reputation of these devices, but that probably does not account for all non-listeners. Therefore, general resistance to technology was discussed. Since there has not been any literature on resistance to mobile listening devices, anecdotal feedback was provided showing the need for more research on this topic, which is explored empirically later in this thesis.

1.3 Gaps and Research Questions

1.3.0 Introduction

Several gaps and inconsistencies have already been pointed out in the literature review. The focus of this chapter is therefore on the research questions that arise from these gaps. Since this thesis consists of two studies, one concerning mobile music listeners and the other focussing on non-users of portable listening devices, this chapter will explore questions related to both of these studies separately.

Musical preferences impact the enjoyment of listening to music, so the choice of music should matter when studying mobile music listening. However, it has only been a subordinate topic in related research so far. Additionally, Bull (2000) states that it is not important what kind of music is listened to, because the effect comes from using the device and not the music itself. Other researchers have not provided further arguments for or against this position, although this is an important topic that should be considered when studying mobile music listening. Listening mode is probably as important as choice of music. Recent studies have mentioned possible listening modes, such as shuffle or playlists, but they did not sufficiently explain the differences between them. The need for control that is satisfied through regulating listening mode is also likely to be influenced by the activity that is carried out during mobile music listening, which has not been taken into consideration so far.

With the development of mobile listening devices new functions have emerged and been described (e.g., Krause & North, 2014). However, there have not been qualitative studies that investigate the listeners' opinions and uses of these functions, so gaining insight about the applicability of results concerning earlier devices is not possible yet.

Studying all of these questions and filling these gaps calls for a new method that meets the requirements of gaining deep insight, that is also ecologically valid and comprehensible. Therefore, a new mixed-methods approach will be taken in the first study, which then also requires evaluation in order to investigate its usefulness for the present and future studies.

Non-users of portable listening devices have not been studied so far. Their reasons for being non-users and their opinions on mobile music listening are

not known and shall therefore be explored. Studying non-users' opinions will also contribute to the sociability debate by providing empirical insight into the thoughts of people who are in the same environment as mobile music listeners, instead of relying on partial information from listeners or theories without any empirical basis.

1.3.1 Research Questions regarding mobile music listening

Despite all the studies and theories presented in the previous chapters, there are still gaps that need to be addressed in order to gain a better understanding of mobile music listening. Past research about mobile music listening has mostly concentrated on the device itself and its use, or the focus was on listening to music in general and not solely on mobile music listening. Additionally, the kind of music that is listened to has rarely been mentioned. Some participants mention a piece of music they might listen to in a certain situation, but this is not the focus of the study (e.g., Bull, 2001) and is worth exploring further, as Krause et al. (2014) have also suggested. Bull (2000) does not study the music on purpose, as he explains, because as long as something is listened to it will be the device that causes the experience (ibid. p. 15). He also points out that “the role of the personal stereo in everyday experience can be analytically distinguished from that which is listened to” (ibid., p. 14). One of the research questions in the present study is, therefore, how participants relate to this question. Do they talk about the music having the effect or the device? Answering this question will help to understand previous research results better, and will provide indications how to approach mobile music research in the future, i.e. if it is mainly the music that has the effect then less focus needs to be given to the device used, and previous results (e.g., Bull, 2010) have to be re-interpreted. However, if the device is mentioned to affect the listener, then this would validate previous approaches, and indicate that this is the way to move forward. It would provide evidence that it is indeed possible to “analytically distinguish” (Bull, 2000, p. 15) between the device and its content. In short, analysing this question could show whether the effects found in past research are due to the device or due to what is being listened to, which, in turn, will inform future research.

In addition to the question of the importance of the device itself compared to the piece of music listened through the device, not much is known about the choice of music during mobile music listening. How exactly do listeners decide what they want to listen to? It is known that listeners are 'aesthetic agents' (DeNora, 2000) who use music purposefully in everyday life, but there are not many examples that reveal specific connections between choice of music and its effects on the mobile music listener. Which factors influence the choice of music while commuting? Gaining further insight into this topic of choice of music will have the additional effect of revealing how aware the listener is of the functions of music for them, and it will also add to, and confirm, the functions of mobile music listening that are already known.

Discovering more about the choice of music during mobile music listening is important, but equally relevant is knowing how the listener applies the music they have chosen. Krause et al. (2014 a, b) carried out studies to illuminate music selection behaviour, however the differences and similarities between the modes are not explained, for instance, it is not evident how listening to the radio, not having any control, and using shuffle mode differ from each other (Krause et al., 2014), nor is the differentiation between using the internet, the cloud, and portable listening devices clear (Krause & North, 2014). For this reason, this study is going to explore the modes of music listening specifically. How are the results found through quantitative studies so far applicable in everyday life? Do they reflect what happens in reality? How do listeners differ between modes of listening to mobile music? The present study will try to answer these questions and will thus provide more information on the listener's need for control and the management of their listening behaviour.

Need for control was found to summarise the functions of music for many people (Frith, 2003). This need can be satisfied through self-chosen music which is preferred over experimenter-chosen playlists (Krause & North 17/08/2015), however there might be other factors that influence the need for control in different situations. How, for instance, do activities carried out while listening to music influence the choice of music? Is the need for control a higher priority during some activities compared to others? Which activities are carried out during mobile music listening? An attempt to find answers to these questions will be made in the present study.

Early studies of mobile music listening, while still valid in many points, are outdated in their understanding of the precise use of these devices. For example, nowadays most mobile listening devices have internet access, which might have considerably changed the way the device is used. There will be other functions that have developed since the launch of the Sony Walkman in 1979. Studying mobile listening devices and their functions that are utilised today will, firstly, reveal new trends in the technological development, and, secondly, enable researchers to assess the transferability of previous research results into our time.

As was pointed out in the previous chapter, a main topic of discussion in relation to mobile music listening are the alienating and unsocial effects of this behaviour. Bull (2000), for example, supports the notion that one of the main effects of listening to mobile music is isolation, which is caused by and promotes unsociable urban environments. Prior (2014), however, discovered that mobile music listeners are often conscious of how their behaviour is or might be socially perceived and therefore behave in a less unsociable manner if necessary. This thesis will further explore the idea of sociability in relation to mobile music listening and will attempt to discover more evidence for either of these positions. For this reason, social interactions during the use of portable listening devices will be brought into focus. How do these happen and how and when do listeners show their availability for potential interaction? Answering these questions will help to understand mobile listening situations better and will investigate a topic that has not received much empirical attention.

In order to understand affordances, the ways people listen in everyday life need to be considered (Batt-Rawden & DeNora, 2005, p. 9), thus, to be able to explain the use of mobile listening devices, their actual use has to be studied. This is only achieved to some extent by the methods applied in previous studies (see Method section for a discussion of these methods). Hence, a different method is called for to find answers to the present research questions. My research, thus, incorporates a 'new' method that has not been used in the context of mobile music listening before. An analysis of the appropriateness of this method is therefore necessary, which constitutes another aim of this thesis (see methods section below).

1.3.2 Research questions regarding non-use of portable listening devices

Many researchers, like Skånland (2012), focus on the positive effects of mobile music listening, and do not mention the negative aspects that arise, while others (e.g., Hodgetts et al., 2009; Richmond, 2006) only concentrate on the negative, socially isolating, hearing-loss inducing, life threatening side of it. Research exists that considers both sides (e.g., Prior, 2014), showing that mobile music listeners are aware of the effects their behaviour might have on themselves and others, but not much is known about the reactions of the people around them. My research is going to fill this gap by not only giving more insight into the point of view of users of portable listening devices, but also offering the perspective of people who do not utilise such devices. This approach will contribute to existing studies by showing not only the music listener's interaction with the social environment, but the interaction of the social environment with portable music listeners. A voice will be given to the non-listeners, whose opinion, in relation to mobile music listening, has not been mentioned in studies before.

Considering all the positive effects (mobile) music listening can have for the listener which have been catalogued in the previous chapter (1.2), why are there non-listeners? What are their reasons for not engaging in this activity? Which factors are most influential in non-listener's decisions regarding mobile music listening? So far, there has only been anecdotal evidence of reasons for not using portable listening devices but the topic of not listening to music has been largely ignored by researchers. My study will begin to fill this gap, providing a starting point for future studies on non-listening. Researching non-listeners is important because they share the environment with listeners and are the ones who likely feel the social results of mobile music listening the most. They are the ones who can report on the effects of this behaviour, can validate perceptions of listeners and can generally provide information that helps to attach the appropriate weight to mobile music listening. Mobile music listening in everyday life does not happen in an isolated bubble consisting of only listeners. Hence, focussing only on the listening behaviour reveals information on this but it is not ecologically valid without taking into account views of surrounding people, too. My research, therefore, will start to put mobile music listening into perspective by taking a broader approach that will include non-users of portable listening devices.

One of the debates around the practice of mobile music listening which may be illuminated by considering the views of non-listeners is sociability. Having examined the listeners' practices, what do non-listeners think of these? Do they understand behaviour that seems obvious to the listeners? Are both groups in agreement about unwritten rules of social conduct during mobile music listening? Taking non-listener's views into account will answer these questions and will provide helpful information that future research can build on.

1.3.3 Conclusion

The main questions this thesis will explore are:

- How are listeners' responses shaped by the device, by the pieces of music, and by the interrelationship between the two?
- How sociable is mobile music listening from the point of view of listeners and non-listeners?
- How do listeners choose what to listen to, and how do they listen to it? What are the factors influencing this behaviour?
- Why do some people decide not to listen to mobile music?

In summary, this thesis delves deeper into the experiences of mobile music listeners. How do their choice of music, the environment, the effects of music listening, and the activities carried out relate? Details that have not been known about mobile music listening behaviour and practices so far are going to be explored from a different angle. Additionally, for the first time, reasons for not listening to mobile music will be mentioned and non-listener's views will be considered. A new method for approaching these questions will also be applied and evaluated. The research will fill existing gaps in the knowledge base on mobile music listening and indicate directions for future research.

2 Methods

2.0 Introduction

This chapter will describe the methods and methodological strategies employed for the studies of mobile music users and non-users. Two studies were carried out to answer the research questions posed in the previous chapter. Firstly, I will address the method used to discover the behaviour of mobile music listeners. Since this method has never been applied in this way before, a discussion of its origins, implementation, advantages and disadvantages, as well as suggestions for future applications, will be included. In the second part I will provide a detailed description of the second study, which will be followed by an explanation of the method of data analysis used for both studies.

2.1 General information

The present studies were carried out in a small city in the UK. Compared to metropolises, such as London or New York, this setting may seem rather rural, however it still has all the characteristics of urban environments, i.e. a “large, heterogeneous population” (Sennett, 1977, p. 39), noisiness and crowdedness (Proshansky, 1978, p. 148). Thus, the influence of these environments on behavioural choices and therefore also on mobile music listening practices should be present in small cities as well as in megacities which mainly differ in their size, i.e. the definition of a metropolis is “a large, important city” (Merriam-Webster, 2018).

Since an elaborate, detailed, and time-consuming method was applied that would yield a large quantity of in-depth information, a smaller sample size was appropriate (Gaskell, 2000; Marshall, 1996). Therefore the number of participants was limited to eleven for the first study. The sample size also corresponded with data saturation (Samure & Given, 2008), i.e. the last participants taking part did not have that much to add to the findings and “no new surprises or insights [were] forthcoming” (Gaskell, 2000, p. 43). An equal number of participants were recruited for the second study, mostly to balance the two studies and to not be biased towards one or the other by allowing more

people to voice their opinions. Because of the relatively simple and limited topic, data saturation was reached here, too (Marshall, 1996).

Many of the participants in the first and some of the second study were friends or acquaintances of the mine and this familiarity was an important resource for the study. For one, I was able to draw on background information which helped to contextualise examples and anecdotes (Blichfeldt & Heldbjerg, 2011, p. 28). Secondly, it was easier to establish rapport in the interview, since an “air of informality” (Bergh et al., 2014, p. 320) was created that “proved fruitful for eliciting data” (ibid., p. 320). The relaxed and open atmosphere was expected to help to create rapport (Harris, 2002) and to draw out more honest responses (Blichfeldt & Heldbjerg, 2011).

The interviewed friends and acquaintances were not my friends because of their taste in music, and I had not talked to any of them about different kinds of music listening behaviour, or my opinion on this, before the study. I had had conversations about my research topic and what I was planning to do with most of the participants beforehand, but this information was made available to all participants equally in the consent form, and many participants, even ones who knew me from a different context, wanted to know more about my studies during the interviews. Thus, it is not likely that I received particular answers from some participants and not others because of the information that had been available.

To test the self-developed, semi-structured interview manuals a pilot study was carried out for each study (Connelly, 2008). Both interviewees (Anne for the first study, and Isabel for the second) were friends, who were asked to give feedback about the method and questions asked in the interview(s) after their sessions. Both did not have anything to add or criticise, and re-listening to the material showed that everything required was fulfilled by the method, so the pilot study seamlessly transitioned into the main study and the data was carried over, which is an established method in qualitative research (van Teijlingen & Hundley, 2001, p. 3).

Ethical approval for both studies was obtained from the University of Exeter, and pseudonyms are used throughout the thesis to protect the participants' identities.

2.2 First study – mobile music listeners

Participants

For the first study, which was carried out in late 2015, I recruited eleven participants between the age of twenty and forty-two, utilising the intranet at work and word-of-mouth through friends. Four of the participants were female and seven male, all of them living in the city. The snowballing went three people deep (a colleague recommended a friend, who then recommended another friend), so out of the eleven participants, I did not know three before the study. In the table 1 below is an overview over the main information about the participants.

Pseudonyms	**Age**	**Gender**	**Occupation**	**Place of residence**
Anne	21	female	Full-time work	City
Thomas	20	male	Full-time work	City
Annabel	28	female	Full-time work	City
Koko	25	male	Full-time work	City
Hayley	24	female	Full-time work	City
Michael	41	male	Full-time work	City
Cody	29	male	Part-time work	City
Ben	24	male	Student	City
Jane	26	female	Student and part-time work	City
Max	42	male	Full-time work	City
Jonathan	32	male	Full-time work	City

Table 1 Information about the participants of the first study (mobile music listeners)

The focus of this study was on adults who use portable listening devices regularly, for instance, during commuting or while attending to something on foot, and the ways they manage to integrate mobile music listening into their lives. Moving around as a participant in traffic, be it through walking or cycling, exposes the person, especially adults (Evans & Wener, 2006; Hennessy &

Wiesenthal, 1999), to the stresses of urban life, for instance, traffic jams and crowdedness, which might influence their music listening behaviour and rationale. For this reason, adults in particular were recruited for the study.

The only other criterion apart from age was that all the participants usually listened to mobile music. Only one participant was referred to me, whom I did not know before, who very seldom listened to mobile music. I still carried out the study with him to explore his rationale for not listening and to see whether listening to music would change his experience in any way. His presence in the study and his answers were part of the reason I decided to carry out a second study focussing on non-users of mobile listening devices.

Illustration of the method

Studying mobile music listening experiences comes with a series of difficulties, as Mulder and Kort (2008) describe:

> "Whereas some aspects of the user experience can be captured and evaluated properly with traditional methods and tools, such as lab experiments and interviews, various other aspects, such as subjective experience, are harder to reproduce in a lab or to collect with traditional methods. These subjective experiences are best obtained in real-life: the different contexts in which a user uses the product or service." (ibid., p. 601)

Because of the obstacles to studying practice and subjective experience, many studies focussing on the influence of music in everyday situations, apply a variety of methods, e.g., interviews (e.g., Bull, 2000, Herbert, 2011, Simun, 2009, Skånland, 2011); questionnaires (e.g., Garner, 2012, Haake, 2011, Krause & North, 2014, Laukka & Quick, 2013); a mixture of interviews and questionnaires (e.g., Axtell et al., 2008; Heye & Lamont, 2010); experience sampling method (e.g., Greasley & Lamont, 2011; Sloboda et al., 2001), i.e. participants are sent a text message or a reminder of some kind at random times during the day, and are then asked to fill in questionnaires regarding their behaviour at that time; online journal entries (e.g., Prior, 2014); and even lab experiments (e.g., Franek et al. 17/08/2015, Karageorghis et al., 2008).

Concerning mobile music listening, there are several papers that do not build on empirical data but consist of theories only (e.g., Beer, 2010, Du Gay et al., 1997, Hosokawa, 1984, Ulrich, 2012, Weber, 2009).

While each of these methods has advantages and can access specific forms of data, there are also disadvantages. Lab experiments are highly controlled and focus on causal connections between a previously-specified element and the outcome, and therefore do not fully resemble naturally occurring behaviour in everyday life (Roe & Just, 2009, p. 1267). Self-report-based measures, such as (quantitative) questionnaires, on the other hand, need to be clear and simple since misunderstandings cannot be clarified (Bhatt, 2012), p. 184). These questionnaires are typically administered in order to test a preconceived hypothesis (Marshall, 1996, p. 522), which is usually a requirement where statistical analyses are to be carried out. This kind of research usually relies on existing research or theories that now need statistical evidence, and will not be appropriate for new and uncharted research topics. Interviews and journal entries, while providing rich data about subjective experiences and behaviours, both rely on the participant's memory and their ability to vocalise their impressions (Grund et al., 1991, p. 1602; Johnson & Weller, 2001, p. 491). False memory and a low vocalisation ability might therefore prevent the researcher from getting a true picture of what is happening. Experience sampling is the method that comes closest to gathering real-life behaviour while it is happening (Hektner et al., 2007, p. 11). Nevertheless, it still relies on the participants' own consciousness of their behaviour which might lend more importance to some instances than to others (Alliger & Williams, 1993, p. 530). This obstacle is difficult to overcome since a lot of behavioural and thought processes happen unconsciously (Bargh & Chartrand, 1999), (Bargh & Morsella, 2008), for which Giddens (1986) coined the term “practical consciousness”, giving the following definition: “Practical consciousness consists of all things which actors know tacitly about how to 'go on' in the contexts of social life without being able to give them direct discursive expression” (ibid., p. 23). Methods relying on participants' consciousness will therefore not lead to a complete understanding of the situation either. Thus, the question arises as to which method is optimal for generating as rich an answer

as possible to the present research questions about the experiences of mobile music listeners.

Drawing on different theoretical traditions, the method applied here is a combination of ethnography, ecological psychology and ethnomethodology ((Patton, 1990). The focus was on participant observation (ethnography) of one person (ecological psychology), concentrating on their behaviour and its relationship with the environment (Patton, 1990, p. 77), i.e. normal, everyday practices (ibid., p. 74) (ethnomethodology), and how participants constitute themselves as mobile music listeners. Participant observation was chosen because it enables the researcher to identify non-verbal and unconscious aspects of behaviour and illuminate them in more detail (DeNora, 2011b, p. 72f.). It provides more in-depth information than any other method (Becker & Geer, 1957, p. 28), and circumvents issues that arise in interviews, such as the unwillingness of participants to talk about certain issues and “the degree to which the interviewer really understands what is said to him” (ibid., p. 28). Immersing oneself in the same environment as the participant helps one to better understand the situation and to discover things that might not have been mentioned in an interview (ibid., p. 30). The attention of this study was on mobile music listening in urban environments, so special regard was given to the influence of surroundings on the listener's behaviour, which lends itself to being studied in context. Listeners' practices were studied one person at a time, mainly for practical reasons. Mobile music listening is mobile, i.e. listeners are moving around while listening to music and are not staying in one place. It is, therefore, difficult for one researcher to follow several people at once, especially if they decide to walk in separate directions. Additionally, observing and noticing everything is not possible (DeWalt & DeWalt, 2011, p. 83), therefore the likelihood of discovering behaviour was increased by observing only one person. One-to-one interactions are also experienced as more gratifying by the participant (Bhatt, 2012, p. 182), therefore offering a 'hidden' reward and incentive for taking part in the study.

The aim of the present study was to gain access to thoughts and opinions on mobile music listening while it was happening. Providing the participants with a familiar setting in which they can explore their music listening behaviour and reflect on it while enacting it would elicit rich data and in-depth information,

since the listener would be more conscious of their behaviour and would be able to recall more minute examples and details of their listening practices than would be possible by relying on their memory. Additionally, the presence of a researcher during the activity was required in order to notice unconscious behaviour that could later be brought to the participant's attention. Being in the same situation as the participant would also allow the researcher to understand the circumstances and relate to the specific examples that a participant might later refer to (Becker & Geer, 1957, p. 30). For this reason it was necessary to somehow interview the participant at the same time as observing them, without interrupting their music listening experience.

An applicable method that would fulfil all these requirements was adapted from an approach first utilised by DeNora (2000). Originally, DeNora had used an approach that she called “shadowing” as part of a bigger ethnographic research project where the researcher, as well as the participant, are immersed in the same situation, wearing tape recorders and microphones. The researcher follows the participant, while both of them comment on what they see, think and feel. In addition to that, the researcher comments on what the participant is doing (ibid., p. 109). This approach was adapted for the present purpose in such a way that only the researcher was carrying an audio recorder and commented on the participant's behaviour. Occasionally, the researcher approached the participant to ask about their music listening behaviour at the time, taking care not to turn the questions into a longer conversation so as not to interrupt their experience any more than necessary. Interruption was unavoidable but, by keeping it short and only approaching the participant occasionally, it was kept to a minimum. Mobile music listening in everyday life is not always uninterrupted either, for example, when shortly greeting an acquaintance or reacting to a salesperson in shops, therefore the listeners should have been more or less used to interruptions and it should not have changed their listening behaviour too much. On the other hand, the interruptions might have reminded them that they were being followed, the implications of which are being discussed later in this chapter.

Specifically, shadowing was carried out by first meeting up with the participant in a previously-agreed place. Observation during the participants' normal commute to work was not carried out because it would eliminate the

opportunity for a second interview immediately afterwards. Instead, we met in town and either the participant needed to go shopping or looking for something anyway or they went for a walk instead (which only two participants chose to do). Before the shadowing preliminary questions of the participant were answered, such as the length of the shadowing session or required behaviour. Participants were told that they 'should do what they normally do' to ensure that mostly familiar actions were carried out. Sometimes the listener informed me about their plans for the shadowing and sometimes they started walking without providing this information. Additionally, a final destination was arranged, where the participant would head once they were finished with whatever they were doing during the shadowing. Usually the opportunity to ask about the music they were choosing was embraced while the listener was not yet fully immersed in their behaviour, i.e. just before starting out, or after about a minute. I kept a distance to the participant while walking around, keeping them in sight but not being able to overhear any conversations they might have. During the observation, I commented on everything that I noticed about the participant's behaviour and the surroundings that might influence the actions in some way. See, for example, an excerpt from shadowing Thomas:

> Quite a lot of people. We're in the post office now with queues. Waiting for the counter and listening to music. And there are many people around right now. ... Wasn't that long a wait, because he, yeah, he is at the counter now. I think about three minutes wait. Four minutes.

I did not follow the participants around in shops, in order to give them some privacy, but I took a look around the shop to notice the background music and the number of other people in it. Then I observed the participant shortly through the window to see what they were doing, for example, looking for something specific or just browsing, and waited for them to finish. Whenever the participant went into a shop or stopped to do something, they were approached afterwards to ask about their mobile music listening behaviour in this regard. Anne, for example, just came out of a shop:

> E: Hey, so did you listen to music while you were browsing?

A: I did.

E: What did you listen to?

A: Em let's see. ... Em see can I see the details? Hm, that's going to be tricky.

E: Was it a radio show, radio something?

A: Yeah, it's the next few songs on my playlist.

E: So did you have any reason for listening to it?

A: Yeah, I've been listening to the Bare Essentials Mix. I discovered it this morning by DJ Charlie. It's good because when I'm cycling I don't wanna have to keep selecting different things to play.

E: Ok, thanks.

Participants were also approached randomly when nothing external was happening to stop them, to ask about their choice of music and their rationale for it. Pictures of the environment (not including the participant) were taken at every stopping point of the participant and whenever they were approached, to keep an impression of the visual surroundings and the atmosphere for future reference in case more than a verbal description was needed to understand the situation. However, these pictures ultimately turned out to be unnecessary for the analysis of the data, and therefore they will not be referred to in this thesis.

Since an "'objective' account of an event or situation" (DeNora, 2014, p. 86) does not exist, and there are always several interpretations of each situation, the experience of a person cannot be assumed just by watching them. Short interruptions during shadowing were therefore not enough to gain a full picture of the participant's usual behaviour. For this reason, a triangulation of methods was applied, and the first study was divided into three parts:

First, semi-structured interviews were carried out with each of the eleven participants, in order to get to know them and their music listening behaviour a bit better. These interviews informed the shadowing session, showing how to understand the behaviour observed, as well as offering the possibility to triangulate the results (Greene et al., 1989 cf. Tashakkori & Teddlie, 2008, p. 43). Participants were asked about their use of music over headphones, situations they encounter in everyday life and whether they like them or not,

their musical preferences, the way music is integrated in their life, and methods of dealing with the situations they described before (see the semi-structured interview manual in the appendix for the whole list of questions). These interviews took place in public, in quiet spaces like the library, or at people's homes, if that was more convenient for them. They usually lasted between twenty minutes and an hour.

The second part consisted of the shadowing session. It took place several days after the initial interview, so that participant would not have the discussed topics in the front of their minds. The purpose of this was that the listener should not feel the need to enact what they had talked about in their interview, but rather behave as they normally would even if it contradicts what they had said in the interview. Participants were walking around the city while listening to their chosen music, being approached occasionally by the researcher as mentioned above. The answers were audio recorded. The researcher's job was also to verify statements made in the first interview concerning behaviour and compare this to what was actually happening in the listening situation. This observation lasted between ten minutes (due to bad weather) and three hours (the participant went shopping), but the average shadowing lasted for about thirty minutes.

Directly after the shadowing, an unstructured follow-up interview was conducted, again, either at people's homes or at the library. These interviews took up to twenty minutes. Participants were asked to remark in more detail on their answers given while walking around. This explanation also gave them the chance to correct something they had said before while reflecting on the reasons for their specific choice(s) of music. Additionally, I had re-listened to the first interview before the shadowing, taking note of interesting aspects of behaviour to watch out for, or topics that I wanted to gain more insight into. Initially, the recordings during the shadowing were played back to the participant in the second interview, however it turned out that they did not have much to add to that, so this approach was abandoned and notes of the first interview as well as interesting behaviours noticed during the shadowing were relied on instead. This was less time-consuming and more effective.

Evaluation of the method

Shadowing, in combination with interviews, proved to be an adequate mix of methods for finding answers to the research questions regarding mobile music listening practice. The methods gave the participant space to reflect on their practices and gained access to their 'practical consciousness' (Giddens, 1986). It resulted in novel insights into the behaviour and experiences of mobile music listeners. The interviews before the shadowing allowed the researcher and respondent to get to know each other and build rapport, enabling the researcher to understand the listener's motives, decisions and usual practices, while making the participant more comfortable about being followed around later on. Shadowing then built up on the knowledge that was gained through the first interview, allowing to observe what the participant had described before. Without the first interview the researcher would not have been able to know what to look out for or to detect what might have been unusual behaviour for the participant. Interviewing the participant again after the observation gave them the opportunity to mention anything they might have noticed when they were not approached for their opinion. The second interview also gave the researcher a chance to delve deeper into questions that arose during the shadowing, to talk about actions that were observed, and to compare the answers of the first interview to the behaviour that had just occurred, thereby separating beliefs about behaviour from observed practices. Therefore, the first interview created the basis for shadowing, and shadowing was the foundation on which the last interview was based. All the different parts built upon each other which helped to discover new information and delve deeper into aspects that have been noticed during the other methodological sections. All three parts were necessary for the success of the study. Without the shadowing some information would have been lost, for instance behaviour that is part of the practical consciousness and therefore difficult to put into words, while leaving out the last interview would have led to a loss of information that stemmed from the participants' own reflection of their behaviour and more in-depth questions than were possible during the shadowing. Without the first interview it would have been impossible for the researcher to understand some of the participants' behaviour and statements during the shadowing, which would have taken much longer as well due to the additional explanations that would have been

necessary. Thus, carrying out the first study in this order proved to be informative in a way that leaving out one of the parts would not have been.

Adapting DeNora's (2000) original shadowing method for the present study turned out to be advantageous, as can be seen by the amount and detail of the results (see results and discussion chapters). DeNora (2003) herself had noticed that her method had not achieved what she wanted it to because, instead of illuminating and finding explanations for the participant's behaviour, the constant reflection spoken out loud into the microphone showed how the researcher was affected by the environment (ibid., p. 10), therefore turning her into a participant of her own study. The adapted method, however, allowed for the researcher to focus on what was important by using the audio recorder as a kind of notebook instead of talking continuously, thus simplifying the process during the shadowing as well as the analysis. Through the necessary adaptation of the method, shadowing enabled the study of mobile music listening – a behaviour that would have been greatly disrupted if the participants were asked to continuously talk about their impressions.

One advantage of shadowing over other methods such as experience sampling or purely interviewing is that it allows the researcher to observe behaviour as it is taking place, and thus noticing details that the participant might not otherwise remark on. Additionally, the researcher is in the same environment as the participant, and can therefore more easily give prompts that might help the respondent's memory in the interview afterwards, for instance, instead of relying on the participant's memory the researcher can ask question such as “At the crossing of streets Y and Z, where the students were getting on the bus, I saw you take out one earphone. Do you remember why you did that?”, which will likely result in richer and more detailed data. Being in the same situation as the respondent will also enable the researcher to better understand the observed behaviour without needing a lengthy explanation and will also allow them to interpret the participant's previous statements. Although experience sampling happens in or directly after an experience, it does not allow for conversations about behaviour that the participant themselves did not notice.

Since shadowing only allows for the observation of behaviour during a relatively short time span and a small number of different situations, it becomes

difficult to come to more general conclusions from the observed behaviour. To counter this disadvantage, interviews were carried out before and after the shadowing, to gather information about the interviewees' usual practices, and to allow for reflections on their usual listening behaviour in different situations. Additionally, asking the participant (as applied in the present study) how the observed situation compared to their normal listening situations gave them an opportunity to reflect on their behaviour in more than one environment and also provided the researcher with more information on the different influences on mobile listening practices. Therefore, while shadowing does only look at one specific point in time, it does not necessarily need to be a disadvantage if applied properly.

Another advantage of shadowing is that it allows the researcher to verify participants' statements. Social desirability (Crowne & Marlowe, 1960, p. 353) or not remembering experiences correctly (Johnson & Weller, 2001, p. 491) as well as distorting the truth (Hektner et al., 2007, p. 10), can consciously or unconsciously impact what an interviewee is saying during the conversation. Verification of information is not fully possible during interviews, unless the statements are implausible or detrimental information is known about the interviewee, such as a bias towards the subject of discussion (Dean & Whyte, 1958). Social desirability could also be measured additionally to identify possible influences of the interview manual (Crowne & Marlowe, 1960). Shadowing, on the other hand, gives the researcher an opportunity to relate what was said in the first interview to what is happening in the environment and elicit more detailed nuances if there are differences between reported and actual behaviour (Becker & Geer, 1957, p. 30), by asking about these in the second interview. Additionally, it takes the element of memory out of the equation by approaching the participant during the observed behaviour (Sloboda, 2010, p. 505).

Social desirability can be a disadvantage for shadowing, too, i.e. participants know that they are being observed and adapt their behaviour accordingly to show only desirable traits which might not resemble the participant's normal actions. Participants can also be influenced in their practices by taking part in a study (reactance) (Cunningham et al., 2007, p. 84). However, shadowing in the present study was not meant to simulate the

participant's true behaviour but instead was utilised to provide room for reflection on experiences and practices, in order to then be able to talk about them. Thus, it was taken into account that participants were likely to display behaviour that does not fully correspond with their everyday behaviour, i.e. the shadowing situation/time of day/day of the week might differ from their usual mobile music listening circumstances, therefore some parts of how they said they normally behave are not applicable. If any differences were detected between the statements from the first interview and the behaviour during the shadowing, this was taken as an incentive to talk about it and delve deeper into what the participant actually wants to express and how the different environments and situations influence their listening behaviour. Therefore, a variation in behaviour compared to the verbal remarks is a positive outcome in this sense, as it gives the participant and researcher something to talk about and explore.

In general, shadowing is useful to collect new and rich qualitative data in an area in which not much is known about. It allows for the gathering of in-depth information about everyday experiences in a relatively short amount of time (compared to the scope of normal ethnographic studies). Of course, compared to qualitative questionnaires or interviews it seems very time-consuming, but, as has been discussed above, it has many advantages over those methods, which justify the effort. Based on the information gathered here, a host of different studies could be carried out to gather more details about certain aspects found or check whether the present results would be valid for a larger part of the population.

Suggestions for improvement of shadowing

Taking the points made above into account, there are several suggestions on how to improve the method applied in this first study and gain more and richer data in future studies:

Firstly, participants could all be shadowed more than once in order to gather more information on different listening situations, for example, once in the morning, on another day in the afternoon, or comparing a weekday to the weekend. Repeated shadowing would require more time from the participant,

maybe making it more difficult to find people willing to take part, but it would technically be possible to carry out. The advantage compared to one shadowing session would be that it allows for more insight into the participant's usual behaviour and it enables the discovery of more general conclusions regarding a participant's actions.

Secondly, a second researcher could be involved in the shadowing, because two pairs of eyes see more than one. Thus, more details might be observed, which might otherwise be missed, for example, if the only researcher is too busy watching out for cars while crossing the road to keep an eye on the participant. However, while some participants forgot that I was following (see below – impact of shadowing on participant behaviour), this is unlikely to occur if two people are shadowing the listener, therefore making them more aware of their behaviour and maybe hindering them from reflecting on their usual practices by increasing their self-consciousness.

Another idea would be to interview friends of the participant who would know about their listening behaviour, too. The additional insight would enable the verification of information mentioned by the participant as well as adding information that they might not have thought about. Additionally, it would also facilitate the gathering of information about the music listening behaviour of the circle of friends, maybe finding explanations as to where the practices of the participant come from. Instead of interviewing one or two friends separately, it would also be possible to ask the participant to bring several friends (after the shadowing and all the interviews) to create a focus group. Being interviewed together with friends might lower the threshold of self-consciousness and it might be easier to get them to talk naturally and bounce ideas and impressions off each other, thereby gaining more in-depth and varied information.

Furthermore, it would be interesting to have the participants meet each other and talk in focus groups about their experiences during the shadowing, as well as their normal mobile music listening behaviour. They could be grouped together according to similarities or differences between them, which would gain more information on these characteristics. Talking in groups might afford more insight on particular experiences and habits but might equally suppress the voices of participants whose opinions oppose the others' opinions. Therefore, this would have to happen in addition to shadowing and interviewing them

separately, to make sure that every single opinion and idea is taken into account and has the chance to be voiced. The present study is only part of the research carried out in this thesis. Non-users of portable listening devices have also been interviewed (as will be discussed below). It would be especially intriguing to get listeners and non-listeners to one table and discuss their views. This might lead to more in-depth information on both groups' behaviours and rationales, as well as encouraging both parties to engage in a dialogue and maybe understand the other better at the end of it.

Another approach to getting more in-depth data on mobile music listening would be to get the participants to complete a diary or use experience sampling for a certain amount of time, for instance, one or two weeks, before carrying out the first interview, the shadowing, and the second interview. This would provide more themes and information to talk about and would allow the participant to recall specific examples to provide during the interview. Shadowing would still be necessary for the reasons mentioned above, i.e. observing unnoticed behaviour, verifying information and giving the participant space for reflection. This approach would yield much richer data, although it would also require more time and effort on both the participant's and the researcher's side.

The researcher's perspective

It is important from an ethnological point of view, to explain my role as a researcher in this study, which enables a deeper understanding of the circumstances of the research (DeWalt & DeWalt, 2011, p. 87). I myself am an irregular user of mobile listening devices mostly during long travels, which gave me an insight into which questions to ask, which avenue of answers to explore further, and sometimes even in which light to understand the given answers. My own opinion on mobile music listening is that is has advantages for the listener, for example, when it comes to alleviating boredom or managing emotions on the go but can be unsafe if used without consideration for the environment. It can also be annoying for fellow passengers on public transport, who are forced to listen to any sounds that inadvertently resonate from the headphones, although this is becoming much less of an issue now that noise cancelling headphones allow the listener to listen to music at a much lower volume. I am

mentioning this, because, in my opinion, what the researcher thinks about the studied subject influences their interpretation of the data, which is why I wanted to position myself to enable the reader to come to their own conclusions about the results.

During the shadowing, I was exposed to the same influences and surroundings as the participants were. On the one hand, this exposure supported my understanding of what the participant was going through and why they were acting in a particular way, but on the other hand this made the shadowing more difficult, too. These difficulties arose from distractions from the environment, for instance, street musicians or street art, window displays, things happening around me, and it was hard to stay focussed on the participant and what they were doing, especially when they did not seem to do anything out of the ordinary that they had not been doing for the last minutes. Secondly, it provided obstacles for the observation, especially when it was crowded, and it was difficult to keep the participant in view. For example, at one point, I was not concentrating on one of the participants for a second, during which they went into a shop. I had to call them on their mobile phone to find them again, which is why I recommend getting the participant's phone number first and making sure that they have their phone with them, before starting this kind of research. Lastly, it was sometimes awkward following someone around and interviewing them. It resembled spying on someone with their knowledge, but in full view of everybody who was around. For me as the researcher that was slightly embarrassing, especially when I spoke into the audio recorder to comment on something that was happening. It helped that the audio recorder was my mobile phone, so I could pretend that I was on the phone talking to someone, and I also got used to it after shadowing several people. However, self-consciousness might have influenced how much and what I said during the shadowing.

Impact of shadowing on participant behaviour

Shadowing provides the participant with a sufficiently similar situation to their everyday listening, to allow their typical listening behaviour to be explored. Being observed for a limited amount of time, however, might not allow for certain actions and interactions that would normally occur in everyday listening

situations, for instance, meeting friends or commuting to work early in the morning. Since being followed around could have influenced participants' behaviour (reactance) and therefore their ability to reflect on their normal listening practices, I enquired about this at the end of the study. After the shadowing, in the second interview, I asked the participants how much they were aware of being followed by me, and most of them mentioned that they either completely forgot that I was there – which I also noticed when I had to run to keep up with them – or that they knew I was there, but that this did not change their behaviour.

Some of the participants explained that the shadowing situation was different to their usual music listening situation in their daily lives. Without being followed, some participants would have not walked, but cycled, rushed through shops, and not walked around aimlessly. This change of situation did not influence their music listening behaviour, though. Only Ben decided to listen to something else because of the study. Normally he would put on a podcast when walking to work, which he did not do because it “would have felt weird”.

> But to be fair that might have been part of you here. First of all, I don't have a good podcast on right now. I listened to the last one I had on the device; I didn't want to listen to it again. But probably also because of the experiment. Would have felt weird to listen to a podcast all the time. (Ben)

> E: Yeah, what I wanted to ask you. Did you change anything to what you would normally do, just because I was there?
> A: Yeah, I think I probably wouldn't have done as much window shopping. I probably would have been like - let's get out of town as quick as possible. (Anne)

Another issue that arose was that of demand characteristics, i.e. the need of the participant to give 'good' answers or change their behaviour so that it will reach the aim they think the study has (e.g., Orne, 1962). This issue usually needs to be taken into consideration in psychological lab experiments (Nichols & Maner, 2008), but I argue that even in interview and observation studies like the

present research, which usually do not have the aim of finding particular answers but rather want to explore what is 'out there', the participant might think that there is an underlying cause and adapt their behaviour accordingly. Koko, for example, listened to a wider variety of music than he would normally listen to, to give a more complete impression of his usual behaviour in a shorter time frame.

> K: 'Cause I try to make it different, like diverse than my usual. I try to integrate everything, 'cause it's a small time and. […] Musical listening experience is wider than this. But I tried to cover almost all in general I try to listen to.
> E: Ok, so you did that because you were taking part in the study?
> K: Not only about that. I just felt like listening these songs. (Koko)

To counter demand characteristics I instructed every participant to behave like they normally would during the shadowing, because I wanted to observe their usual behaviour. In addition to demand characteristics, social desirability, i.e. wanting “to obtain approval by responding in a culturally appropriate and acceptable manner“ (Crowne & Marlowe, 1960, p. 353), could have influenced the answers. Nevertheless, there are so many factors that could have influenced a participant's behaviour and answers, for example, ulterior motives of the interviewee or idiosyncratic factors (Dean & Whyte, 1958, p. 35), that it is unlikely that any study will ever be completely without influence. In psychological studies, demand characteristics and social desirability might have a bigger impact and therefore need to be considered closely (although they may be hard to identify and differentiate) but, in semi-structured interviews and observation, unless there are obvious influences (which would be interesting to talk about with the participant), the aim is to discover people's opinions and behaviours within the realm of everything that could influence these (Dean & Whyte, 1958, p. 34), so these factors are part of the experience that is captured in the study.

Additionally, some participants were aware of being followed and changed their behaviour, not because of possible demand characteristics, but because they did not want to be watched or caught doing something they find

embarrassing. Ben, for example, listened to different music because of that, and Max did not dance along with his music.

> E: Were you very aware of me following?
> B: I wasn't very aware of it; I was aware of it. So I didn't listen to the most embarrassing music, probably Cher, that's it. Eh but not really, no. (Ben)

> E: Did you change your behaviour in any way, because I was there?
> M: Maybe I danced a little bit less.
> E: (laughs) You tend to dance when you listen to
> M: Yeah, you do feel a little bit watched. I become a bit aware of that. But I tried not to have that much of an impact. So I tried to forget that as soon as a realised it. Yeah, I think you got a pretty good picture of how it would be without you shadowing me. (Max)

As Max's statement shows, another impact the shadowing had was that it made the respondents more aware of, or even changed their behaviour, since they were feeling observed, which is a phenomenon also mentioned in the literature (e.g., Goffman, 1961, p. 7). Shadowing made them think more closely about what they were doing, which is an excellent response to the method, because this was exactly what was aimed for – giving the participants space for reflection while enacting their behaviour in order to then receive more detailed answers during the second interview. The aim was not to observe “normal” behaviour, which is unlikely to occur in these circumstances anyway, although the participants assured me that their actions during the shadowing closely resembled their usual behaviour (see also below).

> I figure I was influenced by like trying not to be influenced. (laughs) 'Cause like that still makes me conscious of the fact that you're doing something and you kind of made me think that you need to do it in a certain way, but then you like you do something, and you think - oh, but do I normally do that? (laughs) Am I influenced? […] I think I noticed more what I was doing. But I didn't like change anything or like I tried not to. Yeah. (Hayley)

The awareness of my presence also led participants to check regularly whether I was still following them. Many participants only had time to carry out the shadowing during the weekend, which meant that it was quite crowded in the city centre where we met. This crowdedness made it more difficult to follow them, which my participants seem to have been mindful of, as the quotes below show. However, since mobile music listeners have to be aware of their environment, to stay safe in traffic for example (Walker et al., 2012), checking if I was still there probably did not change the situation too much. More likely it added to the participants' awareness of taking part in a study and therefore led to closer reflection on their behaviour.

> I think I was a bit scared like not to lose you or when I was crossing the road, I was like - oh, oh. I hope nothing happens to you. (laughs) (Hayley)

> But when we were in the city, I was scared that I was losing you, so sometimes I was like that [turned her head around] (laughs), but not extremely, because I knew that you were there. (Jane)

One participant even forgot she was followed. Instead of checking whether I was there (as she had done before) she went out of the shop and rushed on. This behaviour indicates that her actions at that time did not deviate from her everyday mobile music listening behaviour.

Interestingly, some participants said that they changed the content of their playlists after the first interview. Talking about their behaviour had made them think about their listening habits, which in turn led them to change their playlists for various reasons. Thus, reflection during the first interview led to a change of behaviour during the shadowing, which shows that the interviewees really engaged with the study and thought about their practices. This change of behaviour did not invalidate the observed behaviour since it pre-empted modifications that would have taken place anyway, as can be seen in the statements below.

> After the interview, I probably, I started thinking about my playlist and my music, so I put some more music for different situations, so now I don't have only music for the gym, I also have music for walking, I have music for relaxing. […] I think that influenced me, because I noticed that I only had music for workout. (Jonathan)

> Well just after the last interview I had with you, I've been paying a little bit more attention to my playlist, because I wanted to do that anyway. So that triggered it for me a bit. So I created a bunch of playlists now to find the music I really like that I might not have listened to in a while. […] So I didn't create a playlist specifically for today. No, that's not true. I wanted to do that anyway, yeah. (Max)

Only one participant, Michael, deviated quite extremely from his usual listening behaviour. He did not usually listen to music over headphones while walking around, only on the train sometimes (which was not the focus of the shadowing sessions). He was referred to me by someone else, and it seemed that it had not been clearly communicated that I was looking for mobile music listeners, so when I arrived for the interview, it turned out that he only partially matched the criteria. I carried out the study with him anyway, because I thought it promising to explore the behaviour of someone who does not usually listen to mobile music. His responses led me to carry out the second study with non-users of portable listening devices. After the first interview, he talked to someone about the study and came up with a question he wanted to explore during the shadowing.

> But I wanted to try just whilst I'm with you also to listening to some more upbeat and happy music as well, just to get something to talk about. Just to see, I was talking to my colleagues about our conversation and just sort of saying that, if you change the beat of the music, does it improve your mood or is your mood improved and then you listen to something more upbeat. And I just wanted to try it out. (Michael)

Since he did not usually listen to mobile music, the shadowing made him very conscious of his behaviour and the effect the music had on him. It allowed him to reflect more deeply on unfamiliar practices. I also asked him at the end, whether he would listen to music over headphones more often now that he had taken part in the study, to which he answered in the negative.

Generally, the participants assured me, I got a good impression of their usual mobile music listening behaviour. The observed and explained behaviour mirrored aspects of the participants' normal actions even if they did not resemble them exactly. If their behaviour was altered, even only slightly, the shadowing still gave them room to think about their practices. Doing something differently will likely lead to increased awareness of it, and will thus allow the participant to reflect on their behaviour more easily, thereby leading to richer data in the interviews.

> If I did the study again without you there, I think I would have still listened to the same music. And done the exact same thing. (Annabel)

2.3 Second study – non-mobile music listeners

Participants

The second study – focussing on non-users - was carried out in 2016 in the same small city in England as in the first study. As previously, there were also eleven participants between the ages of 28 and 76. Only one participant was male, four participants lived in the country side and seven in the city. The criteria for participation were age – adults were recruited to provide comparable data to the first study – and non-mobile music listening habits. It was not specified for how long they had not used a portable listening device, as long as they were not using them at the time of the study. An overview of the demographic information of the participants can be seen in the table below. Since two different studies were conducted, the age range and places of residence were not matched with participants of the first study.

Pseudonym	Age	Gender	Occupation	Place of residence
Christiana	33	Female	Part-time work	City
Maisy	38	Female	Full-time work	City
Kate	60	Female	Part-time work	Countryside
Isabel	40	Female	Full-time work	City
Agatha	28	Female	Full-time work	City
Paula	28	Female	Full-time work	City
Julia	61	Female	Retired	Countryside
Johanna	76	Female	Retired	Countryside
Josie	58	Female	Part-time work	Countryside
Maria	53	Female	Full-time work	City
Steven	29	Male	Student	City

Table 2 Information about the participants of the second study (non-listeners)

To reach more people more effectively, and to include various people from different age groups whom I was not acquainted with, the methods of recruitment were expanded for this study. Friends and colleagues were approached directly by the researcher, and an advertisement was uploaded to the researcher's work intranet, to the University of Exeter website, and the researcher's Facebook page. Additionally, leaflets were left on university and church notice boards. All of these methods resulted in recruited participants. Differently to the first study, snowballing was not the focus of recruitment, and thus only one participant recommended another. Of all of the participants, four were unknown to me before the study.

Illustration and exploration of the method

In the second study, the aim was to investigate what people who do not listen to music over headphones while commuting think about mobile music listening, as well as to discover why they themselves do not display this behaviour. As they show no particular music-related behaviour to observe, no shadowing was necessary in this study. Instead there was one short semi-structured interview with every participant about their music listening behaviour, with the focus on mobile music listening (whether they had ever tried it and why they had stopped), and then asking about their perception of people who use portable listening devices in public (see appendix for the interview manual). Interviews were carried out at people's homes (if I was acquainted with them before) or in the public library, therefore ensuring the relative quietness of the background (Legard et al., 2014, p. 145) as well as safety of the participant and researcher (McCosker et al., 2001, '6. Strategies for assisting participants').

Interviewing non-listeners proved to be very effective in eliciting responses about a mostly unknown topic. Building on this, a variety of studies could be carried out, for example, observing people in the streets and watching how non-listeners behave towards other non-listeners and towards listeners to find possible differences in behaviour. Additionally, a larger questionnaire study could be carried out to gather the opinions of a more varied demographic, for example, including younger people, or people who live in larger cities, are from different cultural backgrounds, or have a different level of education. All of these factors might have an influence on whether or not people listen to mobile music, and how they relate to people who do or do not show this behaviour.

As mentioned before, it would be interesting to get both mobile music listeners and non-listeners together to discuss their views. This discussion will likely result in very enriching conversations and might even lead to a better understanding between them (if that was not already given).

2.4 Data Analysis

The data analysis for both studies was based on grounded theory (Glaser & Strauss, 1967). It adhered to the principle of “minimizing preconceived ideas about the research problem and the data” (Charmaz, 2008), which was easily done since this research did not have any hypotheses which were to be proven.

Generally, the guidelines of Glaser and Strauss (1967, pp. 105-113) were followed, namely coding the data and taking note of the definition of the codes, comparing the codes and their properties, excluding non-relevant information, and returning to the data for illustration purposes. Specifically, data analysis for both studies was carried out as follows:

First, I transcribed all of the interviews and shadowing recordings. While I transcribed I took note of everything that seemed interesting or should be kept in mind. Based on this, I then created the first codes. Using NVivo for coding and analysis, I went through every interview text and added content to the existing codes. If necessary, I created new codes. By doing this I built on what the participants had said and did not use top-down definitions. It is important to consider that participants know best what they are talking about, therefore lay-expertise (Bergh et al., 2014) has to be taken into consideration in projects such as this that study everyday behaviour.

After analysing every interview once, I went back to the codes to see whether their definitions were clear and understandable. Following this, I went through the content in every code to streamline it towards the definitions and re-code content that was supposed to be in a different code (that was created after I had coded that particular interview). During this process I re-defined and re-named codes, and created new ones where necessary. Then I went through all the data again, to ensure that everything was coded using the correct categories, and that nothing was missed.

Afterwards, I looked at all of the codes and sorted them according to their similarities and differences, e.g., “devices and software” are very closely related to “ways of listening to mobile music” and therefore became a subcategory for this code. When writing up the results, the relevant properties, e.g., “mood management” would be a property of the category “reasons for listening to mobile music”, were grouped together, and the properties that were not relevant were excluded. Examples from the data were given to illustrate the points made. This process lasted until the last version of the thesis was completed (and is very likely still not finished, but the thesis reflects my understanding of the topic at the point of its completion), as relationships between categories and properties, and the relevance of properties changed depending on the angle they were viewed from. An overview over the themes that emerged during the

data analysis and how they were fit into the chapters can be found in Table 3 below.

The aim of coding the interviews and shadowing data was to get an overview over the available information, and help with writing up the results. Asking for a second opinion on the coding would have reduced the depth of the data, especially since the interview following the shadowing in the first study was unstructured, and therefore difficult to code without having all the implicit background knowledge (Morse, 2016). Because the aim of the research was not to describe the data, but to detect underlying themes, I did not attempt to assess inter-rater reliability (Stern, 1991, p. 158).

The quotations that are used in this thesis are directly taken from the interviews. In consideration for the reader and to enable an easier understanding of what was said, everything that would distract from the meaning, for example, 'ehm's, word repetitions, and inserted thoughts that were not related to the answer, was taken out. However, the words used are the participants' own.

Chapter	Theme from Analysis	Short explanation
Reasons for listening to mobile music	Reasons for MML	Answers to the question: Why do you listen to mobile music?
No music by choice or accidentally	Strategies to keep from being without music	What listeners do not to run out of battery or be without a functioning device
	What to do without music	How listeners react when the battery runs out or the device or headphones break
	No music on purpose, incl. Activities, Music in the Background, Music as something negative	When listeners choose not to listen to music, and non-listeners' reasons for not listening to mobile music, incl. Activities that prevent MML, when music in the background interrupts own listening, when music is experienced as

		something negative that needs to be turned off
Choice of music	Content	What are listeners and non-listeners listening to?
	Sources of music	Where do they get their music from?
Ways of listening to mobile music	Focus during MML	e.g. music as just background noise, focussing on the lyrics, etc.
	Ways of listening to music	e.g. using shuffle, own playlists, albums, etc.
	Devices and Software	Music listening devices and software used to choose music and listen to music
The emergence of a new form of etiquette	Social norms and rules	Mentioning things that are "done" a certain way and things you do a certain way because of other people
Dangers of MML	Safety in traffic, i.e. Health and Safety	Safety in traffic, and health issues such as hearing loss

Table 3 Themes from the data analysis; only the topic 'Differently engaged listeners' emerged during the discussion of the results, all the other topics are based on the above themes

MML = mobile music listening

2.5 Conclusion

In summary, it can be said that the applied methods were all relevant and useful for the purpose of answering the research questions. The sample size allowed for enough information to be gathered to provide initial insights into the explored area of interest, which may be used to inform future research.

Shadowing was the method utilised to answer the research questions of the first study, which enabled the collection of information about mobile music listening in a way that was not possible before. In combination with interviewing, it provided valuable additional insight into everyday behaviour. Since the purpose of shadowing was to provide the participant with room for reflection on their practices while enacting them, even a perceived disadvantage – for

instance, a change of behaviour in the participant due to being followed around – was turned into an advantage by supplying new material for inquiry.

Interviewing also fulfilled the purpose of the second study, namely, to discover thoughts and opinions of non-users of portable listening devices. The results found here will prove useful for future research, and have filled a gap in the literature, as will be seen in the subsequent chapters.

Jane

Jane is walking down the road. It is a cold, damp day, but at least it is not raining so she decided to go to town to take care of some things there. She is carrying her small, light-weight iPod shuffle in her pocket and wears near-invisible, black earphones. She knows exactly where she is going and focusses on her destination. It is noon, the streets are near empty where she is walking, but a lot of cars are passing her by and making much noise. *In her mind she goes through her list of things to do once again and then takes out her iPod to turn on the music.* It starts where she left it the last time she went out. James Blunt's high tenor voice sounds in her ear, blocking out the surrounding noise and making her feel good about herself. *The upbeat rhythm of "Stay the night" energises her and gives her the impression that she is not alone.* She is happy that it is the weekend after a long and tiring week, so listening to this energetic music makes the chores that lie ahead of her more enjoyable.

A bit further along the road, she feels like listening to something else, because now a set of slower songs by James Blunt have started playing. By now she is closer to the town centre and more and more people fill the footpath. It is starting to get crowded. She takes out her iPod again and starts skipping through the songs until her favourite singer from her home country is on. Since these songs have been on her iPod for a while now, she knows exactly how often she has to press the button to find the song she needs, which is necessary, because the device she has does not show what is playing at the moment and does not allow her to choose a song from her list, but forces her to skip through them until she finds what she want. She loves the lyrics of the song and concentrates on them and how they make her feel. At the moment she feels a little bit homesick, because her parents will visit her in a couple of weeks and she is very much looking forward to that, although that makes her remember that she is not at home at the moment.

As she walks she listens to the lyrics and is so intent on the music that she only notices occasional snippets of what is happening around her. The parents pushing their baby in the pram – isn't it lovely? The men standing in front of the

shop up there. One of them just said hello. Did they mean her? She pretends that she did not hear them, so that she can go on listening to her music.

And here is the shop she wanted to go into first. Jane takes out one of her earphones, so she is more open to what is happening around her, but does not miss the music. This is how she notices that all of a sudden something is happening behind her. She turns around and sees an employee of the shop folding a cardboard box. After realising that she is in the way, she quickly apologises and hurries on. The music is still playing in her ears, but she would not be able to say what she was listening to at the moment. She needs to concentrate on the task at hand. Especially at the cashier she wants to be aware of everything, so the music is delegated to the background. After that, however, she puts both earphones back into her ears and listening to music becomes the main activity again.

A short walk and a few minutes later Jane enters the next shop she has on her mental list. This time she does not take out her earphones, because she just wants to take a look whether they have what she has in mind. With music playing in her ears she does not notice that the shop has very quiet background music playing, so quiet in fact, that she would have had to listen out for it to notice it. *With the music she had on a few moments ago still in her ear, the boundaries between the shop and the streets start to blur and walking in one or the other becomes one activity. The music keeps her to herself and stops her from noticing things that would distract her from her task.* Jane finds what she is looking for. At the cashier she knows exactly how much she has to pay, so no conversation is necessary. So she keeps on listening to her iPod, lays out the money and then leaves the shop with her purchase. *Another thing to take off her mental list.* And ahead is already the next shop holding what she might need.

Italics – information not from the participant or observed during the shadowing

3 Reasons for listening to mobile music

3.0 Introduction

Jane's experiences and thoughts provide a starting point for the results chapters. The thick description invites the reader into her world and provides an impression of the processes that happen during mobile music listening and the decisions that have to be made. This is especially useful for readers who are not mobile music listeners themselves and might therefore struggle to understand some of the statements made in the following chapters. With this description in mind the results that will be reported from this chapter onwards will be more easily comprehensible. After the last chapter of the results and discussion another thick description of Anne's experiences during the shadowing will follow to round off this part of the thesis, demonstrating that two mobile music listeners can have completely different experiences during mobile music listening even though it might outwardly seem as if they were behaving similarly.

This chapter will address the reasons given for listening to mobile music by users of portable listening devices. These are very important to consider, since they drive many other factors, for example, how the listener interacts with other people, what happens if there is background music playing, or even important choices concerning the use of headphones when cycling. Depending on the importance of the reason for the individual listener, they can override other considerations, such as sociability and safety in traffic, which will be mentioned in the following chapters.

A discussion about the difference between the focus on the device and the music that is listened to will open this chapter. This difference is important to consider as the reasons for listening to mobile music are often connected to the music and are not traced back to the presence of the device per se. The reasons users mentioned for listening to mobile music will follow and will be structured around the control of self. This control of self involves functions such as emotion management, alleviating boredom, and the control of the surroundings, which will point to the creation of private space and the perception of time, among others. Some of the interviewed non-listeners indicated that they understand why listeners would use portable listening

devices and they offered their perspective on reasons for mobile music listening which will be discussed at the end of this chapter.

3.1 Reasons for listening to mobile music

Bull (2000) and Stankievich (2007) both hold the opinion that the device or the headphones are what changes the user's perception of the environment and helps them manage their mobile everyday life. While Bull is aware that music plays an important role in mobile music listening, his focus still is on the iPod or whichever device he is writing about at the time. This focus is evident in the way he writes, using words like “user” and “device” instead of “listener” and “music”, delegating the music to nothing more than “sensory and environmental stimuli” (Bull, 2012, p. 205). Bull also explicitly explains that “whilst users describe music as an activating force facilitating a variety of feelings and describe their fantasies to music or perhaps speech I am more concerned with the role of personal stereo's in the construction and transformation of experience” [sic] (Bull, 2000, p. 14). In this chapter it will be shown that it is the content on the device that has that effect and not just the device itself.

Mobile music listening is defined by the listening behaviour which is afforded by the portable listening device, therefore the focus should be on this practice instead of on the presence of the device. It is possible to wear headphones without listening to anything, but this is not the norm, as the present study shows. Only one participant of this study mentioned sometimes wearing headphones without listening to music. Anne indicated several reasons for this, i.e. wearing them as a social sign of engagement, or to warm her ears. There are likely more people who wear headphones without listening to music for their own reasons which would be interesting to study in more depth, but the reason for the invention of the Walkman and subsequent devices was solitary mobile music listening (Hosokawa, 1984).

Since music listening is the activity that is carried out, music should be taken into consideration when studying the effects of portable listening devices, especially since it has been shown that music has many different functions (see chapter 1) which overlap with the functions mentioned for the mobile listening

devices (see chapter 2) which provides evidence that it is the music that has the effect on the listener, and not the mere presence of the device.

While it is possible to select a device for its meaning, for example, as a status symbol, or a sign of belonging to a specific group of people, the participants of the present study all chose their devices and accessories primarily for their function and not their meaning (see also chapter 6). Additionally, as will be illustrated below, most listeners referred to the music when they described how their mobile music listening supports them, and not their devices, which demonstrates that they, too, feel that it is the music that aids them in their everyday endeavours and not just the device. Bull's above explanation shows that he is aware of this, and that his participants talked about music rather than the device, too, but Bull decided to focus on the device anyway, thereby abstracting the participants' answers, rather than taking them at their word and building theory based on lay-expertise as is the case in the present study.

Control of self

One main motive for mobile music listening is the control of the self, which is subdivided into several other reasons, i.e. energising, alleviating boredom, managing mood, and others.

Starting with playing music through headphones to energise and motivate, there were two activities this mostly happened with, the first one being running/exercising, and the second one when having to do chores/general tasks one does not really want to do. For example, music seems to give my participants an extra boost of energy when exercising. They also emphasise that this only works with upbeat, and not slow music.

> 'Cause I do like my music to motivate me with my running. Gives me energy. It energises you, music. Definitely makes a difference to your mood and your motivation levels. And I definitely find that music so if I'm doing a workout in my room I'll put music on as well. To energise me to change my mood, to give me that extra oomph, it's like the sixth gear. (Annabel)

Yeah, in iPod I got just Dance music basically, because I need some music to speed me up. Can't be really chilled, slow music when I go for a run. (Cody)

Or whenever I used to go for a run, I used to listen to music as well to just keep me motivated. (Hayley)

Motivation is not only necessary for mobile listeners who exercise but also for taking care of all those tasks that accumulate in everyday life. Anne listens to music to energise her to run errands and finish chores that she does not want to but needs to do.

A: Chores time is time where you need to be energised.
E: So you count going to shops as chores?
A: Yeah, a bit. Yeah, running errands. (laughs) (Anne)

Music is also used to create the opposite effect to motivation. If the interviewees needed to relax, they also referred to listening to music. Jane, for example, said that she sometimes gets nervous when flying, so listening to music helps to calm her nerves. And Annabel was listening to relaxing music during the shadowing and explained that this was mainly due to tiredness.

E: So basically because the iPod helps you with your mood?
J: Yeah. Yeah. Especially if I'm nervous on the plane, it kind of makes me calm down and relax. It's a never-ending flight of two hours and a half. (laughs) (Jane)

E: And you wanted to listen to relaxing music, why?
A: I guess it's really busy in town, so you wanna have some chilled-out music, but also, I'm quite tired, because I didn't sleep well last night. So that's probably why I chose the more relaxed music. And also, I think when you just shopping, you probably not necessarily wanting really bombarding music, if you see what I mean. You just want something chilled out. (Annabel)

Interestingly, there are situations and times when listeners would choose to listen to relaxing music one day and energising music on another. This decision then would not depend on the situation itself but on what will happen afterwards or the purpose of the situation. Hayley, for example, does not like motivating music in the morning when she needs to go shopping, but she listens to it on her way to work in order to wake up. These findings show that music is not always chosen for the momentary situation, for instance, motivation while running, but that some listeners look ahead and decide to play music that will prepare them for what is coming, for example, having to be awake at work.

> I think generally if it's like really early I might not want to listen to that really heavy stuff (laughs), 'cause it like - whoa - I think it's a bit intense, but then I listen to it if it's really early and I need to wake up for work, which is weird. (Hayley)

The time of day also seems to play an important role in so far that there are different tasks to do at different times of the day. In the morning you need to wake up in order to start with your day, then the aim is to keep up the energy levels so as to get everything needed done, and at the end of the day it is time to relax and wind down, in order to go to sleep more easily. How exactly this is done, depends on the listener.

> Or depending on the time of day as well. If you're tired so like in the morning it might be more easy to listen to wake me up kind of music to wake you up in a gentle way and then in the evening it might be winding down music, you know? So it depends on the day. It's hard to you don't think about it, you just do. (Annabel)

One of the main purposes of listening of music found in studies before and confirmed here is emotion management, which is something nearly all of the participants mentioned at some point. “I just felt like listening to this” or similar words were the first answer given most often to the question “How do you choose what music you want to listen to?” This answer was only expounded

and clarified when asked for an explanation. As mentioned in chapter 4 it is difficult for many people to give an accurate description of their emotions, which is again shown here. So, if the reason for choosing specific music is related to emotions, it is likely that the answer “I felt like listening to it” without any further reasoning occurs regularly.

Choosing which music to listen to, and decision making in general, is influenced by affect in two ways, as Loewenstein and Lerner (Loewenstein & Lerner, 2003) discovered. Firstly, a person can predict the “the emotional consequences of decision outcomes.“ (ibid., p. 620), which, when applied to listening to mobile music, means that someone chooses to listen to specific music because it will make them feel a certain way. Koko, for example, wants his music to either make him feel happy when he is not or keep him happy when he is already happy. In both cases he would decide to listen to music he knows will achieve this aim.

> If I'm too happy I try to put playlist that makes me happier. If it can. If it's possible. And I don't want to change my mood. So basically it's all about happiness. (Koko)

Secondly, the mood someone is in at the time of making a decision can directly or indirectly influence that decision (ibid., p. 620), for instance, being sad and therefore deciding to listen to sad music. This is clearly shown in Jane's example who skips music that is not appropriate to the mood she is in at the moment.

> But there is sometimes, for example if I feel happy and there is a nostalgic song, I will skip it. Or the other way around. If I feel nostalgic and there is a very happy song, I would skip it. (Jane)

Loewenstein and Lerner's (2003) theory applied to music means that music can be employed to maintain a mood one is in at the moment or change a mood to something else. Max explained how difficult it is to differentiate in a situation whether it is the music that makes him feel a certain way or whether it is how he

feels that makes him choose the music, which would then not change his mood but fit into it.

> I think it's a bit of a symbiotic relationship with me and music, so sometimes I listen to the music, because of the way I feel and sometimes the music makes me feel based on the type of music I listen to. (Max)

Different participants have different aims when it comes to mood management or mood maintenance. Anne, for instance, listens to music, because she knows that if she does not, she will get grumpy, and this is something she seems to want to avoid, whereas Koko uses music with the aim of being happy in mind. Thomas, on the other hand, knows exactly which mood he wants to be in and chooses his music accordingly.

> You know, it's not necessarily that it's particularly unpleasant noises, it's just that it's too chaotic and it becomes distressing and it you know, I will get grumpy. (laughs) (Anne)

> But sometimes some music can be soothing or, you know, can make you happier or, don't know, it really depends. It's so mood dependent for me. (Thomas)

Mobile music listening usually takes place while the listener is moving through an environment, which often involves other people, buildings, traffic, and other factors such as the weather. Thus, the influence of the environment and the situation should be taken into consideration when exploring mobile music listening behaviour. Bull (2012), for instance, wrote that “times of the day or weather conditions are complemented by and enhanced through the use of music played on the iPod” (ibid, p. 205). Therefore, every participant was asked about this, and the answers reveal a unique connection between the environment and choice of music that has not been described this way before. The general consensus (from seven out of the eleven participants) was that the environment and the circumstances influence their mood, and this then

influences their choice of music, as can be seen with Ben, who agreed that this is the explanation that describes his music listening behaviour best. Thus, mood acts as a connector between the environment and the choice of music, being influenced by the surroundings and in turn influencing the individuals' decisions, which makes mood one of the most important factors to examine when focussing on choice of music. Annabel said that the weather and the environment directly influence what kind of music she wants to listen to. However, it is unclear whether there really is a direct impact of the weather or environment on her choice of music or if Annabel is just unaware that this happens indirectly through affecting her mood.

> B: Maybe. I mean I suppose if the weather is good, I feel better, so I prefer the happier music, that way around. Other than that. Well of course there are rain songs. I mean it's England after all. So there are these songs - ah, it's raining. Yeah, maybe, maybe actually. But even then it's subconscious, I don't think about that.
> E: So it's more the weather kind of influences your mood and then you choose..
> B: Yeah, yeah, definitely, I would say. Not the other way. It's not directly, I don't think so. (Ben)

> Yeah, so I guess if it's like if we're in the countryside and it's like rainy and stuff I might listen to more like country acoustic kind of music if I'm in a party and I'm going to a party I'd listen to more maybe upbeat music, maybe. Maybe I wouldn't. Yeah, depends on the environment, definitely. If it's a sunny day, more upbeat music, so I think the weather definitely makes it's a effect on what kind of music I listen to. (Annabel)

These results correspond with findings by DeNora (2010) who says that "when respondents chose music as part of this care of self, they often engaged in self-conscious articulation work, thinking ahead about the music that might "work" for them. And their articulations were made on the basis of what they perceived the music to afford" (DeNora, 2010, p. 172). In other words, the participants in my study know their music and know what they want to achieve with it. So, if

Thomas, for example, wants to be in a happy mood, he knows which music affords that and will make him reach this goal. Interestingly, DeNora also suggests several ways in which these “techniques of auto-emotion work” (ibid., p. 174) could have been learned, for example, through own experience, “through culture and the media” (ibid., p. 174), through friends and family, or through social settings. How they acquired their knowledge of the effects of music on them was not mentioned by the respondents of this study, although Thomas referred to exchanging music with friends at parties which might include information of the musical affordance or how to use it.

Sometimes mobile music listeners enjoy listening to music for the sake of music itself. There are times, when there is nothing else to do, when they can just concentrate on what they can hear through their headphones. Usually this happens when having to go somewhere they might have been walking/cycling/travelling to regularly, and the activity itself is not the goal but a means to an end. However, listening to music for enjoyment only happens, if there is nothing else (e.g., traffic or another task) that requires concentration of any kind, as Jonathan pointed out.

> So when I'm walking that's the time when I can just have headspace. I'm not doing anything specific but walking, whereas when I'm shopping I probably listen to it less.(Annabel)

> Because, I don't know, I usually listen to music when I don't have things to do that require too much concentration. Like I'm used to listen to music when I walk or when I'm on the bus. Not for example when I run into the streets. (Jonathan)

> When I come to uni there is no way I come here without my music on. Or if I'm going to the city centre it's 15 minutes walking. (Jane)

These statements also hint at alleviating boredom, which is another reason why people listen to music over headphones. If there is nothing else to do, then music fills the void that would otherwise lead to boredom. Another way to

overcome boredom or not allowing it to begin is through the music itself, which is what Max does. He chooses to liven up his music listening experience by listening to music he has not listened to for a while and because he does not know which song will come next he has a nice surprise (see also chapter 6 for a discussion on different modes of listening to mobile music).

> So that's going to surprise me, and I look out for these kinds of surprises. (Max)

> It wouldn't be as enjoyable. I think. Would be more boring, if you couldn't have music. (Annabel)

> To get rid of the boredom, I think. That would be to have a nice distraction to have something in my ear, to have something to think about. (Ben)

Listeners also use mobile music to have a sense of companionship, when there is no friend around to talk to. It helps them not to feel alone in a kind of effortless way, where they do not have to think and act the way they have to with another person.

> A: I just really enjoy music and the ability to have headphones to zone out and it's almost like company, even on your own, shopping. Yeah, and I think I would struggle with a few things as much on my own. 'Cause I'm a kind of extravert, so I enjoy interactions and having music. It's a good way of having interactions, but it's like timeout.
> E: Yeah. So it's like someone who's there, but not want a doesn't want anything from you.
> A: Yeah, yeah. Exactly. (Annabel)

> It's a really interesting 'cause I did it probably 'cause I didn't have anybody else to walk around with me to the shops, so like in a way maybe music keeps you company when you when you're all by yourself. (Hayley)

Music helps the listeners feel a sense of belonging, of not being on their own. It is mostly familiar to the listener and can therefore evoke familiar emotions and memories and can, through that, give comfort. It can even give the impression of someone talking to them (Bull, 2004) or help identifying with another group of people, even if they are not physically present (Griffiths & Cubitt, 2011). Those latter two cases were not mentioned by the participants of this study, but they explain other circumstances in which a person might feel a sense of belonging through music.

Interestingly, another trigger that makes listeners choose specific music are earworms, i.e. tunes that get stuck in the head. Ben and Jonathan both want to listen to songs if they are stuck in their heads, which corresponds with findings by (Williamson et al., 2014) who discovered that listening to the music that is stuck in one's head is one of the most popular strategies of dealing with earworms. Anne, on the other hand, usually gets earworms of songs she does not like and tries to get rid of them through listening to other songs to distract herself, which was also found to be a coping strategy when confronted with involuntary musical imagery (Williamson et al., 2014). Max, however, starts thinking of songs that to him relate in some way or another to a song he is listening to at the moment, and then he goes and listens to those songs instead, which could also count as a distracting mechanism. While Max did not mention that he has earworms in relation to any of the songs – the trigger and the triggered – this relates to findings by Williamson et al. (2011) who discovered, among other circumstances that generate earworms, that an earworm can be triggered by another song through association. Additionally, what Max described here is how many of the online music streaming services or recommendation systems work (see also chapter 6), and how many playlists are implicitly created (Cunningham et al. 2006).

> There might be when I have the song stuck in my head and I have it on my MP3-Player I might decide even before I walk out - ok, I want to listen to that now. It's going to be nice. But it's not generally that I don't really have an idea what I want to listen to. (Ben)

> If I wake up with a song in my mind I may listen to it, keep on listening to it or follow the artist or something like that. (Jonathan)

> I think I get the normal when stuff gets caught in my head. For sometimes you get a song is triggered in your memory by a phrase. […] Yeah. That is usually the worst cheesy songs. […] And then I will ... I'm really bad with slogans and things like that (laughs). So, yeah, then at that point it's like - anything to drown it out, as long as it's not more rubbish, you know. (Anne)

> Yeah, sometimes I'm inspired by a song in the playlist - oh wait, haven't heard this song in a while, - and for some reason it has an, it's a nostalgic memory that comes up and that triggers me to want to listen to my own music or another song or another or listen to a whole album from that same artist. That that happens. And then I get into the mood for that kind of music. (Max)

Control of surroundings

The other explanations given for wanting to listen to mobile music fall under the category of aiming to control the surroundings. One means to control the surroundings is to create a private space that excludes the surroundings and therefore allows the listener to focus on what they want to focus on. This reason for mobile music listening is ambiguous. On the one hand, it is a strong argument for mobile music listening, as can be seen by Jane's explanation below.

> I would feel sometimes when you've got your headphones on, you know that no one will come and speak with you, because you kind of you got a shield and you're like - I'm on my own. Don't talk to me. But in a nice way. And when you haven't got your headphones on, you kind of, you haven't got any defence around you. So yeah. I feel naked without them. Yeah. (Jane)

On the other hand, however, it is an equally strong reason not to listen to mobile music, particularly because it excludes the environment in some sense and can therefore lead to a feeling of isolation and being unsociable. Thus, some mobile music listeners explain that they sometimes want to take part in their environment, which is why they would then stop listening to music and take off their “shield” that tunes out the surroundings, as Ben shows below. It is also one of the reasons most often given by the non-listeners for not engaging in mobile music listening. They want to be able to take part in the environment and engage in social interaction, which is why they would not want to wear headphones and listen to music. Or, as Julia clarified, they want to know what is happening around them.

> You get the atmosphere when you don't listen to music. Because otherwise you're really stuck and you don't interact with anyone else, you're in your own world. So sometimes when I feel like - ah, maybe I should pay a bit of attention to the outside world - then I wouldn't listen to music. (Ben - listener)

> I plugged myself in and I felt quite claustrophobic, because I felt I wasn't part of the world. I felt that I was in my own little world, in a little bubble and I couldn't hear what was going on and I like to know what is going on around me. (Julia - non-listener)

So, while tuning out the environment and creating an “auditory bubble” (Bull, 2005) is a strong motivator for mobile music listening, it is an equally strong deterrent that keeps people from engaging in this practice, as will be further discussed in chapter 4.

Listening to music can help to change the perception of time and space, which is another reason why mobile music listeners chose to engage in this activity. In the case of the answers given by the interviewees here, this is closely associated with alleviating boredom, since the way the environment is perceived is what they want to change through listening to music. That way they

direct the attention to something else in their surroundings rather than what they usually notice. If changing what one sees does not help, then music has the additional function of making time pass quicker, so that a boring activity does not last so long.

> Generally speaking, to, I don't know, to concentrate on something else, maybe. Then doing everyday and every time the same thing I can decide I listen to something different to have a different feeling (Jonathan)

> When you've done it a hundred times before and you're like - there's nothing interesting, like if you're walking a really long time for the first time you always have something to look at and you like, oh, look at that, I've never been here - but you've done it a hundred times it's like - I know what's happening. (laughs) Yeah, so you just put on your headphones and you kind of like zone out a little bit. I think it maybe makes you look at stuff differently. Like, depending what song you're listening to. You kind of find you look at your environment in a different way, I guess. (Hayley)

> And it probably, I mean, it's a way to cut short your feeling of time, I think. To make it feel like less time passes. (Ben)

> 'Cause there's a long queue. So, I had to listen to it, so just to, you know, so the time goes quicker. Just because of that. (Thomas)

Hayley and Jonathan pointed out something interesting here. Both of them tend to use music to experience something they have experienced often before in a different way. Jonathan uses the emotions the music elicits in him to feel differently about his environment, while Hayley uses the music to notice different things in her environment that she may not have noticed before. Thus, they do something that Bull (2005) calls “aestheticising and controlling” the everyday (ibid., p. 350). They both know that they cannot change their environment, but they have learned that they have an influence on how they perceive it when they are listening to music. This influence on perception can also be clearly seen when looking at crowded situations which are often

experienced as unpleasant, so the mobile music listener draws on music for support while being in a crowd. In Hayley's example below she imagines being someone else – a secret agent in a movie, who, as part of her mission, has to work her way through the situation at hand. The music she chooses for that helps her to imagine this.

> I love doing it like whenever it's like really crowded, you put like a really fast song really like (coughs) Eye of the Tiger-type song (laughs) to motivate and you and you like just... in a way it like helps you just go through the crowd faster (laughs). You like - ok, I can do it [pretends to hurry through a crowd]. (laughs) I like used to pretend that I was like - ok I'm like a just pretend you're a secret agent and put like a song that fits that (laughs). You like - ok, you're in a movie, you're in a crowd (laughs), you need to get away from. (Hayley)

Not only the environment, but the perception of time can also be changed through music. Participants know that listening to music makes them perceive time as passing by more quickly than it does. According to Areni and Grantham (2009), who base their results on attentional models, waiting time is estimated to be shorter when people are listening to music they like. Their explanation for this effect is, that music holds the attention of the listener and they therefore do not focus on how much time is passing. These findings can easily be transferred to everyday music listening behaviour. Mobile music listeners only listen to music they like through their headphones (see also chapter 5), so if they are focussing on that, then the result is that they experience waiting time (or commuting time) to be shorter than it actually is. They are entertained and distracted by the music and do not focus on how much longer they have to walk to get somewhere. Thus, the passing time is perceived to be shorter. Respondents of this study seem to know about this connection and use music purposefully for this reason to their advantage.

Another very important reason for listening to mobile music is to manage sound and noise. People are putting on headphones to cut themselves off the surrounding noise of screaming children, which was mentioned three times by

different participants, or to just generally shut out sounds they perceive as unpleasant.

> I do it, because I don't want to hear the screaming child, or I don't want, you know, there's better things I can hear, rather than this. (Thomas)

> But then if I'm for example in town and I hear people shouting at each other and screaming children and when I don't want to be confronted with all kinds of negative stuff and then I rather listen to music then again, I put my music back on. (Max)

> It's more about when it becomes a disturbance to me. You know, 'cause there's always noise and then you're probably going to like it most of the time, but its entered the point where you're like - I feel like this is effecting what I'm doing and how I'm doing it (Anne)

> And when I run on the running machine I always listen to music. Also to cover the horrible House music that they put on at the gym. (Jonathan)

A unique discovery of the first study of this thesis is the interaction between music in the environment and own music, which occurs relatively often during mobile music listening and prompts several different reactions from the listener. In many shops music is being played through speakers, some louder than other, and then there are buskers in the streets trying to earn money. There are four approaches taken by listeners in situations when there is already music playing: 1. they like it and stop their music (see chapter 4); 2. they prefer to listen to their own music; 3. they do not like it, but it is too loud to ignore, so they stop their own music (see also chapter 4); and 4. they are so involved in their own music listening that they do not notice whether there is any music playing in their environment. The first and third case will be discussed elsewhere in this thesis. With regards to the second point, some listeners prefer to be in control of what they are listening to (see Max's quote below). He gave the impression of wanting a seamless music listening experience, which should not be interrupted by something that does not aid his reasons for music listening in a situation.

Max did not say whether he notices the background music or not, but he mentions elsewhere (see chapter 5) that he sometimes collects new music when he likes something that is being played through speakers, so there must be situations in which he is aware of the sounds of his environment despite his own music.

Koko and Ben, as well as other participants, often do not notice if there is music playing in a shop, because they are so absorbed in their own music that it overrides other non-prominent sounds from the environment. Nevertheless, their awareness of surrounding music would seem to depend on where the music is happening in the environment. If music is in shops, there is nothing apart from sound that would make someone aware of this. However, if there is a busker in the streets then there would be a visual indicator in addition to the sound that shows that music is taking place. In this case Koko does notice that there is music and he would react accordingly.

> E: And if you listen to music and you go into a shop where there is already music?
> M: No, I wanna listen to my music. (laughs) Not to music that is decided by someone else. (Max)
>
> I don't notice, because I already enter with my headphones in. And I only take them off when I have to go to the cashier. (Koko)
>
> I never pay attention to that actually. I couldn't tell. I never pay attention to the background music. I just completely ignore it. (Ben)

The music listeners use the possibility of cutting themselves off from the environment offered to them by their music and headphones. Withdrawing into their own little world enables them to tune out their environment and focus on what they want to focus on instead. Often they like the music they are listening to better than the sounds the environment has to offer, so listening to the former, the preferred option, is understandable in these circumstances. Again, the opposite is the case for non-listeners, who want to listen to their surroundings instead of something of their choice. As can be seen in chapter 4

there are situations when even the mobile music listeners prefer to listen to their environment and be part of it, for example, in the countryside. So, in the end, it all boils down to how much a person likes the sounds in their environment. If they like them, they are more likely to choose to listen to these sounds rather than to their own music and vice versa.

Listeners like to put headphones on as a sign to others to leave them alone, and also to create their own space in an environment where this is not physically possible. This auditory bubble (see also chapter 1.2) is a kind of safe haven where the listener can be in their own world without being bothered by what is actually happening around them. The auditory bubble keeps the listener protected from noticing the presence of other people overly much, as well as the sounds they make, and the environment that surrounds them.

> There are some times when I want to feel alone. Alone with the music. I listen to the music and I don't really care what's happening in the surroundings. (Koko)

> A: And then it's more about how crowded it is and how cramped you are and the fact that it's not a great social occasion. (laughs)
> E: Yeah. So crowdedness is another reason.
> A: Yeah, I mean if it like, you wouldn't put it on like in the canteen, you know. Then, that's some crowded people you know, and you happily strike up conversation, that is more crowded strangers, you know. (Anne)

Interestingly, in Anne's case, it is the presence of strangers she perceives as unpleasant, whereas the presence of a crowd of people she knows would not lead to the same reaction. Anne also has a medical condition that makes her sensitive to stimuli like noise, light, and temperature. She uses music listening to block out the noise to feel healthier. The headphones have the additional effect of keeping her ears warm and dry and thus help her to avoid an ear infection. This is an important new finding which can contribute to the health management of people with similar conditions who have not discovered the power of music for themselves yet.

> I originally bought them because I was travelling on the busses a lot and I hate the noise so much it makes me sick. […] I bought a proper set of headphones - only forty pounds - and it just really works as noise cancelling. (Anne)

> And it's especially if I'm travelling or commuting or anything like that. I like to try and shut everything else out. […] 'Cause I can get quite overwhelmed if I've like had to experience too much noise for too long. I'd be like - I'm a bell that's still ringing at the end of the day. (laughs) (Anne)

> I do have [a medical condition], so I do get quite affected by the excess of stimulus involved with commuting. And I find especially if I'm biking or something having headphones, if it's wet weather it can make the difference between getting an ear infection or not. (Anne)

This topic of sensitivity to stimuli is also closely connected with information overload in general, which Anne sees in not only the information she needs to commute from one place to the other, but also in the presence of other people. To her, it seems, most stimuli are a kind of information that needs to be processed, and an excess of these stimuli make her feel unwell, because of her medical condition.

> E: And that's more because there is so much information that's going on around you or is that because everybody is just too close and it's just ...
> A: I don't know. I think, those two sort of combine for me because you know, everything that's around you sort of comes into you in the form of information. And then I found out, that with [my medical condition] I basically your central nervous system can be over sensitised. (Anne)

Music can also add sound where there was not any, in order to fill the gap that is left by silence. There are different reasons for wanting to get rid of silence, for example, Michael prefers sounds at night to sleep better, Thomas does not want to overtax his brain by thinking of too many trivial things and puts music on instead of letting the thoughts come to him in the silence (see also Herbert,

2011), and Koko does not like the sound in his ears created by his blood rushing when it is silent.

> But I find silence at night time quite difficult to sleep with. (Michael)

> E: Ok. So if you want to stop thinking you listen to music?
> T: Yeah. I think so. 'Cause when I don't listen to music and it's really quiet, I start to think. About anything. About this car (laughs) or this why is this happening, why is that. And I don't want this, 'cause it's really tiring my brain. So that's why. (Thomas)

> And music makes me concentrate on the music and not concentrating on that [i.e. sound you hear when everything is silent]. I don't know, I don't like to hear the silence in my head. Humans are not designed to stay in silence. (Koko)

Music is used in two different ways here. On the one hand, it gives background sound that just needs to be there without being listened to, for instance, when Michael is sleeping, and on the other hand, it directs the thoughts of the listener along chosen lines instead of letting them wander which would lead to unwanted thought processes. One important factor to consider here, is whether the song listened to has lyrics, or is only instrumental. Lyrics state more clearly what the song is about, sometimes even have a storyline or plot, and therefore can direct the thoughts of the listener accordingly. Instrumental music, on the other hand, directs thoughts, for example, through evoked emotions, associations and memories (Juslin, 2013).

Lyrics have been found to add an additional distraction to background music for introverts, while improving the performance of extraverts (Furnham et al., 1999) who, according to Eysenck (1967 cf. Furnham et al., 1999) have a higher optimal cortical arousal threshold and therefore need more external stimuli to reach their optimal arousal level to function at their best. Listening to music (with or without lyrics) might therefore provide the necessary arousal level for the situation by being adaptable to every person and preference, keeping introverts and extraverts from being bored when nothing else is happening

around them. This theory, however, would need to be investigated through empirical study. An interesting avenue for further exploration would be to study whether introverts listen to music with lyrics in different situations and for different reasons to extraverts.

With regards to the music listened to by Michael, Thomas and Koko, it should be mentioned that Michael listens to “sleep music” or “delta waves” to fall asleep, which is without lyrics. Koko prefers dance music (without lyrics) and otherwise music with interesting instrumental accompaniment, which could be with or without lyrics. When listening to music he focusses on the instrumentation and tries to get the best listening experience possible from it by manipulating the sound through the equaliser on his phone or by choosing headphones that improve the sound quality. By focussing so strongly on what is happening in the music he is able to block out unwanted sounds like the humming sound of his blood and nerves when everything is silent.

> I'm more a particular listener of music. Because when I listen to music I listen very I'm more concentrated about the instruments inside. About every element. Every element starting from the kick and all the effects they put on the instruments. Any kind of instrument, how they sound, how they are controlled inside. How they are like, you know, mixed up with the main thing that makes it sound like it sounds. (Koko)

Thomas likes to listen to any music that he feels like listening to in a situation. He listens to instrumental music as well as music with lyrics. During the shadowing he was listening to a song from Rihanna that he associates with being in the city centre, because of its lyrics. It shows clearly how the lyrics of a song can direct his thoughts and how he chooses music according to the situation he is in to then think along those lines.

> That's yeah, there are two songs I really like to listen when I'm on High Street when there's a lot of people. Like Put it Up from Rihanna, I think that's a song that's really underestimated because it's got really good lyrics. It's more about the lyrics rather than the music. (laughs) The music is not really good, but the lyrics are really good. So she's singing about

> money and what's on her mind and it always really fits into the whole walking through town where people are. (Thomas)

The last reason for mobile music listening mentioned by participants of this study is habit. Some of the interviewees got into the habit of putting on their headphones whenever they went out of the house and never stopped doing so, even though in some cases the circumstances have changed. For example, Thomas, who moved from his home country to England, does not have his original reason for listening to music anymore, which was to block out the rude people within the society, but still keeps on doing it, because he got so used to it. Or there is Ben, who puts his headphones on automatically when leaving the house and only then starts to think about whether he actually wants to listen to mobile music or not.

> 'Cause listening to music is more than norm for me, 'cause it gets into a routine like, you know, put the music on, get on your bike, get out, put your music on, wait. (laughs) (Anne)

> Well, you know, I leave my house, get out the door, walk the first five meters and then get the MP3-Player out. So I guess it's kind of by now it's kind of automatic. As soon as I go out, I just feel like - yeah, well, let's put it in. And then sometimes it happens I listen to the first song and I realise - ok, I'm not in the mood for music. Get it back out. But the first impulse is - ok. I just left my house with my MP3-Player. (Ben)

> And I think now I just got used to it. 'Cause this society is much more different. Much more nicer, happier. But I still do it. It just stayed there. (Thomas)

> E: Why did you listen to music today?
> K: Because I usually listen to music. It's part of me of myself. Being myself it's listening to music. I always did that and I will always do this. (Koko)

3.2 Non-listeners understanding listeners

A new finding from the second study, apart from asking non-listeners about their opinions for the first time, is that some of the non-listeners understand the reasons listeners might have when choosing to use portable listening devices, for example, passing time, energising during exercise, and shutting out unwanted environmental information:

> Yes, I suppose it kills time. I can understand that. Yeah, especially if you're on like your own. Yeah, yeah, there's nothing wrong with that. (Josie)

> And many years ago, we had an exercise bike and I used to put a CD on when I was riding because otherwise it was so boring. Because there's nothing. So, the music, you know, you'd cycle in the rhythm so I wonder whether they hear the music and then they run in rhythm almost. Maybe. I don't know. (Johanna)

> Otherwise I think, part of me makes me think, it's quite it's sad, I can see why you would want to listen to music. But, because I live out in the country, maybe living in a city there's such lot of background noise that you want to cut yourself off, [...], but, you know, I just think it's sad maybe that are they trying to escape. I don't know. (Kate)

Paula is a teacher and she remarked on the use of mobile music in her classroom, which can create a positive learning environment:

> Yeah, they're always asking if they can listen to music. And sometimes, actually, I let them, because it does help them work better sometimes. If it's a particularly naughty class and they just need to focus, sometimes it does help them just to calm down and focus.

Here she sees the positive effects of mobile music listening not for herself, but for her students and how the music manages to help them concentrate no their

task and work better. Listening to music in the classroom is not technically the mobile music listening that was the focus of these studies, nonetheless it shows that non-listeners are not only aware of the negative effects, for example, on sociability, and safety in traffic, but also possible positive effects mobile music listening might have.

For the students, music is ever present and could technically be played at all times. Kate agreed and does not see it as negative, because she perceives mobile music listening as something normal, as an artefact of the times we live in:

> Yeah, but I just take it for granted. So many people seem to have their heads in their phones and things now. (Kate)

The Sony Walkman was invented in the 1980s and became increasingly popular since then. Now there are a variety of mobile technologies that allow for music listening, for instance, iPods, MP3-Players, and smart phones. Teenagers nowadays have grown up surrounded by these technologies and do not know a world without them. Therefore, it is normal for them to use these technologies in their everyday lives. Kate seemed to acknowledge this. Agatha also does not notice mobile music listeners anymore, probably because they are a normal occurrence in the streets of the city she lives in. Additionally, she is also often deep in thought which makes her even more unaware of what is happening in her surroundings:

> Yeah, but usually I don't really pay much attention to it, I guess, because I'm so used not to do it. And usually when I go around I think a lot. So sometimes I don't even notice what is around me. (Agatha)

These quotations show that, although there are things non-listeners of mobile music do not like about mobile music listening, there are circumstances where they understand why it might be beneficial for the listener. They mention the same reasons for this as mobile music listeners which shows that there seems to be a general consensus in our society about the affordances of music.

3.3 Conclusion

In this chapter I have pointed out several new discoveries, namely the influence of environment on mood and mood on choice of music respectively, and that music in the environment leads to different decisions by the listener regarding their own mobile music listening. Additionally, an interesting insight has been offered showing that music listening might help people with oversensitivity towards any kind of stimuli, and it has been revealed that non-listeners are not completely opposed to mobile music listening but sometimes understand the listeners' practices and choices.

Overall, my respondents tended to offer many of the same reasons for listening as have been discussed in previous research literature. There was one reason for mobile music listening, however, that they did not mention, which has received coverage elsewhere, namely enhancement of self-identity. It was, nevertheless, indicated (but not directly mentioned) to be the reason why some listeners choose to listen to specific music (see chapter 7). Reasons for self-identity not being directly mentioned in the present study may be, that it was not important to the participants of this study, or it was not asked about specifically with regard to reasons for listening to mobile music, or because there were only 11 participants, and this is by no means representative of the general opinion of the English society.

With regards to the influence of the device compared to the influence of music, it was clearly shown in this chapter that it is the music that has the effect for the listener and not the device itself. It is music that manages mood, not just wearing headphones, and music can make time pass quicker, not just holding on to an iPod. Even non-listeners are aware of the benefits music can have for the listener, which demonstrates that this is a fairly universal understanding when it comes to mobile music listening, which will likely appear in larger studies, too, since all the listeners mentioned this without exception.

Generally, it can be said, as mentioned at the beginning of the chapter, that the music a person decides to listen to, should be appropriate for their aims and needs at that moment. How and what a person chooses to listen to is very closely related to their reasons for mobile music listening. Mobile music listeners have a variety of reasons for engaging in this activity, from controlling

the self to controlling the surroundings. Interestingly many of the reasons are apparently self-contradictory or paradoxical, for instance, it helps the listener to be alone, but it can also give the impression of having company; and music can overcome silence at the same time as blocking out noise and creating an inner silence. Music can manage very different situations and is therefore a means for many people to find the required balance between all these different contrasts. The same people who use music to overcome silence also listen to it to tune out the surroundings, and listeners who want to be alone still listen to music to have (self-chosen) company. So, thinking about this, the so-called contrasts are not contrasts at all, because they do not exclude each other but can happen at the same time. Music can therefore overcome boundaries that are not as easily overcome by other means (e.g., reading). This effect is increased by the growing access to different kinds of music at any time, which helps listeners find exactly what they want and need in different situations. This increased access to music, in turn, influences the diversity of reasons music listeners have for listening to mobile music. Music can have many different functions (even several at once) that help the listener manage their daily lives and the situations they encounter.

In conclusion, there seems to be a general understanding of the reasons why people engage in the activity of mobile music listening, especially with regards to emotion management, which was mentioned by most of the participants and influences other factors, for example, the perception of the environment or to find a sense of belonging. These results correspond with previous findings, for example, Lonsdale and North (2011), demonstrating that emotion management is one of the main factors driving the choice for listening to mobile music.

4 No music by choice or accidentally

4.0 Introduction

> “Charlie needed a run to clear her head. How Pippa did it, she had no idea; the last few days had left her completely exhausted. Back in London she would put her iPod in and jog by the canal before work, dance music prepping her for the day ahead. She hadn't wanted to run with music today, though. Up here, away from the city, it was quieter. She didn't want to block out the world and create a bubble, as she usually did.“ (Greene, 2014, p. 149)

The above quote from a novel gives an indication that mobile music listening does not happen constantly and all the time, but rather that there are situations where listeners decide to turn off their music. This chapter will delve deeper into this topic and explore experiences of listeners when being forced to manage without music, situations in which they chose to focus on something else rather than music, and reasons why non-listeners do not use portable listening devices. These topics have only been partly touched upon in previous literature, which is why this chapter adds important new insights into sociological and mobile music-related literature. It reveals that not listening to music is an integral part of listening to mobile music, since it is a source of apprehension for listeners who depend on their devices to manage themselves in their everyday lives, while at the same time being a desired goal in certain situations for listeners and non-listeners.

This chapter stands in direct contrast to the previous chapter discussing reasons for listening to mobile music, thereby offering complementary information to understand mobile music listening more fully. It shows that mobile music listening is a complex activity that asks listeners to make a number of decisions. If there are situations where listeners decide to turn off their devices then they will likely have their reasons. These reasons will be discussed here.

While it was discussed above that sometimes non-listeners understand why listeners choose to play music through their headphones, this chapter will examine the opposite – listeners that understand why non-listeners prefer to

move around without music. However, while this understanding was explicit in the previous chapter, it will be more implied here, because the listeners were not asked to contrast their behaviour to that of non-listeners, while non-listeners were asked to talk about people who listen to mobile music. Nevertheless, the connection should still be visible, showing that the differentiation between listeners and non-listeners is not as clear-cut as it seems at first.

This chapter will start with strategies of mobile music listeners to maintain the functioning of their devices. It will show that the more important music listening is for a person the more they will be prepared for it. However, it can happen that the battery runs out or a device breaks, which will be discussed in the section afterwards. The listeners agree that this would be a difficult situation, which would influence their behaviour and mood. If their device is not available then they would have to find other ways of managing in the situation. Being confronted by a broken device forces the listener to take stock of their reasons for listening to mobile music and to notice the importance of the device in their daily lives. After discussing being without music involuntarily, the next section of this chapter will present situations where listeners choose to turn off their music. In this context several topics will be discussed; from information overload, to music as pollution, from activity related listening, to the physical experience of the headphones. This chapter will end with a depiction of non-listeners' experiences with mobile music listening. It will explain why they got out of the habit or why they never got into it in the first place. A discussion of possible differences of the listeners and non-listeners in this study that might have influenced the results will be presented in the context of the literature.

4.1 Strategies to maintain the functioning of listening-related devices

Since having to be without music when the battery runs out on their device seems to be a difficult situation to handle, many of the music listening participants employ different strategies to keep from being without it. These strategies are especially utilised by more engaged listeners who are more aware of their reasons for listening to music and in whose lives (mobile) music plays a very prominent role (see chapter 5 for an explanation of differently engaged listeners). They are more goal oriented and are also more cognisant of

the fact that something could happen to their devices and music, therefore, would not always be present. There is Anne, for instance, who has a waterproof phone, so she can use it in the shower, too. She even bought Bluetooth speakers for the shower, to be able to listen to music whenever she wants to. In case her phone runs out of battery, she carries power banks, to charge it on the go, and if she finds her battery is low, she might charge it at work.

Max on the other hand, has a different method to always have music at hand. To my question, what he would do if he ran out of battery, he said the following:

> M: No, that never happens. No, I make sure I have enough battery. If that would happen I would be really unimpressed with myself, because (laughs) I'm very good at preparing myself for what's coming up short-term. Especially short-term. Also long-term, but especially short-term. If I know that if I'm going to have a long travel, if I go for example to visit my girlfriend and I have to go with the train for two hours, then I make sure my battery is full or that I bring my charger and actually I'm a bit panicky about that stuff. So I always end up making sure I book a flight or a seat that is next to a power socket so that I can keep charging my iPod and I have an iPad as well and ...
> E: And an iPod, too?
> M: Eh, yeah, no, an iPhone and an iPad. And if my phone dies I can carry on my iPad and I just make it I'm always ensured that I can do whatever I want whenever I want it when it comes to listening to music and play with my technical devices. I'm fully in control.

A similar strategy is used by Koko, who is aware of the fact that his phone might not have charged completely overnight, and could therefore run out of battery. For cases like this he has the music on his phone stored on a memory card. If it turns off, he can just take this card out and put it into the MP3-Player he carries around with him, and then proceed to listen to the same selection of music from there.

Furthermore, if he does not forget them or knows he will likely not need them, he says that he takes an additional pair of headphones with him. The

additional headphones are not spare ones in case his usual headphones break, but offer a different kind of audio quality which Koko prefers for certain songs or situations.

> E: So if you listen to music over headphones, do you choose music that is kind of perfect for headphones then or do you listen to anything?
> K: No, I rather I rather prefer to equalise the headphones. Like for example, different genres you equalise your headphones. It depends on the headphones. Because not every pair of headphones they don't sound identical. One of the other. For example, if you have a high definition, for example, I listen to the phones my cell phone's headphones, like those ones that came with the phone. And they are pretty good. They don't have lack of frequencies like bass or highs. Mid are good. With enough. But when I need more highs or more bass I try to work in the equaliser to make, you know, make it sound as I think it should sound. And when it's not, I change headphones.

However, during the shadowing session it transpired that Koko only had one set of headphones with him, because he was happy with their quality. When asked about the spare pair of headphones he claimed to always have with him, he explained that he has one pair in his jacket and one in his backpack, both of which he did not have on him for the shadowing session. He tends to leave them in these places, so he will not forget them when he goes out of the house on a normal working day. Koko also gave another reason for carrying a spare set of headphones with him, so he can share his music with someone. He also has a splitter with him to make that possible. It appears that the shadowing session is not a situation where he expects to need these additional accessories, which is why he left them at home (although he did not say that directly).

An extra pair of headphones is also taken along by Thomas. He even bought his phone for its long-lasting battery, but see below how he himself describes his systematic approach to always having music available:

> E: So what do you do, if you run out of battery?

T: (laughs) Oh my days. That's why, no, this is not happening. Never ever. I've got myself a phone that lasts for two days on the battery. (laughs) I even have reminder, I can show you in my calendar to charge my headset. Because I have Bluetooth headset for cycling, but in case the battery runs out in the headset I've got a spare cable one in my pocket. (laughs) Really. I always have two headsets with me. And the phone never runs out, because it's two days battery, so doesn't. It's not possible. ... Not possible. Just doesn't run out. (laughs) I can guarantee you that.

In summary it can be said, that the more important music listening is in someone's everyday life, the more that person makes sure to have a continuous listening experience through devices that match their needs. Less engaged listeners might put up with broken devices for a while, like Ben did (see below), but more engaged listeners employ strategies, that can be very detailed, to keep from being without music.

E: How long did you have to go without earphones?
B: Ah, about three weeks.
E: Wow. How did you how did that go?
B: I know, it was basically laziness, because I never really found the time to go to town and buy bloody headphones, so like yeah.
E: So you didn't listen to any music for that time?
B: Not on my MP3-player, no. Of course at home, yeah. Not while I was walking.
E: Did that change anything?
B: It was slightly annoying. But the thing is the old headphones weren't exactly broken, but they were like - ah Wackelkontakt, how do you say that?
E: Loose contact?
B: They're like on and off, yeah, so it's like ah, if you go like if you hold them like this it works a bit, so I tried to listen to music sometimes when I was bored, but it never properly worked. It was a bit annoying.

> Sometimes I made the effort, otherwise I just - ah, forget about it. No music.

4.2 If the battery runs out …

Sometimes whether you choose to listen to music does not matter, because your device has run out of battery, is broken, or there is an issue with your headphones. As mentioned above, some of the participants have elaborate strategies to keep from being without music, but even those are not completely fool proof and the participant might find themselves in a situation without available music. When asked about these circumstances, the interviewees gave a variety of answers. They all agree that it would not be an ideal situation, however. Like Bull's (2000) participants who panic when their battery runs out, Jane and Hayley described it in drastic terms, as “a nightmare” and “gut wrenching”:

> Oh, here is how, yeah, aaah it's the most gut-wrenching thing (laughs), 'cause you planned that like […] ok, I'm going to listen to all this, like this person's new album. […] And then you're battery dies. And you like - no, that's not happening. What do I do? (Hayley)

> E: And what happens if you run out of battery?
> J: (drags in deep breath) Nightmare. (laughs) It happened a couple of times. Especially on the plane. Because obviously I go back home three or four times per year and I always make sure that my iPod is on top with battery. But once the flight was very early in the morning and I totally forgot to charge my iPod. And I was lost. I was really lost. 'Cause I couldn't listen to music. [...] And I was feeling really bad. (Jane)

Since they cannot do anything about it in the situation they are in, they have to manage to be without music, although their first emotional reaction is negative. Jonathan only implied his emotional response to finding himself without music, and then describes his behavioural reaction to it:

> I think I can survive without listening to music for one day or for two days. I'm quite used listening to music in many parts of my day, so I would try to replace it, but acting with zen, with quietness and calm, I will accept the destiny has tricked me, but (laughs) I would accept the fact that for that day I can't listen to music. (Jonathan)

Not all participants react like Jonathan and just continue doing what they were doing only without music. Some interviewees would change their behaviour if there was not any music, like Cody who would not run as much if he did not have the music to motivate him.

> I wouldn't run that often or that far. […] It's just I don't have the support of the music to do faster or yeah. It's different. (Cody)

This finding corresponds with Laukka and Quick's (Laukka & Quick, 2013) study, who asked athletes about their use of motivational music in sports and exercise. They found that athletes listened to music because it increased affect, motivation and performance, which is why they utilised “music in very purposeful ways to facilitate their training and performance“ (ibid., p. 209). In an experimental study, Boutcher and Trenske (1990) got 24 female participants to ride an ergonomic bicycle at different workloads in three different conditions: listening to their favourite music, reduced vision and hearing through goggles and earplugs, and a normal condition without any additions. When looking for correlations, it was discovered that perceived exertion was reduced through music in the lowest workload, while affect was more positive with music during middle and high workload. These results give an indication of Cody's motivation to run more often, faster and longer with music than without, i.e. he might be feeling less exerted when running with music and would therefore run longer and faster, and he could be having a more positive experience with music, which would motivate him to run more often.

Additionally, other studies have determined that listening to music can increase running pace, because they start to synchronise to the beat (e.g., Simpson & Karageorghis, 2006). When asked about the impact of rhythm on his running practice, Cody explained that he, indeed, finds himself synchronising

his pace to the beat of the song he is listening to at the moment. Not having a pre-set rhythm to synchronise to could be another reason why Cody does not run as fast without music as he would with music.

> I'm just noticing the tempo, the rhythm. And that sometimes pushed me for run faster or other way otherwise slower as well. […] When it's the tempo faster I'll just start run faster as well. (Cody)

Hayley, who used to go through songs in her head when she did not have a mobile listening device, would now revert to that behaviour when finding herself without music:

> I tend to (laughs) sometimes like if I don't have my 'cause I didn't used to have like smartphone 'til last year, so I would like just sing songs in my head (laughs) for a while like - ok - it's like - oh, I don't have anything to listen to, ok, I'm going to sing this song with it. (Hayley)

It is difficult to name the phenomenon that Hayley describes here. On the one hand, it could be termed as “audiation” (Gordon, 1985), i.e. “the hearing of music in one's mind when the sound is not physically present.“ (ibid., p. 34). It occurs in situations when someone actively thinks of music, for instance, when listening to it, reading it, or playing an instrument, and could therefore be called *voluntary*. However, audiation is only used in the context of musical aptitude and ability, for example, measuring whether a person can imagine a piece of music in a different scale or rhythm (Gordon, 1989), which is why this might not be the best term to use in the present situation. On the other hand, Hayley's experience could be called Involuntary Musical Imagery (INMI), or earworms. INMIs are defined as “the spontaneous recall and replay of musical imagery within the mind’s ear that goes on to repeat on an involuntary loop“ (Williamson et al., 2014, p. e86170). Earworms often happen in a context completely unrelated to music, but are not restricted to that. The focus here is on the word *involuntary*. However, since INMI is involuntary by definition, and Hayley voluntarily imagines music, this definition is not suitable for the phenomenon either.

The most appropriate and, equally, the broadest definition would be to call Hayley's activity “musical imagery”. According to Bailes (2006), this covers everything from INMI outside the musical context, to INMI in the musical context and the voluntary imagining of music in musical situation, i.e. audiation. Bailes does not refer to voluntary musical imagery in the context of everyday life, but mentions it as being a tool to explore musical imagery in experimental conditions. As mentioned before, the term “audiation” is only used for musical situations where music is voluntarily imagined, which is often a requirement for musicians (Beaty et al., 2013). Hayley, however, has never learned a musical instrument, and could therefore not have learned this technique in music lessons. Interestingly, this corresponds with findings of Beaty et al. (2013) who discovered that musicians are not more likely to voluntarily imagine music in their everyday life than non-musicians. The researchers argue that this could be an artefact of their research, though. Nevertheless, the results of their two studies show that voluntary musical imagery is not a popular phenomenon experienced by many people. So, are there people who have similar experiences to Hayley? What other reasons apart from musical rehearsals and wanting to listen to music are there for voluntary musical imagery? How voluntary is this imagery (e.g., does it turn involuntary after a while)? Since publications on this particular subject are scarce, these might be topics that could be explored in future research.

Another reaction to being without a functioning mobile listening device, is to deal with the situation, while at the same time trying to see it in a more positive light. Hayley, for instance, apart from singing the songs in her head, will listen to the sounds that happen in her environment and try to enjoy them, while Max sees being without music as a chance to pay more attention to the traffic when cycling home. These reactions show that these two participants are aware that listening to music cuts them off from their surrounding sounds, which they also mentioned when asked about possible safety issues connected to mobile music listening.

> So I tend to maybe just listen to just sometimes I'm like, it's really weird, 'cause you then miss out on all the sounds that are around you, so like maybe the trees, the wind and all that. So when my battery dies I tend to

like listen for that or like try to enjoy the sounds around me and I would like a car, somebody shouting (laughs). (Hayley)

I remember I had issues with my Beats [i.e. headphones] before and it happened at work, so they broke down [...] And then when it happened at work that means I have to commute home without listening to music and that makes me a bit grumpy. Yeah. But I try to turn that into something positive by saying - well, at least I pay more attention to the traffic now. (Max)

However, there were participants who found it extremely difficult to cope with the situation when there was no music to help them through it. Jane, for instance, uses mobile music listening as a shield (cf. auditory bubble – Bull, 2005) to keep her from noticing certain things and also from being approached by other people. Without music, the auditory bubble is burst, and she is much more aware of her environment and feels defenceless, which she does not like. Other participants, like Thomas and Koko, perceive the absence of music, the silence, as taxing and do not know how to handle it:

It would make me aware of everything. So the noises of my shoes, of what is going on around me, who's coming behind. It would make me kind of paranoid. (laughs) In a certain way, yeah. True, it's very true though. Or I would feel sometimes when you've got your headphones on, you know that no one will come and speak with you, because you kind of you got a shield and you're like - I'm on my own. Don't talk to me. But in a nice way. And when you haven't got your headphones on, you kind of, you haven't got any defence around you. So yeah. I feel naked without them. Yeah. (Jane)

Exactly, because if it's too silent, I don't like it. […] So, no, silence is definitely not my thing. I am afraid of the silence. It's really scary. It's freaky. (Thomas)

K: Yeah, but it's been this time when I didn't have battery on my cell phone, not even the MP3 with me. And it's shit. I don't know. It's not easy.
E: How so?
K: It's too much silence. It's if I don't have somebody to talk to or, you know like, something to do, it's not good.
E: So it kind of distracts you too, like if you, if you listen to music it distracts from ..
K: Hmhm. Yeah. Yeah, as I said before, makes me feel better. ... This is the main goal why I listen to music. Simple as that. (Koko)

Thomas also mentioned that he is used to living in big cities. Now he lives in a small city which feels too quiet compared to what he is used to, thus he listens to music to overcome the silence, which was also found to be one of the reasons for listening to mobile music (see also chapter 3). Similar findings have been discovered in the answers of Bull's (2000) interviewees, who listened to music to “blot out thoughts” (ibid., p. 51). However, these participants also mentioned that this was reached through increasing the volume of the music, which was not observed in the present study. Nevertheless, if the reason for listening to music is to supersede silence, then it is comprehensible why some music listeners feel stranded without this tool to help them through the situation.

These differences in reaction to being without music illustrate that there are some people who find ways of coping with the absence of music, although they are not happy about it, while there are others who have far more difficulty in doing so and are lost without their music. The latter are mostly the listeners who could been described as more engaged (see also chapter 5). They all seemed very aware of the fact that they could not deal with situations without their music, and this awareness would explain why these listeners put so much effort into keeping track of their device's battery life.

Furthermore, there seems to be a close connection between the reasons for listening to music and how the mobile music listener is able to handle situations without music. The listeners, whose descriptions show a high dependence on music in their daily lives, for instance, to overcome silence, to handle mood in different circumstances, show the highest concern about being without music. By contrast, participants who do not listen to music as often (this

also corresponds with the definition for less engaged listeners) and use it more for motivation during exercising, for example, are better able to cope when being forced to be without music.

Additionally, participants' answers to the question of what they would do if they had to be without music, reveal a lot about the reasons why the participants choose to listen to music. It shows that music really helps them achieve whatever they are aiming to achieve, because if music is not present, it leaves them struggling. This struggle is clearly demonstrated in the example of Cody, who uses music to motivate himself when running, and when the music is unavailable, he is not as motivated and therefore does not run as far or fast. Asking this question in relation to reasons for listening to music, has shown here that it is a good tool for verifying given information. Furthermore, it can give the participant an option to explain the extent to which music helps them, which is often something that is difficult to describe, as it relates to emotions. The difficulty of talking about emotions was pointed out by Zentner and Eerola (2010) who gave an overview over all the difficulties faced when using self-report to study musical emotions. Part of these were “limitations in the awareness of one's emotions” and “difficulties in the verbalization of emotion perception and experience” (ibid., p. 210ff.). Since listening to music is closely intertwined with emotions, it is understandable why it is difficult for most participants to talk about them. Using questions that enable interviewees to describe their experiences and giving them a pool of vocabulary to refer to, allows them to express their emotions and motivations more clearly, as the question about having to be without music revealed.

4.3 Choosing to turn off the music

Although music over headphones seemed to be an important part of many of my participant's everyday lives, there are circumstances in which they referred to music as something negative that is to be avoided. These results agree with findings by Prior (2014) who discovered that nearly half of the participants in his study chose to not use their devices at certain times or in specific places. By contrast, Bull (2014) holds the opinion that “consumers invariably experienced

such mediation [i.e. sonic mediation through iPods] with pleasure“ (ibid., p. 104), which is confounded by the present findings.

If someone, for instance, has listened to music for a while already, they might feel that it is time to stop now.

> Yeah. So it just like actually and also you get to a point I think where you've had enough of the earphones. Your ears can't take 'cause it's quite bombarding sometimes when you're listening to it all the time when you're running and then you get to a point when you have to take your earphones out. (Annabel)

Annabel also talked about the fact that music, at some point, starts adding to the information that is surrounding us constantly. We have to take in this information and process it to navigate through the city or interact with society. The more information there is, the more difficult it becomes to process everything that is necessary, which is why Annabel sometimes prefers to be without music:

> Yeah. Sometimes it's quite nice to actually not listen to anything. 'Cause we have so much information in our society. So what I sometimes I've walked without any music. ... And just completely switched off. Yeah. (Annabel)

This statement seems to be in direct contrast to Bull's (2006) argument, that listening to music can help to overcome the information overload and assist the listener in managing the information they are bombarded with. In Annabel's case, music is something that can become information that needs to be evaluated in addition to all the other information. If she feels overwhelmed by everything that vies for her attention, she does not want to add another factor to it. Interestingly, although Annabel explains that listening to music sometimes becomes too much and she will then turn off her device, she also listens to music to tune out her environment, allowing her to concentrate on what she wants to attend to and ignoring everything else. This contrast indicates that for one person music can be a tool to manage surrounding information, as Bull

(2006) argues, or it can become part of the information and therefore “too much”, which is why it is then turned off.

According to a research paper by Brewster (1997), it is very difficult to become overloaded by information in everyday life, because the different senses each take in different pieces of information, so no one sense will become overloaded. Building on this theory, if mobile music listeners talk about receiving too much information, this could be because much of this information is received audibly, so the ears are overtaxed. However, most people take in visual information (and olfactory information to some extent), too, which refutes the aspect of the theory that claims that information overload develops whenever one sense is overstrained. Nevertheless, it might be that there is a limit to each sense if they work together, so receiving too much information through one sense, even though other senses are involved, could lead to information overload. This theory might explain the (auditory) information overload that mobile music listeners report about. Nonetheless, this idea is very hypothetical and needs further research.

A reason why particular senses might become overloaded by information is provided by Bawden et al. (1999), who write that, our senses are able to handle a big amount of information, but our “modern information environment [...] presents us with information in forms with which our senses, and prior experiences, are ill-equipped to deal“ (ibid., p. 251). In relation to mobile music this could mean that our ears have not learned to cope with information through portable listening devices simultaneously to auditory information from our environment. However, most of the music listening participants were in their 20s, so they have had access to mobile listening devices for most of their lives and should have had enough time to adjust to them. Additionally, the participants who were over thirty years old did not report any difficulties with managing the information that reached their ears. Therefore, the argument that we are unable to deal with the modern information environment does not stand up to scrutiny, and can likely be only understood in the context of digital and printed information in which it was published.

Schroder et al. (1967 cf. Schick et al., 1990) carried out an experiment to discover correlations between environmental complexity (defined as “the sum effect of the degree of uncertainty and the positive and negative reactions of the

individual toward the processed information.“ (Schick et al, 1990, p. 200) and an individual's ability to process information, and discovered, that the information processing ability increases with environmental complexity up to a certain point. After that point, while environmental complexity increased, the ability to process information decreased. Therefore, the reason why some participants did not experience information overload in relation to mobile music listening could be connected to the environmental complexity each individual encounters daily, as well as individual differences in their reaction to it. As will be mentioned in another chapter (see chapter 5), differently engaged listeners might have different reasons to use music to help them through their everyday experiences, which could influence their reaction to the environment. For instance, a more engaged listener might mainly use music to tune out their environment and concentrate on their own thoughts and emotions and might therefore feel more reluctant to turn off the music than someone (less engaged), who mainly listens to music for entertainment reasons while trying to stay open to their environment. However, this is still a mere theory and would need further evidence.

Thus, instead of answering questions, the interviewees answers opened new avenues for investigation. The questions that arise from here are: How exactly does this musical information overload work? What does it depend on (e.g., could it be related to personality, environmental complexity, kind of music listened to)? What kind of different strategies exist to overcome information overload related to mobile listening? Investigating these questions would deepen our understanding of how mobile music listeners relate to the information they perceive from the environment.

While Annabel gets the impression that there is too much information “bombarding” her and reacts by turning off her mobile listening device, Anne differentiated between being in quiet or busy environments:

> A: I think mostly it's just a sort of at some point I just go - you know what, maybe I won't listen to music - 'cause listening to music is more than norm for me, 'cause it gets into a routine like, you know, put the music on, get on your bike, get out, put your music on, wait. (laughs) […] So, yeah, sometimes it's just like – actually I would like some quiet. (laughs) It's

> mostly when that bit kicks in that's when I go - just stop and smell the roses and you know and maybe have a quiet one (laughs). [...]
> E: Yeah. So would that be when there are loads of people around you?
> A: No, be more like if it's nice and quiet around me. If it's busy around me I'd rather have headphones on. (Anne)

Anne agreed with Annabel that listening to music over headphones can get too much after a while, so she prefers to take the headphones off occasionally and enjoy her (quiet) surroundings. However, as opposed to Annabel who feels that music adds to the information overload, Anne still sees her music as something that shields her from surrounding sensations. She clarified this in saying that she would only take off her headphones if it is quiet around her, not when it is busy. So, on the one hand, music can stop a person from being able to enjoy their environment by adding a layer of sound to everything, but it can also, on the other hand, create a barrier between the environment and the listener through that same layer of sound. It seems to depend on what a person thinks about their environment, and whether they want to experience it or not, which Hayley aptly summarised in the following way:

> 'Cause I think sometimes music can be a pollution as well. It could kind of take away from the experience, rather than giving it an extra thing. (Hayley)

This statement corresponds with findings from DeNora (2000) who discovered that older women perceive music in shops as pollution. DeNora's explanation for this is that older women are probably more used to listening to music by itself, stopping all other activity, thus, they would be distracted by music when shopping and would experience it as annoying. Hayley does not specifically mention music in shops but rather relates to mobile music listening, but both of these examples show that for some people music does not feel appropriate in situations, to a level where it causes irritation.

If music is playing in shops then the mobile music listener might like it and decides to listen to that instead of using their portable listening device (see Jane's quote below). On the other hand, it might not be perceived as positive, in

which case the music listener will prefer their own music (see also chapter 3). The latter, however, does not always work, because sometimes the music in the environment is so loud that it would penetrate the auditory bubble and the listener has to manage two different pieces of music simultaneously, which is not a positive experience, either, and so they decide to turn off their own music (see Max' statement below). Thus, the listener constantly has to negotiate between their desire to listen to music and the demands that come from their environment, which is also the case when it comes to social interactions (see chapter 7).

> I would definitely notice in a clothes shop. Because as you say, this is definitely louder. And if I like the music that's playing, I usually take off my headphone and then put it on when I'm back outside. (Jane)

> But if I'm walking through an environment where music is playing so loudly that I can't listen to my own music, then I put my music off. (Max)

Often participants have their own music playing and are so absorbed with it that they do not notice whether or not there is music playing in the shop, especially if the shop is entered while already wearing headphones. In this case whether or not there is music in the background (or not so background) does not change the respondents' behaviour. Additionally, some listeners want to stay in control of what they are listening to, which means that they keep wearing their headphones on purpose, as Max does.

> E: If you have like go to a shop and sometimes they, like clothes shops especially, they have music playing in the background like radio or their usual CDs or stuff.
> K: I don't notice, because I already enter with my headphones in. And I only take them off when I have to go to the cashier. (Koko)

> E: And if you listen to music and you go into a shop where there is already music?

> M: No, I wanna listen to my music. (laughs) Not to music that is decided by someone else. (Max)
>
> I never pay attention to that actually. I couldn't tell. I never pay attention to the background music. I just completely ignore it. (Ben)

The fact that certain people are more likely to prefer certain music is used by operators of public buildings and places to deter particular groups of people, for instance, the central station in Hamburg plays classical music through speakers to keep the homeless at bay (Rehberg, 2011) and there have also been experiments in the UK where music is used to scatter crowds (Cook, 2013). Some prisons are taking this a step further still. They use very loud music as punishment, because it keeps prisoners from sleeping, communicating, and even thinking, stopping them from creating subjectivity, and therefore destroying their identity (Cusick, 2013, p. 282). These are very drastic examples of music experienced as pollution or unwanted presence. They prove the point that music is not always experienced as something positive. This is true even for mobile music listeners who are used to having music available at their convenience.

Not only music itself, but also the sensation it creates for the listener, the sense of isolation, can be perceived as negative. When asked about situations when he would not choose to listen to music, Ben said this:

> And sometimes, very rarely, when I just don't feel like it. I'm not going to - ah no. Sometimes enjoy when you walk through the city it's nicer. You get the atmosphere when you don't listen to music. Because otherwise you're really stuck and you don't interact with anyone else, you're in your own world. So sometimes when I feel like - ah, maybe I should pay a bit of attention to the outside world - then I wouldn't listen to music.

He also appears to refer to music as a layer that distances him from what is happening around him. Here the auditory bubble (Bull, 2005) is not a positive thing, that keeps a listener in a pleasant state of mind, but acts as a distraction from surrounding sensations and keeps the mobile music listener from

experiencing the authentic “atmosphere” of their environment, to use Ben's words.

However, sometimes it is also the excellence of a musical performance that leads the mobile music listener to abandon their own music. Some participants of this study mentioned that they would stop their music and listen and watch buskers, which happens out of curiosity (Jonathan), admiration (Koko) and simple enjoyment of the music (Annabel).

> E: And what happens if there are like street musicians or there is music in the street, would you choose to listen to your own music or would you listen to the music that's there?
> J: It depends. Depends. I may turn my music off and start listen to them. Just for curiosity. And to recognise the hard work of someone else. (Jonathan)

> E: And if you go like somewhere where there is music playing in the surrounding, like I think today there are like some in the city centre somewhere?
> K: Yeah, yeah, yeah. Sometimes I stop there, sometimes I film them. I like to like there are some that are really actually good, quite good. And you stay there, and you wonder like - what the fuck they're still on the street? They should be in the studio. They should be recording. That's real music. That's nice music. (Koko)

> I noticed the guy outside Boots playing the Jazz music. That was really good. He was really good. And I enjoyed that, so I actually, you know, stopped my music and listened to him. (Annabel)

In general, what makes the participants want to stop listening to music is not often a negative aspect of the music itself, but rather something else altogether, like a specific activity, the environment, or the mood the listener is in or wants to achieve/avoid. The most often mentioned activities that made participants choose not to listen to music were grocery shopping, clothes shopping, and actively deciding to go for a walk.

> Yeah, but when I'm buying clothes I, no I don't listen to music then. Then I'm a bit more engaged than with buying groceries. You have with clothing of course - do I like that, don't I like that, so it's a bit more of an effort. With groceries, ok - I need some pasta. That works with music. (Ben)

> 'Cause I'm concentrating on the shopping, so when I'm walking that's the time when I can just have headspace. I'm not doing anything specific but walking, whereas when I'm shopping I probably listen to it less. Though it has been quite fun sometime. And also shops have music in them, don't they? (Annabel)

> And in H&M I think, so when you're changing, you can't have your earphones in (Annabel)

Shopping is an activity that requires mental effort, which is why some of the participants reported that they would choose to turn off their music for that. However, it also seems to depend on what is going to be bought: According to Ben, grocery shopping does not require as much effort as clothes shopping, therefore he can listen to music while carrying out the former without it affecting his shopping ability. In this case, the music does not distract him from concentrating on what he needs to buy. If, on the other hand, he needs to select clothes, he says he needs to concentrate on this activity, instead of just taking something that looks right, as would be the case in grocery shopping. The decision-making process in clothes shopping takes up more of his mental capacity and therefore cannot be accompanied by music without detrimental effects. On the other hand, going clothes shopping usually requires trying on the clothes, which makes it difficult to keep on wearing headphones, as Annabel pointed out, so listening to music is not an option in that case anyway.

Furthermore, going into a shop and being a customer means opening up to potential interactions with the employees there. If there is the possibility of a conversation happening many of the interviewed mobile music listeners would make themselves available for that, for example, Jane would take off one

headphone, so she could hear if someone is trying to talk to her and also give a visual sign that she is approachable. Ben would sometimes listen to music in shops, but says that it would make him feel uncomfortable, because he perceives blocking off potential interactions as rude. This impression is the reason why he usually does not listen to music when going clothes shopping, as can be seen above.

> So if I'm going into a shop, just for a fact of good manners I would probably take off one just in case one of the shop assistants asks me something and I don't want to be rude and so - don't talk to me. (Jane)

> Sometimes I go shopping with music, yeah. But I usually feel strange listening to music when there are people around and when I should interact with them. (Ben)

Additionally, there are certain activities that are done for the activities' sake and not out of necessity. In Ben's case it is long distance walking, when he goes out to enjoy the walk itself. He distinguished between walking for fun, when he would not choose to listen to music, and walking to get somewhere, in which case he would prefer to use his mobile listening device:

> If I genuinely made the decision to go into nature to go for a real walk, I would never listen to music. Never ever. For instance I like to do long-distance walks, I did the way of St James and stuff like that. […] So it's like a forty day walk and I would never listen to music. 'Cause then it's about me enjoying walking. And I know it would totally ruin my experience if I was listening to music doing something like that. Or when I go to Dartmoor I would never listen to music. It's more like when walking is a necessity [...]. (Ben)

Walking on Dartmoor brings us to another important factor which seems to influence the choice of listening to music or not: the environment. Many of the participants said that if they were walking in the countryside, they would not listen to music, as opposed to walking in the city.

> Yeah. If I would be like walking, yeah, because if I walk in nature, then I'm there to walk in nature and then I wanna experience nature and then I wouldn't want to listen to music. (Max)

At this point it should be clarified that all the music listening participants lived and worked in the city, while four of the non-users of mobile listening devices reported living in more rural areas and that their main reason for not listening to music is that they want to experience where they are and enjoy the sounds of nature. In this case, the reason why they were non-listeners was closely related with where they lived, however, this is not a main difference between the listeners and non-listeners, since only four out of eleven non-listeners did not live in the city. The city where these studies took place is relatively small and can have a rural ambience in certain areas. It would have been interesting to compare the answers of participants who lived in the more “urban” parts of the city to those who lived in “rural” areas of it. But since this was not a question that was asked, it would be a task for the future to discover differences in music listening behaviour between urban and rural areas of the country.

Ben's and Max's point is, that if an activity is a chore then music listening helps, but if it is enjoyment, music listening might distract. The music listening participants' everyday life takes place in the city, so they have likely done all their chores that take them about the city many times, and need music to distract them from the sameness of it (see also chapter 3). If they go to the countryside, however, it is out of the ordinary and they are probably there for the sake of being there and not out of duty. Then the “tourist gaze” as Urry (2002) called it, comes into play. The environment is experienced and studied actively and not just as something that has to be navigated (Bull, 2012). In this case they choose not to listen to music, to perceive it more fully, which is exactly what Hayley seems to be experiencing with paths she walked along very often, and new routes:

> If I've been to the same place like many times and I listen to music, it will make it different depending on what I'm listening to. But then if it's the

> first time I go there, I want to experience it as it is and like the sea, the waves, the wind, the people shouting. (Hayley)

Not only does whether or not one wants to listen to music depend on the environment, but, according to the answers of the participants, it also relies on, broadly speaking, the circumstances of the environment, i.e. what the weather is like and whom you are with. As mentioned before, if someone engages in an activity together with a friend or partner, they will very likely not listen to music over headphones (see chapters 7).

> When I was working in another place, on this printing spot, working with books, doing books and everything, there was a lot of noise in the in the place. So we used to put headphones in with music, but with all that noise, and we needed anyway earplugs for like, you know, not fucking up our ears, there were times when I didn't listen to music. Maybe because I didn't have battery on my cell phone or my MP3, or maybe I just didn't want to listen to music. And I noticed the thing (laughs) with all that noise - there even was the radio plugged in on high volume, but you didn't manage to hear it so good, because of the noise. When I was putting my headphones in, I was able to hear better the radio. (laughs) (Koko)

Here Koko did not want to listen to music for one reason or another, but had found out, that if he was wearing headphones without music, they would enable him to distinguish surrounding sounds more easily. Something similar was mentioned above, where Anne listens to music over headphones to reduce the sound levels of the surrounding noise to a tolerable niveau, which enables her to hear and discriminate it more effortlessly.

The exact opposite is achieved when Anne wears her headphones without listening to music. In this case she does it to block out and reduce the surrounding noise without wanting to listen to music at that moment. It is very interesting how different people see the same activity and even do the same thing but for different purposes. Wearing headphones while not listening to anything might be perfectly normal for Anne and Koko, yet when I asked Ben

whether he chooses to do the same, he was baffled by the whole concept of doing something like that:

> Yeah, exactly. To be honest, sometimes I wear them, and I have nothing playing, you know. And it's just lovely to have that buffer from the rest of the world. (Anne)

> E: Ok. Do you ever walk around with just your headphones in without anything on?
> B: No, no, because I find headphones actually a bit irritating, so if I don't listen to music I don't have them in, no.
> E: And when would you
> B: Do people do that? Walk around with headphones...
> E: Yeah, some do. Just to ward off other people, probably. (laughs)
> B: Ok, aah. Ah that makes sense, thanks for the (laughs). But, no no, I wouldn't do that. (Ben)

Ben's reason for not wearing headphones without listening to music, apart from not being aware of that concept, was that he finds his headphones to be irritating and therefore only uses them if he chooses to listen to music. There were several more instances described by participants that give other device-related reasons for not listening to music. Jonathan, for instance, comes from a country with very hot summers, so he chose not to wear headphones during this time of the year, because it was too hot to be comfortable. Michael does not wear headphones very often, because they are big, which makes him self-conscious, and he also finds them uncomfortable after a while. Max chose his headphones to be noise-cancelling, so if he has to wear others that are not noise-cancelling, he would prefer not to listen to music, since the noise would overlap and interfere with his music listening experience.

> And it also just depends if the MP3-Player is readily available, because sometimes, you know, this the headphone can get wound up and it happens quite a lot and if I'm in a rush or if I'm a bit upset I don't feel like spending three minutes of my walking looking at my hands trying to

figure it out, so that might be another reason why I sometimes don't listen to music. (Ben)

E: And if you're walking around, why don't you listen to music?
M: Because I haven't got earphones I like. More than anything else. Em .. with this phone I got some earphones that go right in your ear and I find it uncomfortable. So the earphones that I do have are quite big and I feel quite conscious about wearing them around. So just more about being embarrassed perhaps. (Michael)

But maybe not in the summer, because the headphones were just too hot. Burned my ears and it's not a good feeling. (Jonathan)

So I needed to have a piece for outdoor and those are the in-ear ones that I like the most, because I really want to be blocked from everything. It's all or nothing for me. I don't want to have just music in the background, I'd rather then switch it off and listen to the world, but I don't wanna have the world with music in the background. (Max)

Another reason for Ben not to listen to music occasionally, is that the headphones get tangled and he does not want to spend time unravelling them, or that the distance to where he is going is too short to start choosing music and putting on his headphones.

Now I've moved closer to uni, it's only ten minutes' walk and I don't think I do anymore. I definitely listen less to it.
E: Ok. You don't want to bother taking it out, because you're
B: Yeah, exactly, that's the thing. Yeah. (Ben)

Occasionally the decision to listen to music or not depends on one's mood, too. Jonathan sometimes needs some quiet time to think things over. Here, again, the difference between highly and less engaged listeners shows. Koko and Thomas, on the one hand, who had been mentioned earlier as participants who do not like the silence at all because it makes them think about things they do

not want to delve into, could be classified as more engaged listeners. They spend a lot of time listening to music, know exactly what they want to achieve through mobile music listening, and spend a lot of time searching for new music. Jonathan, on the other hand, would be described as a less engaged listener, because he mainly listens to music out of habit and chooses to listen to other people's playlists instead of creating his own. This reason for listening to mobile music and the content of his device are two additional factors that point towards the hypothesis (which still needs to be proven), that more engaged listeners have more difficulty handling situations where they are forced to be without music, than less engaged listeners, like Jonathan.

> I'm not listening to music every day, every time, every second I walk. So it's just, I don't know, it probably depends by what I feel inside. What .. maybe if I'm worried, I have to think about something, I decide not to listen to music. (Jonathan)

The reason Max sometimes chooses to turn off his mobile listening device is because he gets bored with his playlist and decides to rather not listen to anything at all:

> Yeah, well sometimes I'm just bored of my playlist, because they are just the same songs and sometimes I just can't think of what song or artist or what music I am up for, and when I'm undecisive of what to listen then I just come to the conclusion that I don't want to listen to music at all, and then I just take it off. So sometimes I just get bored of it. (Max)

Interestingly, he changed his behaviour after his first interview, or rather, he turned the plans he had talked about into action. So he decided to actively look for “hidden gems”, as he called them, which he has in his music library, but has not listened to for a while. Since this is an enjoyable process with likely many positive surprises, Max is now looking forward to listening to music and will probably not turn off his device out of boredom anytime soon:

> So these are songs I haven't played in a while, but I didn't skip more than twice, so they are potentially good songs. Yeah? But not played in two years. So that's going to surprise me, and I look out for these kinds of surprises. (Max)

Some of the interviewees did not only listen to music, but podcasts, and the radio (which often includes talking), too. One person even watched videos while walking around sometimes. In these cases, the participants also chose not to listen to music, but since they decided to listen to (or watch) something else instead, this would not answer the question, when they would prefer silence to music, and is therefore going to be covered in a different chapter (chapter 5).

There was only one participant who reported never wanting to actively stop listening to music when she walks around by herself. The only exception would be if she met someone she wanted to talk to, in which case she would “just switch it off and talk to them”.

> E: […] And do you ever not listen to music? Like on purpose?
> J: Em .. that's a good question. No, I don't think so. Never happened.
> E: So you wouldn't just think - ah now it's too much. I'll turn it off. Or - ah, it's so nice here, I don't want to listen to music. Or something like that?
> J: No, no, no, no. I don't think so. No. (Jane)

4.4 Non-listeners' experiences with mobile music listening

In their interviews, all the non-users of portable listening devices were asked about previous experiences with using these. The aim was to discover their reasons for not listening to mobile music. One of the main findings was that all the non-users listen to music at home or in their car, so not wanting to listen to music in general could not have been their reason for not using portable listening devices. Only one of the non-listeners reported not listening to music at the moment, but that was due to circumstances: he had just moved to a new house and did not have a device with which he could play music. He would therefore belong to the 'excluded' group of non-users, Wyatt (2005)

characterised in her research. It became apparent that nine of the eleven participants of the second study had at one point used a portable listening device or had at least tried using it, while two interviewees explained that they had never used such a device before, even though they would technically have one at their disposal. The former fulfil the definition of Wyatt's 'rejecters' while the latter resemble the 'resisters'.

To the question of why they stopped using their mobile listening devices, different answers were given. One of the main reasons for stopping was getting out of the habit, without any conscious decision about it being made. Or in Steven's words:

> So it wasn't a conscious decision I think. I think I just suddenly maybe forgot to take it to work one day so I cycled without it and then the next day I thought - oh, I don't need that. I don't need that. And then eventually[..] when I moved house it went - it's [the MP3-player] around somewhere, but I never really searched for it or anything like that. But there was nothing particularly that made me stop. (Steven)

Another reason for ceasing to listen to mobile music was the way it affected them. Agatha (28) mentioned it made her feel "very isolated to go around while listening to something else", and Julia (61) stopped for similar reasons:

> I plugged myself in and I felt quite claustrophobic, because I felt I wasn't part of the world. I felt that I was in my own little world, in a little bubble and I couldn't hear what was going on and I like to know what is going on around me. (Julia)

Similar to mobile music listeners, non-listeners chose not to use their devices anymore due to reasons related to their environment. Some participants focussed on the fact that headphones block out sounds that might be nice to listen to:

> It's nice just hearing everything going on, but to be fair where I lived at home it's a lot more countryside, so you get a lot more different sounds, which is nice. (Steven)

> I do have an iPhone as well, I could put it on there, but I've never done that. I like looking around and hearing the sounds around. I love going to Dartmoor and if you listen to music while you walk on Dartmoor it's not quite right. You need to take in the sounds and smells of where you are. The birds flying and, you know, that's what I like. It's very restful. (Julia)

> I don't want to sound critical, but I wonder whether they're missing out, I sometimes think maybe you are missing out on hearing all the other sounds that are around you. And if you're in the countryside, if you're going for a walk and you're just listening to music you are missing the other things that are sounds, like the birds, you know, sounds a bit tweed isn't it, but and the sound trees in the wind, you know. (Johanna)

Others did not like the feel of the technology itself, i.e. wearing headphones or the sound quality of the music that was listened to:

> J: I tried it and it is .. I just didn't like the sound on it and I didn't feel right just listening like that. Just strange, isn't it? I just didn't like it.
> E: Yeah. So was it also the feeling of having earphones in?
> J: Yes, yes, I didn't like that either. (Johanna)

Mobile music listening is therefore experienced as being too intrusive, either because it changes the experience of listening to the environment, or because it is perceived as unpleasant in itself, which corresponds with the reasons Wyatt (2005) found for non-use of the internet or mobile phones. In Isabel's opinion, mobile music listening is a distraction and consumes time that could be otherwise used more purposefully.

> Of course, well, to be honest, when I think about these people, I think they are very lazy. It's a reality for me. Because I think they are hiding

> from their problems and they, especially men, they are so focussed on listening to music or playing games or whatever they do, just to not live the reality of their lives. They are ignoring the problems and keep going like this and in my opinion, I used to tell my nephew all the time, you are listen to too much music and you don't pay attention at your life. You waste your life like this. (Isabel)

For similar reasons, mobile music listening is not a priority at the moment, because it distracts her from her studies and takes up valuable thinking time when commuting to work. She explained it this way:

> I used to love music, I mean listening to music, but since I went to study more, I need to pay attention to study. So .. I had to give up something. And that was the first thing I gave up.

Additionally, Isabel used to use music to accompany her running, but she stopped this for the following reason:

> And when I thought about running and listening to music myself at the same time, I found it very difficult. Because I used to lose my headphones all the time. They weren't very good, you know. I was so frustrated. Really frustrated.

As mentioned before, the reasons for not listening to mobile music for the interviewed non-listeners was not related to not liking music. Although it was ruled out here, not liking music could be a cause for other people for not wanting to use mobile listening device, since not deriving any pleasure from listening to music – or musical anhedonia – has previously been discovered (Mas-Herrero et al., 2014) to be independent of general anhedonia, which is often found in connection with psychiatric disorders. Mas-Herrero et al. carried out a study where they found that the reward systems of healthy individuals without general anhedonia is activated in a monetary reward task, and not when they listen to music. In a previous study (Mas-Herrero et al., 2012) the researchers have observed that musical anhedonia occurs in 5% of healthy

adults without any brain damage or psychiatric disorder, so it is a relatively seldom phenomenon.

An argument could be made that there was an age difference between the listeners and the non-listeners which could account for the contrast in behaviour and opinion. The listeners ages ranged between 20 and 42 years, with an average of 28,36 and a standard deviation of 7.34, whereas the non-listeners were between 28 and 76 years old, averaging at 45,82 years with a standard deviation of 16,49 years, which shows that the listeners were a more age-homogenous group than the non-listeners. According to (Herbert, 2011) and (DeNora, 2000), people aged 70 years or over or, in DeNora's study, older women prefer to listen to music without doing anything else at the same time, which would explain why one non-listener does not like mobile music listening, although this participant did not mention this as a reason for her behaviour. Lepa (2014) carried out a study of the use of music-related devices in Germany and found that people under the age of 57 use headphones to listen to music more than those over 57. Even if this were the same in the UK, where the present studies were carried out, this would only account for the preferences of 4 out of the eleven participants of the second study. Interestingly, Krause et al. (Krause & North, 2014) discovered no correlation between age and music technology use in their study. Nevertheless, when it comes to selecting the music one wants to listen to, another study of Krause et al. (2014) concluded that older people preferred to listen to the choice of music presented to them through the radio, while younger people chose to shuffle their music on the devices they were using. Which age the researchers define as “older”, however, is not clear. Very likely these findings correlate with the studies of Herbert and Lepa and would therefore not explain why there were non-listeners under 57 years of age participating in the present study.

While age does not account for the difference between participants, and rural versus urban living had been excluded as an explanatory factor earlier in this chapter, personality might be an indicator of preferences for mobile listening devices. Studies have found that the reasons for listening to music are connected to personality traits, especially with regards to emotional uses and musical preferences (e.g., Chamorro-Premuzic & Furnham, 2007; Juslin et al., 2011; Rawlings & Leow, 2008). Could personality therefore also explain why

people choose to listen to mobile music while others do not? There was not enough information collected in this study to answer this question, but it might prove a promising avenue to explore to find out why some people do not like listening to mobile music.

Evidence of the connection between reasons for disliking mobile music listening and personality can be found in the research of (Kallinen & Ravaja, 2007) who compared listening to news via headphones with speakers in an experimental setup. Their findings indicate that 60% of the participants preferred the headphones to the speaker condition, and that valence was more positive and attention higher for the headphones condition. Additionally, extraverted participants scored higher in attention and arousal in the speakers, although they did not say they preferred speakers over headphones. The authors relate these results to the close interpersonal distance implied by headphones and the better access to a variety of stimuli when listening to speakers. Since this experiment was carried out with business news as the auditory stimuli, it would be intriguing to see whether the same would be true with music or whether other factors come into play then.

To clarify, it should be said here that not all the non-listeners in the second study disliked mobile music listening. Some of them can relate to listeners' choices (see chapter 3) and would select to listen to music themselves, but are prevented from doing this by the circumstances. Maria, for example, takes the car to work and back and therefore does not have the opportunity to listen to mobile music, and Paula prefers to talk to someone on the phone or in person while she is walking and thus cannot listen to music at the same time.

One reason why some people might choose not to listen to mobile music, is the format and quality of it. The so-called audiophiles - "hi-fi enthusiasts who make home listening to music on high end audio equipment a prominent feature of their cultural consumption" (O'Neill July 2004) – would likely not listen to music on mobile listening devices, since most of these are MP3s and audiophiles lament the low quality of this format. Yet, while the preference for a high audio quality that comes as close to live music as possible is a reason for not wanting to use portable listening devices with low-quality formats, none of the participants of the second study indicated that this might be the rationale for

their music listening behaviour. It should, however, be considered in further studies about this topic.

Since there is no research directly related to reasons for not wanting to listen to mobile music (or music in general), I searched the internet for possible answers to this question. A user had started a forum discussion with an informal poll on the question “What's your opinion on MP3 players?” (PaulKTF, 2010). He got 624 answers, most of which indicated that they had an MP3-player (76,1%), will buy one (1,6%), will not buy one (19,9%), or are still undecided (2,4%). When looking through the forum at the discussion about reasons for wanting or not wanting to have or use a mobile listening device, several topics emerged. The main reasons for preferring MP3-players were the ease, efficiency and mobile flexibility of these devices, the high amount of music that can be stored on it, the chance to create different kinds of playlists, the possibility to have everything in one place and the size of the device. On the other hand, arguments against the use of MP3-players were the following: not enough time to transfer the CD collection into MP3 format, dislike the earbuds, low sound quality, a preference for ambient noise, no opportunity to use it, and a partiality towards physical media, such as CDs and vinyl. This forum was very informal, which means that there is no information about the demographics of the users or their everyday music listening behaviour, nor can peer influence be excluded as an influence on the arguments or the vote. However, it gives a first impression of the arguments used for and against mobile music listening, some of which were confirmed in the present study, for example, the preference for ambient sounds and soundscapes, the dislike of earbuds or headphones, and the lack of opportunity to use a portable listening device. To discover more about reasons for not wanting to use mobile listening devices, a larger qualitative or a quantitative study based on the results of the present study would be recommended.

4.5 Conclusion

In summary, this chapter shows that studies of mobile music listening should take non-listening into account as well, since it provides a different point of view on listening and broadens the knowledge about decision that mobile music

listeners have to make in their daily lives. Studying non-listeners also revealed important insights, showing that choosing to not listen to mobile music often is not related to the music itself but to the effects of mobile music listening on the listener and their environment.

It was discovered here that mobile music listeners behave in very nuanced ways not only with regards to listening to music, as will be discussed in the coming chapters, but also when there is a decision to be made about whether or not to turn off their device. Listeners choose to not listen to music when they start to experience music as something negative, during specific activities, in certain environments, and when the physical experience of wearing headphones becomes uncomfortable.

However, it also turns out that whether or not the music is turned off is not always a choice. Sometimes the listeners are surprised by a drained battery or broken headphones and then have to find other ways to manage difficult situations. Being suddenly without a device clearly reveals to them how they rate the importance of it in their everyday lives and points, once again, at their reasons for mobile music listening. At the beginning of this chapter it was illustrated that the more important mobile music listening is in someone's life, the more detailed their strategies to avoid being without music. These listeners think ahead, charge their devices regularly, buy devices that will likely not run out of battery quickly, and even take a second device/headphones with them in case one breaks or runs out of battery.

Four reasons were mentioned by non-listeners for not engaging in mobile music listening. The main reason was the feeling of isolation that comes with listening to music over headphones, which they experience as negative. Additionally, wearing headphones can be uncomfortable, music can be a distraction from thoughts, and some non-listeners were listeners before and got out of the habit. As mentioned in the introduction, it transpires that although listeners have the tendency to listen to mobile music while non-listener tend to not listen to mobile music, the difference between them is not as great as it seems, or even they think it is. Some non-listeners understand why a person would listen to mobile music, and most listeners choose to turn off their device at some point, so they have several reasons in common, be they for listening or not.

5 Choice of music

5.0 Introduction

After focussing on reasons for engaging in mobile music listening behaviour and when this is stopped, this and the following chapter will examine listening behaviour in more detail. Since music was found to effect the listener in many different ways, one of the most important questions to ask in that regard it what music the listener is listening to. This chapter will therefore explore a mixture of different topics, which are all related to what the participants choose to listen to and how they find the music they put on their devices. Listeners differ in their engagement with music, as was found by Greasley and Lamont (2011). This notion will be further supported and expanded through evidence from the present study. Specifically, the differences between listeners in their engagement with music will be shown in relation to how often they change the content on their portable listening devices, and parallels will be drawn to other chapters to show that Greasley and Lamont's listener types apply here as well.

The chapter will start with an overview of the kind of music participants prefer to listen to and will then delve deeper into the topic of listener types. The last part of this chapter investigating the sources of music for the listening devices will also take listener types into account.

5.1 Content

The original aim of this study was to find out how the experience of mobile music listening relates to the music people are listening to. Asking the participants about their musical preferences during mobile music listening revealed a new but not surprising insight. To summarise: whatever music participants like to listen to in general is also used through portable listening devices. The choice of music does not just depend on whether it is listened to on the go or not, but the activities carried out and the mood the listener is in, amongst other factors. Mobile music listening fits seamlessly into people's general music listening behaviour, in a way that allows them to be more flexible and independent from certain spaces like home, where stationary listening devices determine the listening experience to a point.

There are obviously certain things you can do while carrying a portable listening device, which you cannot do while at home, for example, running, moving through different environments, or commuting by public transport. Using portable listening devices leads to a broadened range of activities which can be accompanied by music, but the music still fits into the categories of musical preferences of the individual. The following quotes give an indication that what is listened to is independent from how it is listened to.

> Feel Good Friday kind of Happy Hits or ah Autumn Leaves it's just all kind of mood dependent how you feel. (Annabel)

> E: What would you listen to then?
> A: It'd probably be in line with my periodic taste. (Anne)

> I want to make sure I always have access to whatever I want to listen to. In case I go like yeah, I want to listen to that song, and it rarely happens, but sometimes I am in the mood for a very specific song and I need to make sure I have access to it whenever I want it. (Max)

> To be honest I haven't got any specific type. So I listen to the music I feel like listening at the very moment. It really depends. When I go cycling I listen to more energetic music. When I'm at home and want to relax I listen to, you know, chilled music, so it really depends. (Thomas)

Specifically, what participants of the first study listened to ranged from House (e.g., Oliver Heldens, Kygo), “clubbing music” (e.g., DJ Tiesto), Classical music (e.g., Mozart, Vivaldi), Pop (e.g., Bloodhound Gang, Sam Smith), alternative Rock (Evanescence, Nightwish), alternative 80s music (e.g., Depeche Mode, Cure) and Metal (e.g., Iron Maiden, Pantera). The terms for the genres were the participants' own. Interestingly, while there were some artists that were mentioned by more than one participant (e.g., Sam Smith, Oliver Heldens), the respondents all had their own individual taste in music. Some, like Thomas or Michael, listened to a very wide range of music but preferred non-mainstream

music. Others, like Max or Annabel, liked very specific music but sometimes listened to something other than that as well.

On the other hand, the non-users of mobile listening devices prefer music ranging from Salsa music, Folk, relaxation music, Classical music, Jazz, “music from what I used to like when I was younger” (Josie), Pop (e.g., Ed Sheeran) and the radio. Since the music listeners usually had their devices with them, they were able to give specific examples for the genre they were trying to describe, while the non-listeners did not have that advantage and mostly mentioned genre names to answer my question.

Comparing these two groups of participants it could be said that, although their taste in music seems different, the range of music they like is equally wide. The difference is likely an artefact of interviewing only a small number of people, and my guess would be that, if I had a very large number of interviewees, there would not be any difference in musical preferences between the groups. Therefore, I would be hesitant to say that non-mobile music listeners, for example, prefer more instrument-based music as compared to mobile music listeners.

As was mentioned above, none of the interviewees differentiated between music they listen at home and music they listen to “on the go”. They always listen to music they like, which depends on something other than their location (e.g., mood or concurrent activities – for more information please see chapter 3). These findings confirm Dibben and Williamson's (2007) earlier research, who found similarities between music listened at home and while driving, and Heye and Lamont's (2010) study, who also discovered that listeners will always listen to music they liked and, because they carry their complete music collection in their pockets, are unlikely to listen to something else than they would at home. The researchers conclude: “Thus familiarity and liking are essential features of mobile listeners' personal soundtracks.” (ibid., p. 110). Koko summarised it very eloquently as follows:

> I don't think somebody would keep in there like music they don't like. I don't know. Sounds weird. (Koko)

5.2 Differently engaged listeners

In a study carried out in 2011 by Greasley and Lamont, it was found that not everyone uses music the same way in everyday life. Some people are more engaged music listeners than others in several respects. According to the researchers there are highly, moderately and less engaged listeners, who differ in their use and choice of music, the effect it has on them, and their awareness of that. In the discussion of their findings, Greasley and Lamont say that it would result in two different listener types, because of the "similarities between less and moderately engaged groups" (ibid., p. 63) which I also found; thus I will only differentiate between more and less engaged listeners from now on.

Since these two listener types are not confined to listening to music at home but can be seen as a general description of listeners in everyday situations and to some extent even in special circumstances, for instance, concerts, this approach is very useful to illustrate differences in general music listening behaviour. Furthermore, I agree with Greasley and Lamont that "music can fulfil different functions concurrently" (ibid., p. 45), which makes it a versatile tool in everyday life. This approach accounts for variations in music listening behaviour and explains how the same kind of music can be used in different circumstances and how that depends on the individual. Even though I did not have as many participants as Greasley and Lamont, who had 25 respondents, my interviewees fit into those categories, too. In table 4 you will see an overview of the music listening characteristics I found to describe more and less engaged listeners. In addition to the characteristics given by Greasley and Lamont, the answers of my participants led to several more distinguishing features, which are clearly differentiated in the table.

More engaged listeners	➢ **are very aware of what they want to achieve through music listening** ➢ **know exactly how to achieve it** ➢ **listen to music a lot** ➢ choose devices and headphones to enhance their listening experience ➢ use strategies to keep from being without music

	➢ spend a lot of time looking for new music, creating playlists and adding songs
Less engaged listeners	➢ **listen to music out of habit** ➢ **have less reasons for listening to music than more engaged listeners** ➢ **are more likely to hear music not of their own choice (e.g., someone else's playlist)** ➢ have likely listened to the same playlist for years ➢ find it difficult to explain their reasons for listening to mobile music ➢ are more likely to not have playlists, but a selection of songs on their device ➢ run out of battery from time to time ➢ choose to turn off their music more frequently than more engaged listeners

Table 4: More and less engaged listeners. Characteristics by Greasley and Lamont (2011), distinguishing attributes found in this study

I have identified four of the eleven participants of my first study to be more engaged listeners according to the features mentioned by Greasley and Lamont as well as other differences. One of their characteristics is that music is so important in their lives that they employ different strategies to keep from being without it (for more details, please see chapter 4). Anne, for example, bought a waterproof phone and Bluetooth speakers, which together with a power bank allow her to use her phone in nearly any situation without running out of battery. Thomas sets a reminder to charge his Bluetooth headphones and bought his phone for its battery life, Koko carries a second mobile listening device with him into which he could insert the memory card from his phone in case that runs out of battery, and Max makes sure to travel while sitting next to power sockets.

In comparison, the less engaged listeners do not have these strategies in place and sometimes end up in situations where no music is available. Although they are aware of the negative impact this might have, for example, that the advantages that come with listening to music are no longer available, they

resign and try to deal with the situation at hand, as Ben's and Hayley's answers to the question “What happens if you run out of battery?” show:

> I get really annoyed, but there's not much I can do, is there? So yeah, that's it. I curse myself and move on, pretty much. (laughs) (Ben)

> And then your battery dies. And you like - no, that's not happening. What do I do? - So you … 'cause I as I said, I tend to listen to it to make it a bit more interesting like doing up some mundane tasks. More interesting. But now I'm like – what do I do now? (laughs) And then the same old walk without my music. Ok. (Hayley)

The more important music listening is in someone's everyday life, the more that person makes sure to have a continuous listening experience through devices that match their needs. Less engaged listeners might put up with broken devices for a while, like Ben did (see below), but more engaged listeners employ strategies, that can be very detailed, to keep from being without music.

> E: How long did you have to go without earphones?
> B: Ah, about three weeks.
> E: Wow. How did that go?
> B: I know, it was basically laziness, because I never really found the time to go to town and buy bloody headphones, so like yeah.
> E: So you didn't listen to any music for that time?
> B: Not on my MP3-player, no. Of course, at home, yeah. Not while I was walking.
> E: Did that change anything?
> B: It was slightly annoying. But the thing is the old headphones weren't exactly broken, but they were like […] they're like on and off, yeah, so it's like ah, if you go like if you hold them like this it works a bit, so I tried to listen to music sometimes when I was bored, but it never properly worked. It was a bit annoying. Sometimes I made the effort, otherwise I just - ah, forget about it. No music.

As can be seen in the table above, another difference between more and less engaged listeners is that the more engaged listeners are often very clear on their reasons for choosing to listen to music in the first place. Koko, for example, knows exactly how the music will affect him and chooses it accordingly, while Anne clearly differentiates between crowdedness amongst friends and crowdedness amongst strangers. With friends she would not listen to music, while she does not enjoy being in a crowd of strangers and prefers music to distract her in that situation.

> If I'm too happy I try to put playlist that makes me happier. If I can. If it's possible. And I don't want to change my mood. So basically, it's all about happiness. (Koko)

> A: And then it's more about how crowded it is and how cramped you are and the fact that it's not a great social occasion. (laughs)
> E: Yeah. So, crowdedness is another reason.
> A: Yeah, I mean if it like, you wouldn't put it on like in the canteen, you know. Then, that's some crowded people you know, and you happily strike up conversation, that is more crowded strangers, you know. (Anne)

Less engaged listeners are less vocal about their reasons for listening to music and they go into less detail when talking about their experiences or situations that might lead them to listen to specific music. Ben gives the impression that he does not really care about what he is listening to as long as there is something that keeps him entertained. The same is valid for Hayley, who only mentioned that music keeps her motivated, but does not mention specifics.

> To get rid of the boredom, I think. That would be to have a nice distraction to have something in my ear, to have something to think about. (Ben)

> Or whenever I used to go for a run, I used to listen to music as well to just keep me motivated. (Hayley)

Of course, I chose quite clear examples to illustrate my point here. It is not always as easy to differentiate between less and more engaged listeners' reasons for listening to music. Mostly it is about an impression gained from the whole interview – how quickly they answer, how much detail they give in general, how much they have to say about a topic – that decides which group they tend to belong to, and this is difficult to show in a few interview excerpts without reading the whole transcript, which would go far beyond the constraints of this thesis. For this reason, it helps to take several characteristics into consideration and to compare the interviewees with each other before deciding as to which group they might belong to. Not all the characteristics have to apply for that to work, for example, Jane has a selection of songs on her device which has been there for years, she tends to run out of battery, and she does not have as many differentiated reasons for listening to music as Max, for example. However, she is the only participant who would never voluntarily choose to not listen to music, which apparently contradicts the aforementioned characteristics. Nevertheless, since more characteristics from the less engaged than the more engaged category apply, it is probable that she is a less engaged listener. As with all categories, the more attributes there are to describe a category, the easier it gets to identify someone as belonging into that category. The interviews carried out in the first study have added to the list of characteristics started by Greasley and Lamont (2011). This list, however, is likely not complete and more research into this could reveal more details that should be taken into consideration when looking at these categories.

When thinking about reasons why some people are more engaged listeners and others are not, the first thing that comes to mind is personality. McCrae and Costa (e.g., (McCrae & Costa, 1990) have found a way to comprehensively summarise all personality traits into five factors – called the “Five Factor Model” or Big Five. The traits mentioned there are: Openness to experience (“receptiveness to new ideas”), Conscientiousness (“differences in organization and achievement”), Extraversion (“preference for social interaction and lively activity”), Agreeableness (“selfless concern for others”), and Neuroticism (“proneness to experience unpleasant and disturbing emotions”) (all explanations come from Shaver & Brennan, 1992, p. 537).

Chamorro-Premuzic et al. (2007) carried out a quantitative study with over 300 respondents and discovered that people adopt music differently according to their personality type, for example, “open and intellectually engaged individuals” (ibid., p. 175) use music more rationally, while introverts engage with music for emotional purposes. Looking at the interviewees of my first study, without referring to a personality test to confirm this, it could be said that Anne is likely to be an introvert, who likes to listen to music to distract her from unpleasant stimuli, while Max probably is an extravert, who gives very rational explanations for his music listening behaviour. Yet, both fall into the “more engaged listeners” category. Therefore, it could be concluded, that Extraversion is probably not the explanation for the difference in listener engagement, although this would need further evidence.

One factor that could explain the differences found by Greasley and Lamont (2011) is Openness to experience. A possible justification for this could be that Openness to experience implies that this trait is what makes some people look out for the latest technological trends and incorporate them in their daily lives. All the participants of my study who fall into the category “more engaged listeners” were very technologically aware, which would correspond with Rogers' (1995) innovators in his classification system of technology adopters. Innovators, according to Rogers, “have more favorable attitudes toward new ideas“ (ibid., p. 201) and are therefore the first people to buy new products. While inquiring about the newness of participants' portable technology was not part of the present study, it would be worthwhile to compare the differently engaged listener theory to the technology adopter theory to find possible similarities and differences. The personality trait Openness to experience basically describes Rogers' innovators, which was also the conclusion Nov and Ye (2008) came to. The researchers had administered questionnaires to 121 respondents and asked about their personality and their personal innovativeness in IT (PIIT), amongst others. PIIT is a measure that shows a person's willingness to adapt new technologies (ibid., p. 2), therefore corresponding with Rogers' definition of innovators. Their findings suggest that Openness is a significant determinant of PIIT, which would support the aforementioned idea that this could be the reason why some music listeners are more engaged than others. This impact of Openness is especially valid for

mobile music listening, which relies on the use of various technology, for example, a device and headphones, which is constantly changing and improving.

Since the present studies did not include any psychological tests and, thus, the aforementioned reasoning is based on examples from interviews, carrying out personality tests, for example, in relation to more and less engaged listeners seems to be a promising avenue to take to get clearer and more differentiated answers to the question of why some people are more engaged listeners than others.

What we have seen so far in this chapter is that the distinction between more and less engaged listeners offered by Greasley and Lamont (2011) provides a useful tool to understand different engagement with mobile music and portable listening devices as well. Looking at mobile music listeners' behaviour in more detail allowed for an addition to previous characteristics found by Greasley and Lamont, and helped to better appreciate the different behaviour of listeners by offering a tool for comparison.

5.3 Sources of music

Another example of how listeners differ in their engagement with music can be seen when looking at the sources of the music they listen to. While some previous studies (e.g. Cunningham et al., 2006; Prior, 2014) offer insight into methods of finding new music, this chapter summarises these and new findings and provides in-depth explanations of unique behaviour.

With access to the internet digital media have complemented traditional ways of finding new music, such as in-person recommendations or having listened to a song on the radio (Tepper & Hargittai, 2009). A clear distinction between the two listening types (more and less engaged listeners) can be established when considering how active the listener is in searching for new music. More engaged listeners are more active, while less engaged listeners do not look for music that much or leave it to someone else to do it for them.

A very elaborate method of finding (new) music is used by Max, who owns so much music that he devised a plan how to find songs he has not listened to often or songs he had forgotten he liked. He takes advantage of the technical

possibilities offered to him by his devices and creates playlists from his own music based on different parameters. Max also spends additional time during the weekend to listen to new music and add songs he likes to his playlist. If he comes across any songs he enjoys during the week, that are played in shops for example, he records them using an app on his phone and then uses that recording and the information the app gives him to search for that song during the weekend, to add it to his playlist. Max seems to enjoy this activity, which agrees with findings by Cunningham et al. (2006) who discovered that "[c]reating a playlist or mix can be fun - the creator engages with their personal collection, browsing through it, sorting and ordering the songs, viewing the songs in light of a new idea (the organizing principle of the mix)" (ibid., p. 5).

> I don't know off the top my head what I've done, but I have a playlist that has at least two skips, and no more than two skips, and not played in the last two years. And songs that aren't already loved with the heart symbol or icon. So, these are songs I haven't played in a while, but I didn't skip more than twice, so they are potentially good songs. (Max)

> And what else I do and that I'm at home I usually, especially at the weekends, I like to listen to playlist that are selected by Apple Music for me to discover new music and when I listen to a song that I haven't known before that I like, then I press love and then it becomes in my playlist, so it's an ongoing playlist. (Max)

Thomas, who is also a more engaged listener receives music from a variety of different sources. He receives recommendations from friends, listens to radio stations from around the world, and is even inspired by music in video games. Recommendations from friends were found in a previous study (Prior, 2014) to be a reason for listening to mobile music, since it is a conversation starter and gives access to online-based communities (ibid., p. 33).

> I was playing a video game once and I really enjoyed the music. So that's how I get music. I don't know, I do a big research to get music. (laughs) I do not like mainstream music. (Thomas)

The efforts of the more engaged listeners stand in direct contrast to the way less engaged listeners come across new music. Cody, for instance, relies on his partner to put new music on his device, because he is not as technologically savvy as his partner. Cody's partner searches for new music all the time, so Cody benefits from that, because his partner knows him well and knows what he might enjoy. One of the characteristics of less engaged listeners is that they often have not changed their playlist in a long time, which clearly applies to Hayley, as can be seen in her quote below.

> [My partner] does like a service for me. Because I'm not really friends with Apple, I just like apples (laughs). I'm using that, because we got it. So [my partner] so often changes [the playlist] completely for me and knows me quite well what I'm listening. (Cody)

> I remember when I first started running, I still have that playlist on my phone and I'm sick of it and really have to change it. (Hayley)

Hayley's statement has its origin in the first interview I carried out with her. Interestingly, when I met Hayley for the second time to carry out the shadowing and the second interview, she mentioned that she had changed her playlist by adding more songs. She explained that the first interview had made her think about her music listening behaviour and, since, as she says above, she had planned to change her music for a long time, she finally got around to doing just that.

> 'Cause I realised that I'm very bored of the ones that I already had on there. So I would listen to them like almost every single day, so I was like - oh, I should probably add some more. (Hayley)

In general, not concentrating on the differences in engagement of listeners, this study has pointed at various ways how participants find the music they choose to listen to through their mobile listening devices. This search for music often involves actively sitting down at a computer or utilising a smart phone to use

search engines or music streaming services, but some participants also find music when they are walking around or spend time in shops and hear a song on the radio that they like and choose to look up, as has been mentioned above already. In a study carried out by Cunningham et al. (2007) participants were asked to keep a diary of the new music they encounter every day. Their results revealed “an astonishing variety of ways” (ibid., p. 86) in which people come across new music in their daily lives. The researchers mention the internet, computer, radio, TV, movie/DVD, in shops, live performances, CDs, MP3-players, ringtones, and even conversations that evoke an interest in a new song. Although participants in the present study did not mention all these means of finding new music, Cunningham et al.'s study proves that there are a lot more sources of music surrounding us in our daily lives than often assumed. While participants in the 2007 study mostly did not do anything with the new music they encountered, some interviewees in the present study, like Max or Jane, heard the new song and decided to add it to their own music library.

Anne, Michael and Koko referred to looking for something to listen to using online (streaming) services. Michael does this every day, because he uses the journey in his car on the way to work to discover new music, so he takes the time every morning to browse through the music app on his phone to find something he wants to listen to that day. This app suggests new songs and albums and he can then listen to them for free. Anne said that she searches for podcasts that introduce her to new music and, since she does not have any music on her device, needs to constantly refer to someone else's playlist or use criteria to narrow down the selection of music offered to her. Koko also finds music through podcasts put together by someone else. If he likes a song from what he heard, he has all the information available to then find it and add it to his own music library. This method of finding new music is part active and part passive; active, because it involves consciously browsing the app or a website that offers streaming services and having to think of criteria to narrow down the search, but passive, because the results are not just one song at a time, but a mix or an album, thus it includes listening through all of it, even though some songs might not conform to the participant's wishes. Often songs that are not liked can be skipped, but that depends on the streaming service, for instance, the free version of the online music streaming service Spotify only allows a

certain number of skips per hour. In the end, both Anne and Michael explained, they do not usually like all the songs suggested to them, which is exactly what Max said above, when he mentioned that he listens to Apple Music and then “likes” songs so that they are added to his music library, because it involves listening to a lot of music that might not be of immediate interest.

> E: So if you are looking for new music you basically take the streaming service and then just browse through.
> M: Yeah, and I'll do it in the morning whilst having my breakfast. I have a look for something new and then Bluetooth it in the car as I'm driving to work. (Michael)
>
> I was looking for something to listen to this morning and it's a new podcast that I found, so I've been mostly trying to sort of find out what it's all about and see sort of is the mix of a good quality and something I like. (Anne)
>
> Usually I find what I'm interested in on the podcasts I listen. And there are playlists and I find the authors and I can go straight to find the song and go to iTunes to buy it. (Koko)

Anne described how she wanted to find more songs of one particular artist, so the podcast she was listening to was based on that. Michael prefers to be introduced to something new, so he uses the criterion “new releases” or “new artists” to find music. A study by Krause and North (2016) discovered that most playlists are created based on “tempo, mood, genre, and lyrical content” (ibid., p. 1209) which is similar to what participants in this study mentioned. Once a listener has a found a song or an artist they really enjoy listening to, these might be taken as a starting point for finding similar songs or artists. Many streaming services, like YouTube, support this, because they are built in a way that suggests similar songs to the one playing at the moment, which is what some of the interviewees utilised.

> If I like something from this artist, after that I go and search other song by this artist. Or similar. Or collaborations of, for example, if it's a singer for example, singers in the music industry not all the times, they do their own compositions. They work in, you know, in featuring with others. (Koko)

Something that is supported by technology nowadays is hearing a song and wanting to know what it is to look it up afterwards. Max, Jane, and Thomas all sometimes find songs that way; Max through utilising his phone to record the song and tell him what it was, and Thomas and Jane through listening to the radio, where a song is often announced with title and artist. If the song is not announced, most radio stations have an online presence where it is possible to find out which song was played at what time. This feature allows the listener to go home and find the song again.

> No, sometimes when I'm out and about and I'm not listening to music and I hear it like on the speakers in a shop or something, then I use Soundout and I put the microphone next to the speaker, it's like and then I collect the music and I bring it home and then in the in the weekends I look through my Soundout library (Max)

> If I fall in love with a song or the melody for example and I listen to it on the radio and then I go back home after work, then I will probably look for that song, because I like the music and that's it. (Jane)

> I love tune-in radio, 'cause you get all the stations from around the world. So, once I chose a local Siberian radio station and I got so much amazing music, so many songs from there (Thomas)

Another way to get new music is through recommendations by friends or even, in Cody's case, having the partner add a new selection of songs to the mobile listening device, relying on them knowing one's own taste in music.

> E: So you exchange music, too?
> T: Literally on a daily basis.

E: [simultaneously] So you get music from other people, too?

T: Yeah. (Thomas)

Recommendations of new songs can also be made by strangers. In times of social media and the growing presence of the internet, there is a wealth of online platforms where people present the music they like. Both Koko and Max also create their own music, which they share with friends and add to their own music libraries.

I've got a special website. It's a Russian website where you can listen to the soundtracks that people have on their profiles. (Thomas)

In general, finding new music can be a very active process, for instance, when browsing other people's favourite music or looking up specific songs one likes to listen to. On the other hand, it can also be relatively passive, for example, when receiving music recommendations from friends or listening to the radio. Below, in table 5, is a summary of the ways participants of the first study mentioned finding new music. They are arranged along the line from very passive to very active. The purpose of the table is to illustrate how participants differ in their search for new music. It is by no means complete, nor do the various ways of finding music have to necessarily be in this order. As mentioned above, the

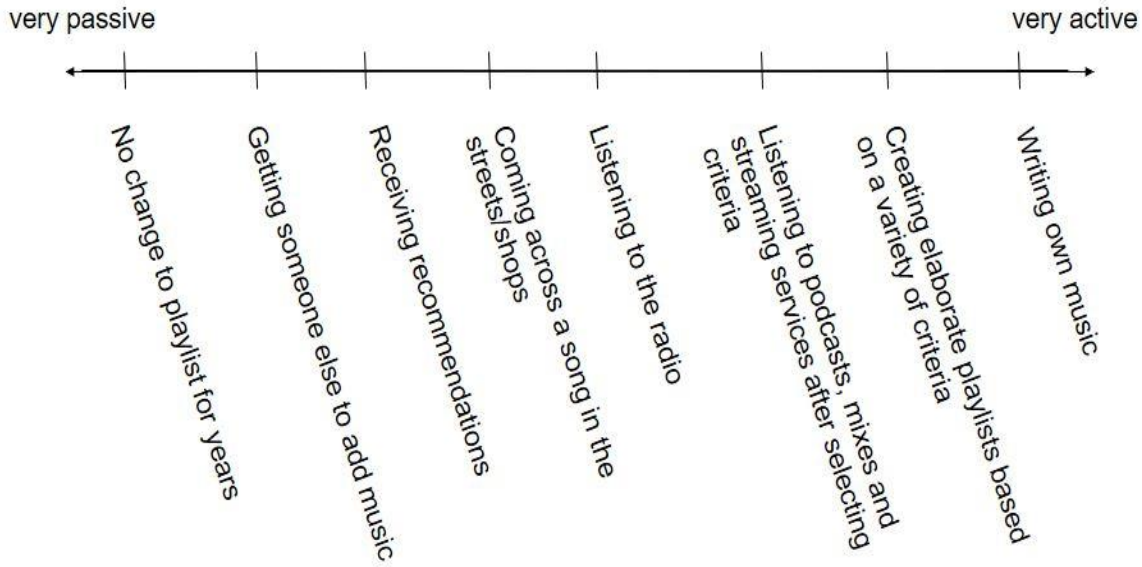

Table 5 Very passive to very active ways of finding new music

proactivity of listeners in finding new music is also an indicator of their engagement with music in general.

All these various music finding methods show that mobile listening is by no means static, but constantly developing and expanding, especially with regards to playlists. A few of the participants mentioned that they have had the same playlist for years, which gives them an advantage in knowing exactly which music they have available and where to find it on their device, but most of the participants are always trying to find new music in order to diversify their experiences, for example, alleviating boredom by adding surprises to their playlist or having something that better matches their moods.

5.4 Conclusion

This chapter clearly shows the usefulness of Greasley and Lamont's (2011) approach of differentiating between differently engaged listeners. This approach accounts for a lot of the variations in behaviour, although more quantitative studies would have to be carried out to prove this in general. However, for the purpose of this study, describing listeners in terms of more and less engaged succinctly puts the vague feeling of there being a difference between the interviewees into words and gives descriptions that help with the categorisation. Drawing on examples discussed more closely in other chapters, differences in listening types were explained, especially with regards to avoiding running out of battery, and how aware the listeners are of the goals they want to reach by listening to mobile music and how to get to that point.

Later, differences in engagement with music were discovered in the amount of work and detail the listeners put into the sourcing of new music for their devices. These sourcing differences lead on to a more general presentation of the range of activities that result in a change of the song selection, from very elaborate plans, to letting someone else take over the playlist compilation, to not having changed the music for several years.

This chapter shows once again that, although there might be general similarities between mobile music listeners, a closer look reveals that all individuals have a unique way of engaging with the music on their devices and the music that surrounds them. It is proof to the point represented throughout

the thesis that there is much more to mobile music listening, for instance, differences in choices of devices and their content, than is evident at first sight.

Adding to the literature, this chapter has revealed that there is no clear difference between the music that is listened to at home and the music that is played through portable listening devices. Musical preferences play a role in decisions at home and in public and these seem not to change according to where the listener is. Additionally, information found through the first study added to Greasley and Lamont's (2011) differentiation between differently engaged listeners and showed its usefulness in applying it to a different context. Furthermore, additions to previous findings related to the sources of new music were made, and examples from everyday life which provided insights into unique behaviours were given.

6 Ways of listening to mobile music

6.0 Introduction

It has been mentioned before in this thesis that mobile music listening is more than just walking along and deciding that it would be nice to have music playing, taking the device out and starting to listen to music. Over the course of this study it was found that music listening has to be prepared, meaning that the device has to be in working order, music has to be stored on it (see chapter 5), and the headphones have to be functioning and appropriate for the task at hand. To reach that stage a variety of devices and software are utilised, and these will be presented in this chapter. This chapter builds on the previous one, which illuminated the choice of music particularly, in that it explores how the music that is chosen is listened to and which prerequisites are necessary for this to happen.

Once the listener is on the streets, the decision-making processes that started at home or in a shop do not end. Apart from decisions regarding other people and the environment, which will be discussed in other chapters, the listener has the opportunity to change what they are listening to in situ, and has to choose a mode for music listening, such as, shuffle or in order. An array of combinations of sources of music and listening styles lead to a huge range of listening behaviours for the user to choose from. Even if it is known exactly what is playing through the headphones of a mobile music listener and which mode of listening they had chosen, it cannot be certain that the listener is focussing on the music that is playing. It might be that the music is a mere backdrop to the activity the listener is engaged in or listening to music could be the main activity itself.

This chapter will start with a discussion of the focus during mobile music listening, pointing out that it is impossible to get a grasp on interpreting the listening situation without asking the listener directly. The focus also depends on the listening mode and vice versa, which is therefore going to be explored next. The overview of listening modes will demonstrate that there are so many different possible combinations to be decided from, that the outcome, the listening behaviour, is very individual. This chapter will end with a discussion of the variety of the interviewees' devices and utilised software, which influence

the variety of listening modes and therefore the choices that can be made during mobile music listening.

6.1 Focus during mobile music listening

People who listen to music over headphones seem to do just that and it appears to the observer that the mobile music listener is immersed in their music to the exclusion of everything else, as the quote from a non-listener below indicates.

> And it's a bit unsociable as well. You know, if you're walking along with somebody you're not talking to them, are you? You're actually listening to music. (Julia, non-listener)

However, in the first study it emerged that observation does not reveal all there is to know about the mobile music listener. This is a very important finding which can change the way future studies look at mobile music listening or music listening in general, since it reveals that assumptions on behaviour during mobile music listening are not always correct. Firstly, it cannot be assumed that the listener even listens to music – they might be listening to podcasts for example, or just wearing headphones without listening to anything, to ward off possible attention. Secondly, even if they are listening to music, they might just have that running in the background and are instead focussing on the task at hand (see also Herbert (2011) who describes the possibility of a fluctuating focus during mobile music listening). Thirdly, if they are focussing on the music, it does not necessarily mean that every listener perceives it in the same way. One listener might only need the beat for the exercise they are doing, another might prefer the lyrics over everything else and someone else may want to have the best general listening experience possible. When adding in emotional experiences, memories, varied activities and reasons for listening to mobile music (see chapter 3) a very differentiated picture of mobile music listening arises. Therefore, it is not possible to know what is really going on in the situation without asking the listener themselves.

Some participants do not care very much what they are listening to, as long as there is music running in the background, while others actively listen to the music and the lyrics. Ben and Thomas, for example, would not be able to say what they are listening to all the time, because the main point for them is to have music there. However, during the shadowing session Ben was always immediately able to tell me what he was listening to, which could have been due to the nature of the study, since he expected to be asked about it and therefore paid more attention to the music playing through his earphones (see chapter 2 for an evaluation of the shadowing method). Music can support concentration on what is important in the moment, for example when going shopping.

> I just like the background sound, it's not really (laughs) not that into music in that it matters a lot what I listen to. I just want to listen to something. (Ben)

> Yeah, it's like, you asked me what was I listening to and I couldn't tell you, because, you know, when I go into a shop I want to, like, I know what I'm doing, so I'm like, it's difficult to explain, but I'm not fussy about what's being played. Because when I concentrate I just don't hear it somehow. Obviously I do hear it, but I can concentrate more when the music's there. Any music. Rather than without music. I don't really pay attention to what is being played. (Thomas)

Depending on the activity during music listening, the focus can vary, which is especially applicable for exercising. Two participants mentioned that they direct their attention to the rhythm, which helps them through the exercise and might even influence them to go faster than they would without music. Ben usually perceives the music as being in the background, but in circumstances like exercising, he listens out for the rhythm. Cody also noticed that while he does not pay attention to the lyrics, he is aware of the rhythm of the song playing on his device. He does not consciously decide to run to the rhythm, but he has observed that a faster rhythm makes him automatically run faster. This result corresponds with findings from previous research (Karageorghis & Priest, 2008; Nethery, 2002; Priest & Karageorghis, 2008; Simpson & Karageorghis, 2006)

where it was discovered that music can help with performance during exercise, because it distracts from the task at hand, regulates arousal, and reduces perceived exertion. Fast and upbeat music seems to have a particular performance enhancing effect (Priest & Karageorghis, 2008), while music with a medium tempo is preferred for endurance (Karageorghis et al., 2008). By contrast, a study carried out by (Leow et al., 2018) observed that no synchronisation happens during a walking task to music if the participant is not directly instructed to synchronise their movements to the music, which would contradict the previous findings and anecdotal feedback that synchronisation can happen unconsciously. However, comparing the experiments it seems that walking (in Leow et al.'s study) might not be as demanding as working out (in all the other studies), so participants might not have relied as heavily on the music to support them in their task. In the present study Ben and Cody used music not just during walking, but also during running and rowing, which would explain why matching their rhythm to the beat of the music was perceived as helpful. Karageorghis and Priest (2008) also give some useful advice on how to select music to successfully reach the aim of the planned exercise. During this selection familiarity and musical preferences should be taken into consideration, since half of the participants of their study (Priest & Karageorghis, 2008) used a mobile listening device in the gym instead of relying on the provided background music, which helped them reach their goals more easily. In the present study, Jonathan also preferred self-selected music over the choice of music in the gym.

> I mean especially rhythm. I think when I'm rowing you have this base - dup, dup, dup, dup, which kind of gives you a rhythm so this is what you need. So yeah, yeah, I think I pay more attention to it. (Ben)

> C: Like usual it's I like the background not really much. It's just more in the background than really listen the music. I'm not listening lyrics, I'm just noticing the tempo, the rhythm. And that sometimes pushed me for run faster or otherwise slower as well.
> E: So you run in the rhythm of the song?

> C: Sometimes, yeah, I do, I think. (laughs) Yeah, sometimes because I just notice on myself sometimes for me like for no reason I'll start run faster and that I think it's got consequences [i.e. coincides] with when it's the tempo faster I'll just start run faster as well. (Cody)
>
> And when I run on the running machine, yeah, I listen to music always listen to music. Also to cover the horrible House music that they put on at the gym. (Jonathan)

Hayley, on the other hand, said that there are times when she is exercising, where she does not have the opportunity to change the songs into something she might want to hear at that moment or the chance to think about what to choose, because she has to concentrate on her running technique, so she leaves the music on in the background. While she seems to like having music when she is running, the exercise itself prevents her from focussing on it.

> 'Cause I think especially 'cause I'm not a really proficient runner, like I haven't done marathons or something I still need to like be concentrated on the way I run, the way I breath. And so I don't have that much time to just skip songs and think about... And maybe sometimes you don't even, like I've had moments when I don't even notice what song is playing (laughs), 'cause you're so like so loud. (Hayley)

Even though there appear to be interviewees who do not actively hear what they are listening to, this is only true in specific circumstances, for example, exercising and shopping, and therefore not all the time. All the participants quoted above have mentioned other situations where they would concentrate on some part of the music or choose to listen to one specific song. Thus, it seems that the focus of music listening can vary from time to time, and situation to situation.

Jane, for example, would not have been able to identify what she was listening to while she was shopping, but knew exactly what was playing when she was just walking around. For Cody it depends on how much he has to concentrate on what he is doing. If he is out of practice then he might have to

focus on his running, but at other times he is able to listen to the music that is playing through his headphones. In addition to that, the music makes itself apparent to him from time to time when a new song starts to play. Ben, however, confirmed his previous statement that he does not usually focus on the music itself, but then amends it by stating that it depends on the situation, which he then explains further (see below). Bull (2005) describes his “auditory bubble” as something that engulfs the listener and keeps them from interacting with the outside world. The present research and previous studies (e.g., Prior, 2014) however, conclude that the permeability of this bubble depends on the user themselves. As mentioned elsewhere in this thesis (chapter 7) users can choose to listen using only one earphone or they can share their devices (see also Bergh et al., 2014), which would automatically make the auditory bubble penetrable because the other ear would be open to outside sounds. Even if listeners are wearing both headphones it does not mean that they are fully focussed on their music instead of their surroundings, as the examples below show. Thus, the auditory bubble seems to be more flexible than Bull (2005) implies.

> E: And did you listen to your music? Like did you actively listen to it or was it more in the background?
> J: It was more in the background. For example, if you asked me what was playing in my headphone I can't remember now. So it certainly was more like a background and it is really interesting, now that I think about it. (laughs)
> E: (laughs) But, just like for the other times, I could have interrupted you any time and you could tell me what it was?
> J: Yeah. When I was walking, yeah, definitely. I was actively listening to it. (Jane)

> Sometimes it's quite hard to start to run again if I had two weeks off, like it's been Christmas, I just didn't want to go that often, weather wasn't that great, and I just enjoyed more food, so after a while when I started run again, the first ten minutes are the hardest and I more listen to the music ever since I start run. I more concentrate for running unconsciously. Like

> I'm not thinking about, I'm just doing that. And it's depending on the music as well, sometimes when the track is change, I realise - oh, it's good song, and I'm just listen the song. Yeah? (Cody)
>
> E: So, you're not, you're not listening to the lyrics?
> B: Occasionally I do. But sometimes I don't. I fade it out. And so if I might come home after a twenty-minute walk and I couldn't remember any song I listened to. It was really just background. It was nice to have it, but I didn't pay attention to it. Maybe if I was thinking about something else. Sometimes I do pay attention to it. But it really depends. (Ben)

In addition to preferring music in the background and fluctuating focus on music, some participants like listening to music, which is why they engage in this activity in the first place.

Max, for example, emphasised that he would not have music in the background. If there is music, he wants to listen to it – listen solely to that, and nothing else. Michael, on the other hand, usually listens to music in his car and sometimes over headphones on the train where there is naturally a lot of background noise, so when he wore headphones while walking around for this study, he experienced the music as more immediate and was therefore more aware of it than usual.

> It's all or nothing for me. I don't want to have just music in the background, I'd rather have then switch it off and listen to the world, but I don't wanna have the world with music in the background. (Max)
>
> Yeah, because I'm usually listening to it in the car I'm perhaps more distracted, so now I was more aware of the music, because it's directly in my ears and not any other influence coming in. Yes, more aware of the music certainly. (Michael)

Interestingly, the participants who focus on the music itself are also the ones who prefer to listen to the lyrics when a song is running. While other participants might also have this preference, these two participants were the only ones who

put it into words. Thomas, for instance, explained that he likes listening to certain songs in crowded situations, because the lyrics match what he is experiencing, which he discovered during the shadowing. Other participants might have chosen their music because of the lyrics, for example, Jane, who decided to listen to her favourite singer because she loved the lyrics, but might have not been aware of that reason. On the other hand, the lyrics could have been the reason why a participant skipped a song with the explanation that it did not fit the mood at that moment. All the different factors immanent to music play an important role in creating mood, but lyrics are more explicit about the emotion being expressed and therefore have an influence, too. In a study carried out by Juslin et al. (2010) people were asked to name factors that influence their emotions when listening to music. After musical factors (45%), situational factors (27%), and memory factors (24%), lyrics were mentioned 10% of the time (ibid., p. 611). These findings would explain why not that many interviewees in the present study were aware of them, since other factors seem to be more prevalent and would therefore come to mind first when asked about potential influences on selection behaviour.

> It's a two way, sometimes lyrics are important and sometimes the melody is important or the way it's been produced. And ultimately it goes hand in hand and that happens for example, with the Ink Spots. (Max)

> It's nice to hear a song with words. I haven't been one for ever listening to words, but more recently I've been more aware of lyrics. (Michael)

> So she's singing about money and what's on her mind and it always really fits into the whole walking through town where people are. Just, you know, blinded with buying those clothes and those electronics and it just fits. Like and also Sam Smith Money on my mind, same. Those two songs really fit. (Thomas)

Nowadays music is often advertised together with a music video that relates to the music in one way or another. This practice leads some participants to imagine being in their own music video or the one that they had seen belonging

to the piece of music they are listening to. It seems that the practice of making music videos encourages listeners to pretend to be somewhere else, in their own world, that is different from the real environment they are in at the moment, or they might incorporate the real world into the imaginary one. Music has a way of “enchanting the more humdrum spaces through which we pass” (Beer, 2012), therefore making normal, everyday experiences more enjoyable. It can help the listener focus on something else, thereby eliminating boredom, and overcoming annoying sounds, for instance, Jane does not like to hear her own footsteps (see also chapter 3).

Music videos were first created as a promotional tool (Wollen, 1986), but since they became the content of television formats like MTV the “distinction between the commercial and the program” (Aufderheide, 1986, p. 57) quickly got erased. Aufderheide explains that “(w)herever they appear, music videos are distinctive because they imitate dreams or manufactured fantasies rather than the event structure of bounded programs" (ibid., p. 65), which makes them an ideal tool for escapism and make-believe. For this reason, it is comprehensible why mobile music listeners take advantage of the opportunity offered to them. A song will lend itself to imagery without an accompanying music video and will help the user create a narrative for the surrounding world (Bull, 2000, p. 187), but if a listener has seen a music video before or even the accompanying music video to the song then there is a prescribed visual imagery to the music which will often be remembered when listening to it again.

> H: Yeah, but I'm still into that. Just put on a song and pretend that I'm in the music video. And I'm like - ooh.
> E: Have you then seen the real music video to it before?
> H: Yeah, yeah, yeah. But some of them don't have music videos, so you're free to do to imagine. (laughs) Or I used to, it's weird 'cause when you've seen the music video you kind of it plays in the back of your head as well with the song. (Hayley)

> I like to make the whole world one big music video, but isolating my hearing to limit it just only to music. So then the whole world becomes one video clip. Music video. (Max)

Due to his musical experience as a DJ, one participant did not only focus on the music itself, but on the musical qualities of the different instruments and the final composition of the piece of music, depending on its parts. If there are specific frequencies that are missing or that he feels are too much, then he uses the equaliser on his phone, or even chooses a different pair of headphones more suited to the kind of music he is listening to and changes it to what he wants it to be. Since his mobile phone has an equaliser that mostly does his work for him, which he revealed in the second interview, he does not have to constantly take out his phone to manually change the sound to what he prefers.

> I'm more a particular listener of music. Because when I listen to music I'm more concentrated about the instruments inside. About every element. Every element starting from the kick and all the effects they put on the instruments. Any kind of instrument, how they sound, how they are controlled inside. How they are like, you know, mixed up with the main thing that makes it sound like it sounds. (Koko)

> E: And you always, like when you listen to a song where you need to equalise, would you just take the phone out, use the equaliser and then continue to listen to it?
> K: Exactly, exactly. I hear the song, I think about it lacks a bit of that kind of frequency (Koko)

Such a focus on the quality of music has not been mentioned in a study before. That Koko's answer and behaviour is different to others' could be due to his experience as a DJ. He knows how to listen out for different aspects of the music, which enables him to mix the music in a way that works for him. Since he also composes music, he is aware of the factors that need changing to make the piece of music enjoyable. With regards to DJs, Prior (2014) writes that any mobile music listener becomes their own DJ by using the device and its music to manage their emotional states and themselves (see also DeNora, 2000). So in a way everyone is a DJ whenever they listen to mobile music, but there are differences between "normal" listeners and people who are DJs professionally,

as Simun (2009) points out. The author interviewed “listeners” (ibid., p. 924) and DJs who used portable listening devices and discovered that there was a difference in use. DJs seemed to utilise the device primarily to listen to music, which was not something any of the other participants mentioned. Instead the “listeners” focussed on what music would do for them and the effects it would have. Thus, this could be an indicator that DJs, because of their job, have a different approach to music and music listening. It would be intriguing to see whether this difference would uphold in larger studies, and whether there are any other differences between “normal” listeners and listeners who deal with music on a professional level. Questions to consider are, for example, whether professional musicians listen to as much mobile music as other people, and what they listen out for if they do.

All this reveals that there is much more happening for specific listeners than what seems obvious at first glance. There are very nuanced ways of listening to music that depend on a lot of factors and, as mentioned at the beginning of this chapter, only a small amount of information can be gleaned from pure observation. Instead, listeners need to be asked to get to a more accurate understanding of the listening situation.

6.2 Ways of listening to music

As important as asking participants about their focus during mobile music listening is, it is also important to ask them how exactly they are listening to music. The results here, as opposed to previous studies (e.g. Krause and North, 2014) come from a bottom-up approach taking into account the listeners' behaviours without limiting their choices to a select few possible music selection methods. Thus, the present findings reveal more varied, detailed but also broader examples that show how the listeners combine different methods of listening but also switch between them when feeling the need to do so. Depending on which mode of listening they choose, they assert more or less control (Skånland, 2012) which needs to be taken into consideration when analysing their music listening behaviour. Control seems to be an important factor when it comes to enjoyment of music (Krause et al., 2014), which implies that the way a person is listening to music influences whether they reach the

goal they had for listening to music or not. Thus, the amount of control a listener has when listening to music should definitely be considered when looking at listening situations (Krause et al., 2014). The amount of control the listener wants to utilise in a given situation is also a clear indicator of their level of engagement with music (see chapter 5 for an explanation of the differently engaged listeners). Simply said, more engaged music listeners generally want to exert more control over the listening situation than less engaged listeners. A study carried out by Kamalzadeh et al. (2012) also suggests that the type of playback preferred depends on the activity during mobile music listening. They discovered that when the focus is on the music, shuffle mode is preferred, but if an activity is carried out during music listening, then more control is asserted over the choice of music, for example, through choosing certain artists or genres.

The table below shows an overview over which kind of classification system participants' have online or on their devices for their pieces of music, and the mentioned ways of how they listen to it. Of course, this list is not exhaustive. It is possible, for instance, to download other people's playlists or listen to a song on YouTube which would then automatically be followed by another unchosen song of a ready-made playlist. Nearly every classification system can be listened to in all the ways mentioned, so I have refrained from drawing connecting lines between every system and every strategy for clarity reasons. Additionally, different strategies can be used simultaneously, for instance, listening to a playlist on shuffle and skipping songs that do not fit the mood or purpose of the moment. The list below and the potential connections between the items in the first and second column clearly indicate that there is a huge range of possible ways of listening to music, which can be adapted to and by the individual listener.

What to listen to (classification system)	**How to listen to it (strategy)**
➢ Other people's playlists (online) ➢ Self-created online playlist ➢ Whole albums	➢ Shuffle ➢ Skipping songs ➢ In order ➢ Switching between

➢ Own playlist ➢ No playlist, every song in one folder on device ➢ Unchosen content (e.g., on the radio) ➢ half-chosen content (e.g., on free Spotify)	classification systems ➢ Choosing one classification system

Table 6 Classification systems and strategies of music listening

Most participants had at least one playlist or selection of songs stored locally on their devices. With internet enabled smart phones and portable music players the choice of music at any given time increases dramatically. There are online stream and music services and various websites that offer music, for example, YouTube, Spotify, LastFM and SoundCloud. They are accessible at any time anywhere as long as there is internet available (see chapter 4 for a discussion on how internet availability influences the listener's device usage behaviour). Jonathan, for example, uses YouTube when he wants to listen to songs he does not have stored on his device. Ready-made playlists there enable him to choose a song once and then not have to do so again for a while. He looks for particular artists and then selects a playlist that comes up as a search result. Similarly, Annabel uses Spotify to find the music that matches her mood by using categories that help to narrow down the search.

> E: Ok. So, you choose a playlist from YouTube and then listen to that?
> J: Yeah, I generally choose a playlist from YouTube. (Jonathan)

> Yeah, on Spotify. So, you can choose mood. If I go back. So you go to browse, mood, and then it shows you different moods so if you are feeling good Feel Good Friday, kind of Happy Hits or Autumn Leaves it's just all a bit kind of mood dependent how you feel. (Annabel)

Anne does not have playlists on her device, so she relies on services that help her find the music she wants to listen to when she feels like listening to it. Using the internet to access music enables her to save the storage space on her device for the music she really wants to listen to, which she would then

download. If she wants to discover new music she will listen to it online, so she does not have to “commit” (Anne) her storage space. Online she uses SoundCloud, for example, which gives her the opportunity to “like” certain music and refer back to it and listen to only these tracks. SoundCloud, like most streaming services, also has the option of selecting music using different categories. Anne also uses services such as LastFM (see also Ulrich (2012) for more information on this service) or websites that offer the mixes she likes to listen to.

> E: So, you, because you're not listening to playlists you have to choose your music constantly. Does it sometimes happen, or do you just let it run through, whatever there is?
> A: Well, I might let it run through what's on SoundCloud, but I don't really like what they assemble in the streams, so I mostly listen to a shuffled version of my likes or if I want to start from a particular song, then I'll put that on first and then I have to shuffle. […] But that does an auto-playlist system when I can choose to make a radio station based on three different artists or based on three different tags that other people will have tagged music with. So you can choose like a 90s tab or a relax tab or, you know, all sorts of things. Or you can just listen to everything that's in your library. So everything that is recorded you haven't listened to before. (Anne)

Sometimes it is necessary for the listener to switch between online streaming services, because they offer more or less help with the song selection. Annabel prefers to use Spotify, because it gives her the opportunity to select music according to different categories. However, if she wants to listen to one specific song, she uses YouTube, because the free version of Spotify forces the user to listen to all the search results in shuffle mode. This function means that she has to listen to all the songs that come up if she is searching for one specific song, but with YouTube she can go straight into playing the one song that she wants to hear. Annabel is the only one who mentioned switching between other people's content, and also between online playlists and her own, although I would not conclude that she is the only one with this selection behaviour. It

might be that the other participants sometimes switch between self-created and other people's playlists, too, and just did not mention it in the interview.

> So sometimes you find your song and it would just come up with that one song. But sometimes it'll come up with like five. And you have to listen to all five, because it's on a shuffle because you're not paying for it. (Annabel)

> E: Ok. But you choose playlists. So, you don't start off with a song and then choose a different playlist and then do something else and then switch?
> A: Depends. So, I'll probably start of one playlist, listen to it, and if I'm like - oh, I don't like this running playlist, I'd choose another running playlist or go to my playlist or think of an artist I like and then listen to them. So I do change it. Depends on if it's working for me or not. (Annabel)

> E: Would you switch the same way between your playlists and then ones on Spotify?
> A: Yeah, so I just of kind of vary that. So, I've got a big playlist of 111 songs and I've got another one River Sigh which is more chilled out ones and then I've got an old playlist that I made years ago, and I was listening to that the other day and I was like - oh, I remember those songs. So, varied, basically. (Annabel)

The music selection methods above are specific to the listening situation. The selection happens during mobile music listeners' commute or while they are walking. Most of the time, however, the listeners prepare their playlists or download the music they want to listen to at home, before they go out of the house (for more information on that, please refer to chapter 5). Two participants, for example, explained that they sometimes listen to whole albums instead of choosing playlists. Michael looks for new albums every morning, which he then downloads and listens to in his car, because it takes him as long as an album lasts to get to work, so he uses the opportunity to get to know new music. Max, on the other hand, does not usually have the time to listen to a whole album on

his commute, so he turns the circumstances of travelling for more than an hour into an advantage, using the time for a musical experience that he normally wouldn't be able to have.

A music album is a selection of pieces of music according to one topic, for example, an artist, a composer, a genre or a specific instrument. It is therefore very similar to playlists which are often made with a particular mood or situation in mind (Krause & North, 2016), although playlists are not restricted to a specific number of songs as CDs are. Additionally, playlists are often created by a listener based on their preferences and experiences, while an album is very likely the product of a discussion between a range of people. Albums are mostly created with a commercial aim in mind, while playlists are not, as far as I am aware, a product to be sold directly to the customer, but a product made by the customer, using songs from one or several albums. Of course, if the playlist is online, websites want the listener to subscribe or to buy the music they are using in the playlist directly, but the playlist is mostly a form the music can take and not the product itself. Max and Michael did not say why they prefer albums for longer travels, but Michael implied that the music service he uses offers albums instead of playlists so using that will automatically make him listen to albums, and Max indicated that albums are more specific than “random playlist(s)”, which could mean that an album gives him a clearer idea of its content than a playlist.

> Yeah, I'll listen to it I said when I'm going to work, so I do generally listen to the whole album. It takes me about 45 minutes to an hour to get to work. (Michael)

> When I go for long journeys, I tend to pick whole albums more than just listening a random playlist, because I know I have like a whole hour to travel which makes me realise I can actually listen to a whole album from beginning to the end, but when I go to work, which is a commute of 20 minutes, I can't finish a whole album, so I then prefer to listen to a mixture of songs. (Max)

Only Jane indicated that she does not like playlists and prefers to have everything in one folder on her device, so she can choose from it spontaneously. For her a playlist is not appropriate, because she likes to be adaptable and cannot say what kind of music she would want in certain situations or for specific moods.

> E: And do you have like playlists or how is that on your iPod?
> J: Not on my iPod actually. No. I haven't got any playlists. Because I don't believe in playlists. (laughs)
> E: How come? (laughs)
> J: 'Cause every day is different. So for example if today I want to listen to three particular songs, maybe tomorrow I won't, and I will listen to other three songs. So playlist doesn't make any sense with me. 'Cause it depends I can change my mood in five minutes and go to another song and then, yeah. (Jane)

Even though there are so many different ways of listening to mobile music, one of the most common seems to be to choose one of the playlists on one's own device and listen to that in shuffle mode, which means that the listener does not know what song will come next but can be certain that they will like it, since it can only be one s/he selected before. Whether it fits their mood or the situation/goal at the moment is another matter, which is why many of the participants skip a lot of music until they find a piece of music that they feel like listening to at the moment.

> E: So your playlist it just contains all the songs, you don't necessarily play them in the order they come?
> H: Oh, yeah. I always listen to it in shuffle. (Hayley)

> T: So, I put shuffle when I turn it on. So, it's just, obviously if there is a song I don't want to listen to, I just switch it. (Thomas)

Shuffling the music can have different purposes. Krause and North (2014) outline them as follows: "Other research suggests that shuffle is used to keep

one’s music collection ‘fresh’ (Batt-Rawden & DeNora, 2005); to introduce serendipity into one’s listening (Leong, Howard, & Vetere, 2008); to overcome boredom (Cunningham et al., 2006); and when there is no strong preference (Kibby, 2009; Leong, Vetere, & Howard, 2008).“ (ibid., p. 11). To summarise, listening to music in shuffle mode keeps boredom at bay, because it is not possible to get used to a certain order in the playlist, it is a constant surprise to see which song will be played next, and the listener does not constantly have to think about the song they might want to hear later.

Only three participants mentioned that they prefer their songs to be in the same order every time they listen to them. For Cody, the reason is that he only listens to mobile music when he is running, and since he does not run for too long (30 to 40 minutes), even though he listens to the tracks in order, he will always have something new for a while, until the list starts from the beginning. Jane likes to listen to her songs in order, because she has had them in that order for a couple of years and knows exactly where each song is, which proves beneficial in her case, because she uses an iPod shuffle, which does not have a display to tell her which song is playing at the moment and which is next, so she has to rely on her memory to find the songs she wants to listen to on her device.

> E: And then you just put it on shuffle or how does that work?
> C: No, it's go from first to last one.
> E: And then you know when it's the last song, it's time to go home now, or? (laughs)
> C: No, because I've got 44 songs here and it's a bit fun. (Cody)

> J: Yeah, you can do it randomly or in the order and I would probably leave it in the order they are. 'Cause it's the order they've always been in six years, so I know which one is the next. And it's kind of it's good. I like it. (Jane)

Jonathan does not like to listen to music on shuffle; he established that he tends to listen to playlists on YouTube in the same order and explained why he does so.

E: Ok. So, you do same order?

J: Yeah.

E: Yeah. (laughs)

J: It's probably how I'm used to, because I was used to going in a couple of clubs in Italy, when I was 17 or 18 years old, two days ago, I mean.

E: Yeah, obviously. (laughs)

J: And the playlist was always the same. Friday there was one playlist, Saturday was another playlist, but always the same for 4 or 5 years. (Jonathan)

For Jonathan listening to a playlist in order has become a habit that also reminds him in a way of his clubbing days when he was younger. As DeNora (2000) mentions, “music brings back waves of emotion, the specificity of a time, an event, a relationship” (ibid., p. 65). Music is a powerful tool that can evoke emotions and memories about past events, but that is not what is happening to Jonathan here (and if so, he does not mention it). While he is probably not listening to the same music as he did when he was younger, or even if he did, it would likely not be in the same order as it was in the club, the habit itself reminds him of that time, even if that does not happen continually or is not usually conscious. It is conceivable that experiences like Jonathan's are not as seldom as they seem. Let me illustrate this through a fictional example from general music listening:

> Whenever Dinah's mother came home from work, she would go to the radio and turn it on. Settling down on the sofa with a cup of tea, she would relax and listen to the radio for half an hour before getting up again, turning off the radio and doing whatever needed to be done in the house. When Dinah was a child, she would often join her mother on the sofa. They would not talk but sitting there together made her feel close to her mother. Now, thirty years later, whenever Dinah comes home from work, she turns on the radio, gets herself a cup of tea and relaxes on the sofa for half an hour. Sometimes her own daughter joins her there. Each time she does that, she feels close to her mother again and the ritual makes her feel comfortable. It does not matter what kind of music is

broadcast on the radio – her taste in music is different to her mother's anyway – but the habit of doing the same thing her mother did relaxes her and brings her back to her childhood.

Therefore, it is not the music that is obviously part of Dinah's and Jonathan's habit, but the situation in itself or certain elements of it, that bring back memories and help create the atmosphere and emotions that are desired at that particular moment. Very likely there are other examples in people's everyday lives that are connected to (mobile) music listening where it is not the music itself, but a habit that is particular to that person, that will make them reminisce about another time, situation or event, which would be an interesting topic for further studies.

As indicated shortly above, something that the participants mentioned doing with both online services and their own playlists is skipping songs that they do not want to listen to at a particular moment, which is possible in any listening mode – whether the music is played in order or in shuffle mode. Shuffling seems to depend on whether the music fits in with the situation or mood the listener finds themselves in, so if they do not like the song that is playing at a given moment, they tend to skip it until something better is playing. All the participants skipped songs at some point, and nobody mentioned that they would never skip songs. There are certain situations when selecting a different song is not possible, for example, when Hayley is running and needs to concentrate on that, or when the listener feels that it would be wrong to skip songs when listening to a specific artist, Jonathan, for instance, sets himself certain rules when it comes to listening to Nirvana. He says that “it should be prohibited by the law to skip Nirvana” which is why he always listens to it when the next song on his device is by this group. Jane created her playlist with songs she likes, so she explains that she does not skip the songs very often, “'cause obviously all the music I've got on my iPod is what I want to listen to”. During the shadowing she only skipped several songs once to reach a different section of her playlist with another artist that fit her mood more accurately. Thus, while there are some listeners who seem to skip songs less than others, all of them chose a different song at some point or another. Skipping songs includes

everything from skipping the next song or songs until something better is found, to choosing to go to a different part of the playlist, to selecting another playlist from the device. Choosing a different song in the same playlist shortens the skipping process, especially since most of the interviewees know the songs on their mobile listening devices quite well, so they can easily navigate between songs to discover something they feel like listening to.

> Yeah, yeah, definitely. I'll flick through if I'm not enjoying the album and just skip through the tracks and then perhaps put the radio back on. (Michael)

> I just put it on and then whatever comes up and then I just decide ok, do I like this song at the moment, if I do I listen to it, if I don't I just - next, next, next, until I find something I like. (Ben)

> And then when they come in my shuffle and it's like - yeah, like some songs I play every day and that I don't skip, and some songs are in my playlist that I really like, it's like - oh, I'm not up for that one, and I just skip to the next one. And sometimes I skip like ten songs, before I find like - oh yeah, this is a good song. So, I skip a lot. And that helps (Max)

Skipping songs enables the listener to choose to listen to something else that might support them in their mood, situation or momentary goal. Even if every listener had the same playlist on their device, and had the same devices in the same situation, it is very unlikely that they would all listen to the same music at the same time, because everyone has a different personality, various moods, experiences, and memories which all impact what someone prefers to listen to in a situation. This list of influences, again, shows that there is much more to consider when looking at a listening situation than the listener's behaviour and explains why it is not possible to come to conclusions about the listener's practices only through observation. As mentioned before, it is important to delve deeper into the situation, to take the focus and perception of the listener into account, as well as behaviour, and only then is it possible to get a semblance of knowledge of the situation. As with every listening situation – be it mobile or

stationary – it will most likely never be achievable to know everything there is to know about a situation, because there are too many factors to consider, that influence not only the situation but each other, too.

There are a surprising number of ways of listening to music, which differ from listener to listener. Most participants had very clear ideas and habits of how they selected the music on their devices and what to do if a song does not fit into the situation they find themselves in. This selection behaviour is closely interlinked with what criteria listeners base their choice of music on, and is sometimes even dependent on the device, as shown by Jane's example, who always listens to her songs in the same order, because it has transpired that this works best with her device which does not have a display. Generally, how the listener uses their device and chooses to listen to music gives a clear indication on how much control they want to exert in a specific situation. Similar to the range of control the user has over finding new music (see table 4 in chapter 5) they can manage their own listening behaviour utilizing different levels of control over how they listen (see table 7). The table below is not complete and is just one way of arranging the different methods of listening to music without taking the content into account. Its purpose is not to show everything there is to say about listening modes, but to demonstrate that there are indeed levels of control that can be exerted, however subtly, when listening to mobile music. The least control is exerted when there is only one content (e.g., a self-made playlist, a mix, or an album) available which is listened to in shuffle mode without skipping songs. If the same content is listened to in order (without skipping), it would imply more knowledge of what is coming next and therefore more control. Adding skipping songs to that would mean that the listener not only knows which song is coming next but can do something about it. The most control is exerted when the listener has several contents available (e.g., has several playlists stored locally on the device along with internet availability and a subscription to a music streaming service) and can choose between them and change the piece of music playing as often as they want to. Adding choice of content to choice of listening mode amounts to a large number of different combinations which a listener can choose from at any given moment, depending on several factors. Thus, it is not unexpected to find so many different ways of listening to mobile music in this one study alone.

Incidentally, it should be mentioned that most of the interviewees did not have one clear method of listening to music but utilise different ones depending on the activity, which agrees with the findings of Kamalzadeh et al. (2012) mentioned earlier in his chapter.

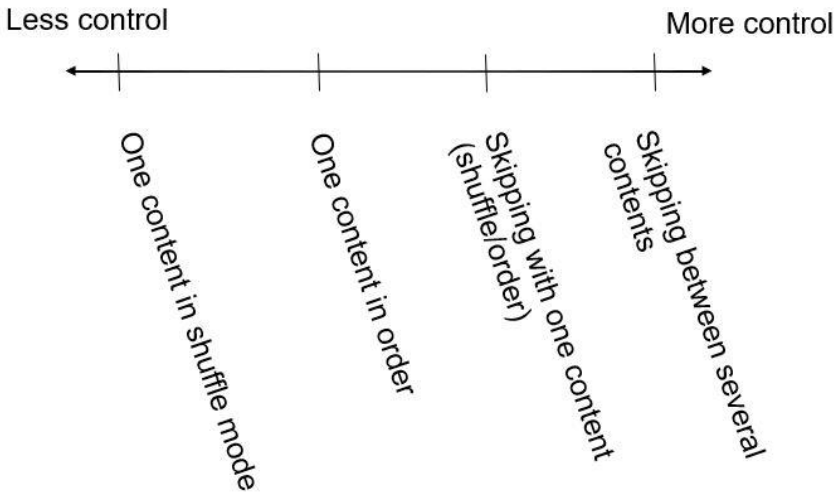

Table 7 Amount of control depending on listening behaviour

6.3 Devices and Software

Mobile music listeners often have very specific aims in mind when wanting to listen to music and they choose the music accordingly. However, if the device chosen, does not play the music in the required way or cannot store as much music as needed, then the goal will often not be met, no matter how carefully the music was selected beforehand. This constraint means that most mobile music listeners have spent some time thinking more or less carefully about their needs and getting the appropriate equipment.

One of the prerequisites of mobile music listening is a portable listening device. All mobile music listeners need a device which can hold their music and headphones through which the music will reach only their ears. Additionally, software is needed to transfer music from a computer to the device or enable the device itself to connect with an online streaming service. Furthermore, headphones are necessary to facilitate the “mobility” in mobile music listening, and there are other devices and software to consider when wanting to listen to mobile music (see figure 2 below). Some participants carefully contemplate what to buy, while others are satisfied with what they got when they bought the device and are happy not to have to think about this again.

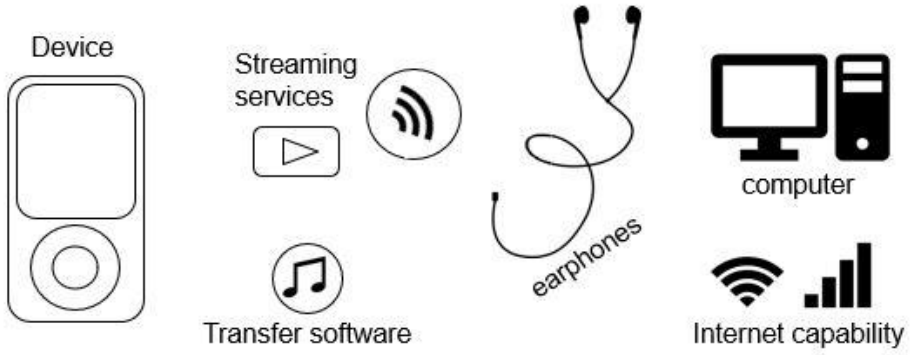

Figure 2 Tools for mobile music listening

Most participants used different devices depending on the activity, location or time of the day. Many of these are not mobile listening devices, so they are not going to be discussed any further here. Two examples where participants use particular devices in particular environments are shown below.

> So, my iPhone is the most thing I use out, like when I'm out and about. iPad at home. (Annabel)

> Well, well, for example at work I cannot keep my headphones on. But there's the radio. (Koko)

However, there are also several kinds of devices that are used by participants when they are commuting to work, for example. Most of them mentioned using their smartphone for listening to music (9 out of 11), but some had other devices which they could technically use for mobile music listening, too. It is mostly a question of convenience or whether the other device they have is working or not, that influences their decision to use it. The devices mentioned are mobile phone, MP3-Player, iPod, iPad, and Apple Watch. The latter works like a remote control, allowing the user to control what they want to listen to, as long as the iPhone with the music on it is close. It can also have a limited number of songs stored on it, which can be listened to when the iPhone is not in range, but in Max's case he uses it as a remote control to select the next song. Since the study was carried out, new versions of Apple Watch have been released. The

latest model has cellular and Wi-Fi capability, which allows the user to stream music directly through Apple Music (a subscription is necessary) using Bluetooth headphones, independently of the location of the iPhone (Apple, 2017). Using the latest Apple Watch would allow for a different and highly specialised kind of mobile music listening, since it needs specific devices and software to go with it, which would be interesting to explore in a different study.

> I had an MP3 player but not with a huge amount of storage, but with a mobile phone it's easier for me than bringing two devices. (Jonathan)

> For a year I haven't had a charger for it [an iPod], so I used to borrow my friend's one, but now we don't live together, so I just use my phone most of the time. (Hayley)

> [I use] Apple Watch to skip songs. (Max)

In the same year that the present study was carried out in the UK, Krause et al. (2015) published the results of their own research with 177 participants, which showed that the most commonly used devices for listening to music were the radio (27,4%), followed by a “mobile MP3” (13,7%), followed by several stationary devices. The mobile phone was only used in 4,9% of cases (ibid., p. 8). These results contradict the findings of the present study – that most participants used a smartphone to access their music on the go –, which could be due to the different focuses of the study. Krause et al. were aiming to discover trends in music exposure throughout the whole day and did not only concentrate on mobile music listening. Mobile music listening is very likely to take place when the listener is commuting somewhere, which, on most days, does not happen all day long, but mostly before and after work/school, which is also the conclusion the researchers derived from their results, since they found a significant correlation between time of day and device (ibid., p. 11). Krause et al.'s focus on general music listening could therefore explain why portable music devices were not as commonly used as the radio, for example. Since it also depends on how a person commutes, for instance, on foot, by car or by bicycle, this would have influenced what kind of device was used, for mobile

music listening will technically not happen in a car, because it is prohibited by law (at least in Europe PNLD, n.d.). Additionally, they had far more participants than I did, which could have had an impact on the outcome of the study. Furthermore, the prominence of the radio could be explained by its versatility. The radio can be used as a separate device at home or at work, can be listened to through a computer, is present in the car, and can even be tuned into from a smartphone. Since Krause et al. (2015) did not differentiate between the devices used to listen to the radio, this could be the reason why their participants indicated that they used the radio most often, while this did not seem to be the case in the present study.

In addition to the device itself, an important question to consider for most mobile music listeners is what kind of headphones to use. Especially more engaged music listeners (cf. Greasley & Lamont, 2011, and also chapter 5) think about what their aim is through mobile music listening and know exactly how to achieve it. Regarding headphones, they have usually spent some time thinking about which headphones would suit their needs best. Anne, for example, bought her headphones because they are noise cancelling. Her aim is not only to listen to music, but also to drown out all the other noise that happens around her, so her noise cancelling headphones fulfil both needs simultaneously. Max and Thomas cycle to work and therefore need headphones that have a remote control, otherwise they would have to take out their smartphones every time they want to skip a song which is not easily done while cycling. Koko's aim, on the other hand, is to create the best sound possible and have an enjoyable listening experience. For that reason, he is constantly looking for new headphones, although he also mentioned that he appreciates the ones he has now. The other respondents did not mention headphones or said that they were happy with the ones they got when buying their device (see Annabel's quote).

> I just got earphones with my phone and they're good earphones. (Annabel)

> 'Cause those are really good. I originally bought them because I was travelling on the busses a lot and I hate the noise so much it makes me

> sick. […] I bought a proper set of headphones - only forty pounds - and it just really works as noise cancelling. (Anne)
>
> Some headphones they only have like where you can pause music and all that, but I definitely need headphones where I can put the volume up and down and skip new songs and go back to previous songs. 'Cause sometimes it happens when I listen to a song and I want to hear it again and I just have to be able to go back and I don't wanna stop my bike, get my phone out and then .. that's just not efficient for me. (Max)
>
> T: So, it's just, obviously if there is a song I don't want to listen to, I just switch it.
> E: Ok. Even when you're cycling?
> T: Yes, I've got special headphones I can switch. (laughs) (Thomas)
>
> If I don't like my headphones, I try to buy another pair. Just me. I'm never pleased enough, until I finally find something that suits my needs. (Koko)

For some participants their headphones are the reason why they do not listen to mobile music all the time or why they would want to stop at some point (see also chapter 4 about the reasons why listeners and non-listeners choose not to listen to mobile music). Annabel experiences discomfort when wearing her headphones in certain non-mobile situations and would then choose to take out her headphones and listen to the music through the speakers of her phone instead. The same rationale was given by Johanna for never starting to listen to music over headphones in the first place. She does not like wearing headphones and equally dislikes the sound quality of the headphones she tried once. Michael also decided that he does not like the feeling of having earphones in his ears, so he bought a pair of headphones. However, headphones (that cover the ears and are usually connected by a band over the head) are bigger than earphones (that have little earpieces that are plugged directly into the ear) and now he feels very conscious about wearing and using them. For that reason, he does not use them when walking around, but would only listen to mobile music on the train.

> But then also, what stops me listening to music via earphones is when discomfort. So when I'm tired, so sometimes I want to listen to music in bed, if you don't want to disturb all your housemates, you put your earphones in at night. But then if it's you get that point where you just can't stand anything in your ears, so then I have to take them out and I put my phone on really quiet, the music, to listen to it (Annabel)

> J: I tried it and it is .. I just didn't like the sound on it, and I didn't feel right just listening like that. Just strange, isn't it? I just didn't like it.
> E: Yeah. So, was it also the feeling of having earphones in?
> J: Yes, yes, I didn't like that either. (Johanna, non-listener)

> Because I haven't got earphones I like. More than anything else. With this phone I got some earphones that go right in your ear and I find it uncomfortable. So, the earphones that I do have are quite big and I feel quite conscious about wearing them around. So just more about being embarrassed perhaps. (Michael)

In summary, therefore, it can be said that appropriate headphones change or ease the mobile music listening behaviour, for instance, when allowing more freedom in movement when cycling, but they also prevent mobile music listening, for example, if they are uncomfortable. This facilitation or prevention of access is only valid for the more engaged listeners and some of the non-listeners in the present studies. Nonetheless, comfort and practicality of headphones are important to consider when studying listeners and non-listeners since they provide or prevent access to mobile music listening and therefore all of its psychological and social benefits.

Since most mobile phones have internet capability nowadays, many listeners rely on this to use music streaming services while they are out and about. These services, however, are not limited to mobile music listening, but are often used with stationary devices, like the computer or a smart TV, at home, too. As mentioned above, the service that was referred to most often is YouTube,

followed by Spotify, and Sound Cloud. Others mentioned were Last FM (which even allows the listener to keep track of their listening behaviour), iTunes and Apple Music, and specialised music apps for smart phones. Only three of the eleven mobile music listeners reported using streaming services while walking around. As Annabel shows below, she likes having access to online music streaming services, because they allow her to listen to whatever music she feels like listening to at the moment without being restricted by what she owns or has on her device. At least two more participants used these services to find new music/podcasts to add to their library and then listen to that while commuting. In a questionnaire study carried out by Krause and North (2014) it was discovered that most people listen to music using a portable listening device (33,8%), while only 15,4% of respondents would use the internet to access music in general (ibid., p. 10). Mostly, that would support the results of this study. However, Krause and North do not explain how they accounted for portable listening devices that have internet capability, and they have another category “Cloud sources” (ibid., p. 10) which necessarily relies on internet access, too. Therefore, correctly analysing the researcher's results becomes complicated and a direct comparison is not possible. Additionally, technology develops very quickly, so studies conducted in 2014 might lead to very different results if they were carried out now, four years later. Smartphones have internet capability and most people have a data plan, so they can use their mobile data to access the internet anywhere at any time without having to worry about the expenses. It would be intriguing to focus on mobile music listening (as opposed to music listening in general, as Krause and North did) and carry out a questionnaire study to discover which devices and software are used and to what extent. Looking into these questions would also serve the purpose of quantifying the results of the present study and showing whether what was valid for eleven people is applicable to a bigger group of people, too.

> And that's what I really like about the iPhone and having Spotify and stuff, 'cause I'm like it's quite nice, it's quite fun, 'cause you like - oh, what music do I want to listen to? And you've got the world as your oyster. (Annabel)

Other software that plays a role in mobile listener's everyday life is either software that helps with the exchange of music from a computer to the mobile device, like the aforementioned iTunes or similar services offered by other manufacturers (e.g., Sony's Media Go), or applications that support listening to music or finding new music, like Soundout.

> I use Soundout and I put the microphone next to the speaker, it's like and then I collect the music and I bring it home and then in the in the weekends I look through my Soundout library. (Max)

Many devices also have inbuilt functions that help the listener with finding and sorting through music they have, so they do not have to do everything manually. Koko, as mentioned above, also uses the equaliser that is built into his phone to change his musical experience according to his needs.

> I think, I did use I took like the genius function on my iPod. Like, back when I used my nano. Years ago. Where you could choose a song and then you tick, compile a playlist based on this one song. That I found very useful. (Anne)

> E: And you can separate it into artists, if you want to listen to the ones
> T: [simultaneously] Yes, yes, I just type in Florence and it's automatically everything without Florence it chucked out of it and only Florence is left. (Thomas)

> E: And you always, like when you listen to a song where you need to equalise, would you just take the phone out, use the equaliser and then continue to listen to it?
> K: Exactly, exactly. I hear the song; I think about it lacks a bit of that kind of frequency (Koko)

The portable listening device itself can also influence behaviour, as can be seen in chapter 4. Nothing shows as clearly what functions the device fulfils than suddenly not being able to use it. Therefore, Thomas bought his device for its

long battery life, while Anne prefers to use online streaming services which do not require her to use up the storage space on her smart phone.

With all the different devices that are available for mobile music listening, as well as various kinds of headphones and software to choose from, mobile music listening has become a highly personalised experience. The variety of listening devices in conjunction with the different circumstances music is listened to gives the impression that it would be difficult to find two listeners who choose their music the same way and use the same kind of service for everything.

6.4 Conclusion

In summary, it can be said that focus during mobile music listening is not static, but it fluctuates according to the activity carried out. The listener is aware of that and often chooses the mode of listening accordingly, for example, a shuffled selection of one's songs for running (less focus on the music), and an album for a long train journey (more focus on the music). The devices and software chosen determine the range of music listening behaviour that can be carried out with them. Throughout all of these – focus, mode of listening, and device – the role of choice and therefore control stand out. Referring to Greasley and Lamont (2011), more engaged listeners would more often than not be aware of the music they are listening to and therefore focussing on it more than less engaged listeners would. They would also want to exert more control over their mode of listening, and, since they are more conscious about their aims during mobile music listening, choose their devices and accessories corresponding to these goals.

The present study shows in more detail than has previously been revealed that there are a multitude of ways and technologies available for mobile music listening, which can be adapted by each listener individually. It demonstrates that it is important to choose from what is available, to find the right device that is appropriate for the listening needs. Different headphones are required when cycling compared to walking, a good sound can only be accomplished when selecting headphones that allow for high quality listening, and the software that can be used depends on the device and the computer the listener wants to use

with it. Therefore, preparation is needed before starting to listen to mobile music.

Additionally, something that clearly stands out in this chapter and contributes to the way future research in the field of mobile music listening (or similar everyday practices) should be carried out is that it is impossible to analyse a mobile listening situation correctly by merely observing the listener. Even if they seem to listen to music, this might not be what they are focussing on, and without asking, one would not know which mode of listening the user selected and why they did so. Therefore, it is always necessary to take the listener's own explanation of the situation into account when trying to get a better understanding of it and to not simply rely on observation, because behind what meets the eye a host of decisions and thought processes have taken place and are still at work.

7 The emergence of a new form of etiquette

“He's with the headphones, so he's not here.” (Koko, 25)

7.0 Introduction

After concentrating on the individual choices of mobile music listeners, the next two chapters are going to investigate the listeners' engagement with their environment and the effects their surroundings have on their listening practices. This chapter focusses on social engagement, particularly the rules that listeners think they should follow when being around other people, and the social experiences of non-listeners with listeners. The information provided here adds new insights into the sociological view of urban life and also into the detailed behaviour of mobile music listeners in their environment.

Etiquette, according to Merriam-Webster (2018), is “the conduct or procedure required by good breeding or prescribed by authority to be observed in social or official life”. The social life of the mobile music listener is going to be the topic of this chapter. With the development of the portable listening device new aesthetic practices emerged that demanded the need to know how to behave while using the device in public. There are no official social rules for mobile music listeners, nevertheless an unofficial set of norms has arisen that are understood by mobile music listeners and non-listeners alike.

Wearing headphones, for example, is often used as an excuse to not interact with other people, which led to the common conception of mobile music listening as inherently unsociable (e.g., Bull, 2000). Music listeners seem to be caught in their own little world and are apparently not aware of what is happening around them (Beer, 2012). Non-listeners observing these listeners are therefore unable to interact with them, which shapes their opinion of mobile music listening as unsociable behaviour even to the point that a non-listener interviewed in the second study would “never be friends with someone who does that” (Christiana). The focus of this chapter is to illustrate that the assumption of mobile music listening as isolating is not generalisable to all listeners, and that there should therefore be an adjustment in attitude towards mobile music listeners.

During the first study it became apparent that mobile music listeners seem to have certain social etiquettes in common that they follow in order to not be impolite to other people. The mobile music listeners as well as the non-users were very clear in what behaviour is considered as rude and what can pass as socially acceptable. In the following chapter, the nuances of social interactions connected to mobile music listening are explored from the views of listeners and non-listeners of mobile music. Aspects such as walking around together with a friend, meeting someone while listening to mobile music, interactions in shops, as well as managing uncomfortable situations are examined from different angles. The chapter will end with a list of requirements non-listeners would like to see in listeners for the latter to appear more sociable.

7.1 Mobile music listening in a social context

There are times and circumstances when mobile music listeners feel it would not be appropriate to listen to music. To describe those situations, they used phrases like “it's not socially acceptable” or “not fair to other people” (Annabel), it “would be rude” (Hayley), or they “don't want to disturb” anybody (Koko). Most music listening participants would not use their device when they are doing something together with someone else:

> E: So, you listen to music while you go to the car, but not in the car?
> K: Yeah. .. No, not in the car. In the car there are people, people I know.
> E: And then the radio.
> K: Yeah. And besides that, I think it's a rude way of you know, like lack of respect if you stay with the headphones in. Maybe he has a question, asks for something and you go - ooh, say what? [...] I personally wouldn't like this kind of behaviour and probably, I don't know, people that would be glad about like seeing you with the headphones in his own car and he asks you something and you - there, he didn't hear me. He's with the headphones, so he's not here. (Koko)

Most non-listeners agreed with mobile music listeners in this point. The impression is that even worse than blocking off possible conversations is talking

to someone while being occupied with music listening. This behaviour was generally considered as rude and antisocial:

> And it's a bit unsociable as well. You know, if you're walking along with somebody you're not talking to them, are you? You're actually listening to music. (Julia)

> I wouldn't want to, like if I was going shopping I wouldn't want to. If I was going to be interacting with people then I think it's a bit rude to be on headphones. (Paula)

Wearing headphones can give the impression of not being available, which is clearly felt by Koko (above) and also Josie and Maisy, who are both non-users of portable listening devices:

> Well, like I said, they look a bit introvert. You feel like - oh they're wearing that, don't talk to me. And I don't think that's a nice ... I don't like it that much, you know, when people especially nowadays with great big headphones and they're walking around - oh, my nice headphones. But you should, you know, it's nice to socialise with other people and your environment. (Josie)

> I kind of see headphones as a little bit antisocial. Em .. it's like I see someone we work with actually walking down the street with headphones on and although I know he will talk to me, it does give like an impression of someone being in their own world. So they don't want to be interrupted. (Maisy)

As a reaction to that, some non-listeners have the impression that the listener is not really present but "in their own little world" (Maisy), and approaching them to start a conversation would mean rudely interrupting them and forcing them to be present abruptly, which the polite non-listener is reluctant to do – or, in Maisy's words: "I don't wanna kind of shock them and wake them up". Being in one's “own little world” were the exact words that were also used by Bull's (2000)

participants, who said that it can be “quite antisocial” (ibid., p. 102), too. Thus, it can be concluded that this impression is not purely related to the present study but can be found in different music listeners from different time periods, since Bull's study was carried out more than 15 years before the present one.

Berland (1998) explains how it can happen that the music listener gives the impression of being or actually is in their “own little world” (Maisy). She writes that “music creates an embodied but imaginary space” (ibid., p. 131), which would be something that only the listener themselves can experience. Therefore, in mobile music listening, which is a mainly solitary activity, the listener is so occupied by the music and enveloped by the experience that comes with it that they are physically present, but mentally in a different location altogether. As the music is not played aloud nobody can gradually enter the same location and share the experience. The only way to interact with mobile music listeners who are caught up in their thoughts and feelings is to interrupt them and therefore startle them. Thus, it is understandable why Maisy feels reluctant to approach someone who is listening to mobile music. Mobile music listening enhances the likelihood of absentmindedness but gives a warning to the approaching person through the visibility of the headphones, cautioning them that the listener might be lost in thought.

For this to happen, though, the knowledge of headphones and their use had to first emerge in society. It seems that headphones did not always have the ability to ward off people. On the contrary, Kahney (Grinspan 2004 cf. Prior, 2014, p. 33) reports that early mobile music listeners used to plug their headphones into one another's devices when they met each other in the streets. The author does not explain why this behaviour stopped, but my guess would be that it ended when mobile music listening became a mass phenomenon due to omnipresent advertisement after the launch of the Sony Walkman (Du Gay et al., 1997) and was not exclusive to a handful of people anymore. In time the observer must have noticed that people wearing headphones behave differently to people without headphones, so the conclusion is that certain behaviour is now expected of people who wear headphones in public. Headphones only work as a social sign because everyone knows that it is possible to listen to music through them and that will likely distract the listener from interacting and reacting. Without this knowledge headphones could be interpreted as “strange

ear warmers" which would have no consequences for social interaction and would probably appear out of place in summer. Just as doctors had to and still have to learn how to use a stethoscope and how it "restructure(s) their auditory space" (Sterne, 2003, p. 128), the patients also had to learn about the use of this device and its consequences for them. Thus, nowadays if the doctor wants to use a stethoscope to examine a patient who has already been to a doctor before in their lives, the patient will know what is coming and will act accordingly. The same is valid for headphones. With their ubiquitous presence it is likely that anyone who has ever been out in the city during the day will have seen someone walking around with headphones and will have noticed their behaviour. Therefore, they will know what to expect when they see someone with headphones again. With headphones becoming earbuds and earbuds becoming smaller and more invisible, for example, through being connected via Bluetooth instead of a cable, it is increasingly difficult for the observer to notice whether someone is wearing headphones or not, which is demonstrated by the odd looks Anne reported getting when using her headset to make a phone call while commuting. Despite their decreasing visibility, headphones are like an "audio-visual pair of sunglasses" (Bull, 2007, p. 32) that create an "auditory bubble" (Bull, 2005) around the listener while giving an increasingly less visible visual signal that keeps intruders at bay. While it is often the music itself that keeps the listener from concentrating on the environment around them and transports them into another world, it is the headphones, which function as a sign of music listening to the surrounding people, that keep observers from interacting with listeners. Bull (2000) states, that mobile music listeners are aware of this segregating effect of headphones and that "this awareness leads some users to switch off or take off their personal stereos when they engage in any form of interactive discourse. Some users feel a sense of discomfort if they are not fully engaged in the process of interaction" (ibid., p. 102). Max is very cognisant of the effect mobile music listening can have on the onlooker and therefore makes sure that he is mentally present and not distracted by the music, as well as endeavouring to prevent anyone from getting any other impression than that, if he enters into an interaction:

> If I actually have interaction with people, then I take them off. I don't just pause the music and leave the headphones in or on, because I want to make sure that whoever I communicate with knows that I'm paying attention to the communication. So I think it's quite rude to have it on even music is off. I don't wanna give the idea that I might still listen to music when I communicate with other people. So then, yeah, the music project really switched off and then it becomes the process of communicating with people for me and then music is not allowed to be taking part of that. (Max)

As mentioned before, most of the mobile music listeners believed it would be rude to have a conversation with someone while listening to music. However, it transpires that what you do with your headphones and the music you are listening to depends on the kind of interaction you are going to have with someone. There seem to be stages in change of music listening behaviour according to the length and depth of conversation, which again often depends on how well you know the person you meet. The discovery of these stages helps to understand the interactive behaviour of mobile music listeners, and knowing about these stages can provide useful insight and starting points for future research into mobile music listening but also other kinds of urban interactions. The lowest stage is to greet someone in passing and to change nothing, then comes briefly talking to a person, which is usually accompanied by taking one headphone off, but keeping the music running. And the highest stage is to take both the headphones off and, in some cases, stop the music, too. This stage comes into play when the conversation is going to be longer, you want to talk to someone, and/or you know the person you are going to talk to well. Only Max (see above) said that he would always turn off his music and take off his headphones if he is going to interact with someone.

Here, again, there is a distinctive use of headphones as a sign that the listener is busy and does not want to be interrupted. However, on the other hand, this same signal might ward off interactions the person actually wants to have. In this case, the headphones, the social shield, have to be taken off in order to allow intended conversations, which can happen in the above-mentioned stages.

> So sometimes it's like one [i.e. headphone] initially, like I've done that, where you stop and start talking to them and then I stop and then I keep one in, take one out. Talk if it's a brief encounter. If it's going to be longer than a brief encounter. But if it's brief, just take one out. (Annabel)

> E: And if you listen to music and met someone that you knew?
> H: Ok, well it depends on how well you know them. (laughs) 'Cause if it's someone that you like maybe if I see somebody from my like […] course now, I would just get one of my headphones, just say hi and continue on. But if it's like a really close friend or if it's someone that you know a bit more, you I would like tend to just get my headphones out and yeah, as well as make sure that all my attention is directed to that person. Or yeah, rather than be like, still listening to it and speaking to them. (Hayley)

> J: If I meet someone I just turn it off, if I want to speak to that person. Otherwise I just say hi and keep my music on just to say I'm busy.
> E: Ok. So you would take one out or so or would you just say, ok, well
> J: Em no. If I want to speak to someone, I just switch it off and turn my headphones off. (Jonathan)

If both headphones are taken out, then a willingness to interact is displayed and understood as such by the non-listener, while leaving one headphone in shows that the listener is not fully concentrated on the conversation that is taking place, or has limited time and wants to keep going soon:

> I guess sometimes they take out both headphones, which I think is politer. Sometimes they take out one and then you think, or stop it I suppose. But you always feel like you're interrupting them a bit more I suppose, don't you, than if they're just walking along. (Paula)

> How people sometimes leave one in or they've got their headphones hanging down, the music still playing. They want to get back to that rather than talk to you. (Steven)

There are different ways of showing one's engagement in the conversation, be it body language, the volume of the music that is listened to or the wearing of headphones (Bull, 2000). Usually body language is sufficient to transmit the impression of not wanting to be interrupted, but the headphones act as an accessory (like sunglasses mentioned above) to body language and emphasise this point. It allows the listener to tone down the body language to a subtle and polite level while using the headphones to communicate the same message in a socially acceptable way. Instead of holding their hands over their ears to keep from hearing someone, they wear their headphones. Taking them off would then give the impression of availability and even more, because it shows that the listener is making the effort of stopping what they are doing at the moment. The idiom “being all ears” expresses this very well. If someone ensures that both their ears are free to listen to what the other person has to say, it shows that they are attentive, want to listen and are not distracted by something else. When you are talking to someone you expect them to pay attention and listen, otherwise it refutes the purpose of the discussion, which explains why both the mobile music listeners and the non-listeners perceive taking off headphones to be the politest behaviour in an interaction. All the other stages (taking one headphone off, leaving both on, turning off the music, leaving it on) show varying degrees of attentiveness and distraction, which correspond with the depth of conversation the listener wants to get into. However, a reason why non-listeners perceive mobile music listening as unsociable is that they identify listeners through their listening behaviour. As soon as a listener takes off their headphones, they are no longer easily identifiable as listeners which is why not wearing headphones is not seen as sociable mobile music listening behaviour. Thus, mobile music listeners are only recognised as such if they are wearing headphones which closes them off to potential conversations, which in turn explains the differing points of view of listeners and non-listeners on this topic.

Bull (2000) discovered that there is a constant internal conflict within the mobile music listener that influences their behaviour. On the one hand, they

want to keep listening to their music, while on the other hand they have to decide whether and how much they want to interact with someone. “The discourse is always in direct competition with the process of consuming personalized sound” (ibid., p. 100). Interestingly, while some of the interviewed mobile music listeners took pains in making sure that music was always available for them (see chapter 4), none of them mentioned wanting to continue their musical experiences in a social context. One reason for this could be that I did not ask them about this specifically, so they might have this wish but did not think of it in relation to that questions asked, so did not comment on it. Only Anne and Koko said that they prefer self-checkout in supermarkets, because they do not need to talk to anyone then, so they do not change anything in their music listening behaviour. In this case, Anne and Koko do not choose listening to music in a social context, but avoid the social context altogether in order to listen to music, which is slightly different from the situation Bull and his participants describe.

> E: So you would like go into a shop, have your headphones on, and only if you have to pay you take one off?
> A: Oh, I prefer self-service, you know? (laughs) (Anne)
>
> I only take them off when I have to go to the ..
> E: Counter?
> K: Yeah, exactly. And there is someone there. And there is a DIY [i.e. self-checkout], I go there and do it by myself. And don't need to talk. If I need approval like for example I buy some Lager or I don't know, and they have to come and, but sometimes it's happening that I don't need to take them off, because the employee already sees me that there's something a light or something that says that they need approval, they come and look at me and - eh, 25? Yeah. (Koko)

If, however, there is no self-checkout and you have to talk to the cashier, most interviewees would either turn off their music completely or take at least one headphone out to show that they are willing to interact. Here, again, the “sense of discomfort” (Bull, 2000, p. 102) in the face of an interaction while listening to

music as mentioned above, comes into play:

> But I usually feel strange listening to music when there are people around and when I should interact with them. So at least by the time I go to the counter I take them out. Because I think it's really rude to not do that. And I feel strange actually, because as I said, it's very insulating in a way. (Ben)

Jane and Annabel are aware that in some shops there are assistants who might come up to you to help you. Their unanimous opinion in these situations is that they should lower the shield that is represented by their music listening behaviour, to show that they are available for an interaction and be able to react more quickly and appropriately. Anne, however, used this exact same function to not be approached in a shop. She partly kept on her headphones, because she did not want to interact with a shop assistant.

> So if I'm coming in if I'm going into a shop, just for a fact of good manners, I would probably take off one just in case one of the shop assistants asks me something and I don't want to be rude and so - don't talk to me. (laughs) (Jane)

> But, I think when you're in a shop you have to have slide the volume down slightly, because you have to be aware if someone starts talking to you. Or say if you like if you're passing someone and say sorry when you bump into them, you don't wanna shout that out, so you put the volume down, but then when you're out in the street you probably have the volume I have the volume up a little bit higher, because you don't need to be as interactive then. (Annabel)

> And I went round the shop and actually the music in the shop was alright, but I kept the headphones half on anyway. (laughs)
> E: Just to block out some of the noise?
> A: Yeah. Also 'cause I didn't want any help. (laughs)

E: Ah ok. And you think if you had taken them off they would have approached you?
A: They would have been more likely to. (Anne)

Interestingly, Anne was the only one of the participants who talked about music listening as a socially acceptable way of letting people know that you are busy or did not hear them. This effect of mobile music listening was also mentioned in Bull's (2000) study, but Anne is the only interviewee here who mentioned this behaviour. She uses the fact that wearing headphones makes her less approachable to keep strangers who might want to talk to her in the streets, for example, fundraisers, at bay. Nevertheless, as this was not one of the questions on the semi-structured interview manual, it might have been the fact that I did not specifically ask for it that meant nobody else voiced their ideas about this topic.

And it definitely it's a good social sign, as in - I'm already occupied. Go away. (Anne)

Mobile music listening can have the effect of shutting out other people and stopping conversations from happening. For Anne, this is something positive when she tries to avoid being approached by fundraisers. However, Steven, a non-listener, raised the point that listening to mobile music might stop interactions from happening that are initiated by strangers who need help, for example:

But in the long term, even just walking around on your own a bit does have the effect of .. there might be someone you walk past every day for a year. Maybe if you didn't have them then they might have spoken to you at some point, but because you do have them in. So there's these things you are not aware of that maybe. It's not just somebody you know talking to you it could be somebody you don't know, wanting to say hello or ask for directions or ask for help or something. So you're very much closed off, which is .. yeah, kind of puts me off. (Steven)

Mobile music listeners seem so absorbed in their listening experience that they do not notice some of the things that are happening around them, for example, people wanting to have conversations or asking for help. In some cases, the volume of the music might make it impossible for them to hear anything else. This unsociable behaviour is what researchers (e.g., Bull, 2000; Gergen, 2002) have pointed out repeatedly as a sign of the privatising and isolating effect of mobile music listening. However, recent studies have found that there are many more nuances to mobile music listening than apparent at a glance, for instance that “the iPod zombies are more switched on than you think” (Prior, 2013) and that sharing headphones can be its own form of being sociable (e.g., Bergh et al., 2014; Bickford, 2014). Additionally, while some forms of listening to music have always been thought of as being sociable, they are also inherently private despite taking part in public as Small's (1998) thick description of visiting a symphony concert shows. So also does using an iPod have more nuances than just being private, which the descriptions of the listening participants above as well as events like flash mobs (e.g., Improv Everywhere, 2010) – where people are connected by instructions given to them through their portable listening devices – demonstrate.

Nevertheless, there are obviously still situations in which mobile music listening can be perceived as excluding, as examples from non-listeners below point out. Wearing headphones in the presence of other people can be experienced as unsociable (Cook, 2013; Small, 1998) because it depends on the preferences of the listener to open themselves up to conversation. They might not always want to interact when somebody around them wants to talk to them, or it could be that they only notice certain potential conversations and not others, therefore taking the choice of starting verbal exchanges away from the surrounding people.

> To the point when you're on the chairlift together, there's two of you or three of you or six of you and they've all got their music in. And em not too loud, so they could talk. They'd talk a little bit louder, but they could start a conversation, but if I started one, nobody would hear me. So you're kind of sitting there like that and you could only join in with their conversation, but you couldn't. (Steven, non-listener)

> Some headphones are very obvious. But sometimes if they just have their little ear pods in or something you don't maybe realise if their hair is over and you don't see maybe and sometimes like and that used to be where I used to work and maybe even now where I am now, it's like you say, when you know the people, you say hello. And they don't say it back and it's not because they are rude, they maybe don't hear you. And this is just one thing, you go - oh they are listening to music. (Maria, non-listener)

If wearing headphones can ward off people altogether, it seems understandable why some of the non-listeners get the impression that they are being ignored on purpose:

> But it really annoys me when people avoid you on the street, because they pretend that they've got their headphones on and they can't actually see you, because they've got their headphones on and they can't hear things that are going on. (Christiana)

Christiana is talking about people she knows, however, while Anne was referring to strangers before. None of the mobile music listeners in the present study mentioned avoiding people they know on purpose or using their music as an excuse to not talk to an acquaintance. If they want to keep the conversation to a minimum they might still stop and greet someone and then continue on their way without changing anything in their music listening behaviour. Maybe the music listeners are aware that ignoring someone you know in the streets is perceived as very rude and they wanted to give a good impression in the interview, which is why they did not mention it. On the other hand, it could be due to the people that were interviewed, and other people would show this kind of behaviour, like some of Bull's (2000) interviewees who would prefer to listen to music than talk or interact with their partner. Including more participants in the study or using quantitative methods to discover findings that can be extrapolated to a larger demographic would be a way to verify these assumptions in future research.

Additionally, none of the interviewed mobile music listeners reported being so caught up in their music listening experience that they did not see a friend when walking around. Possible reasons for this lack of reporting might be that the listeners did not notice that they had not seen someone and were therefore unable to talk about it, or that they were aware of the distance their music creates between themselves and their environment. With this awareness might have come a change in behaviour which ensured that they paid attention to what was happening around them if necessary and therefore noticed acquaintances more easily. To summarise: if an interaction is to be discouraged, nothing will change in the music listener's behaviour, although they might say hello in passing. If, however, there is the possibility of an interaction with someone, but this will likely not become a deeper conversation, then either the volume is turned down or only one headphone is worn. Conversely, if the listeners meet someone for the express purpose of spending time with them, for example, walking around with a friend, then most of them would not listen to music. Or, as Thomas so succinctly puts it:

> E: And if you go to town with someone?
> T: I don't listen to music. It's rude. (Thomas)

Hayley elaborates her reasons for not listening to music when walking together with a friend in the following way, which expresses what the others have hinted at:

> E: And if you were walking with someone else, would you listen to music?
> H: No, no. 'Cause I think that yeah, I would think that would be quite rude. It would be like - ok, we are walking together, but I'm going to ignore you and listen to my music. - Yeah. I hate when people are together and they're on their cell phones, just I absolutely hate that, so I like whenever I'm with someone else I tend to like make sure that or my attention is directed to that person as much as possible rather than me just being like - oh, ok, I'm just going to look at this, my Facebook. - And - oh, I haven't seen you in a while, how are you? Ok. (Hayley)

Only two participants mentioned situations where they would listen to music over headphones while with a friend. Nevertheless, even here they would not subscribe to solitary music listening, but would prefer to share their headphones.

> But sometimes when I'm running I've given one earphone to my friend and to help motivate her and then had the other earphone in. Or I've given my music and headphones to my friend. I've offered it anyway in the beginning. And then if she didn't need it and then I see she's struggling I've given her the music if she forgot her phone for instance. Which she did. And then she was listening to mine and I was just running without for a little bit. Just having a time out. And then she gave it back to me. So, yeah. There you go. (Annabel, 28)

> E: And if you like go around with someone would you then listen to music?
> K: If the circumstances require, I do. But not on the headphones. Actually, we share. I take one headphone, takes one headphone. Or on the phone speakers, 'cause they're loud enough. Or I have these portable speakers that makes huge noise. (Koko, 25)

This behaviour of sharing music is not something Max can identify with. He described that he can mostly see that in “young people” and the age of Koko and Annabel corroborates that. Both are more than a decade younger than him.

> It's not really social to be to listen to (laughs) music when you're with your buddies, although I see young people do it all the time, you know. And they have like one earbud in the left ear and they share that with someone else and I just don't understand why they do that. (Max, 42)

It transpires that it might be their age that leads people to think differently about listening to music over headphones together in a public context, which was also found by Bergh, DeNora and Bergh (2014) in interviews with teenagers, who showed the same behaviour as Koko and Annabel in this study. If they spent

time together with friends they would either not listen to mobile music or share headphones with them. The participants in Bergh et al.'s study are likely of the same generation as Koko and Annabel, so this demeanour could be age specific, especially since none of the older participants in this study mentioned it. However, to ensure the verity of this statement, further quantitative studies should be carried out to see whether sharing headphones is limited to listeners of a certain generation.

There also appears to be a clear idea of what a person of a certain age should listen to as opposed to a person of a different age. Koko supported this notion and explained that if you do not listen to the music you are expected to listen to, you might be “judged”. Thomas described an experience where he was ridiculed for the music he liked. It was when he first discovered that music affects him emotionally:

> And I remember I was ten and all the kids were bored, and I was so fascinated by the music. I was not fascinated by the show itself. I sat there - I even get goose bumps now (laughs) and I remember the music I was like - oooh. And that's when I realised that music, you know, everyone laughed - oh you listen to classical - you know how kids - [in a different voice] oh, he's a freak. He listens to classics. I don't care what I listen to. (Thomas)

Koko used to listen to music over speakers in public places as a kid, although he says that he no longer does that:

> Don't know. Like sound pollution. Like maybe people don't like the music I'm listening to and I don't want to, you know, be judged. It's not like, I don't think people would judge me, because I listen with what normally every person of my age would listen. So, yeah. But I don't use to take my, you know, like take a huge a big speaker that makes a lot of noise and take it with me. (Koko)

All the interviewed mobile music listeners agreed that it would be impolite to listen to music at a volume that other people would also be able to hear what

they were listening to. This position is not solely connected to the prevention of hearing loss, which is discussed in more detail in chapter 8, but also with socially acceptable behaviour. An insight into this is given by Annabel, who answered my question about why she listens to music over headphones in the following way:

> Because if you're walking around with your music playing aloud that's probably not socially acceptable and also it's a personal thing, so listening to music and you can't hear it as well, so when you have headphones in you get better sound, more surround sound, whereas if you had it holding on your phone, firstly it would be blaring out and everyone else could hear you (laughs) and it's just not fair on other people and also you don't, it's just not what you do. If you're going to listen to music put headphones in and then it's fine. And also I think headphones give you a better audio.

Although these statements are related to playing music out loud in public, they clearly indicate that mobile music listening is a private experience, which allows you to listen to anything at all without broadcasting it to all the surrounding people. It seems that the music you listen to gives information about yourself to others, so playing music out loud allows the other listeners to come to conclusions about your personality or habits (whether they are correct or not). "Tell me, which music you listen to, and I'll tell you who you are" (Kilthau et al., 1997, p. 368) is also an idea that has pervaded music preference research for some years (ibid.). There are certain stereotypes connected to musical styles, for instance, the idea that fans of heavy metal are predominantly aggressive (ibid.), and while some of these have been verified in studies, others have not (e.g., North, 2010). This connection is clearly shown in Thomas' example, who was laughed at for liking classical music as a child and was called “a freak” for not fitting into the pattern of what all the other children preferred to listen to. These stereotypes come either from the public and have entered research or vice versa with the effect that people are reluctant to talk about their music listening habits if they do not correspond to what they think they should listen to. Ben, for example, changed his music listening behaviour for the study, because

he did not want me to interrupt him and ask about the music he was listening to, while he was listening to something he was embarrassed about:

> So I didn't listen to the most embarrassing music, probably Cher, that's it. (Ben)

Mobile music listening is private or a “personal thing”, as Annabel calls it, and nobody around the listener knows what they are listening to, unless they choose to listen to it at a volume that communicates it to their surroundings. While high sound volume is often accidental, it can also be purposeful to create a certain image of oneself in the presence of others, which might be the reason why Koko used to listen to music over speakers in public. However, he is aware that music can be perceived as annoying and “it's just not fair on other people”, as Annabel phrased it, to listen to music out loud and force everyone to take part in it. The impression that it is impolite to listen to music out loud in public might be closely connected to private space, which, according to Altman (Altman, 1975), is “the invisible boundary surrounding the self” (ibid., p. 37). It serves the function of maintaining an “optimal level of intimacy between people” (Argyle et al, 1973 cf. Holahan, 1982). Therefore, in a crowd with strangers, you do not want to smell, feel or hear the other people if you can avoid it. Listening to loud music, in this case, would intrude in other people's private space and would result, like any invasion of private space (Insel & Lindgren, 1978), in discomfort and stress in the involuntary listener. To avoid this there seems to be the consensus amongst the mobile music listeners in this study to keep one's music to oneself and use headphones instead of speakers. Anne, for example, explained why she does not sing, but mouths along to songs she hears through her headphones.

> E: So you sing along to your songs while you're commuting or rather not?
> A: I like to mouth (laughs) because I'm not singing so nobody's going to look around. They're just going to look past me and go - what? What's going on? - and chances are I'll never have to see them again and be confronted about it (laughs).
> E: (laughs) You could always pretend you're on the phone.

A: The amount of times I have been actually on the phone with my Bluetooth headset on or with even with headphones on and then people have just looked at me like - what's going on? (laughs) So I might as well mouth. (Anne)

Music is also a great way to nonverbally communicate with people, as Anne has discovered in the case of a neighbour. She turns the fact that music can invade someone's personal space into an advantage by reciprocating the effect her neighbour's music has on her:

A: Sometimes I do put on something nice and hardcore and loud and screamy when my neighbour's music is annoying me. Then I think - I send something back. (laughs)
E: Yeah. Would you then turn it extra loud?
A: Yeah, yeah, yeah. Extra loud to make sure they hear it. And then you see if by the end of the song they're music is still playing. (laughs)
E: (laughs) Ok, so who wins then.
A: It works. (Anne)

Anne also found that listening to music can give support in overcoming annoying situations with people, and help deal with uncomfortable social situations, like crowdedness.

It was like, I don't know, half past six seven a clock, but it was dark, 'cause it was winter. And they were on the bus outgoing somewhere. Drinking on the bus. Ah, being noisy and annoying. And yeah, I could still hear them over my music, but when I put some metal on then I was listening to some trash talk. That drowned them out nicely. (Anne)

A: And then it's more about how crowded it is and how cramped you are and the fact that it's not a great social occasion. (laughs)
E: Yeah. So crowdedness is another reason.

> A: Yeah, I mean if it like, you wouldn't put it on like in the canteen, you know. Then, that's some crowded people you know, and you happily strike up conversation, that is more crowded strangers, you know. (Anne)

Here, again, the auditory bubble comes into play, that augments the personal space or creates an invisible bubble around the listener in light of the impossibility to maintain the required personal space in a crowded situation.

Non-listeners' views on the sociability of mobile music listening have been considered for the first time in research so far and provide important insight into opinions that were previously based on assumptions without any empirical proof. Some of the non-users of portable listening devices compared mobile music listening to the use of smartphones, since they could have the same antisocial effect. Smartphones are not necessarily utilised to play music but to look at the screen for incoming messages, games, or news:

> The same thing would apply to smartphones. They're on them all the time. They start with the idea like - ok, I'll use it just when I need it, but then within six months, within a year they're using it all the time and sort of sitting like this. And you realise they haven't listened to the last fifteen seconds of what you said. So I found the same kind of people and the same reasoning kind of got me away from that. So, you may not think it's bad, but it looks bad. Same as if you get your phone out. Well I just - two seconds - but that would if I saw someone do that and be like - come on mate, you can do that when you get home or something. (Steven)

A side effect of using smartphones and portable listening devices, in the opinion of non-listeners, is that it stops people from socialising. This development worries the interviewees especially with regards to teenagers who have grown up with these devices and whom they perceive as not knowing how to truly socialise without the help of their gadgets:

> But at the same time, when you see teenagers out together, they're quite often showing each other what they've got on their phone. And that's how

> they're socialising. And it is in a completely different way to how we used to socialise as kids. And in a way I find it quite sad, because they're not actually really conversing and interacting with each other. (Maisy)
>
> I've got on numerous busses with school children who do that [listen to mobile music] and .. they save seats on the busses and do all those kind of things. .. I don't know if it's good for them, being perfectly honest.
> E: In what way?
> C: 'Cause there's no interaction. 'Cause they're just listening on headphones all the time. I just think there's no interaction, no social interaction with anybody else at all. (Christiana)

It would be interesting to discover whether this assumption that social skill is deteriorating because of the use of mobile devices can be supported by findings of longitudinal studies, or whether they are nostalgic personal impressions of the interviewees that would fit into the category “when I was younger, everything was better”. It could be that mobile music listening or staring at the screen of a mobile phone are different forms of behaviour that have been present for people of the same age for several generations, for example, it might be possible that collecting messages, music and funny posts on Facebook have the same function as collecting stickers or football cards and using these as a vehicle for conversation.

Many non-listening interviewees had strong opinions on how music listeners should behave. However, they also remarked that they have no issue with listeners as long as they adhere to some unwritten rules, i.e. if they are considerate of their surroundings:

> And even in here you get people with headphones on, but they're still quiet and considerate of other people. I think it's just a consideration. (Christiana)

One of those considerations concerns the volume at which the music is played. Kate does not mind people listening to music over headphones, because she

has experienced a time where people played music out loud for everyone to hear. Compared to that, headphones are preferable:

> I think that yeah, it's actually a lot more polite than I've there was a when I was growing up there was a time when people had Ghetto blasters that they'd sit on their shoulders and they would blast out to the world and you would think, ok, that's antisocial. So, it is perhaps better to have people having headphones in rather than having this great big Ghetto blaster. But if people listen to music, it's a good thing, as well. It's a good thing to listen to music for certain. I don't I don't criticise them, it's just the way the way they like to do things. As long as they're safe.

Kate said that music is something nice which can have positive effects on the listener. The issue is not that listening to music is something intrinsically bad or annoying, but how it is done:

> And if somebody would sit next to me, I mean it would not be so loud that I would be disturbed, because I mean they have it in their ears, so they can't have it massively loud. So and I think I'm more chilled out anyway, you know, some people maybe they are quicker like they don't like this and this and they react, and I just feel, well, yeah now. It's if I would sit with somebody here, but it's the same with mobile phones, it's like you know when somebody sits and it's like a visitor and they are just doing that [pretends typing on a phone], then I think, well that's not socialising, but yeah. (Maria)

Therefore, most non-listeners, even the most adamant, do not mind if someone is listening to mobile music on their own, because then there is not interaction with other people and they would not need to socialise while having music in their ears:

> E: And what do you think when you see them [mobile music listeners]?
> P: That it's probably quite a good idea? (laughs) I wouldn't want to, like if I was going shopping I wouldn't want to. If I was going to be interacting

with people then I think it's a bit rude to be on headphones. I would only want to do it if I'm literally walking somewhere and not going to be talking to anyone. (Paula)

E: Like if you're walking around by yourself, would you then?
S: Sure, yeah, I won't have a problem with that at all. And if someone sees you and they take it off. (Steven)

Taking together impressions from chapter 4, a chapter that will come later on in this thesis (see chapter 8) and the present chapter, a set of etiquettes emerge. If these rules are followed, then most non-listeners do not have an issue with mobile music listeners. These rules are there to facilitate the safety of the listener as well as their surroundings (see rule 1, 2, 3, and 4), to promote social interaction (rule 3), to diminish potential conflicts (rule 3, and 4), and to encourage the listener to value their environment (rule 1, and 5).

Non-listener's rules for listeners:

1. Be aware of your surroundings at all times!
2. Do not listen to music while cycling, as you might not hear a car approaching!
3. Do not listen to music or give the impression that you are doing so (e.g., having one headphone in) while you are interacting with someone!
4. Turn down the volume to a level that does not leak out to your environment!
5. Take your headphones off and listen to your environment from time to time! You might find something you enjoy.

Most of the mobile music listeners are aware of these rules, even if they do not always behave accordingly. With regards to the third rule, it was shown in this chapter that the listeners have different strategies of making themselves available for conversation. They show nuanced behaviour according to the situation and kind of interaction. However, it seems that many non-listeners are not aware of these nuances, so this appears to be an area where listeners and

non-listeners could learn something from each other and should pay more attention to each other before generalising and judging.

7.2 Conclusion

Overall, these results support the notion that listening to music is conventionally and normatively patterned. Focussing on listening practices reveals how people negotiate everyday urban life, through developing new etiquette to negotiate the presence of strangers, interacting with other people, and the wish for anonymity and personal space.

Wearing headphones can be a sign to other people that the listener is occupied, which might either be perceived as rude or can be used to manage social situations in a socially acceptable way. Mobile music listeners are aware of this and use it to their advantage, and adjust their behaviour to the situations they find themselves in. It seems that while non-listeners, being studied for the first time in an empirical study concerned with music listening, worry about the social skills of listeners, the latter have developed very nuanced music listening practices in response to the people around them, that differ from person to person, but are still similar in many ways for different people. This nuanced behaviour shows that the worries of researchers like Bull (e.g., 2000) – while not unfounded – are not to be seen as extreme as they seem. It has been demonstrated in this chapter that the mobile music listeners follow some kind of new form of etiquette that allows them to switch seamlessly between their music listening behaviour and interactions with other people. They have developed ways of opening up to their surrounding world and demonstrating that they are available for interaction. Nevertheless, the responses of non-listeners point out that this behaviour has so far gone unnoticed most of the time, which could either mean that the listening participants interviewed here show exceptional behaviour which is not common among other mobile music listeners, or that they talk about being available for interaction more than they actually are, or that they show this behaviour, but it is so subtle that it is not picked up by non-listeners. It could also be – as happens so often among humans – that the non-listeners do not remember particular instances were a mobile music listener was social and responsive, but that only the negative examples stayed in mind (see

also studies about customer satisfaction that show that dissatisfaction is very difficult to overcome once it has happened (Ranaweera & Prabhu, 2003) or research demonstrating that emotionally charged experiences are remembered better than emotionally neutral experiences (Kensinger, 2009), or they interpreted the interview as being about negative instances and only reported these.

Headphones are often used as an extension of the limbs to convey information in a socially acceptable way. This information relates to the availability for as well as the length of possible conversations as described above. These signs are clearly understood by both listeners and non-listeners and are similar across mobile music listeners.

This chapter clearly demonstrates that there are nuanced ways of preparing to interact and interacting with other people during mobile music listening which had not been discovered in any previous studies. It shows that the premise that all mobile music listeners are unsociable is not generally valid and therefore this opinion of them should be adjusted, especially for future research. There are, of course, exceptions – listeners who use their music to keep other people at bay or situations where even the most sociable of listeners would prefer to be left alone – but it was still determined that there are certain unwritten rules that mobile music listeners adhere to with regards to social interactions.

While the headphones themselves control the social aspects of mobile music listening, it is the music that helps the music listener manage their personal space (e.g., through the auditory bubble), identity (e.g., through the choice of music independent from the surrounding people and their opinion) and their mood (e.g., through the choice of music) in relation to the aforementioned social aspects. Therefore, portable listening devices have several functions that can be at work simultaneously and that can be utilised by the user in very distinct ways with regards to the social context mobile music listening happens in.

8 Dangers of mobile music listening

8.0 Introduction

Apart from the danger to social relationships that were discussed in the previous chapter, mobile music listening can also affect the listener's physical health. In this chapter two main issues that arise when wearing headphones will be discussed. Firstly, the listener's safety in urban traffic will be considered. Everyone who takes part in traffic has to deal with the issue of staying safe. Governments have come up with many rules that need to be followed depending on the means of travel which are meant to keep a person safe and out of harm's way. Mobile music listening adds auditory information which might keep the listener from noticing signals from their environment. The questions that will be discussed in this chapter are, how mobile music listeners behave to stay safe, and what non-listeners think and have experienced with regards to music listening in public and safety in traffic.

In addition to being a threat to one's life, mobile music listening can also lead to hearing damage or loss. Since listeners are aware of the potential danger they employ strategies to counteract these effects, which will be presented in this chapter.

The topic of staying safe and healthy while listening to mobile music has been the source of much controversy in previous research, as will be revealed in this chapter, but is very important and therefore forms part of this thesis as well. As opposed to previous research, the focus here will be on individual behaviour and point of views, and different listeners' risk management skills that offer a deeper insight than previous, more quantitative, research has provided.

8.1 Safety in urban traffic

When talking about moving around the city while wearing headphones and listening to music, many of my music listening participants seemed to be aware that it could be quite dangerous to be in traffic and not be able to hear everything. In some cases the topic came up by itself, mentioned first by the participant, and in other cases, I asked specifically about it. However, the

interviewees always appeared to have an opinion on it or a specific strategy to deal with this.

Safety of mobile device users in traffic is a very big issue for all the interviewed non-listeners. This is especially valid for cycling while listening to music, which is seen as very dangerous by all of my interviewees. While some of the participants said that it would depend on how loud the music was played or whether both earphones were used or only one, the general consensus is that it is not a good idea to take part in traffic while using portable listening devices:

> I do think, my son, when he was 16, he had a Walkman. Do you remember the Walkman? And he used to use that in his pocket - I only have one, only listen with one ear, mum. But we always thought, he shouldn't be doing it, I did say though - could be dangerous, because you can't hear other cars approaching you from behind and I think it can also distract you while you're listening to music. You're not concentrating on, you know, to give way to a car or something, because you, you know, it could be distracting, could be dangerous. I think. (Josie, non-listener)

> Wouldn't be good, I don't think, to listen to music when you're cycling, because you are that little bit less connected. (Paula, non-listener)

> I don't have a helmet, but lots of people have a helmet and they also have headphones. I'm like - come on, you're kind of losing the .. if you're wearing a helmet to be safe, then maybe the headphones aren't a good idea. (Steven, non-listener)

Several of the music listeners cycled to work regularly. Some of them listened to music while cycling, while others, like Jonathan, did not do it for safety reasons. Interestingly, all of them had different arguments and different techniques for dealing with traffic while they cycled and listened to music. Anne, for instance, said that she is very sensitive to noise and listening to music actually helps her move through traffic:

> 'Cause I don't like to cycle on the roads. I think yeah, as long as I can hear the noise around me and to be honest I find most other noises so loud, even when I have my music playing at a level that I find pleasant, I can still hear everything else. (Anne, listener)
>
> I don't listen to music when I when I cycle, because I think it's too dangerous. (Jonathan, listener)

Anne's condition, which makes her sensitive to stimuli, also makes it difficult for her to manage sound and the information she perceives from the environment. For this reason, being able to choose what she wants to hear instead of being exposed to the noise around her, helps her to deal with this information overload. Bull (2007) came to similar conclusions after interviewing several mobile music device users. He discovered that those devices serve the same function as sunglasses do on a sunny day – they keep the incoming stimuli to a minimum, while also serving as a kind of shield to protect the user from anything he does not want to notice, including other people's behaviour in their vicinity or towards them. This purposeful disregard of other people is the reason why many non-listeners have the impression that mobile music listening is an unsociable behaviour, but this will be elaborated in a different chapter (see chapter 7). Regarding information overload, music can be used to distance oneself from the sound of the streets (Bull, 2005), which is exactly what Anne is doing. She uses music to create a barrier between the unwanted noise of the environment and herself, because it would otherwise overwhelm her. Furthermore, she mentioned, that she is prone to getting ear infections if she is not very careful, so wearing headphones have the additional benefit of keeping her ears warm and infections at bay. This maintains her openness to the environment which she could not hear well, if she had an ear infection. In her own way, this behaviour is what keeps Anne safe in traffic, being able to focus on what she needs to hear at the moment and protecting her ears simultaneously.

Another way to handle listening to music while finding your way through traffic, is not to rely on hearing but trusting a different sense altogether.

> I don't hear the traffic. I look. I use my eyes rather than ears, because I think ears can mess you up a bit? You know, you can hear something that's not there, but you can't not see something that's not there. Do you know what I mean? (Thomas, listener)

Ultimately, this means that Thomas looks around to check his environment for potential danger when he is cycling while listening to music. However, he was observed on foot, so this behaviour could not be verified. Nevertheless, it would agree with the study carried out by Walker et al. (2012) who found that especially men tended to display a more cautionary behaviour when crossing streets while listening to music compared to without music. Similar observations were found in Bull's (2000) study, where his participants reported that they tended to rely more on their eyes than ears when they become aware that they cannot hear what is going on around them. Whether this increases safety remains to be seen, because Goldenbeld et al. (2012) discovered that young cyclists in the Netherlands have the highest risk of being involved in an accident due to use of portable electronic devices, even though they reported that they pay more attention to traffic when using these devices. The researchers conclude from this, that this compensatory behaviour is not enough to increase safety. Demonstrating a similar concern with the safety of cyclists when using portable electronic devices, Ward et al. (2011) came to the conclusion that cyclists listening to music using in-earbuds missed 2/3 of the auditory cues from their environment. The question remains, however, how many auditory compared to visual cues a cyclist/pedestrian has to necessarily perceive in order to stay safe in traffic.

Max, on the other hand, does not try to compensate for the loss of his auditory sense in any way. He is very much aware of the danger he is facing while listening to music while cycling, but he decides to do it anyway. His reasoning for that, however, does not lie within himself, but is part of a bigger way of living, a kind of lifestyle that comes with riding a certain bike, the BMX. As can be seen below, Max believes that when uses his BMX, he is freed of certain rules and is allowed to show behaviour that would not be accepted otherwise, like cycling on the pavement. According to Max, listening to music in traffic is very dangerous, but it seems that, since he is exempt from certain rules

in traffic because of his bike, he can cycle somewhere where listening to music is not as dangerous, and can therefore 'afford' to listen to music over headphones while cycling.

> E: Ok. And how do you work out if there's a car? (laughs)
> M: Em by using my gut feeling (laughs). I must admit that I might be a bit dangerous there. [...] I'm born and raised with cycling and how to operate my movements through traffic. I ride a BMX and I think I can get away with driving on the pavement, because of that, […]. So I'm not a normal commuter with a big bike that goes on the road, so I manoeuvre myself through alleys and pavements and kind of skip the rules and sometimes I go on the road, because then I make use of the traffic rules to get some speed for example and then, when it becomes really dangerous, because I think in England cycling on the road is really dangerous even without listening to music, and then I prefer to go on the pavement. […] So I try to be invisible and manoeuvre myself through the city when I ride down the streets and kind of commute to work and all that. So, I'm a bit devious, I'm a bit naughty. (Max, listener)

BMX (Bicycle Motocross) was invented either in the US in the 1970s (USA BMX, n.d.) or earlier than that in the Netherlands (Admin, 2016) by children imitating their motocross idols with converted bicycles. It became famous in the US through a movie in the 1970s and was made an Olympic Sport in 2008 (Admin, 2016). Alongside BMX racing where the goal is to reach a finish line through an obstacle course much like motocross, there is also BMX freestyle which can be carried out in several environments, one of them being in the streets. Street BMX bikes are a bit heavier than other freestyle BMX bikes, they usually have metal pegs on the wheels to help with tricks and often come without brakes to be more manoeuvrable (braking is done by stopping the movement of the wheel with the feet instead). They get “creative with handrails, stairs, drops, ledges and other urban surroundings” (Admin, 2016) much like skateboarders do. It seems that this appropriation of the streets is what gives Max the impression of being outside the rules of the street, because the aim is not to go from A to B on the road but to incorporate landmarks and objects into

the cycle ride. Even though he uses his bike to commute, it becomes apparent that he, nevertheless, is aware of its affordances. As he mentioned himself, he is aware of how dangerous cycling in the streets can be and, as a concession, always wears a helmet, which makes it slightly safer.

For the above-mentioned reasons it is not completely unreasonable for non-listeners to be worried that listeners would be focussed on something else and not notice any impending danger in their environment, and that they would be distracted or shut off from surrounding sound and would not be able to react quickly enough to avoid accidents. This inability to hear what is happening in the environment is not limited to cycling but to any activity that takes place in public:

> But I do think I think it's quite dangerous, you know, not to sort of know what is going on around you, because there could be an accident happening somewhere. I always bring it back to the train, but on the train you can't hear the instructions from the guard or anything, or a bus even, you know, so yeah. So I think it's quite dangerous really (Julia, non-listener)

It seems that mobile listening device users are aware of the issue of missing signals from the environment. The users I interviewed said that moving around places where other people are present, requires you to be aware of them, in order not to collide with anyone. Wearing headphones and listening to music can take your attention from what is important, as Annabel stated, so it is necessary to focus on the most important things that are going on around you, while ignoring others, as Cody does when he is running:

> So sometimes I think you zone out and it's kind of sometimes it can be dangerous, because you have to make sure that when you get to roads and stuff, you're looking left and right or you bump into someone or you'd probably be less aware of your environment by having the headphones in. Most of the time. (Annabel, listener)

> What is on the left or who is … I'm noticing cars and I'm noticing people which I'm going to meet them in some point. But everyone else, I don't really care. (Cody, listener)

While using portable listening device does not require monitoring a screen constantly, the concern of non-listeners that listeners may be involved in a serious accident through inattentiveness is still very valid, since many users combine the use of their smartphone with listening to music (although none of the listening participants in this study did). Even in the short time it takes to look for a new song to listen to, an accident could happen:

> If they're changing the music on their iPhone or something they're actually not aware of what they're walking into. You know, could have an accident, it's quite dangerous. I think in China they now have a bike lane, they've got a walking lane and, I'm sure I saw it on the news, they've got a texting lane where you can actually use your phone, you know, so it's safe. (Julia, non-listener)

The texting lane Julia talked about exists. According to The Guardian (Benedictus, 2014) a city in China has split a (relatively quiet) sidewalk into two lanes: one for users of smartphones and the other for other people. There is, however, much speculation about the purpose of it. On the one hand it seems to encourage texting while walking (Powers, 2014), while, on the other hand, it appears to create a safer environment for smartphone users (Strange, 2014). The question people are asking themselves, is how distracted smartphone users are supposed to notice the signs and stay in the lane in the first place (Strange, 2014)? Whether or not this lane was created with serious intent, it does raise awareness of texting in public, which has caused a large number of accidents in recent years (see Benedictus, 2014).

Germany (and other countries, like the Netherlands) strives to increase the safety of mobile phone users, too. The cities of Augsburg and Cologne built traffic lights into the pavement for people who do not look up from their smartphones to see what is happening around them. Whenever a tram approaches or the traffic lights turn red, the lights in the pavement start blinking

to attract the attention of the “smombies” (a combination of the words “smartphone” and “zombie” that was voted youth word of the year 2016 in Germany) (Sewell, 2016). The aim of the implementation of these traffic lights is to find out whether they reduce accidents at crossings at tram stations (Kolokythas, 2016).

App developers have invented other means to help users avoid accidents while texting in public. They have created an app that uses the camera of the phone to show the image of the street in the background of the screen, so that the user can see the street even if they are looking at their screen (Zolfagharifard, 2014). With this the field of vision is broadened and obstacles that were once hidden by the phone are now visible and can be bypassed.

An argument might be that listening to music leaves you free to partake in your environment and is therefore less dangerous than looking at the screen of a smartphone:

> I think you are more distracted if you just keep looking on your mobile phone, like what people do. Because when you have the headphones you still look around, there's nothing you have to look at. (Maria, non-listener)

Nevertheless, there have been studies (e.g., Lichenstein et al., 2012) that show that an increasing number of fatal accidents happen to pedestrians who listen to mobile music. Lichenstein and colleagues analysed 116 reports of accidents connected with the use of mobile listening devices. They discovered that most victims involved in the accidents were male (68%) and under 30 years of age (67%), and that 70% of the injuries were fatal. However, the authors caution that they based their studies on media reports which could be biased towards fatal accidents and that, although headphones were worn in all the reports examined, there is no necessary causal relationship between the use of headphones and the accident, although the circumstances make it likely that there is a connection between the two.

On the other hand, it was found that, while talking on the phone leads to greater distraction and slower pace when crossing the road, there was no effect when listening to music over headphones when carrying out the same task

(Neider et al., 2010). The researchers conclude that their results might have been due to the fact that talking on the phone demands more attention and is therefore more distracting than listening to the music that can be turned off if necessary.

Arising from these studies is the impression that the danger that emerges from the use of headphones in traffic lies in the “auditory masking of outside stimuli (environmental isolation) and distraction (inattentional blindness)“ (Lichenstein et al., 2012, p. 290). Neider et al.'s (2010) study does not show the former, since the virtual environment they used was without auditory cues, and the music the participants chose to listen to in their study did not seem to distract them either. This could explain why they did not find an effect for headphone use when crossing the street. However, in everyday life when music is chosen for a reason, it is likely that the listener pays attention to it depending on the circumstances. This will need further proof, but a first indication of this can be found in the present study where all my participants were able to give me examples of what they were listening to retrospectively in the first interview (i.e. without having been shadowed just before that). On the other hand, some participants had to take out their device during the shadowing to tell me what they were listening to at that moment, which could either mean that they did not know the title of the song or that they were not aware of what they were listening to. Further studies are necessary to discover more detailed information concerning this.

Most of the participants of the two studies presented here are more or less aware of the risk that is involved when listening to mobile music. While for listeners potential danger seems to be just one of the aspects that need to be negotiated when choosing to listen to mobile music, non-listeners are more outright in their worries. They paint a picture of the city which involves risk and danger in addition to unsociable behaviour. There is usually more than one person involved in an accident, or it includes material damage of more than one person's belongings. Having the impression that there are people up and about who are not aware of what is happening around them and are therefore more prone to accidents, can shape the perception of the environment drastically. It can even lead to changed behaviour in public places, to take the argument further. Thus, studying listeners' and non-listeners' perception of the danger

arising through listening to mobile music means studying people's perception of their environment and their associated behaviour.

The risk involved with using portable listening devices has also come to the attention of the law. Several countries regulate the use of portable listening devices while cycling (e.g., PNLD, n.d., Heuping, 2014) saying that it is allowed to listen to music while participating in traffic, but as soon as an accident is caused, or the listener is "deemed not to have proper control of their vehicle or to be driving without reasonable consideration for others" (PNLD, n.d.) it is a serious offence and will be treated accordingly. In Utah they went a step further and are fining pedestrians $50 for “distracted walking” near the railways (Henderson, 2014). Distracted walking includes talking and texting on the phone as well as listening to music over headphones (Davidson, 2012). Whether any of these regulations will help to reduce accidents remains to be seen.

8.2 The effects of high sound volume

Apart from danger to your whole person there is also the possibility of hearing loss or damage through listening to music with the volume set too high for longer than recommended. All of the mobile music listeners in this study were aware of this possible danger, which is likely a reflection of the fact that it is a widespread topic in the media. When entering “hearing loss through headphones” into the internet search engine Google, I found 988.000 results, with results like “Top 10 tips to help protect your hearing“ (NHS, 2015) or a discussion in The Huffington Post of how damaging headphones actually are to the ears (Flynn, 2014). Early research was worried about hearing loss caused by listening to pop music over headphones (Fearn, 1984; Hellström & Axelsson, 1988) while more modern research is concerned about sound levels through headphones in general (Hodgetts et al., 2009; Levey et al., 2011).

The awareness of possible negative outcomes of mobile music listening led the listeners in the present study to monitor their behaviour and their noise levels accordingly. Only one participant said that he would still listen to music on high volume, whereas everyone else seemed to be very conscious of the noise levels they subjected their ears to.

It's not .. even when I go in supermarket and such I stay with my headphones on. As loud as possible. I don't know, they say that it's not good for the ears. But I don't notice this. My hearing is excellent. For now. (Koko)

But I would never put the volume up so that it's over, how do you say that, of eh that it becomes louder than the surrounding music, because I'm very much aware that if you put music on too loud, that it might damage your hearing. And that's something I'm conscious of. […] I over the years I've learned how to listen to music, especially also because I was in a band and I recorded music and sound just becomes .. I've become really experienced with music. (Max)

E: So do you listen to your music loud enough for other people to hear, too?
A: I think, 80% of the time, no.
E: Only if you really want to annoy them? (laughs)
A: You know, only if they're really loud and I really don't want to hear them. Or maybe if I'm like - I really love this song, but then I normally turn it down afterwards anyway, because my ears are quite sensitive, and I find the average person to be quite deaf in comparison to the noise levels they prefer. (Anne)

The inclination to turn the volume of the music up to experience it more viscerally and immediately, is connected with the consequence of it having detrimental effects on the ears, especially if the listener forgets to turn down the volume again after the piece of music ended. Anne is conscious of this, which is why she usually lowers the sound level of her device again after the song. This behaviour was also familiar to non-users, as Josie's statement below shows:

‘Cause when you have a good song, you just want to turn it up. Because you feel it. You can feel the music quite well when you wear headphones. It's sort of I'm sure there's a tendency to just - oh, that's a good song, turn that up. But yeah, you can damage your hearing.

Two participants mentioned adjusting the sound volume of their listening devices to their environment. Anne would turn up the volume of her music if people around her are loud, and Max would increase the sound volume of his device to a reasonable level with background music in shops unless the background music was too loud which would make him turn off his music. This behaviour had been reported in previous studies, for example, Bull (2000) found that his interviewees adapted the sound volume in order to "maintain the hermetically sealed nature of their listening experiences" (ibid., p. 41). In an experimental study, Hodgetts et al. (2009) discovered that background and high ambient noise increased the sound levels of music that was played through headphones during exercising. However, the listeners were not aware of how high these levels were. This unawareness might be the reason why the participants of the present study did not mention the connection between background noise and sound level.

Some smartphones have a feature that automatically limits the output levels of the sound that is played over headphones to a healthy level. Two of the interviewees talked about this feature; one of them saying that he actively uses it, while the other knows about it but chooses to rely on his experience instead, which, coincidentally, agrees with what the limiter recommends.

> E: So you listened to your music quite loudly?
> M: Eh no, no.
> E: No.
> M: Em on the phone it's got .. a European kind of limiter, so it limits the volume of the music coming from [he played music and turned up the volume], so it doesn't do it whilst there's no earphones in, but when it's connected to an external source, it plays about two thirds of the volume and then if you try and turn it up, it keeps saying there's a warning message not to play your music too loud. Yeah. (Michael)

> I know there is on the iPhone, too. It gives you red indicators when you're putting music on too loud. I don't let that influence my choice, I use my ears and best judgement, but I do always notice that my preferred music

> level is always around the safe zone of the indications of my iPhone. (Max)

All of these quotes show that the sample of mobile music listeners I interviewed were all conscious of the fact that music listening can affect your concentration and make you less aware of what is going on around you. Thus, the listener has to take certain measures to handle the situation and to ensure that s/he is not in danger at any time.

One particular situation where it can be dangerous not to know what is going on around you, especially at night, is when you are walking by yourself. Jane therefore turns down the volume of her music when she goes out at night, so she is aware of what is happening around her and can detect any potential danger to her person more quickly. This behaviour has also been reported by several participants in Bull's (2000) study, who concludes that “the actual use of a personal stereo could be counterproductive as the loss of hearing might constitute a potential vulnerability in terms of the perceived position of threat” (ibid., p. 104). In Bull's study, women used portable listening devices in two ways: either they pretended to be listening to music or had it on very low volume while being fully aware of what was happening around them, or they listened to music loudly in order to not be distracted and therefore a target for potential danger. This discovery agrees with Thibaud's (2003) findings that mobile music listeners are constantly navigating between two overlapping auditory worlds. Depending on how much they want to perceive from their environment, the listeners either turn their volume up or down. Jane tends to do the latter in order to be more aware what is happening in her surroundings. While Bull's (2000) interviewees observed that wearing headphones also keeps them from being approached by people at night, Jane did not mention this. However, it might still have been part of the reason why she listens to mobile music when out alone at night, which shows that exactly the attributes that are often ascribed to mobile music listening in a negative context, i.e. “unsociable” and “isolating”, can have positive consequences, too.

Only two out of the eleven non-listeners referred to potential hearing loss in their interviews, which is surprisingly seldom. Instead they focussed on the safety aspects of mobile music listening, which are discussed in another

chapter. However, even though loud volume was not often connected to potential hearing loss by non-listeners they did talk about other effects it could have on the surrounding people, for instance, when it forces the neighbours on the train or bus to listen to it as well:

> Their music, you can hear it. You can actually hear their music and I have asked people on the train one or a couple of times actually to actually can they turn it down and they've been quite nice about it. Yeah, I've just asked them nicely. [...] (laughs) Yeah, 'cause I just can't go on a long journey listening to that. Yeah and it's all tinny sometimes, isn't it? And oh it's sort of the bassline going and, you know. (Julia)

Julia's wish to not listen to this distorted sound for an extended amount of time agrees with findings from Thorley (2011) who found that distorted sound from other people's headphones can lead to stress and aggression in the passive listener. Julia did not say whether it would have the same effect on her, but it is definitely not an experience she enjoys. While Julia is mostly annoyed by the sound quality that reaches her ears, for Agatha it depends on the kind of music that is being played:

> It depends on the music. Because it's if it's music I really don't like, then it's a bit irritating, but .. sometimes if it's music I like, it's a kind of nice background to whatever I'm thinking. […] Yeah, sometimes you have if you have other people who are listening to other music, then it kind of clashes and you listen to this weird mixture. (laughs)

Although Maisy also mentioned that she does not like being forced to listen to music, she ties it back in with her general observation about mobile music listeners. In her opinion, the main issue with the use of portable listening devices is that it requires a certain amount of “consideration for […] other people”, which has to be used to stay safe in traffic, when meeting other people and also with regards to the volume at which the music is being played:

> That can be another thing actually, can't it, when you hear somebody else's music and you don't necessarily want to listen to that music. When they have it so loud. But yeah, I don't, yeah, keep coming back to this consideration for surroundings and other people thing, don't I? In some way or another.

Maisy also recalled an experience where the volume of the music made the listener forget about the appropriate voice level for the surroundings:

> I can think of an example when I was on holiday when my uncle was listening to music on headphones and I wasn't. And he started singing and I wasn't expecting it (laughs), which is kind of the opposite of what I was talking about earlier. That was a rock version of Nelly the Elephant. I've never forgotten it. And he was really shouting loudly, because he had his headphones on. And, yeah, I suppose that's another thing, isn't it, people that listen to music on headphones like on beaches, which is where we were and stuff, it comes back to this being aware of your surroundings and things and being aware of what's going on. Because he obviously wasn't aware of how loud he was. […] Because otherwise he wouldn't have been as loud (laughs). And maybe he wouldn't have sung anyway if he didn't have his headphones on, because when he did take his headphones off, when I said to him - look, and I started laughing, he then got a bit - ugh - a bit self-conscious.

Here it seems that the sense of privacy offered by the headphones lead Maisy's uncle to forget that he was not alone, so he behaved as if he was, which was funny for Maisy and embarrassing for her uncle and might have been annoying for other people who shared their beach. It shows the effectiveness of the auditory bubble (Bull, 2005) in creating a sense of privacy, that Maisy's uncle was completely unaware of how loud he was singing and the effect it had on other people.

As a user of portable listening devices, Annabel knows about the difficulty of always being aware of how loud you are. For this reason, she adjusts the volume of her music to her surroundings. If there are many people around or

the likelihood of having to interact with someone is high, then she turns her music down a bit in order to react appropriately and so as to use the right voice level:

> But, I think when you're in a shop you have to be a bit more .. you have to have slide the volume down slightly, because you have to be aware if someone starts talking to you. Or say if you think like if you're passing someone and say sorry when you bump into them, you don't wanna shout that out, so you put the volume down, but then when you're out in the street I have the volume up a little bit higher, because you don't need to be as interactive then.

Annabel consciously opens up her auditory bubble to let it be permeated by surrounding stimuli and to be able to react according to what is happening around her. This behaviour refutes Bull's (2005) idea that the auditory bubble is static and closed off, and agrees with Beer (2012) that it is possible to open up those bubbles at will. Additionally, it supports Herbert's (2011) conclusion that it depends on the focus of the individual listener, how much is perceived from the environment. Even if a mobile music listener is wearing headphones with music running it does not mean that the user is actually focussing on the music, as was discussed in the previous chapter (7). Turning down the volume of her music seems to allow Annabel to switch her focus between her environment and the music more easily, therefore adding to the permeability of her auditory bubble.

Christiana provides an example of what happens if the mobile music listener is completely immersed in their own world and has their music playing at such a high volume that it is near impossible for external sounds to intrude. As a non-listener she describes an experience where she was sitting in the bus next to someone who was so caught up in their listening experience and played their music at such a high volume that she was not able to get their attention to press the stop button for her or let her get out to press it herself:

> I wanted to stop at a certain stop and they had their music blasting and I couldn't press the button. I wouldn't get a chance, so it's that kind of thing.

Having been a mobile music device user once, Agatha, knows about the effects loud music can have on the surrounding people. She recalled her experiences as a music listener where she was “always really paranoid about if I'm disturbing other people or if other people know what I am listening to”, which seems to make her more attuned to that behaviour in other people. Additionally, it might be a reason why she no longer listens to mobile music herself, although she does not refer to it in that way.

The question remains whether the interviewees of this study were influenced by social desirability factors. Given that the awareness of the damage loud music can do to your ears was very high in this study, participants might not have wanted to admit how high their music volume actually was. Even Koko's contrary statement about listening to music as loud as possible could be attributed to social desirability and impressing the researcher, since it could make him stand out as being tough, because his ears do not seem to be as easily affected by loud music as other people's ears might be. Whether or not his statement is true or an exaggeration for the benefit of the researcher cannot be confirmed with the methods of the present study. Although the shadowing verified several of the previously mentioned practices, it is not suitable to verify loud volume, because the researcher needed to keep a distance to the participant, in order not to crowd them and make them feel observed, and is therefore not in a position to notice any sound “leaking” from the participant's headphones. Additionally, all the participants were aware of being shadowed, so they might have adapted their behaviour accordingly, thus even in the moments when the researcher approached the participant to ask questions, nothing undesirable would have been noticed. Furthermore, whether or not sound is “leaking” from headphones depends a lot on the quality of the headphones, which would make it impossible to notice high volume if the participants is wearing good quality headphones. However, based on the findings of Portnuff et al. (2013), who discovered that self-reports about music volume are reliable, it can be reasonably assumed that the information given by the participants of

this study is valid. The validity of participants' answers can also be verified when looking at the results about safety in urban traffic where participants readily admitted to undesirable behaviour, i.e. listening to music in traffic even though they know it is dangerous, so there is no reason to believe that the interviewees in the present study had been overly influenced by social desirability factors.

8.3 Conclusion

In this chapter it emerged that one of the main arguments against mobile music listening is safety in traffic. Most of the non-listeners mentioned this concern in their interviews, especially in relation to cycling. When asked about the dangers they face when cycling with headphones the users in this study had different strategies to overcome these, from looking around more, using the pavement instead of the road, to trusting their gut feeling, which might be more or less successful. Another danger is that signals from the environment could be missed, which could lead to accidents even if one is not cycling. In the comparison between smartphone use and mobile music listening, different arguments emerged. On the one hand listening to music listening was shown to be safer, while on the other hand it was also found to be less safe than smartphone use. It seems that more studies need to be carried out to come to a more specific conclusion about this topic.

Another danger for the listener that was discussed in this chapter was high sound volume. The interviewed listeners were all aware of the potential danger of this and, apart from one listener, made sure not to listen to music too loudly through headphones. The non-listeners were generally not very aware of the danger, although they mentioned high sound volume in the context of its effect on social interactions. They would only be annoyed with high sound volume during mobile music listening if it stopped the listener from reacting appropriately or if they were forced to listen contorted, tinny music.

Knowledge of the risk involved in mobile music listening can shape people's opinions on their environment, as the worries of non-listeners show. Non-listeners see the mobile music listener’s behaviour, and are alarmed at some of the dangers especially to cyclist who expose themselves by listening to music. These worries, also about smartphone use in public, give the impression that, at

least from the non-listeners point of view, the streets are a more dangerous place to be than they would be without the technology. Additionally, having to inadvertently listen to someone else's music influences the surrounding people's mood and their attitude towards the listener. Thus, studying actual and perceived dangers in the city provides more in-depth information on the current opinion and perception of urban environments.

Anne

The sun is shining but Anne is exhausted and therefore grumpy, because it has been a long day at work. She is manoeuvring through the crowds of pedestrians and cyclists on their way home and listening to a music podcast she had just found this morning. The noise, smells and closeness of the other people are quite stressful, so she is happy that the upbeat music helps her, lifts her mood, and softens the world around her a bit.

Anne enters the first shop. She knows exactly what she wants to buy, so she does not feel the need to turn off her music to interact with the person at the counter in more depth. If they do not understand her immediately she can always point to the requested product on the shelf, which is not necessary this time. However, she does take out one earphone to demonstrate her participation in the conversation. After her purchase she quickly leaves the shop again because there are more shops she wants to go to today and she just wants to get it over and done with quickly.

After making her way through the crowd again she walks into the next shop. Here she asks several questions of the employees for which she completely takes off her music. She is deeply engaged in the conversation and turns off her music for that.

When she tries to start the music again, it does not work. Anne presses the side buttons on her headphones several times hoping to get it to start again, but to no avail. The streaming service of her phone is no longer functioning. She had chosen to stream the podcast instead of downloading it directly to her phone, to try out the podcast before committing the storage of her mobile phone to it. After trying to get the music to run again several times she gives up. She takes out her phone to turn off the music application she was using.

Without music Anne goes into the next shop. The music in the shop is not too bad and she wears one headphone to block out some of the noise and to signal to the employees that she does not need any help and therefore does not want to be approached. Without finding anything she might want to buy, she leaves the shop again.

Outside she gives her streaming service another try. Using her phone she activates it and it starts playing music as required. Anne reminds herself to stay

off the pause button of her headphones because that would interrupt the stream again. From now on she skips songs using her phone instead.

In the next two shops she also just browses around looking at the products. Her playlist is playing again and she discovers that she really likes it the way it has been created. The order of songs suits her which she enjoys particularly because she also listens to music while cycling and does not want to constantly change what she is listening to then.

In a small street she stops a woman and asks a light for her cigarette. She does not stop her music for this and only partly takes one of her headphones off but is able to communicate with the woman anyway. After standing for a while to enjoy her smoke and the music she goes on.

On the way home she walks through a small park. She passes a group of people sitting in the grass listening to loud music, but she does not seem to take any notice of them. Anne pauses to read a sign next to a tree and notices a man sitting on one of the low branches. A police officer walks past her towards the tree and Anne stops to watch what is going to happen. From reading the sign saying that climbing on the tree is not allowed she knows that the police officer is likely there to remove the man from the tree. She wants to know whether the man will leave without making a fuss. Through all of this she keeps on listening to music and is aware of what she is listening to. Even reading while listening to music did not stop her from enjoying the music which comes from her training as a call centre advisor who has to learn to read, write, talk and listen at the same time. With this background she can enjoy music at all times. After the man is safely removed from the tree, Anne walks on.

Conclusion

The present studies have examined mobile music listening and non-listening in detail, using a sample of 22 respondents, listeners and non-listeners. In addition to addressing the research questions several unexpected discoveries were also made. In this chapter, I will first summarise how the research questions were addressed, and then turn to more general results and findings.

Although the present studies were carried out with only a small number of participants and were exploratory in nature, they nonetheless offer insight into topics that have not been explored in this way before. The small number of participants has to be kept in mind when reading the results, although they were case studies and therefore resulted in more in-depth information that larger, less detailed studies would not have achieved. So, while the present studies have limitations, they also offer valuable information that can be taken on by future studies on a larger scale to be proven and expanded.

1. How are listeners' responses shaped by the device, by the pieces of music, and by the interrelationship between the two?

On the one hand, it became apparent that the mobile music listeners refer to the music when they talk about how mobile music listening lifts their mood or helps them through situations (see chapter 3). They also choose the devices that fulfil their needs best – headphones that allow for the best audio quality or for listening to music while cycling, and devices that have a long-lasting battery, so the listener never needs to be without music (see chapter 6). Listeners spend a lot of time and thought on selecting the music they want to store on their devices which indicates the importance of music rather than the device.

On the other hand, it turns out that the device serves as a signal to non-listeners about the availability of the listener for communication. Wearing headphones indicates that the listener is occupied, while taking them off opens up the listener visually for conversation. Therefore, the device can be used as an accessory to communicate availability which works either with or without simultaneously listening to music, thus illustrating that the portable listening device plays its own role during mobile music listening.

However, it transpires that it is not so much a question of the importance of the device over the music (or vice versa) but rather a question of how the device and the music are uniquely utilised in everyday life and how they afford situated listening. Listeners use the music as well as the device for their own purposes, with each of them supporting the listener in their own way and in different situations.

These results validate previous results that concentrated on the music or the device, showing that past research can indeed inform present and future research when it comes to mobile music listening. However, Bull's (2000) claim that it is possible to “analytically distinguish” (ibid., p. 14) the device from what is listened to becomes problematic, since this is not reflected in everyday life. Users do not often differentiate whether the device or the music has the required effect, especially since multiple effects can overlap, for example, listening to energetic music for motivation while wearing headphones to keep the ears warm. Therefore, the present research has clarified that future studies, instead of focussing on the devices or the music should rather focus on how they are used, what they add, and what they help with in everyday life.

For general sociological research this means that the participant is the expert and any results should always be grounded in the empirical data without being analytically alienated from its source. This will produce findings that can be traced back to actual behaviour, which help to better understand everyday practices.

2. How sociable is mobile music listening from the point of view of listeners and non-listeners?

The second aim of this thesis was to discover whether mobile music listening is as unsociable as it is often perceived to be. Some of the non-listeners in the second study would clearly say that it is, while this impression is not entirely supported by the behaviour of the mobile music listeners. Listeners use music to shut out disliked noise from the environment and replace them with favoured sounds. Some of them even wear their headphones to keep strangers from approaching, for example, when there are fundraisers in the streets. All of the interviewed listeners, however, are aware that there are situations in which it

would be rude to listen to music, faced with the potential of social interaction. This study showed that, with the development of portable listening devices came the emergence of a new form of etiquette. Listeners have clear ideas of how to behave in social contexts, for instance, not talking to someone and simultaneously listening to music, and being open for potential conversation. Therefore, most of the listeners pay attention to potential interaction and are aware that they could be perceived as unsociable. As a response, they indicate that they are available for conversation and that they are part of the interaction, by taking at least one headphone off. Some even share their headphones and one participant carries a splitter to share his music if desired.

Despite all these nuances in behaviour and the thoughts that the listeners applied to appearing more sociable, this is often not perceived by the non-listeners. Reasons for this could be that the listener is still in control of when they want to be open to interaction, which leaves the non-listeners to respond but not to initiate conversation when they want it. Additionally, once listeners take off their headphones to show that they are attending to the conversation they are no longer identifiable as listeners, so non-listeners would not be able to tell that they are talking to a mobile music listener. In short, although it is often not recognisable to the observer mobile music listening is much more sociable than it is often credited with.

Listeners tend to behave in certain ways as to show their availability and often think that this is obviously perceived by the non-listeners, however, the present study shows that this is not the case. Not a single non-listening participant in this research reported to have seen any of the behaviours that listeners thought they were exhibiting. Past studies have concluded from carrying out research with mobile music listeners that this behaviour is perceived as unsociable. The present study, however, has for the first time sought to verify this impression by focussing on non-listeners, too. This research has found discrepancies between the intended behaviour of mobile music listeners and the way this behaviour is perceived by surrounding people, and also provides possible explanations for this discrepancy. Therefore, the findings from the present studies indicate that, in order to understand everyday situations more closely, it is important to ask not only people who carry out certain behaviour but also surrounding people who will be able to illuminate

these actions from their own perspective. I would therefore suggest that future studies take this into account, so as to improve the ecological validity of their results.

Additionally, the present research has demonstrated that ideas about the sociability of everyday behaviour should not be based on assumptions, which might be correct but do not show the full picture of what is happening, but rather that empirical information about the studied behaviour should be taken into consideration to explore nuances that might reveal a completely different picture than previously assumed. The present studies therefore have filled a gap that most research was not aware of, and presented a way to move forward that goes beyond mobile music listening research to any studies focussed on everyday behaviour.

3. How do listeners choose what to listen to and how do they listen to it? What are the factors influencing this behaviour?

The third research question considered the choice of music and the ways it is listened to. With regards to choice of music, it was discovered that mobile music listeners do not listen to music they would not listen to in general, or to something that does not adhere to their preferences, as was already found in a previous study (Heye & Lamont, 2010). The music stored on the device is often part of the listener's normal music library, so there is not a certain 'mobile music' that people listen to. Even if the music is streamed to their devices, it is still preferred music. Some listeners constantly change their content, while others have had the same music on their mobile listening devices for years, so it is unlikely that bigger, quantitative studies will be able to find any major correlations between the choice of music and mobile music listening, because it is as changeable as other music listening behaviour. A small number of participants sometimes listened to podcasts, too, which would be an interesting topic for future studies, but most of the time it is music that is listened to.

In agreement with other studies, it was found here that the most common way of listening to mobile music is choosing playlists and listening to them in shuffle mode. This way of listening gives the listener control but also contains a level of surprise. Skipping songs is also quite common, which has not been the focus of studies so far (e.g., Krause et al., 2014). The present results indicate

that there are more ways of listening to music than have been found previously, especially when taking classification systems (e.g., own playlists, or online content) into account, which increases the potential number of ways it can be listened to.

What is listened to, and in which manner, also depends on the activity that is being carried out simultaneously. Therefore, sometimes the chosen music is not the same as at home, because the activities differ, for instance, when running. Common activities mentioned that accompanied mobile music listening were exercising, doing chores, commuting to work and shopping, which covers many of the solitary activities that are carried out outside (sometimes mobile music listening also happens in the home, especially if other people live there, too), thus indicating a need for control in different situations. If the activity requires concentration, and the music is in the background, then less control is needed and exerted over the choice of music.

Control is also a topic that is relevant with regard to finding new music (less control = listening to the radio; more control = looking for specific songs online) and depends on how music is listened to. The importance to consider need for control during mobile music listening discovered here agrees with previous findings, and highlights how control can be applied to more than one selection methods.

The present study provided a description of decisions, influences on, and behaviours during mobile music listening that had been partly illustrated in previous research but have now been summarised in one place. Additionally, in-depth information added to the sketchy information available from quantitative studies (when it comes to detailed behaviours or decision) and therefore leads to a deepened understanding of mobile music listening which can be helpful for future research and helps to compare mobile music listening to other everyday behaviour.

4. Why do some people decide not to listen to mobile music?

For the first time, a study has examined non-users of mobile listening devices and their reasons for not using them. It was revealed that most of the non-listeners had tried to use portable listening devices at least once and had

stopped again for various reasons. Some participants felt too isolated because it did not allow them to hear everything they wanted from their environment. Others did not like the feeling of wearing headphones or the sound quality, and it was deemed to be distracting and not important enough compared to other activities. Additionally, a few participants stopped to use their devices for no particular reasons, while others would use it but for lack of opportunity. These findings do not generally agree with the reasons found in an anecdotal survey, however they are a good basis for the development of larger studies.

The non-listeners of this study fall into the categories that Wyatt (2005) devised, namely the “rejecters” who have stopped using their devices after trying it, and the “expelled” who do not have the opportunity for it. Future studies could delve deeper into the possible existence of the other categories of non-users (“resisters” and “excluded”) to discover whether they are applicable to non-listeners, too.

This study of non-listeners started to fill in a gap that no other study about mobile music listening had even noticed. It reveals the other side of the coin when it comes to reasons for listening to mobile music and shows that it is important to take non-listeners into account, since their experiences provide a more complete picture of listening practices in everyday life and also tell us about their negative aspects. This study shows the importance of considering all angles when studying everyday practices to get a full picture and therefore the ability to situate it better within everyday life and understand it more fully.

One of the discoveries of the first study is the usefulness of a new method for research into music listening behaviour in everyday life. The method, called 'shadowing', first used by DeNora (2000), was adapted for the present research and was found to give valuable insight and knowledge that could have not been found using any other method to date. It gave the participants the room to reflect on their practices and the researcher the opportunity to observe behaviour and ask questions about it, which was very helpful in discovering nuances and experiences the participants would not have remembered otherwise or would have been unable to express or even notice. Its uniqueness, in combination with interviews, also lies in its ability to eke out in-depth information in a minimal amount of time, which other forms of participant

observation had not been able to do to date, and methods such as experience sampling could not fully grasp either. Therefore, this mixed methods approach proved to be a valuable tool which can enhance future research, especially when it comes to everyday behaviour that lies within the participants' practical consciousness, or behaviour that should only be minimally interrupted in order to be fully explored.

Mobile music listening has been discovered in this thesis to be more than simply turning on the device and listening to music whenever one wants to. It is not purely what can be observed in the streets or at a specific time of day. On the contrary, mobile music listening needs preparation, there are unspoken rules to be followed in social contexts, different ways of listening depending on the person's preferences, and different contents that can be listened to. It is intertwined with other behaviour in everyday life and cannot easily be separated from this. It resembles a Musical Event (DeNora, 2003) in that it consists of three times – before the event, during the event, and after the event (a more in-depth explanation of the application of this to mobile music listening can be found in Schurig (2017)). Listeners also found that there are times when they want or need to turn off their music, and others when they would turn their devices on again. All in all, it was illustrated that mobile music listening is nuanced behaviour that involves a lot of thought from the listener and that does not start in the streets but at home. This study also shows that most if not all behaviour cannot be purely studied within one context, since it always has connections to other parts of life, be it education, expectations, home life, or behaviour in public. Therefore, future studies should take these connections into consideration in order to discover even more about the reality of behaviour than is currently known, since many everyday practices are connections of behaviours that cannot easily be compartmentalised into a specific time or place.

The present research also provides further evidence for Greasley and Lamont's (2011) concept of engagement with music. I applied this to the participants of the first study, implementing the authors' suggestion to collapse moderately and less engaged listeners into one group, and showed that there are clear differences between more and less engaged listeners. They vary in several respects that add to the contrasts already found by Greasley and

Lamont, namely how often listeners look for new music, how they choose appropriate devices and their employment of strategies to keep from being without music. These findings demonstrate that engagement with music is a useful tool not only in general everyday music listening, but also in mobile music listening, that helps to differentiate between types of listeners.

This research is another counterexample against the broad brushstrokes of the critical theorists which have already been refuted in several studies. It shows that individuals are not being taken over by the technology of the cultural industry (i.e. the portable listening devices) but are able to use their devices and their music in very differentiated ways, adapting them to their needs. Listeners are “aesthetic agents” (DeNora, 2000, p. 62) and not puppets. Of course, one might argue, the technology created these needs, but it was shown here that this is not the case for every single need, for instance, privacy in public transport was formerly and still is created through reading newspapers or books and hiding behind them (e.g., Evans & Lepore, 1992). Later, mobile listening devices were co-opted to serve this same purpose. Additionally, fulfilling needs people did not know they had is not a prerogative of the cultural industry, but happens with every invention, and is therefore not a valid argument against inventions used by the cultural industry.

The idea that cities are cold, unsociable places was often supported by studies of mobile music listening behaviour. These studies used the argument that the reason for mobile music listening was to distract from this negative environment and infuse it with warmth through listening to music instead (e.g., Bull, 2000). However, the present study demonstrates that this is not always the case. While listeners do use music to create private space and shut out the noise of traffic or shouting, they equally use music to change the perception of the environment to be more exciting and infused with something new, for example, once it has become part of a routine, which does not necessarily mean that the environment was cold before – it had just become overly familiar and therefore boring. Listeners even stop the music when they find something enjoyable in their surroundings, for instance, talented street musicians. A clear distinction was made between pleasant and unpleasant sounds which are either opened up to by turning off the music or blocked by listening to music. Pleasant and unpleasant sounds can occur in any environment, for instance, a street that

was perceived as unpleasant because of all the cars and people in it suddenly becomes pleasant if there is a street musician playing well. Thus, I would not say that cities are always necessarily cold and uninviting but, in addition to crowdedness (which is not always present in the same place), the sounds are what make a place more or less negative and this can change anytime. Additionally, participants mentioned that they often choose to take off their headphones if they are in parks, which are also part of the city. Therefore, either cities are not as negative an environment as suspected, or mobile music listening is not an ideal example to demonstrate this. However, it might be interesting to study and compare mobile music listening behaviour in different cities to see whether this impression is upheld.

Studying mobile music listening reveals information on how people manage their self-identity in the presence of and for others (e.g., DeNora, 1999), since it broadcasts “other non-musical aspects about ourselves” (MacDonald et al., 2009, p. 17). Often these conveyed non-musical aspects are not the ones that were intended by the listener as the discussion about the sociability of mobile music listening shows. While listeners behave in ways that could be interpreted as sociable and conscious of their surroundings, this is often not perceived by the non-listeners, which reveals that there is a gap between self-presentation and perception by others. Looking at the sociability debate from this angle also challenges dominant notions of urban space, which is often perceived as cold and unsociable.

Additionally, studying mobile music listening divulges details about the effect of the presence of other people on the listener. On the one hand, if the listener likes the experience, then s/he is likely to reduce the listening behaviour or turn off the music completely, for instance, when surrounded by friends and acquaintances. On the other hand, if the presence of other people leads to unpleasant sensations, such as crowdedness or noise, then mobile music listening is used as a shield and is likely increased. The presence of other people also raises issues related to safety which need to be acknowledged and managed by the listener, for example, when participating in traffic. Thus, studying mobile music listening in action provides important details about the interactions between people in public and the effect the presence of other

people on the mobile music listener, thereby producing valuable information for the field of sociology.

Apart from informing future research, the results of these studies can help in other ways, too. More knowledge about the reasons for mobile music listening and its functions will pave the way for people who struggle with the same issues as listeners do, for instance, wanting to manage their mood or being unable to ignore unpleasant sounds in their environment. If music carried around helps the listener to overcome these issues, then it might help other people, too, who have not considered this option yet. Mood management, preparation for oncoming events (e.g., when going to work or getting dressed for a party) and alleviating boredom were some of the reasons for mobile music listening found in the present study. These functions might be helpful for non-listeners, too, so future publications could, for example, provide a manual for mobile music listening effects or everyday struggles that it helps to conquer. Furthermore, it would be a step closer in offering (music) therapists a way to help people who struggle in everyday situations, by adapting some of the behaviours that other people normally use in their lives, especially since it has already been shown that listening to music is one of the most common strategies to raise energy levels, reduce tension and anxiety, and change mood (Thayer et al., 1994), and that people use mobile music to maintain their health through blocking unwanted sounds and to feel less crowded (Skånland, 2012). Music, once again, has been shown to be so much more than a source of enjoyment, and carrying it around on small devices supports listeners in their everyday life in many different ways.

Appendix

Interview manual for the first study

Introduction

1) introduce myself, welcome, thanks
2) seat participant, check if comfortable
3) give consent form, information sheet, and demographic questionnaire, allow for questions and ask if everything understood
3) introductory statement: saying how important their view and experience is, ask if ok to record interview, tell that ok to not answer questions, want as much information as possible

Questions

What kind of music do you like to listen to? (descriptions and examples, not only genres)

Which devices do you use to listen to music and why? When?

Do you listen to music over headphones while on the move?

if not: why not?

- now concentrating on listening to music over headphones -

Why do you listen to music while on the move?
prompt: When was the last time you did that? Describe experience.

How do you choose which music to listen to while on the move?

if not answered there, then: What role do other people play when you choose which music you want to listen to?

Which kind of social situations (i. e. with other people in them) do you encounter when listening to music over headphones?

What role do these play, if they do, in your choice of music?

Describe one experience of how you chose which music to listen to.

Are there specific situations in which you would like to listen to specific music? If so, which situation and which music?

How do you choose when to listen to music and when not? (if not listening all the time)

What happens if you run out of battery?

(If having playlists): In which kinds of situations would you consider actively searching for a different song rather than letting the playlist go on?

- What happens when you go around and meet someone or have an interaction with someone?
- Could you describe a typical music listening day?
- If already background music on, would you still listen to your own music?

End

1) ask for any questions or anything else to add
2) talk about study in the city centre, about best time for it, make appointment if directly possible
3) thanks, goodbye

Interview manual for the second study

Do you listen to music?

If yes, How do you tend to hear music then?
What kind of devices do you use for that?
When would you use what device? (different genres of music, time of day, ...)
What kind of music do you tend to listen to?

Do you have a device that could be used for mobile music listening?

Have you ever listened to music over headphones with a mobile device? (the mentioned one or another)

If yes, how did you experience it?
What made you stop?

If no, why not?

Have you ever noticed people walking around and listening to music over headphones?

If yes, what did you think when seeing them?

Safety in traffic? Hearing damage or loss?
Sociability? In transit?

What happens if you meet someone who is listening to mobile music?

How do they react in their music listening behaviour when encountering you?
Can you give me an example? Recently or a while ago?

Are there any other things you have noticed about people who walk around wearing headphones?

Any questions? Anything you want to ask me?

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