



Bits and bytes: A sociological exploration of the meanings
ascribed to music in the age of the digitally compressed file
format

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I, the author, confirm that the Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means <http://www.sheffield.ac.uk/ssid/unfair-means>. This work has not been previously been presented for an award at this, or any other, university.

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Thesis abstract

This thesis examines the meanings that individuals ascribe to music disseminated via digitally compressed audio files (e.g. MP3, Ogg Vorbis, AAC). Digitally compressed music is ubiquitous in the West. However, there is little sociological analysis concerning listeners' engagement with these files. In particular, the subjects' meaning-making processes have received little attention in sociological analysis. Existing accounts (see Sterne, 2012) afford too much weight to the object (i.e. technology), whilst neglecting the role of the subject (i.e. individuals). This lacuna requires further investigation, especially if we are to understand experience as playing a central part in people's everyday interaction with digital music.

My thesis adopts a Weberian (Weber, 2012 [1914]) framework and situates meaning ascription at the heart of experience. I conducted an inquiry into how such music is *received* and *interpreted* by listeners. Rather than deriving meaning directly from the object, it is important to explore how people discuss their relationships with digitally compressed music and the meaning people ascribe to it in their everyday lives. To explore these relationships in more detail, I argue that we ought to consider the aesthetic, social and political dimensions of digitally compressed technology. Doing so enables us to understand how musical experience is linked to multiple facets of everyday life.

I deployed qualitative methods to build rich understandings of social action through conducting four online album listening parties and online follow-up focus groups involving a total of 36 participants. I organised, participated in and observed four online album listening parties, using these as stimuli to provoke further discussions regarding music's dissemination and the listeners' experience. I conducted seven focus groups following these parties and used them to collect data on participants' discussions of their everyday encounters with digitally compressed music. My data was organised and coded electronically on NVIVO, and analysis was conducted thematically. The substantive contributions of this thesis are presented in three chapters.

Chapter 4 explores the role of sound quality in my participants' reception and interpretation of music disseminated from digitally compressed audio files. The meanings they ascribe to sound quality are complex and multifarious, and whilst participants valued good sound quality, they frequently struggled to understand what I meant by digitally compressed audio and instead discussed meaning in relation to a different perspective of the debates surrounding analogue versus digital technology. Overall, I found that, whilst participants valued good sound quality, they often attributed this to the equipment rather than the format.

Chapter 5 frames listening as a practice and explores the ways in which my participants engage with music through the lens of attention and distraction. They reported that mostly they were doing something else whilst listening. My analysis focuses primarily on two activities: music listening during work and listening during studying. My participants' accounts allowed me to examine how music enables them to 'get into action' (De Nora, 2000). But whilst the format enables them to go about their daily activities with relative ease, it also creates problematic conditions, ultimately functioning in the interest of capitalist production.

In chapter 6, I argue that notions related to the 'possession' of my participants' music libraries and how they attributed 'control' were important for how they ascribed meaning to digitally compressed music. People's interpretation of music was often related to the tangible properties of formats. They were fond of physical artefacts due to the physical relationship that they had with them. Regarding control, my analysis focuses primarily on my participants' critique of, and adherence to, corporate power in the current climate of music streaming. I found that their consumption of digitised music was characterised by both elation and frustration.

Overall, this thesis contributes towards a deeper sociological understanding of the social and cultural significance of digitally compressed music. I challenge technologically deterministic accounts of digital music consumption, demonstrating that meaning is not inherent in the format itself, but rather emerges from individuals' lived experiences and social practices. In so doing, I demonstrate that we ought to emphasise the agency of the listener in actively shaping their musical experiences.

1. Introduction

Inside and outside of academia, my life revolves around music. When I am not thinking, reading, or writing about music or listening to it for pleasure, I am often mixing it myself. As a drum and bass/jungle DJ, I find myself constantly immersed in the practice of music listening. Whether it be during my Friday night voyages into Bandcamp music libraries, discovering rare gems, or at a rave appreciating the sonics transmitted through a large sound system, I am almost always listening. This, of course, is true of thousands of other music enthusiasts in the UK, too.

However, during my early twenties I started to reflect more critically on my listening practices. In particular, I began to wonder *how* the format of music might affect how we *experience* and thus *think* about music. I was increasingly unable to ignore the question of how the structure of audio might sound depending on how it is delivered to the listener, for instance via a WAV, MP3, or vinyl. Formats, which are defined as a way of storing audio and distributing it, are essential for recorded music to exist and to be shared. But what might this mean for listeners?

As a DJ, I am frequently surrounded by digitally compressed technology, most notably the MP3 file. I engage with MP3s all the time. In many ways, I am reliant upon them. Without my MP3 files, I would find it much harder to store my music collection on a physical laptop and USB, and I would not be able to play many of my tunes on a digital pair of decks, many of which tend to prioritise the MP3 as the standard format that is most reliable. MP3s comprise the catalyst of my collection and the workhorse of my performance. Admittedly out of necessity, rather than choice, MP3s have, to me at least, been an essential, vital format. Like a vinyl record, MP3s are almost synonymous with *the music* itself. Seen in this way, they are not too dissimilar to a musical instrument or series of instruments in their own right (see Bartmannski and Woodward, 2015: 12). If my MP3s suddenly failed to operate, this would lead to a crisis.¹ I would be forced to think about how to adjust quickly, but would face the risk of not being able to play a live set at all. As scholars have noted (see Prior, 2008: 309), it is often when technology appears to ‘glitch’ that it reasserts itself as a fundamental component of the performance, in this case, the performance of DJing to a live audience. This is perhaps most vividly illustrated by the dreaded ‘E-B302: CANNOT PLAY TRACK (3000)’ error code displayed by a pair of Pioneer turntables - a DJ’s worst nightmare!

¹ Such crises might constitute what ethnomethodologists describe as “breaches” (see Garfinkel, 1984 [1967]).

It is perhaps readily understandable that my reflections on such scenarios led to an increasing pre-occupation with music formats. Whilst I am ultimately concerned with ‘what’ I am going to play, the journey I would like to take listeners on, the vibes and atmosphere I would like to create and, finally, how this might be received by listeners, the format has begun to play an integral role in shaping my decision making as a selector. What I decide to mix is to some extent afforded by the *storage* size of the MP3, since small file sizes typically load faster on software, allowing for smooth transitions, and, simultaneously, by *sound quality*. For instance, I am aware that some of my old-school jungle tunes from the mid-nineties have been mastered digitally at 256 kbps (kilobytes per second) (Pulp Fiction by Alex Reece) and 192 kbps (Heaven by Carlito) respectively. But whilst these two tunes are certified classics, the bit rates at which they are recorded may lead me to abandon them during a set, largely because I am reluctant to play tunes that are of reduced audio quality. If I do decide to play them, I may have to think about how I would engineer a transition without it sounding too muffled. This, in turn, can shape my decisions when I am curating my track selection.

What I would like to illustrate with this brief reflection is that the format in which music is transmitted can influence, in subtle ways, how we think about music. Yet whilst my reflections may come as little surprise to DJs, who often wrestle with the demands of file organisation, audio fidelity and software compatibility, it is crucial to consider the role that formats play more broadly. This thesis considers the role of music in everyday life for people that are not DJs or musicians. Indeed, rather than positioning music formats, exclusively, as a conduit for musical delivery in live performances, my research situates music listening through the lens of aesthetic enjoyment on an everyday basis by considering the thoughts of individuals who regularly consume digitally compressed technology. Indeed, we ought to consider listeners who consume music predominantly for aesthetic enjoyment, rather than purely for creative endeavours. Digitally compressed music is by no means limited to the realm of production or performance. We should explore how the format might influence the listening experience for people, therefore, who are not actively analysing the music. Such explorations open opportunities in recognising the subtle role that formats can play in people’s everyday lives and in shaping their listening habits.

In this thesis, I seek to interpret, understand and analyse the meanings ascribed to recorded music which has been disseminated through digitally compressed audio files. In doing so, I use sociology to offer a detailed, in-depth discussion of the meanings ascribed to digitally compressed music *by* individuals who regularly consume such technology. As I shall point out in more detail later, while scholars have previously explored digital compression (see Sterne, 2012; O’Grady, 2021), they often tend to prioritise the technology itself, rather than discerning the meanings attached to these objects *by* everyday listeners. Overall, there appears to be

little empirical investigation of how *people* ascribe meaning *to* music disseminated through digitally compressed means. My thesis seeks to address this lacuna. It seeks to offer an empirically informed account of the meanings of music transmitted in digitally compressed formats that takes seriously the thoughts of those who consume digitally compressed technology in their everyday lives.

To introduce my thesis, I will, for the purpose of contextualisation, draw attention to some features of the world of music listening today. Next, I will elucidate the background of my study. I will give a brief overview of the current state of scholarship related to my topic and outline the lacuna that my research seeks to address. Following this, I will proceed to state my research questions and introduce the key concepts that will guide me in helping to answer these questions. Moreover, I will describe the context of my methodological approach and shed light on how my approach establishes my own position within the sociology of music scholarship. This will in turn lead to a section on my key substantive as well as methodological contributions. The introductory chapter will close with an outline of the structure of my thesis.

1.1 The world of music listening today

The world of music listening today is dynamic. It has been undergoing changes. Digital technology has undoubtedly been at the forefront of these changes and has shaped the ways in which we experience and connect with music. In the last twenty-six years, for example, we have seen a series of transformations, all influenced by innovations in digital technology.² During this time, the consumption of digitised music has moved through peer-to-peer channels, namely via (illegal) file sharing websites (1999-2003), to the iPod in the mid-noughties (2003-2008) and later to (legal) cloud-based streaming services during the late noughties (2008), which continue to dominate mainstream patterns of music listening today (see Hesmondhalgh and Meier, 2018: 1562). During this time, we have seen people's consumption patterns shift from owning physical copies (e.g. cassette tapes or CDs) to accessing vast libraries of music through streaming services.³

For the consumer, at least, these transformations have also led to shifts in how we *listen* to music (see Bull, 2000; 2007). Since music is now so accessible, it can be listened to on demand. Whilst this may have been possible twenty-five years ago, the listener back then could not select their music with as much ease as today. The abundance of music now available on streaming libraries in turn means that the today's listener has unprecedented levels of agency in deciding *what* they want to listen to, on-the-go. This ability to make a

² This is not to say that technology has *determined* people's listening habits today, but rather, has contributed as a key factor.

³ I do not, however, disregard the resurgence of vinyl records as a key factor in these transitions (see Bartmanski and Woodward (2015), Aldersley (2021)).

conscious choice about what we listen to points to yet another breakthrough in the world of music listening and namely one that was not as feasible prior to the emergence of music streaming.⁴ The music listener today can actively engage with a vast collection of tunes, discover new music and actively curate their own playlists and, in doing so, present the broad diversity of their music tastes (see Atkinson, 2011) in a way that would have previously been very expensive or simply unrealistic for consumers in the pre-digital age. Consumer choice, evidently, is central to these shifts, with technology playing a key role in how we experience and enjoy music today.

As far as technology is concerned, it is the digitally compressed audio file that comprises the primary focus of my thesis. I draw on the MP3, which emerged in 1992, as a starting point for my analysis, but also consider later, more recent types of digitally compressed audio, such as AAC (1997) and OGG Vorbis (2000). These formats are important to explore because they are ubiquitous in Western society.⁵ Many people's experiences of listening to recorded music involve digitally compressed technology, often without them even being aware that this technology facilitates their listening experience. This is particularly pertinent today, as scholars have characterised the contemporary era as the "digital age" (see Rogers, 2013; Bartmanksi and Woodward, 2015; Ritzer and Jurgenson, 2010; Hayes, 2019). Indeed, many people today consume via streaming services, which, again, underscores the relevance and necessity of exploring digitally compressed audio today. According to data from IFPI (International Federation of the Phonographic Industry) (2023), it is estimated that 73% of listeners globally consume their music via streaming services.⁶ Most of these streaming services (with the exception of Tidal) deliver their content via digitally compressed audio, using formats that have emerged following the MP3 file.⁷ For many, therefore, digitally compressed audio forms a key part of the everyday experience of music listening.

1.2 An overview of the current state of scholarship

Despite the popularity of their usage, few sociological studies have engaged with the *meanings* that people ascribe to digitally compressed audio formats. Sterne's (2012) groundbreaking book *MP3: The Meaning of a Format* offers the most extensive and widely

⁴ It would, of course, be possible to download a song one would want to listen to during the Napster era. They would, however, be constrained by the song's file size and the storage size of the device listening on.

⁵ According to Sterne (2012) "the mp3 is the most common form in which recorded sound is available today" (2012: 1).

⁶ It should be highlighted that the survey sample included over 40,000 responses from 26 countries, which accounted for 91.2% of global recorded music market revenues in 2022. For more information on the sample, see: https://www.ifpi.org/wp-content/uploads/2023/12/IFPI-Engaging-With-Music-2023_full-report.pdf (accessed 26th February 2025).

⁷ Spotify use OGG Vorbis and Apple use AAC (advanced audio coding) (compressed audio files) whereas Tidal use FLAC (free lossless audio codec) (uncompressed audio files).

cited study in the field.⁸ In his account, Sterne provides a chronological account of how the MP3 was developed, with a particular focus on the history of psychoacoustics. Despite the title of the book, however, I will argue⁹ that Sterne appears to derive the meaning of the MP3 primarily from the technology itself. Whilst he does place the MP3 in a wider social, cultural and economic context, his analysis is often driven from *his* understanding of the MP3 as a sonic artefact that contains inherent properties. In other words, his analysis is object orientated. There is no empirical engagement with *consumers* of the MP3 in this study, which, in turn, leads to partial understandings of the complexity of meaning making. Indeed, to fill this lacuna we need to consider how *people* ascribe meaning to digitally compressed technology.

Furthermore, accounts that have engaged with digital compression tend to neglect the multifarious nature of meaning making. As I will point out in my literature review, there is an aesthetic (see Sterne, 2012), social (see Prior, 2014; 2018) and political dimension to digitally compressed technology (see Burkart and McCourt, 2003; O'Grady, 2021). But whilst accounts that explore these dimensions undoubtedly provide crucial insights in their own right, they often emphasise one dimension far more than the others. Such analyses also fail to account for the overlaps between these dimensions. Integrating these three dimensions is fundamental for a more complete understanding of how digital compression shapes the meanings ascribed to music. For example, we ought to consider how aesthetic factors, such as preferences associated with sound quality, may reproduce social inequalities, infused with power relations. To establish whether this may be the case, more up-to-date empirical research is required. As I also outline later, many inquiries into digital compression (see Katz, 2010; Sterne, 2012) and the technology that facilitates its use (see Bull 2000: 2007; Beer, 2008) focus upon consumption habits during the era of Napster (1999-2003) and the iPod (2003-2009) (see Hesmondhalgh and Meier, 2018: 1562). The role of digitally compressed music in the current streaming era has received less attention¹⁰, which again creates a gap that needs to be addressed in contemporary research.

Other accounts that have engaged with the meanings subjects ascribe to formats in which music is transmitted, and from which I have drawn inspiration, tend to focus on formats that contain a more noticeable physical dimension. This is evident through studies of the cultural significance of vinyl records (see Bartmasnki and Woodward, 2013; 2020) and cassette tapes (Simon, 2022). In conducting their analyses, these scholars have located the formats as a

⁸ According to Google scholar, Sterne's book has been cited 1417 times (link available: https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=mp3+the+meaning+of+a+format&oq=MP3+the+meanin) (accessed 6 April 2025).

⁹ See literature review for a more detailed account.

¹⁰ Sterne's study was published in 2012. Since then, we have encountered numerous changes in the consumption of digitally compressed music.

fundamental aspect in the everyday lives for those that they have studied. Important insights include explorations of the material significance of these objects and the ways in which they have been incorporated into people's practices. For example, Bartmanski and Woodward (2015; 2020) have used cultural sociology as a framework to explore how the concepts of "iconicity" (also see Alexander, 2008), "ritual", "aura" (see Benjamin, 1939) and "coolness" help to "explain the paradoxical resurgence of vinyl at a time of the digital revolution" (2015: 3). In so doing, they provide an in-depth exploration of the vinyl record and substantiate their findings with reference to users who regularly engage with such technology.¹¹

Meaning forms a central part of Bartmanski and Woodward's (2015; 2020) analysis throughout their work. Indeed, they are interested in the relationships that people have with the vinyl object and what the vinyl record signifies and expresses for those who use it. Their 2020 monograph *Vinyl: The Analogue Record in the Digital Age* (2020) draws on empirical evidence collected from ethnographic fieldwork conducted in Berlin. Here they emphasise the multifarious nature of meaning ascription by demonstrating how the vinyl object cultivates a broad range of meanings that transcend traditional dichotomies such as "old/new, authentic/contrived, original/copy, valuable/cheap or 'warm' vs. 'clinical sound'" (Bartmanski and Woodward, 2020: xxi). The tactile, auditory and political properties of vinyl are framed subjectively by those who use them and according to the context in which they are consumed.¹² Indeed, elsewhere they argue that "objects have an inherently mobile, mutable quality and are constructed both by their materiality and by stories, myths and their production and reception in particular contexts" (Bartmanski and Woodward, 2020: 17). As sociologists, we ought to be sensitive to the fact that meaning ascription is shaped by people's experiences. Bartmanski and Woodward's (2020) research provides a seminal entry into the study of meaning ascription and its relationship with music formats. I take their work as a useful anchor to help position my own project.

1.3 Research objectives

My research aims to answer the overarching question: how does the experience of digitally compressed audio formats affect the meaning of music in everyday life? To do so, I have conducted an empirical investigation of the meanings ascribed to digitally compressed music by users who regularly encounter such technology. Although digitally compressed technology has been studied previously by scholars (see Bull, 2000; 2007; Sterne, 2012; Prior, 2014;

¹¹ It should, however, be noted that their analysis is limited to interview data gathered from connoisseurs active in the Berlin techno scene (see Bartmanski and Woodward, 2020: xviii–xx). Whilst this is not a methodological disadvantage per se, we should be mindful of the fact that their participants already have a considerable knowledge of the vinyl format.

¹² Elsewhere, I have argued (see Aldersley, 2021) that the vinyl record plays a role in stabilising some of the meanings (for example, those related to 'control') in an otherwise uncertain world. I use the COVID-19 lockdown as a case-study for my analysis.

2018; O’Grady, 2021), they have often neglected meaning ascription.¹³ My research seeks to address this lacuna by exploring meaning ascription from the perspectives of the everyday listener. Moreover, as I shall argue later, examinations of musical artefacts should consider the multidimensional nature of music as an artform that simultaneously encompasses aesthetic, social and political properties. These elements, which interweave (see Benjamin, 1939) and have been somewhat overlooked in contemporary scholarship, should be taken seriously in the sociology of music.

My research questions, which follow from the lacuna identified, are as follows:

1. How does the experience of digitally compressed audio formats affect the meaning of music in everyday life?
2. How do the aesthetic consequences of digital compression shape the meaning that actors ascribe to music in everyday life?
3. How are digitally compressed audio formats used in individual and social listening environments?
4. What are the political implications of the process of making meaning from digitally compressed music?

1.4 Key concepts

To guide my attempts to answer these questions, I will proceed to introduce the key concepts that my thesis grapples with, namely meaning ascription, music, and digital compression. Meaning ascription, which forms the central sociological locus point of my thesis, is a concept that I return to consistently throughout. Drawn from Weber (2012 [1914]), I refer to meaning as a concept that helps us to understand human action, or, in his terms, and more specifically, that aids “the interpretative study of social action” (Weber, 2012 [1914]: 4). The meanings ascribed to phenomena must be, according to Weber, interpreted subjectively, that is, in line with the individual’s own interpretations and experiences. From this perspective, objects and actions have no inherent meaning within them, but rather, meaning is something that individuals *assign* to objects and actions. These meanings can be researched empirically with reference to the symbols that people use to denote meaning, for example words, gestures and rituals (see Frith, 1996: 249-268). I thus adopt a Weberian understanding of meaning in my research, seeking to better understand the meanings that people ascribe to music disseminated by digitally compressed technology.

¹³ See literature review chapter for a more detailed analysis.

Music is the second key concept that my thesis engages with. Music is defined, according to Martin, as “some sort of pattern of organised sounds, deliberately created in order to produce certain effects” (Martin, 1995: 14). My thesis, it should be stated, deals primarily with music as a *recorded* art-form. Whilst I am sensitive to the fact that music can exist as a “text”, “product”, “resource” and “performance” (see McCormick, 2012: 723), it is worth acknowledging that my discussion of music deals primarily with how *recorded* music, as opposed to live music, is *received* and *interpreted* and asks whether the effects of digital compression have an impact on how its meanings are shaped. I should also make it clear at this stage that my thesis deals predominantly with music *listening*, rather than music conceived as a *productive* process.

Finally, my thesis grapples with the digital compression of music. Compression is a process whereby the size of a digital audio file is reduced by removing or re-arranging data. Digital compression is primarily used for the purposes of storing and transmitting music as accessibly as possible (Sterne, 2012). Digitally compressed files include the pioneering MP3 file (introduced in 1992) but also AAC (used by Apple Music) and OGG Vorbis (used by Spotify). Alongside meaning and music, digital compression comprises the *object* of my research, the medium through which music is transmitted to the listener. It is the mode of technology that my thesis seeks to make sense of.

1.5 Methodology

Research in the sociology of music ought to incorporate music “as organised sound” (see Martin, 1995: 15), an auditory art form, into its analyses (also see Marshall, 2011). Far too often, music has appeared at the periphery of scholars’ analysis, and they have repeatedly failed to recognise how sonic elements play a key role in people’s relationships with music. In my research, I aimed to situate music at the centre of my observations. I did this in particular by virtue of my methodological approach, which incorporates music elicitation methods in the setting of album listening parties (see Allett, 2010; 2012) to help gauge meaning making with reference to the sensory elements of music.¹⁴ I thus aimed to recognise the status of music, not only as a key feature of everyday life, but also as a dynamic form of expression. This was particularly pertinent given that my investigation focuses not only on music, but, explicitly, on music transmitted through digitally compressed audio files.

My research design combines two key methods, namely music elicitation and focus groups. My methodological commitment, throughout this project, has been to incorporate music as a central element within the research process. I acknowledge that music is an art-form that creates a unique sensory experience. It is something that is *heard* by listeners. With this in

¹⁴ See methods and methodology chapter for a more detailed account.

mind, I decided to employ music elicitation. This is a method which, according to Allett (2010), involves the “integration of the music listening experience” as a device to “draw out or trigger memory, affective experience and descriptive in-depth discussion” (Allett, 2010: 3). With music elicitation, therefore, all the participants (and the researcher themselves) encounter music as a shared activity. In this sense, the sensory elements of music are acknowledged and grounded in a sonic experience.

To concretize this sonic experience and to ensure that the *reception* of music remained at the centre of my observations, I organised four online album listening parties (demarcated by four genres: drum and bass, rock, hip-hop and jazz) as a novel form of music elicitation. The album listening parties comprised the practice of listening to an album with research participants in real-time. This was to ensure that the *reception* of music remained at the centre of my observations and to provide rigour to the research process. The music was disseminated through Spotify via the (now defunct) JQBX collaborative listening platform. Crucially, all the music was transmitted by digitally compressed formats.

Focus groups, on the other hand, comprised the second component of my research methods. These were employed to provide a space where participants discussed their experiences of the album listening parties and to reflect on their everyday usage of digitally compressed music (and other formats) more broadly. The seven focus groups were integrated into my research design also to provide discussion points that were more difficult to elicit during the album listening parties. Indeed, music is difficult to discuss in a setting where everyone is listening, since people’s attention is primarily directed towards the music. Focus groups, though, provided the ideal location for people to engage in conversation, since multiple members could prompt others to discuss their ideas.

1.6 Key contributions

My thesis, in summary, provides three key contributions, both substantively and methodologically, to a burgeoning field within the sociology of music. These contributions are significant because they address important gaps in the scholarship regarding the relationships between music and meaning, and music and technology.

Substantively, my thesis contributes fresh understandings of how people ascribe meaning to digitally compressed music. In doing so, I mobilise a Weberian (1914) framework of interpretation to grasp how meaning ascription is a subjective process, shaped, in many ways, by people’s own individual experiences. My thesis therefore moves beyond previous interpretations of digitally compressed music, most notably Sterne (2012), who conceptualises meaning with reference to how it is derived from the *object* itself, with focus on its inherent properties. My thesis, on the other hand, seeks to understand how meanings are ascribed to

the object. I do this by considering and interpreting the thoughts of my participants, crucially, who actively engage with such technology. This focus on the subjective experience of meaning ascription opens new avenues for exploring how such processes are multifaceted and complex. It allows us to transcend technological determinism and appreciate the role of listeners in shaping cultural understandings of digitally compressed music.

My second substantive contribution relates to the holistic nature of meaning ascription. As my substantive chapters will make clearer, I have found that the meanings ascribed to digitally compressed music are often framed in relation to the *context* in which this music is consumed and with regards to *the technology* that also transmits the audio to listeners. For example, my research has shown that the choice of playback device, whether that be a HI-FI set up or smartphone, also influences and shapes the listening experience. Meaning ascription does not occur in a vacuum, but in relation to particular technologies, environments and activities. In order to gain insights into the processes of meaning ascription, we need to consider *what* people are doing whilst listening and *how* they are listening. My thesis considers how music disseminated through such technology, therefore, might be used as a resource (see DeNora, 2000) to carry out tasks that we frequently associate with everyday life.

From a methodological perspective, my research illustrates the importance of simultaneously conceptualising and incorporating (as the object), music as music, namely as “organised sound” (Martin, 1995: 15). Scholars carrying out empirical data collection within this area have, as I have said, too often failed to integrate the sonic features of audio into their research design. This oversight risks overlooking the very essence of musical experience, particularly if we are to investigate how music listening is affected by specific formats. My use of album listening parties, in particular, constitutes a novel approach to conducting sociological research, which in turn addresses this gap. It functions simultaneously as a form of music elicitation, to solidify music’s role within the research process, and as a “stimulus” (see Merton and Kendall, 1946) to provide scope for further discussion in the focus groups. Further research, as I argue in the conclusion of this thesis, should utilise music more intentionally, in order to acknowledge its status as sonic material and move beyond textual analysis. Album listening parties indicate new directions for those seeking to conduct research in the sociology of music. This offers a powerful tool in appreciating the complex connections between music, experience, technology, and the social context.

1.7 Thesis structure

This thesis is presented in seven chapters. The next chapter reviews the literature relevant to my project in order to provide the theoretical, conceptual and empirical basis of my study. I outline the lacunas within current scholarship and discuss how an engagement with literature

drawn from the sociology of music allows me to grapple with my research problem further. In the third chapter, I describe and discuss my methods and methodology. Here I detail my research process, explain my theoretical framework and methodological approach and how I undertook my fieldwork, data collection and analysis. The three chapters that follow comprise my substantive chapters. They present and discuss my findings. These are organised into three themes: sound quality, attention and distraction, and ownership and control. In these chapters, I unpack my findings with reference to the data collected in my focus groups and consider their implications and contributions. In the concluding final chapter, I reflect on the contributions of the thesis as a whole, detailing the significance of my findings, and also posit a number of potential directions for future research.

2. Literature review

2.1 Introduction

There can be little doubt that music plays an integral role in everyday life. Its presence ranges from the more mundane or ordinary aspects of everyday life, e.g. driving to the shop or having a shower, to the more profound and significant moments of our biography, e.g. dancing to a song at a wedding or listening to a piece of music at a funeral. Music has 'power' in the sense that it can trigger emotions, embodied reactions and memories (Allett, 2010). For these reasons, scholars have suggested that music is often a highly personalised and individual experience (DeNora, 2000, Martin, 1995). It is an individual matter insofar as these aspects are highly subjective and often connected to our own experiences. At the same time, music is integrated into collective, shared experiences, for instance, if we are to consider live performances with musicians generating sound in unison (see Cook, 2009, McCormick, 2006), or thousands of people singing together at once (see Hesmondhalgh, 2013: 2). Likewise, music can also act as a catalyst for identity formation, with our tastes revealing things about ourselves (Bourdieu, 1984; Hebdige, 1979). Music is fundamental as both an individual and 'shared' experience. The interaction between music and people, therefore, raises its relevance as a topic which is of considerable interest to sociologists. Its creation, performance and reception does not operate in a vacuum, but between people in a society (see Attali, 1985).

My thesis seeks to explore how people's experience of music in digitally compressed audio formats may influence the meanings ascribed to music. This is a crucial task. Contemporary society is permeated by digitally compressed audio formats. Indeed, since the late nineties, people's consumption patterns have shifted from music on material artefacts, such as cassette tapes and CDs, to music disseminated by digitally compressed technology, often through the use of streaming platforms such as Spotify and Apple Music. In many ways, one could argue that the sheer presence of music today has been facilitated by digitally compressed file formats. These are mediums which, via tangible objects (such as iPods, phones and computers), disseminate audio to the masses. The file formats include Ogg Vorbis and AAC, which are descendants of the revolutionary format - the MP3 file.

This chapter comprises a review of the literature pertinent to a sociological investigation of the MP3 audio file format. In section 2.2 I will first discuss digitally compressed audio formats and explore why they constitute an important sociological research topic. I will proceed to explore the core themes and debates that have centred around digitally compressed audio formats. In section 2.3, the literature will be surveyed in accordance with the themes of my research questions: the aesthetic, social and political dimensions of digitally compressed music. In section 2.4, I will argue that whilst existing scholarship addresses the phenomenon in general,

it fails to connect it to the wider sociological problem of meaning specifically. I will identify the absence of meaning as the critical lacuna within this literature. Moreover, I will argue that if we are to incorporate the notion of meaning into an examination of the MP3, then a close engagement with the sociology of music is required. Such an engagement is apposite and necessary, since the sociology of music approaches social life through the lens of meaning ascription. I will explore the extent to which this literature may help to resolve and mobilise further discussion on the MP3 from a distinctly sociological perspective.

2.2 The MP3 format

Digitally compressed audio formats are mediums which convert and store sound into information. Digital compression is the process whereby some musical information (frequencies) is eliminated. The volume of the louder sounds is reduced, and the quietest sound is increased. Because some musical information is lost, this frees up file space, reducing the original master file “to approximately one twelfth of the size of a normal audio CD file” (Mewton, 2001: 25). The result is compression (also known as ‘lossy’ audio), where sound deemed to be less audible (or not audible at all) for listeners is omitted from the reproduction of the master copy (original recording). Volume acts as the prerequisite for the elimination of frequencies here, with the amplitude of louder sounds overpowering the quieter sounds. As a result, frequencies are smoothed out and flattened. According to Mewton, compression “reduces sound quality only a little – you can just about tell the difference on a good stereo, but probably not when you’re out and about, listening through headphones” (Mewton, 2001: 2).

Typical compression formats today include the MP3, Ogg Vorbis and AAC. According to Sage Audio (2025), the MP3 format is most common audio file today. In this literature review, I will treat the MP3 as a representation of *all* digitally compressed audio formats. Although there are subtle aesthetic and technological differences between these formats, all of them share the fundamental characteristic of compression. For the purposes of my analysis, I will use the MP3 as a case to conceptualise digitally compressed audio formats more generally. The first part of this literature review will examine the digitally compressed file format MP3 and its characteristics, the transformative impact of digitally compressed technology on everyday life, and prevalence.

2.2.3 Characteristics of the MP3

The MP3 emerged in 1992 as a universal digital audio file format. Formally titled, it derives its name from M-PEG-1 Audio Layer 3, but it is mostly abbreviated to “MP3”. MPEG stands for Moving Pictures Expert Group, a group of engineers from companies such as Phillips, Panasonic, AT&T and Fraunhofer. Their goal was to create the perfect audio file, which is

designed to “cut across digital technologies as diverse as compact discs, digital video, high-definition television, teleconferencing digital video, high-definition television, teleconferencing, digital broadcast, and satellite communication” (Sterne, 2012: 21). The MP3 format principally functions as a medium between the listener and the music (Sterne, 2006). Unlike in previous formats such as vinyl and cassette tapes, which, by contrast, were not characterised by the flattening of sonic properties, the audio quality is altered in processes of compression. Scholars have posited that the reproduction of sound in an MP3 diverts its characteristics away from the master copy (Sterne, 2012: 153-62; Beer, 2008: 73). Due to its compatibility in “cut[ting] across digital technologies”, it should perhaps come as little surprise that this trade-off has occurred, as its user-friendly interface is supported by digital artefacts today (2012: 21). This is evident in the fact that the devices which are used to store and disseminate the MP3 typically take the form of portable media devices, such as MP3 players, laptops, mobile phones and, perhaps most famously (at least until relatively recently), the Apple iPod.

Whilst it is worth noting that the devices the MP3 relies upon are material, tangible objects, the MP3 file itself is immaterial, insofar as it is constituted by computer code. The reduction of the file size is conducted via algorithms, which compress the data of the file and decrease its sound quality (Beer, 2008). The sound quality is altered via processes of auditory and perceptual masking, which transform the sonic properties of music through reducing frequency and volumetric responses. For auditory masking, sound is eliminated if one frequency is significantly quieter than the other when synchronised, with the quieter one subsequently eliminated. With regards to temporal masking, the same procedure occurs if two sounds are close together in time (less than five seconds apart) (Sterne, 2012: 21). This consequently distorts the polyphonic traits of music. The undercutting of musical quality makes sense because of the MP3’s digital character, which is traditionally described as “binary forms as zeros and ones” (Prior, 2018: 13). It is much simpler to strip information away if it can be coded and processed into a quantifiable source of detail. This is in contrast to its analogue predecessor, which is classified as sound which is disseminated by “continuous sound waves” (Matteson, 2016). Ultimately, the MP3 is convenient for users, because they can accumulate a large collection of music without the constraints of ‘weightier’ physical media, such as the vinyl record, tape cassettes and CDs.

According to Devine (2013), compression is desirable for producers and consumers alike for two reasons. Firstly, he puts forward an aesthetic argument, noting that compression is ‘better’ simply because it is “more audible” to listeners, which means that its psychoacoustic properties can be picked up on more easily (2013:164). Since files are subjected to dynamic range compression, the loud parts are made quieter, and the quiet parts are made louder. This in turn leads to a more consistent average volume of the music. Secondly, there is a

practical reason, which stems from the idea that “loud music is more ear-catching than quieter music” (2013: 164) and therefore it can be listened to in scenarios where other distractions (e.g. the sounds of bustling urban environments, traffic, people talking) may disrupt the musical listening experience. Compressed audio, according to sound engineers and professionals, tends to fare better in situations where casual listening is the norm. This is largely due to the fact that it is “consistently louder” and therefore harder to ignore (2013: 164). In the 1970s, people were expected to sit down and listen in environments freer from distractions. Today, music must grab your attention more. As Devine states, “recordings which have been made consistently louder through dynamic range compression tend to fare better in such situations [as background or soundtrack to everyday life] because they garner more attention and constitute a higher signal-to-noise ratio” (2013: 164). Recorded music today has adapted to the bustling nature of everyday life. This has been seen with the active use of compression technology.

2.2.4 The transformative impact of MP3 technology on everyday life

The MP3 format has not only changed the way in which we hear music but has also broader implications for the governance of our everyday lives. As Jenkins (2010) observes, MP3 technology has aroused the curiosity of sociologists, since MP3s “have important consequences for how people negotiate their everyday lives in the interaction order” (2010: 259). In developing the sociology of Goffman, Jenkins makes the compelling argument that digitisation has transformed the way in which pedestrians behave in contemporary urban environments. In exploring the concept of ‘civil inattention’ (Goffman, 1990 [1959]), Jenkins observes the tendencies of individuals to tune out of their spatial awareness due to the distraction created by digital audio devices. To make his case, he draws on a growing number of individuals who have incurred “interpersonal collisions” whilst listening to music (2010: 268). In contrast to Goffman’s analysis, which placed emphasis on the actor’s skill to predict the behaviour of others, Jenkins believes that ‘the interaction order’ requires reconceptualization in the twenty-first century because digital devices are altering and sometimes hindering our ability to be aware of our surroundings. How we orient ourselves in everyday situations undergoes a transformation in the face of mobility (Jungnickel and Aldred, 2014). This has, in turn, been facilitated by MP3 technology.

These instances are just one (albeit extreme) example of the transformative impact of digital technologies on our everyday lives, with the MP3 file being perhaps the most pertinent illustration of the expanding mobility of music. According to Beer (2008), such technology leads to transformation concerning “the alteration, mobilization or realignment of the time and space of the musical experience” (2008: 74). This is because users are no longer confined to

listening to recorded music at home. They can now listen to music in situations where they are constantly 'on the move'. Listening to music in cars has been superseded by an ability to absorb music, *inter alia*, on the train, on a run, or on an aeroplane. As a result, it is plausible to suggest that shifting patterns of consumption have intensified the presence of music in everyday life. Having said that, we cannot discount the fact that these changes have only been made possible by the "the materiality of the artefacts of consumption" (Beer, 2008: 74). It is virtually impossible to imagine the salience of musical mobilities without considering the design of artefacts which store the audio formats from the outset. Indeed, the ease with which we encounter music in the contemporary world is unprecedented, since "miniaturisation and mobility" now constitute a fundamental component of the musical experience (Theberge, 2001: 22).

These changes, however, should be approached with caution. An improvement of music accessibility does not automatically lead to an enhancement of its quality. It depends on how we perceive transformation, since it denotes a change in form and character, not necessarily an enhancement or progress of any sort. If we are to use 'mobility' and 'accessibility' as a benchmark, then digitally compressed formats undoubtedly improve musical reception, since they allow people to consume it in ever more locations and situations. However, if we are to refer to a transformation in "aesthetic quality", it may be possible to raise doubts, because the music's audio quality is often deemed inferior to previous formats (see Bartmanski and Woodward, 2020: 17-20). Transformations can therefore be damaging in some ways and should not automatically be equated with progress. A sociological exploration of the MP3 must, therefore, be sensitive to the ways in which we envisage this transformation and must not overlook the potential inertia which may undermine or inhibit the seductive qualities of such accelerated technological change. Although the dichotomy of progress and inertia may seem crude and oversimplified, it succeeds in providing a reference point for outlining these categories in advance, and, as such, provides scope to add nuance when explored in further depth.

In turn, this necessitates a critical examination of these transformations, including those transformations that impact our everyday experiences. The prevalence of such technology raises questions about how our experience of compressed audio formats affects the meaning of music in everyday life. Because music is something which is *heard* ultimately by the listener, researchers should be adept to exploring how it's meaning might be articulated with reference to their own experiences. As Marshall (2011) states, "it is important to recognize that listeners create[s] musical meaning through their position within a discursive framework that gives them the tools to make sense of the sounds they hear" (2011: 159). This "discursive framework" refers to the catalogue of vocabulary that listeners deploy to describe music. This may

certainly be shaped by the technological infrastructure which facilitates the audio that people hear, consciously or subconsciously. For example, a listener may be able to tell the difference between their favourite song in its compressed and its uncompressed form. Subsequently, they may be able to describe it accordingly. In the face of these changes to sonic reception, music requires examination in the face of its material transformation, crucially with reference to the how these transformations might be described by listeners.

2.2.5 The prevalence of digitally compressed audio files

Digitally compressed formats have changed the way in which people consume, listen to and interact with music. They are also worthy of further research because they are prevalent. This is perhaps unsurprising, since many scholars have noted that we live in a 'digital age' (see Bartmanksi and Woodward, 2015; Ritzer and Jurgenson, 2010; Hayes, 2019; Rogers, 2013). Personal audio devices which transmit the format and, in turn, the music and other sounds via compressed technology are regularly observed on an everyday basis, for instance with users commonly listening to digitally disseminated music whilst commuting and at home. A cursory glance in an urban environment is often enough to convey the prevalence of this technology. Some 263 million users of the on-demand music streaming service Spotify (Spotify, 2025) starkly illustrate the point. To underscore the prevalence of digitally compressed audio formats, Sterne boldly explains that the MP3 is the "most common form in which recorded sound is available today" (Sterne, 2012: 1; 186). This still resonates thirteen years since Sterne's book was published, as data from Sage Audio (2025) reveals, the MP3 is the most popular audio format available today globally.

However, despite the popularity of this format, it is still imperative to recognise that it is not 'universal'. As Hesmondhalgh notes, "digital divides" between developed and developing countries signify significant disparities in internet access (Hesmondhalgh, 2013: 323-327). Limited access to the internet inevitably hinders the circulation of MP3 files, because they are often collected and distributed via a broadband connection. The knowledge and skills that (known as digital literacy) people also have are scarce in countries that often don't have adequate internet access, thus limiting their engagement with digital technology. Even the within the UK context, digital divides continue to exist. As data from the ONS reveals, digital exclusion remains a problem, particularly for the older generation (see ONS, 2019). Consequently, this has implications for the consumption of digitally compressed music, particularly since many people 'stream' music over an internet connection today. Indeed, the ONS (2019) found that listening to music was the sixth most popular activity undertaken on

the internet, by internet users (58%).¹⁵ Therefore, whilst I argue that the ubiquity of the MP3 is supported by its broad usage, which is found through daily observations of music listeners and by data, it is also important to recognise it is not a universal object within everyone's lives. Although this ubiquity does provide a compelling reason for sociologists to explore the MP3, we should also be cautious to label such technology as affecting everyone to the same extent.

2.3 The three dimensions: aesthetics, social life, and the political

There is much more to the MP3 than is perceived *prima facie*. Whilst the technological features of the MP3 may strike us as unremarkable, beyond these facades exists important implications for how we organise our social lives. Notably, scholars have pointed to an aesthetic, a social and a political dimension. The MP3 should not, therefore, be seen merely as something trivial, but rather, as a prism to understand much broader social phenomena. To unpack the sociological relevance of the MP3, these dimensions need to be analysed in further detail. Starting with aesthetics, in this section, I will explore how the sonic aspects of the MP3 has been explored, previously, by Sterne (2012). I will then proceed to underscore the importance of meaning and outline the lacuna that my thesis seeks to address and resolve.

2.3.1 The aesthetics of the MP3

By aesthetics, I mean the 'sound' of the MP3, that is, those features that endow it with its form and character and those that separate it from alternative formats not affected by compression. By sound, I refer to the features that comprise the vibrations that our ears receive, including frequencies, volume, tone. Sterne's book *MP3: The Meaning of a Format* (2012) gives the most comprehensive account of the aesthetics of the MP3 format. Sterne outlines its genealogy through advancements in psychoacoustics. In exploring how the ear hears sound transmitted by technology, he conducts a review of this development, starting in the late 19th century. He probes into elaborate detail about how the capacities of human hearing have been exploited and advanced by innovations by engineers right up into the present day. Crucially, his central argument is that the perceptual coding and internal characteristics of the format, defined by 'auditory' and 'temporal' masking, are what provide the format with its 'meaning'.

For Sterne, the MP3's meaning is underpinned by the sound design, in short, by "the sonic signature" of the artefact (2012: 174). The sound properties of the MP3 are designed with a certain incentive in place, namely, to disseminate audio in environments that enable casual listening. Listeners, therefore, are presupposed as subjects who pay little attention to the aesthetic properties but instead prioritise listening to music on the move. Sterne explains that

¹⁵ Other activities included, in order of popularity, (1) sending and receiving emails (84%), (2) finding information about goods or services (77%), (3) internet banking (69%), (4) social networking (65%), watching YouTube videos or similar (ONS, 2019).

this diversion was evident from the listening tests of the format, which encouraged listeners not to pay attention to the music itself, but rather to “hear the codec at work” (2012: 153). As he states, “the MP3 format is designed for casual users, to be heard in earphones on trains or on the tiny speakers of a computer desktop... the more distracted the listening subject... the better an MP3 will work” (2012: 182). As with all formats, the characteristics in the audio codec imbue it with what the object’s features may sound like in specific contexts. Sterne’s analysis recognises that the algorithmic configurations built into the MP3 affect what a musical text means in the 21st century. Indeed, ‘how’ we listen to music is now constructed within the object itself.

Whilst Sterne carries out a sophisticated examination of MP3 aesthetics, what is missing from his analysis is an examination of how social actors ascribe meaning to the MP3. Sterne has a tendency to conceive meaning rather narrowly. He assumes that ‘the meaning’ is derived historically via the wider field of psychoacoustics (the scientific study of sound perception and audiology). He locates the histories of audio compression back to Thomas Edison in the late 19th Century and connects the creation of the MP3 format in 1992 to earlier developments, such as the emergence of telephony and radio broadcasting. According to Sterne (2012) “the history of mp3 belongs to a *general history of compression*” (2012: 5, emphasis in original). For example, he notes that the process of masking noise (a key part of audio compression), was developed initially by engineers to ensure that people could hear each other in the face of other sonic distractions, such as telephone calls and typing in office spaces (Sterne, 2012: 120). Sterne does argue that we cannot analyse the affordances of the MP3 without ignoring the role that predecessors played in driving technological innovation. But whilst he traces a clear historical lineage, outlining of the emergence MP3 throughout the book, there is little consideration of how the format is actually *received* by listeners, which is a critical oversight in his work.

Meanings ascription is important to consider, because, as literature (see Kristeva, 1989; Frith, 1996) suggests, meaning and aesthetics go hand in hand, since what is defined as beautiful and pleasurable is constructed through the meaning the actor ascribes to the object. In this sense, the agent exercises aesthetic judgement only *after* they have experienced the musical event of sound (see Frith, 1996: 258-9). Sterne’s formulation is one sided, because he prioritises the “need to construct a new genealogy for contemporary digital media culture” and neglects an analysis of how meaning may be ascribed to the MP3 by individuals, and how they may react and interpret this phenomenon (2012: 2). His preoccupation with history does (through his genealogical approach), admittedly, guide the reader in gathering a solid understanding of how the MP3 has been developed. In doing so, he highlights to critics that we should appreciate novel forms of technology as a by-product of earlier developments

(Sterne, 2021: 2). Yet, we cannot assume that history shapes meaning purely by virtue of the intensions of inventors of technology – those of whom Sterne prioritises in his analysis. Consequently, it could be interjected that an analysis such as Sterne's lacks sociological insight into how actors, particularly everyday users, construct aesthetic *meaning* in practice. With reference to semiotics (Saussure, 1990 [1916]), scholars have argued that the connection between the signifier and the signified is often arbitrary for cultural objects (see Shepherd and Wicke, 1997; De Nora, 2000). This is to say that there is no essential connection between the object itself and the aesthetic meaning it articulates. There is nothing inherent within sound that captures a universalised response. Frith writes "musical meaning is not inherent (however ambiguously) in the text" (1996: 250). It is instead up to the individual to *construct* meaning. They do this in accordance with cultural codes and signs (Frith, 1996: 109). Interpretation is required from the actor to make sense of the content of music.

A sociology of music inspired by Max Weber underscores the importance of meaning in a similar vein. It is argued that the *meaning* of musical phenomena may be multifaceted and depend on who ascribes it to those phenomena in the first instance (see Weber, 1914; Eyerman and Jamison, 1998; Martin, 1995). Audio technicians, for example, may refer to the aesthetics of 'lossy audio', 'compression' and 'digitisation', whereas the average music listener might associate the words 'portable', 'popular' and 'modern' with music disseminated through an MP3. The adjectives and nouns that individuals assign to sound are crucial to capturing the meaning of aesthetics, since people's ability to describe and articulate forms of art function as a key form of aesthetic judgement (Bourdieu, 1984: 20-24, also see Frith, 1996: 250-251).

Although the format remains the same, the symbolic meanings which are representative of the MP3 may differ broadly among users and their lived experiences. Sterne overlooks these considerations. What these considerations point to is the importance of empirical studies of the meanings different people ascribe to music. An engagement with interpretivist sociology reveals that meaning is by no means reducible to "historical meaning" as Sterne describes it in the first chapter of his book (2012: 2). It makes more sense, Hesmondhalgh claims, to describe Sterne's book as "*A Sound-Based Genealogy of Digital Media*, or even *A History of Audio Compression*" (Hesmondhalgh, 2015: 130, emphasis in original). As the gaps in the literature reveal, in more research practical terms, to study the MP3 file, more is required than a statement of the engineers' intentions behind the MP3. It is necessary to move towards an incorporation and integration of 'the social', which takes into account and encompasses the complex interplay of cultural contexts, individual experiences and shared interactions that shapes how people encounter such technology. Indeed, we need to understand how the MP3 is *received* but also *used* by the actor. The 'social' refers to how this technology is used when it comes into contact with individuals, taking into account people's practices, shared meanings

and power dynamics that emerge from its use. This contrasts with analysing the MP3 when it stands alone as an object disconnected from the actor's response. The conclusion from this tension in the literature demonstrates that, to achieve a more comprehensive conception of 'the social', more empirical research is required, that is, research that is embedded within and shaped by people's everyday experiences with digitally compressed music.

2.3.2 The social life of the MP3

The requirement to incorporate the social into an analysis of the MP3 is, to some extent, addressed by Bull's ethnographic work *Sounding Out the City: Personal Stereos and the Management of Everyday Life* (2000) and *Sound Moves: iPod Culture and Urban Experience* (2007). Drawing on findings from interviews with over 60 participants, primarily in London, between 1994 and 1996, he (2000) pursues a more insightful approach than Sterne (2012). In his first book, *Sounding Out the City*, he asks three main questions: "(1) What is the nature and influence of the auditory in everyday life? (2) What role does technology play in the construction of auditory experience? (3) And what role do personal stereos play in the management of the everyday life of users?" (Bull, 2000: 2). Bull argues that these questions have a "cognitive, aesthetic and moral significance that are all relational in so much as they inform us of the ways in which users relate to their surroundings, others and themselves" (2000: 2). He attributes agency to the individual in using music devices (in his case, Sony Walkman) to navigate the challenges of urban, metropolitan life. According to Bull, the use of personal stereos to channel and regulate emotions enables people to go about their daily lives with greater ease. Focusing on the affordances that personal stereos provide, he describes how people increasingly rely on personal stereos to create sonic environments that facilitate soundtracks to everyday life.

He claims that this absorption helps to "bolster the user's sense of power and control in urban space" (Bull, 2000: 25). For example, Bull comments on how "personal stereos are invariably played with sufficient volume to drown out the industrialized sounds of the city" (2000: 21). Use, therefore, in contrast to Sterne (2012), is not created in a vacuum, but in conjunction with one's environment. Bull suggests that these devices offer a sense of security and describes the personal stereo and headphones as "providing them with an invisible shell" to escape from the noisy environment of the city (2000: 22). In this sense, the personal stereo, with its attachment to headphone use, creates a sonic atmosphere of "interiority" for the user (2000: 22). This interiority provides an insular experience for the user insofar as they are sheltered from their external environment. His participants describe a "dreamworld", "where the boundaries of cognitive and physical space become reformulated" (Bull, 2000: 22). Using music to navigate urban space is a key tool for managing the challenges of everyday life.

In Bull's (2007) book *Sound Moves: iPod Culture and Urban Experience*, he extends his analysis to the attention of the Apple iPod. Many of the same themes that emerge in his first book (i.e. auditory experience, the navigation of metropolitan space) also appear in this text, but with closer conceptual focus. In particular, he uses the concept of "auditory bubbles" (2007: 3) to describe how the feeling of being insulated by headphone listening in turn draws sonic boundaries whereby the user can personalise their own soundscape by filtering out their external environments. This creates a unique phenomenological experience insofar as it is experienced subjectively from the perspective of the individual who creates that environment. Yet, whilst these uses do afford, somewhat, the individual greater control in their ability to shape their sonic environments, it is important to be aware of the more negative implications of auditory bubbles. Indeed, his findings strike a clear parallel with the work of Jenkins (2010), discussed earlier, particularly insofar as these experiences can lead to diminished spatial awareness. Overall, Bull's research offers very important empirical insight into the uses of portable devices, that is, the quotidian uses of music devices to mitigate the challenges of urban life.

Bull's analysis remains limited, though, because he mostly concentrates on *individualised* deployments of personal digital devices. He does not focus on how the utilization of these devices might foster interaction between people. By contrast, Prior (2018; 2014) has moved beyond Sterne by delivering greater insight into the multifarious, increasingly *social* experiences users have. As he finds in *Popular Music, Digital Technology and Society* (2018), individuals use iPods in much more diverse and complex ways than Bull suggests. Prior notes that it is "one sided" to assume that listeners remain confined to a digital "cocoon", "bubble", or "pod", because individuals are increasingly using personal digital devices to share collective experiences (2018: 106-7). Prior's research (2009-2012) on the applications of MP3 player use has detected that developments in digital technology are in fact helping to reignite social bonds through the quotidian uses. For example, he has discovered that actors use MP3 devices to share music with university flatmates whilst carrying out mundane tasks such as washing up, working or cleaning. To capture these experiences, Prior deploys two concepts, 'techno-sociality' (2018:108-109) and the 'plural' iPod (also see Prior, 2014). Techno-sociality refers to the "multifarious ways" in which we "connect with others", invariably by using non-human objects to do so (Prior, 2018: 109). He argues that we need to move away from the idea of the "duped and sequestered consumer" and consider the "more plural landscape of techno-sociality and use" (2018: 109). In the "plural iPod", he considers how the iPod is "a device" with "meanings" that "are far from synonymous with a single condition" but, rather, "is dynamically and skilfully folded into multiple patterns of practice" (2018: 36).

From 'iPod jacking' to sharing Spotify playlists, Prior's substantive findings successfully demonstrate that the MP3 is far from a format that solely encourages isolated, individualised musical experiences. Rather, the format can ignite bonds *between* individuals, stimulating social ties between them. His observations are important because he demonstrates that the uses and gratifications of such devices shift when more individuals are brought into an arena of social interaction. Gratification is important here because it illustrates that people use the iPod to satisfy certain desires (in this case, the desire for social connection). "users", he writes, "reported that iPods were an important factor in lubricating everyday domestic interaction and a means to build relations with others" (2014: 32). Prior's findings suggest that sociality is manifested in three ways: (1) through sharing headphones with friends, (2) through using devices in 'collective situations' (such as iPod docking at house parties), and (3) through acquiring and cataloguing music on online playlists (2014: 31-33). With Prior, the analysis follows people from a position of seclusion to one of association with others by means of audio devices to connect with each other in everyday life.

The uses and gratifications approach in sociology (also see Katz, Blumer and Gurevitch, 1974), which refers to the ways in which people use media to satisfy their own needs and desires, has also been employed to stress the multifarious motivations people have for using MP3 technology. Zeng (2011) provides the most explicit account of this matter. She argues that although the MP3 player was designed with the intention of making it possible to listen to music compatible with the MP3 format, these devices have been adopted to fulfil a "wide range of uses that address various needs" (Zeng, 2011: 99). Drawing on data from questionnaires for, and focus groups with, university students and media professionals, Zeng's research found that the most popular uses and gratifications for MP3s were to exert 'control' over musical experiences and encounter 'entertainment'. Zeng seeks to evidence this with reference to an overwhelming agreement among participants with the statement that they adopt MP3 players to "listen whenever I want to" (with a mean of 5.34, whereby 6 indicates 'strongly agree') and with the statement that they deploy MP3 technology to "feel entertainment" (5.12) (2011: 103). Overall, there is evidence in Zeng's study to support Prior's conclusions. For example, 'share content with my friends', which features with a mean of 3.83, reinforces Prior's statements that the iPod helps to solidify social relations *between* people. Yet Zeng's quantitative results display a more individualistic approach, that zooms in on personal desires rather than those as belonging to a broader structure. There is little emphasis on the *shared* meanings of MP3 usage. Zeng largely suggests that many of the motivations for adopting such technology are focused on a rational basis to fulfil desires that provide immediate gratification for listeners. Her findings suggest that if they did not deliver these benefits, users would simply abandon them and turn to alternative forms of technology.

The main reservations I have about Zeng's account, however, concern the depth of her analysis. Whilst she makes an attempt to explain and examine the multifarious uses of MP3 players, she tends to neglect the wider problem of meaning. Her mixed method approach combines qualitative methods (focus groups) and quantitative methods (questionnaires hosted by Survey Monkey). At first sight, one may assume that this enables Zeng to generate a comprehensive analysis of why the uses and gratifications foster meaning in these devices. However, on closer inspection her results provide merely a snapshot of the multifarious uses, with focus given almost exclusively to the quantitative findings. Results from the focus groups do make appearances, but these are scarce in the text, with Zeng referring only to anecdotal evidence. In fact, the qualitative, explicit, findings of the participants' experiences are almost completely absent from the analysis. This is unfortunate because it would certainly be illuminating to know *why* so many participants use the MP3 player to "listen to my favourite content" and not other devices (2011: 103). Similarly, in order to gain further insights into how users deploy MP3 devices to "keep myself accompanied" it seems necessary to draw on qualitative findings to contextualise their implementation in further detail (2011: 103). Zeng's account, strangely, fails to explore the specificities of such dimensions of the meanings of music played through MP3 devices. The overreliance on quantitative data thus risks articulating these meanings superficially.

All of the studies reviewed in this section have made important contributions to the sociological study of contemporary music listening. What has not been conducted yet, however, is a thorough examination of the *meaning of digitally compressed audio formats*. The focus has been on meaning attached to the devices which disseminate audio, rather than the format itself. Although some attention is given to the processes of digital compression, the music as a feature begins to fade as an object of scrutiny. This is acknowledged by Bull, who claims 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 stereos in the construction and transformation of experience" (2000: 14). Similarly, Prior does not aim to assess the ascription of meaning to digitally compressed audio formats, but rather focuses on the devices themselves – in his case, the iPod. What this entails is that the transformative aspects of digitally compressed audio files have yet to be properly analysed. Bull and Prior have not investigated how the altering features of digitally compressed audio formats affect what music *means* in everyday life. Instead, they have predominantly concentrated on the reconfigurations of urban environments due to advancements made in mobile audio listening. Whilst these studies undoubtedly open and convey avenues for further research, the interrogation of the social meaning that actors

ascribe to digitally disseminated music evades scrutiny, thus demonstrating that my study is required to address such a lacuna.

2.3.2 A device for democratisation or exploitation? The political implications of the MP3

In addition to the aesthetic and social significance of the MP3, scholars have highlighted a fundamental political dimension. That is to say, it has been shown that this technology carries with it implications concerning the distribution of power and wealth in the digital age. An analysis of power relations is crucial because the MP3 has been associated with a conflicting duality, namely, the potential to both democratise the distribution of music, in spreading it to the masses via file sharing (see Marshall, 2015b), but also to exploit individuals in creative processes through unauthorised file distribution (known as piracy) (see Terranova, 2000). This duality requires further exploration when one considers the importance of the political implications associated with the MP3.

It has been said that the internet acts as a catalyst for democratisation, with the nature of economic exchange shifting due to the modified relationship between the producer and consumer (see Lessig, 2005; Ritzer and Jurgenson, 2010). This shift is especially evident in the distribution of music, where platforms like YouTube, SoundCloud and Bandcamp have empowered independent musicians. Traditionally, models of music distribution stressed the underlying power disparity between those who distributed and those who purchased music (see Adorno, (1997 [1962])). Record labels and radio stations controlled the distribution of music and the flow of information about music. They acted as gatekeepers, controlling access by having control over what music was heard by the masses (see Haupt, 2006: 116). The internet now, however, gives consumers the power to upload music to a global audience in just seconds, thus disrupting traditional delivery channels and leading to a democratisation of access and distribution.

Analysts have thus pointed to the utopian quality of the internet as a “digital commons” where information can be exchanged for free (see Droumeva, 2021; Wittel, 2013). According to Wittel, “the commons refers to natural and cultural resources that are shared by a community of commoners. These resources are not privately owned, they are owned and shared by the community of commoners. These resources can be such different things such as land, language, music or software” (Wittel, 2013: 320). The internet provides a space for the communal ownership of resources, thus leading to processes he describes as “counter-commodification” (Wittel, 2013:317). Such changes, Wittel, claims, pose a serious threat to capitalism insofar as it “pushes back the frontiers of measurement, value and quantification towards qualities, values and an expansion of the gift economy” (Wittel, 2013: 320). Although music has traditionally been conceptualised within capitalist economies as a commodity, the

digital commons provide opportunities to subvert its status as a commodity by allowing anyone to upload or download music for free. This in turn threatens the role and purpose of traditional gate keepers.

This exchange between parties through the practice of uploading and downloading is further encapsulated by Barbrook's work (2005). Barbrook refers to 'The High-Tech Gift Economy', arguing that file exchange in the digital era strikes affinities with a Maussian account of gift-exchange societies (see Mauss, 2002 [1925]). He claims that "in the absence of states or markets to mediate social bonds, network communities are instead formed through the mutual obligations created by gifts of time and ideas" (Barbrook, 2005). These social processes are not bounded by legal/contractual relations but rather, reinforced by norms that emphasise the importance of reciprocity and communal ties between individuals.¹⁶ The practice of exchanging information is therefore thought here to deepen mutual obligations insofar as people feel compelled to give and receive to continue the flow of shared resources and knowledge. Barbrook draws on open-source software such as Apache and Linux to emphasise his case.

It should be noted that the MP3 is at the heart of these ostensibly 'emancipatory' developments, particularly if we are to consider it in combination with Napster, which was a American peer-to-peer website (1990-2002) that allows users to freely exchange MP3 files over the internet (see Hesmondhalgh and Meier, 2018: 1562-1563). The user gifted music by uploading songs to Napster, but in doing so, also 'received' music for free by downloading it. This created a mutual relationship, with obligations tied to the rules of gift-exchange. Barbrook believes that this phenomenon symbolises an era of "anarcho-communism", with previous conventions of exchange sublimated by the capacity to download music for free (2005). Similarly, therefore, scholars (McCourt and Burkart, 2003) note that filesharing websites such as Napster posed a challenge, since the free exchange of music files threatened the 'hegemony' of the 'The Big Five' record (EMI Records, Sony, Vivendi Universal, AOL Time Warner and BMG) companies over distribution. Peer-to-peer filesharing is a challenge worth noting because it demonstrated the potential to redefine music as a universal good and not merely as a commodity to benefit corporations. McCourt and Burkart recognise that this was partly by virtue of the fact that, because the MP3 format was developed outside of The Big Five record companies control, it offered "no intrinsic properties against copying" (McCourt and Burkart, 2003: 336).

¹⁶ It should, however, also be noted that Barbrook (2005) is sensitive to the fact that the hi-tech gift economy has to adapt to the capitalist mode of production. He thus recognises how it fits within the "mixed economy".

The shifting landscape of exchange forms a central point regarding the political significance of the MP3. However, far from providing a panacea to the barriers corporations have over copyright (namely the unregulated distribution of music), the relationship between use value and exchange value has raised controversies in the digital age. Terranova's (2000) Marxist analysis of exchange value and use value in the early 2000s found that, due to advancing technology, labour is becoming increasingly 'immaterial' (also see Lazzarato, 1996) and therefore obscured from more traditional (material) capitalist models of work. The ambiguity of labour time within information-centralised economies can be exploited by capitalist bosses, as she finds in her case study of 'Net-Slaves' (2000: 33-36). Since there is sometimes no *tangible* product produced by those employed within the arts industry, labour time is not adequately remunerated. This is often because labour processes are opaquer within the digital economy, especially when compared to previous Marxist depictions of labour processes that proceeded the advent of the internet (Marx, 2010 [1867]: 120-136). Since the MP3 is a format that contains information, it is not subjected to the same labour (measurable) processes that occur with, for example, the making and distribution of CDs or vinyl records. Academics (Sterne, 2006: 829; Burkart and McCourt, 2003: 347, Marshall, 2002; Marshall, 2015a) have applied these considerations to the MP3 file, explaining that, because music is traded for free on peer-to-peer websites such as Napster, artists claim that they are not financially rewarded for the dissemination of their music. This, consequently creates tensions between artists/record labels and consumers. The consensus that emerges from these debates is that the record labels prevailed as ultimately successful as framing peer-to-peer exchange as a phenomenon that undercuts artists' creative endeavours.¹⁷

Therefore, despite Barbrook's (2005) positive affirmations, the political implications of copyright infringement have, therefore, featured as a core part of the discussion among academics commenting on the MP3's impact on the music industry. However, despite these interventions, it is worth noting that, because most users today consume their music legally, the political dimension is not exhausted.¹⁸ In this light, more up-to-date literature, therefore, needs to be considered. Another way in which the political dimension might be surveyed, for example, is via the ways in which compressed and uncompressed music are discussed by those within the music industry. O'Grady's (2021) article 'Rethinking criticism about lossy compression: Sound fidelity, large-scale production and audio capital in pop music' points to

¹⁷ This success is also measured by the fact that the record companies successfully sued companies like Napster over copyright infringement (see Burkart and McCourt, 2003). Also note that Napster is only one example of P2P websites. Other examples include SoulSeek, Bit Torrent (both of which still operate) and eDonkey.

¹⁸ Indeed, many users now listen to digitally disseminated music for free. We have moved towards paid-subscription models that provide users with music for a monthly charge. Spotify and Apple Music are examples of such platforms that rely upon paid membership. This means that accounts discussing issues of piracy are beginning to become outdated.

the numerous ways in which politics operates within debates surrounding hi-fidelity and recorded sound. In this article, O'Grady examines the political dimensions of audio preferences. He considers whether the claim that compressed audio significantly 'degrades' the quality of recorded sound holds much weight and credence, focusing primarily on the YouTube documentary *The Distortion of Sound* (2014) and news commentary from 2014 to 2018. According to O'Grady, the claim that lossy audio symbolises a significant degradation of audio quality is rather trivial. He is sceptical about this perceived degradation because ABX listening tests have shown that trained listeners often fail to discriminate between the audio quality in higher bit rates (256 and 320 kbits/s) of MP3 files (see O'Grady, 2021: 1079; Pras et al, 2009: 6; Crowdy, 2013: 152). Rather, the appreciation and expression of 'audio capital' functions ultimately in the interests of those high up within the music industry to serve economic and political desires. Drawing on Bourdieu (see 1984; 1993) for inspiration, O'Grady refers to audio capital as "the way in which individuals with celebrity status (symbolic capital) and who engage large scale production networks (determined by access to economic capital) construct fidelity ideologies about consumption that suit their own production practice" (O'Grady, 2021: 1078).

To substantiate the notion that audio capital seeks to establish positions within a social hierarchy, O'Grady refers to the comments made by elite figures within the music industry, such as Hans Zimmer, the renowned classical/film composer, who professes that "we have a McDonalds generation of music consumers", and DJ/Producer Steve Aoki, who claims that "you don't hear the complexity of the song with compressed MP3s" (O'Grady, 2021: 1082). From the point of view of elite figures within the music industry (including the musicians Neil Young, Slash, Snoop Dogg, Kate Nash, and Mike Shinoda), we have entered a "fidelity crisis" which has been "caused by the uptake of lossy compression technologies" (O'Grady, 2021: 1078). According to O'Grady (2021), expressions of 'audio capital' are political precisely because they seek to reproduce inequalities between those who possess considerable economic assets (e.g. access to large recording studios and expensive hi-fi equipment) (see O'Grady, 2021: 1087; see Perlman, 2004: 789 for a discussion of audiophiles)¹⁹ and symbolic status (e.g. by appealing to celebrity culture) and those who do not, namely, the everyday consumer, who typically prioritises convenience over fidelity. Crucially, those who hold these elite positions within the music industry have a vested interest in maintaining a divide between lossy and lossless audio formats because it helps to legitimise music as a commodity that *ought* to be bought, rather than rented through streaming services (see Marshall, 2015b: 179).

¹⁹ Perlman (2004) for example, explores the practices surrounding audiophiles and notes how the price brackets for audio equipment can sometimes range from \$5,000 to \$175,000. For many, of course, the cost of a high-quality audio set up is simply unaffordable.

This exclusionary divide, O'Grady argues, ultimately serves businesses who seek to make a profit within the music industry. The choice of format, therefore, can transcend aesthetic preferences and serve as a device to maintain inequality.

Overall, in these sections, I have conveyed the literature that is pertinent to an investigation of the MP3 file. This literature suggests that there are three important dimensions that should be considered when analysing this format: namely, the aesthetic, the social and the political. This analysis has, *inter alia*, highlighted significant contributions surrounding the technological features of the MP3, the ways in which it might be used in social life and the debates surrounding the emancipatory or exploitative potential of these developments. However, as you will find in the following sections, I will argue that to carry out a sophisticated sociological examination on the MP3 file, these dimensions require closer attention with reference to the *meanings* ascribed to digitally compressed music, the key lacuna found within my examination of the surveyed sources analysed thus far. As such, I will argue that a more critical engagement with the sociology of music allows us to address this lacuna in greater depth.

2.4 The lacuna: Turning towards a sociology of music

The accounts reviewed thus far have addressed important aspects of the MP3. Yet the sociological significance of the MP3 has by no means been exhaustively investigated. With the exception of Beer (2008) and Prior (2014, 2018), extant examinations lack a focus on the fundamental sociological problem of meaning. The accounts discussed often approach the MP3 from a 'musicological' perspective, with close attention given to its technological features. This is problematic because, as Martin (2006) argues, the 'turn to the social' in musicological studies "has not led to a sustained engagement with the themes and traditions represented within the established discourse of sociology" (2006: 98). According to Martin, despite its efforts, musicological analysis often locates music as a text and not something that is experienced in *context*. If music is to be discussed from a 'social perspective' encountered in actualised situations, sociology provides the intellectual impetus for outlining how people construct meaning in practice. In fact, the construction of meaning by social actors has driven sociological literature for over a century (see Simmel, 2011 [1900]; Weber, 2020 [1914]; Geertz, 1973; Habermas, 1984 [1981]). Meaning continues to be a core problem in current research, too, particularly following the 'cultural turn' (see Alexander, 2011; Alexander and Smith, 2003; Bennett, 2008; Eyerman and Jamison, 1998). The sociology of music has underscored the appropriateness of this type of sociology for musical phenomena and technology. Scholars in this area of sociology stress the agency of the individual in respect of their ability to construct and make sense of their realities.

Scholars in this field, such as DeNora (2000), Martin (1995; 2006), Shepherd and Wicke (1997) dispute core ideas from musicology, including the idea that music has meaning inherently built into its sonic features (Langer, 1942; Meyer, 1956; Prior, 2018: 108). Instead, they maintain that meaning emerges from the relations *between* individuals and from their relationships with music. As Martin posits, “such meanings are not inherent or self-evident but are socially constructed” (1995: 24). A sociology of music thus stresses the importance of social interaction and its role in making sense of music. This applies to music transmitted by the MP3, because, as Prior demonstrates in his analysis of the multifarious meanings ascribed to portable music players (2014; 2018), people can potentially subvert the intended functions of technology. It would be one sided to assume that because technologies like the MP3 are “scripted” (see Akrich, 1992) to facilitate particular types of listening²⁰ (also see Sterne, 2012:153), that they cannot be used in ways that actually run counter to their intended usage. A sociological engagement with the MP3 should be open-minded to the fact that social interaction can shatter the intensions of inventors and designers.

Since those who designed the MP3 actively considered the dynamic relationship between the object and the subject, the MP3’s technical features cannot be interpreted one-dimensionally. The sociology of music is sensitive to these considerations of the object-subject dichotomy, recognising that it would be disingenuous to suggest that the aesthetic features of music have no meaning whatsoever. We must balance objective and subjective phenomena to understand the complexity of musical reception, through its interaction. Whilst previous accounts (e.g., Sterne, 2012) have ignored the sociological relevance of music and technology, I will address this lacuna by illustrating how the sociology of music can provide critical insight into the aesthetic, social and political dimensions of the MP3.

2.4.1 Aesthetics: bridging the material and the non-material

At first sight, the MP3 may strike us as a nonmaterial object. After all, unlike mediums such as Vinyl, the MP3 file cannot be touched physically (see Katz, 2010: 29). It is a code constituted by audio data. Although the MP3 might be stored on a physical device, such as a phone or laptop, the file itself remains non-physical. This has led scholars (see López, 2013, Magaudda, 2011) to refer to current times as reflecting the dominant narrative associated with the “dematerialisation of music”.²¹ The ostensible immateriality of music today reflects broader developments in global economics. Indeed, the intangibility of music chimes with economists Quah (1996) Haskel and Westlake (2017), in their respective assessments of the “weightless”

²⁰ Distracted listening, in the case of the MP3.

²¹ It is, however, worth noting that whilst they ultimately reject these assertions, it is worth noting that they point to dematerialisation as reflecting the transition away from formats conceived in a physical form (e.g. vinyl and CDs) to a form that exists in ‘the cloud’. Overall, these narratives are thought to point to a key development in modernity.

and “intangible” economy²² These scholars have recognised how Western economies today are becoming increasingly concerned more with the investment of intangible goods rather than physical assets such as property, land, vehicles and stock. The music industry today, which is primarily driven by digital consumption, echoes these developments in the global economy, with digital music streaming services contributing more than 80 per cent of total music listening revenues (Curry, 2025).

Yet whilst these economic shifts constitute a crucial concern within the global economy, my analysis is driven more by the sociological (rather than economic) focus of how the intangible features of MP3 files might feature within a discussion of their aesthetic significance. I am concerned specifically with delving into how their material features have been conceptualised and debated by scholars located within the sociology of music. I start my analysis, with Beer (2008), who, drawing on the ideas of Walter Benjamin (1931 [1968]), recognises that the MP3 has implications for the *collectorship* of music.

Beer writes: “unsurprisingly for anyone who holds a collection of this type, the physicality of the collection is an integral part of our relations with it and the identity constructions it facilitates: this is both how we think of ourselves and how we wish to present ourselves to those that visit the private places where we exhibit our collections” (2008: 76).

Hence, aesthetic experience, when it comes to be defined by the physical properties of the MP3, is transformed in the process; our sensual encounters with music are altered. Although admittedly one can touch the iPod or a mobile phone, we no longer ‘hear’ or ‘touch’ music as we did before, that is, via the direct and intimate physical experience that one gets from tangible objects. For example, one would no longer browse their collection, physically, by flicking through their catalogue on shelves or a through a CD rack. Songs and albums are not organised in the same way as they would be via a physical collection, but rather, through files that appear on a screen. Our collection is whittled down to a small object (namely, a phone, laptop or portable music device) that stores hundreds of thousands of music files. Such changes in the ways in which music is now presented to us, mark a radical departure away from previous forms of collectorship, where music would often be exhibited on a CD rack or shelf. Today, we can easily access our music collections, but often with reference to playlists and digital information that is presented to us on a device.

²² I write “ostensible” because scholars have demonstrated that virtuality should not automatically be equated with a complete lack of physicality. MacKenzie (2019) for example, has demonstrated how high-frequency trading is underpinned by the physical technology that maintains it (e.g., fibre-optic cables, computers, electricity). Elsewhere, Dodd (2018) has underscored the importance of physical machines maintaining the crypto-currency Bitcoin. It is important to be aware of, and sensitive to, these debates whilst addressing materiality, particularly given the popularity of Actor Network Theory in sociological discourse (see Latour, 2005).

These technological transformations have shifted the contours of how we might address the materiality of musical aesthetics in everyday life, especially given that physicality forms an integral part of the musical experience. As I explain in my article 'Vinyl Creating Meaning in an Uncertain World' (Aldersley, 2021), material objects (in this case, the vinyl record) play a key role in how we relate to and experience music. Yet, these experiences are not only afforded by the tangibility of the artefact, but also through the practices that we participate in whilst engaging with the format. Indeed, with the vinyl record, "the user cultivates a multitude of physical connections. This involves the rituals of taking the record out of its sleeve, the movement of the needle to start the music and the practice of 'flipping' the vinyl to listen to the second half of the record" (Aldersley, 2021). An analysis of the aesthetic features of music formats, specifically their physicality, should not be separated from the practices that enable these rituals to occur. Such rituals play a fundamental role in characterising the uniqueness of the listening experience.

This exemplifies the broader point that technological objects should be taken seriously within the sociology of music. Although the examination of this component needs to be developed further with regards to music listening (see Bartmanski and Woodward, 2015; 2020; Marshall, 2011) it is worth noting that scholars such as Waksman (1999) (with the electric guitar), Frith (1996) (with the microphone), and Haupt (2006) (with digital samplers) have emphasised the centrality of material objects within musical processes. The burgeoning engagement with non-human objects suitably follows the influence of Science and Technology Studies (STS), Actor Network Theory (see Latour, 2005; Prior, 2008) and Cultural Sociology (see Alexander and Smith, 2003). As Theberge (2001) recognises, "without electronic technology, popular music in the twenty-first century is unthinkable" (2001: 3). The MP3 file supports this claim, given that it is a ubiquitous format in contemporary culture. Importantly, Theberge stresses that "technology is also an environment in which we experience and think about music; it is a set of practices in which we engage in making and listening to musical sounds; and it is an element in the discourses that we use in sharing and evaluating our experiences, defining, in the process, what music is and can be" (2001: 3). Musical experience is shaped by its relationship with the material and social world, namely by our engagement *with* technology.

However, despite the popularity of digital music files, it would be misleading to characterize the current state of music consumption as one of 'dematerialisation' (see López, 2014). This is the argument put forward by Paolo Magaudda, who finds, in his (2021) article 'When materiality "bites back": Digital music consumption practices in the age of dematerialization', that material objects still play a crucial role in people's consumption practices. Magaudda's empirical study of 25 young Italian digital music consumers focuses primarily on the integration of iPods, hard drive disks and the vinyl record as physical objects increasingly used to facilitate

listening experiences. According to him, the active use of these objects has profound importance for how we ascribe meaning to our consumption practices in everyday life, since material objects can reconfigure the relationships that we have with practices. For example, the affordances that are commonly attributed to music devices such as iPods (for instance, portability) result in a novel set of practices whereby users have changed their musical listening habits. Listening to music whilst looking at a screen or skipping tracks on an iPod, for example, leads to a deviation from traditional ways in which one may listen to music. This, in turn, drives a shift in the values they align with “modes of listening (see Stockfelt, 2004 [1993]), where users arguably had less “control” (also see Katz, 2010: 189) over their experience.

Today, listeners may identify more with the value of immediate gratification. Such shifts in people’s practices reveal how material objects may facilitate ways of listening that guide the user in forming relationships with music. Magaudda convincingly argues that we ought to conceptualise these shifts as one representative of “rematerialisation”²³ (Magaudda, 2021: 31). It is here where the ‘meaning’ of technology must be incorporated into the aesthetic experience, a factor neglected by scholars such as Sterne (2012). With regards to the MP3, meaning can be reflexively shaped by agents. For example, using an MP3 file on a HIFI system may subvert its aesthetic meaning as an audio format designed for portability. Similarly, using aesthetic scenery, such as a picturesque landscape whilst listening to an MP3 file, complicates its aesthetic experience through an interaction between our visual and auditory senses.

Furthermore, Zimmermann (2021) notes how the equipment used to transmit compressed music differs across users. This in turn shapes listening experiences by their individual listening contexts, with the equipment used to disseminate audio playing an active role in the transmission of sound quality. Meaning, consequently, is negotiated by agents through their engagement with the material world (see Stockfelt, 2004 [1993]; Martin, 2006). This is one key factor which unites the inseparability between the aesthetic and the social, demonstrating that we cannot discretely separate these categories. Moreover, this level of reflexivity also reveals that meaning is not exclusively embedded in the acoustic design of the MP3 but actively constructed by means of users’ engagement with technology. This is noted by Bartmanski and Woodward (2020), who state that “practically speaking, things make sense only in conjunction with broader constellations of objects, i.e., in enplaced and embodied contexts of their use where groups of people can share the associated experiences and intersubjectively establish

²³ To argue his point on “rematerialisation”, Magaudda argues that, if anything, there are *more* objects embedded into the everyday practice of music listening. He states “Since mp3 and other digital music formats have become more widespread, we have also witnessed the greatest development in new music listening technologies, devices and objects ever experienced” (Magaudda, 2021: 19).

their value” (2020: 138-9). In short, aesthetic music experience is contextual and dialectically related to the environment in which we find ourselves.

2.4.2 The social implications of the MP3

Examinations of the ‘social’ implications of the MP3 entail, among other things, an exploration of what it means to individuals. This demands an understanding of why people use the MP3, what motivates them to use such technology, and what this means for their interaction with music. In delving deeper into the actors’ motivations for social action, it is thus possible to grasp a “verifiable accuracy of insight and comprehension” which would otherwise not be obtainable (Weber, 2012 [1914]: 5).²⁴ Although MP3 listening could, superficially, appear uniform, in deeper analysis, the emotional, habitual, and aesthetic meanings attributed to it may well be multifaceted. As Bartmanksi and Woodward’s analysis of the vinyl record found, the medium was characterised by its “semiotic mutability: its ability to materialise a flexible range of meanings” (2015: 21). The symbolic associations were ascribed by the actors themselves and included symbolic tropes such as ‘warmth’, ‘authenticity’ and ‘charisma’. Interestingly, they note how the conceptual pairings of “old/new, authentic/contrived, original/copy, valuable/cheap or ‘warm’ vs ‘clinical’ sound” were brought up by participants in *relation* to the differences between the vinyl format and newer forms of digital technology (2015: xxi). Such categorisations point to ways in which the meaning might be expressed comparatively through oppositional signifiers. For Bartmanski and Woodward, such expressions provide a “heuristic master trope” through which the analogue and digital divide (2015: xxi) might provide a starting point for further analysing people’s attachments to the vinyl format. However, whilst conceptual binaries do appear in the sociology of music (see Frith, 1996: 203-225 for an analysis of performance and Hesmondhalgh, 2007: 507-227 for an analysis of musical taste), a similar cultural analysis of the MP3 format has not been established. This is surprising, particularly because the format is so widely present in our society. Indeed, the MP3 must have meaning, otherwise users would simply neglect it.

As DeNora suggests, the meaning of music in everyday life is profound because music “is something that gets [people] into action, something that is a formative, albeit often unrecognized, resource of social agency” (DeNora, 2000: 152-53). By this, she highlights music as a tool we use to orientate our social lives and relationships with others. Music gives

²⁴ Weber’s concept of “verstehen”, meaning ‘to understand’, is useful here (see Weber, 2002 [1914] for further insights). Weber states Understanding which needs to be gained through a grasp of deeper insights into the actors thinking. He uses the example of a woodchopper chopping wood. He finds that it is not immediately obvious why they are doing this. They might be working for a wage, chopping for a supply of firewood for their own/recreational use or working off a fit of rage, etc. The action is not *a priori* understandable through the action itself, but only through studying the meaning the actor ascribes to it *after* the action has occurred.

us agency in the sense that it propels action. For example, she draws on the work of Willis (1978) to illustrate that music is an instrument to help motorcyclists drive faster. From her own research, she uses the anecdotes of aircraft music, karaoke anthems and music in therapy sessions to demonstrate how music is not merely a form of art, but a device to construct social order (2000: 1-21). DeNora's contribution yields substantive insights into how we might go about assigning meaning to music in its everyday settings. Whilst this intervention, however, undoubtedly helps to establish the meaning of music in everyday life, it rarely addresses explicitly how technology may 'get us into action' and in turn construct meaning. Considering that MP3 technology is so prevalent today, her work (now two and a half decades old) requires further development to account for these transformations. Indeed, there may be parallels with the "affordances" that DeNora investigates in her book and the meaning of music in everyday life if it is transmitted via digitally compressed technology (2000: 111-13). More research is required to address this void.

Indeed, there should be more consideration into how the MP3 format is used *in context* and as a "resource" for social agency. What I mean by this, is that we ought to consider how the format is used alongside other people, activities to explore how it fits within particular environments. To reiterate, the format is not used in a vacuum, divorced from everyday habits and routines, but, as research from Bull (2000; 2007) and Prior (2014; 2018) indicates, it is actively integrated into the spheres of everyday life. Such considerations lead us to recognise the importance of acknowledging not only 'what' people are listening to, but also 'how' they are listening (see Stockfelt, 2004 [1993]: 88-93). As Marshall (2019) states "listening to music is most often a complementary activity – people put on music in the background while they are doing something else such as exercising, doing housework and socializing" (2019: 141-158). We must consider these activities when exploring the social implications of the MP3 file, since they point to particular ways in which the MP3 might be deployed in people's everyday lives. Future research, I argue, needs to strongly ponder on whether the format affects the ways in which people listen and whether this has a bearing on conceptualising music as a resource for social action. In the next section, I will consider ways in which the sociology of music might shed light on the format's political implications.

2.4.3 The political: subversion and transformation?

As discussed, meaning is not static, but subject to negotiation by the actors who inscribe digital technologies, such as the MP3, into their 'lifeworlds' (Prior, 2014; DeNora, 2000). The meanings ascribed to the MP3 can be political, even if the purpose of the technology is not overtly political by design. Hebdige's (1979) seminal work *Subculture: The Meaning of Style* provides a useful entry point into how the symbolic potency of objects can be reconfigured to

subvert and transform cultural meaning. Drawing on the work of Douglas (2002 [1966]), Hebdige investigates punk subcultures to explain how mundane objects such as hairpins and dog-collars can be incorporated into practices which transgress the cultural boundaries of what capitalist societies deem 'acceptable' or 'normal' behaviour. Objects by themselves may lack cultural meaning. It is when they are embedded into human relations that they garner significance. From this point of departure, Haupt (2006) outlines the potentially subversive potential of MP3 technology to disrupt capitalist markets which are premised upon the notion that music is a commodity to be bought and sold. He writes, "audio file sharing on the Internet is counter-hegemonic for the following reasons: the integrity of the music text is violated because individual songs from albums can be downloaded, traditional notions of authorship are challenged/violated due to the fact that digital technology makes it easier for individuals to sample music in the production of new music, and brand integrity is violated" (Haupt, 2006: 116). Although MP3 technology was not originally designed with a view to challenging capitalism, it can be argued that its meaning shifted following its use in P2P file sharing networks such as Napster (also see Hesmondhalgh and Meier, 2018: 1562-1563; Marshall, 2002). This thus highlights the semiotic mutability of meaning making insofar as individuals have re-appropriated its original function to confront existing power structures.

It is also worth considering that the MP3 raises political potential insofar as its acoustic and sonic features "emphasizes distraction over attention" (Sterne, 2006: 827). Whilst one might argue that the distortion of the music's sonic elements may imbue it with the capacity to prevent critical thinking, implying 'passive' rather than 'active' listening, one must consider also the fact that the intensions of engineers and designers can be rejected by agents who use such technology. Thus far, the reviewed literature only provides a cursory glance at these political considerations in describing how listeners might engage with the MP3. The reviewed literature stresses the capacity to 'engage' with the MP3. Contending literature which examines a 'distracted' and 'alienated' audience is negligible. Prior (2014) alludes to this possibility, with his respondents stating that the iPod "alienates me from other people" and "forces me into conformity" (2014: 31). Yet these effects would be worth studying in greater detail, especially because 44% of users in Prior's study found the device to be fostering processes of disconnection (2014: 33). These quotes point to crucial political questions, which deserve greater attention and point to avenues for further research.

One way to address this lacuna is through turning to the sociology of Theodor Adorno, a key scholar within the sociology of music. Adorno's work, whilst not addressing the MP3 (Adorno died in 1969), is imbued with critical insights into the constraining effects of music transmitted by technology (see, for instance, (2002 [1965]), for an account on vinyl and (2002 [1941]) for an account on radio) on individuals and society more broadly (see, for instance, Adorno, (2009

[1941]); Adorno and Horkheimer, (2016 [1947]). Adorno provides substantive theoretical tools for addressing the nature of authenticity, rationalisation and alienation in society, issues which provide a dialectical link between the aesthetic, social and political effects of recorded music.

Adorno researched the transmission of music via radio in the late 1930s and early 1940s (Adorno, 2002b [1941]: 251-269). He argued that the electrical dissemination of sound fundamentally shifted the meaning of music in everyday life (Adorno, 2002a [1941]). As DeNora (2003) notes, Adorno viewed music as a critical cognitive tool “*to think with*” (2003: 3, italics in original). Particularly, he “devoted his thinking to the ways that music could, for better or worse, transform consciousness” (2003: 3). With the advent of radio transmission, music’s critical quality was called into question, since its fidelity was compromised. Radio music, for Adorno, seemed to bear “a certain artificiality” which was “lacking in acoustic vitamins” (Adorno, 1938: 24). Its aesthetic quality was consequently undermined. Adorno considered this a symptom of the increasing rationalisation of capitalist society, which increasingly prioritised music’s form as a commodity over an art form used to question the discontents of modernity. Individuals, by virtue of their increasing atomisation, felt alienated in society. Throughout his work, his analysis is directed towards the aesthetic, social and political dimensions of modernity. For Adorno, these dimensions were dialectically interrelated, with the parts forming a larger whole of what he called “the concrete totality” (2002 [1941]: 439). Adorno’s work provides some direction to the potential of my research in that his insights into the aesthetic, social and political dimensions of technology are analysed together.

2.5 Research questions

As I have illustrated throughout this literature review, there exists three crucial dimensions to the MP3 format (and to digitally compressed music, more broadly). In exploring the literature, I have detailed the format’s respective aesthetic, social and political dimensions and have located meaning ascription as the critical lacuna within these constellations. Indeed, whilst there exists a body of literature on the MP3 format, there is a lack of sociological engagement that integrates all three of these dimensions. Moreover, usage is often conveyed rather narrowly and without reference to other people, environments and activities. This means that we need to consider how the MP3 is consumed in context, namely, in relation to people’s experiences and in relation to what they are *doing* whilst consuming these formats.

With all these considerations in mind, it is necessary at this stage to posit my research questions that I arrived at, following my survey of the literature.

1. How do the aesthetic consequences of digital compression shape the meaning that actors ascribe to music in everyday life?

2. How are digitally compressed audio formats used in individual and social listening environments?
3. What are the political implications of the process of making meaning from digitally compressed music?

2.6 Conclusion

To conclude, whilst there exists a body of literature on the MP3 within the fields of musicology and sound studies, these accounts often fail to situate the *meaning of this technology specifically* in society. As I have suggested, the sociology of music is able to address these problems through homing in on individual agents' capacity to reflexively interact with the MP3. This sheds light on many important issues, ranging from shifting aesthetic experiences (Beer, 2008; Theberge, 2001) and the diverse social uses of portable devices (Prior, 2014; 2018) to political questions regarding subversion (Haupt, 2006) and capital (O'Grady, 2021). In isolation, these accounts address some of the meanings that people attach to MP3 technology. However, an in-depth exploration of this issue is still lacking, and there seems to be little integration of all three dimensions (aesthetic, social and political) as a totality. This is troubling, because aesthetics affects both how we interact with music and how we use it as a political force to challenge or reinforce existing power structures. A closer engagement with the sociology of music creates the potential to address this lacuna.

3. Methods and methodology

3.1 Introduction

This chapter will focus on the methodological components of my PhD project. It will detail my philosophical approach, the overall methodological orientation, the sample, the methods used to collect data and how I approached my data analysis and interpretation. The chapter will begin by mapping out my theoretical framework (3.2), which draws primarily on Weber's methodological writings (1914) and scholarship in the sociology of culture concerned with how individuals 'make meaning' in their reception and interpretation of music. As my thesis centres on meaning making, I will ensure that my research questions are directly applied to the subject matter of my research. To do this, I will interrogate the significance of empirically investigating the aesthetic, social and political features of digitally compressed music. Next, I will describe in detail my methodological approach (3.3). The chapter will explore the major tenets of ethnography within sociological research and make explicit why it has been adopted as a key methodological approach for doing empirical research on the meaning of digitally compressed music in everyday life. This section will explore how participant observation, music elicitation methods and focus groups provide sociologists of music with the necessary tools to explore subjects' everyday engagement with and understandings of music and technology. The second half of this chapter will explore the more practical elements of my thesis and discuss in detail how exactly I executed my fieldwork and data analysis. I will detail considerations on genre (3.4) describe my recruitment strategy and sample for recruitment (3.5) and explain how I carried out the album listening parties (3.6) and focus groups (3.7). I will also describe the challenges encountered in my data collection (3.8). Finally, this chapter will conclude with a reflection on how I conducted my data analysis and interpretation (3.9).

3.2 Theoretical framework

In this section, I will map out the key theoretical considerations of my thesis. To do so, I will conceptualise the key parameters of my research, namely those related to meaning ascription, music, technology and everyday life. I will consider interventions made by scholars and proceed determine the conceptual parameters of these concepts in the context of my research so as to arrive at clear and concise definitions that accurately reflect the nuances of my study.

3.2.1. Meaning ascription

My theoretical framework, which underpins my study of the ascription of meaning, is principally informed by Max Weber's definition of sociology. Weber defines sociology as:

"the science concerning itself with the interpretative understanding of social action and thereby with a causal explanation of its course and consequences. We shall speak of 'action' insofar

as the acting individual attaches a subjective meaning to his behaviour – be it overt or covert, omission or acquiescence. Action is ‘social’ insofar as its subjective meaning takes account of the behaviour of others and is thereby oriented in its course” (Weber, 2012 [1914]: 4).

Meaning here guides the conduct of social action. It is studied with a view to understanding and interpreting human behaviour. According to Weber, understanding can be categorised as both “direct observational understanding” and “explanatory understanding” (2012) [1914]: 8-9). Direct observational understanding refers to the more “rational” grounds of grasping logical statements such as “ $2 \times 2 = 4$ ” or actions such as “reaching for the knob to shut the door” (2012 [1914]: 8). On the other hand, explanatory understanding relates to meanings ascribed to actions that may not be immediately ascertainable to the researcher purely by means of direct observation. Weber famously uses the example of a woodcutter, who may be chopping wood for a multiplicity of reasons, including, *inter alia*, for shelter, recreation or to work off a fit of rage (see Weber, 2012 [1914]: 8-9).

Although researchers inevitably engage in these two modes of understanding, it is the second mode (explanatory understanding) that requires one to take into account the complex interplay of meanings that provide motivations behind the action itself. When conducting empirical research, we should be sensitive to the fact that social action might require empirical interrogation and interpretation before one can arrive at conclusions about the meanings that are attached to such actions. As previous research (see Becker, 1963; Geertz, 1973) has demonstrated, we can only come to decisive assessments of meaning once we both observe human behaviour, noting not only actions but also their context. We should take into account the importance of responses to stimuli from the research participants involved, including their verbal explanations and emotional reactions. Weber’s example of the woodcutter provides a useful point of departure for explaining how human behaviour can only be studied seriously through close engagement with those who we seek to study. Any study into meaning making needs to take into account people’s behaviour and thought processes, especially since meaning making forms a central part of how people experience the world.

This relates to my research problem, namely, the meanings ascribed to digitally compressed music in everyday life. Although ascribing meaning to an action (like chopping wood) is not quite the same – though it is similar to – ascribing meaning to an object (like digitally compressed music), my research deploys Weber’s understanding of meaning insofar as I recognise that the actor has agency in subjectively reflecting on their own consumption habits. In particular, Weber is relevant here insofar as actions such as *listening* to music transmitted via an MP3 also relate to the actor’s own behaviour. In order to understand how meaning is

ascribed, we need to interpret the actor's thoughts about an object and how they engage with it. Meaning is not conceived through a vacuum but in relation to one's experiences.

3.2.2 Music

The definition of music that I adopt in my thesis is borrowed from Martin (1995). Martin refers to music as "some sort of pattern of organised sounds, deliberately created in order to produce certain effects" (Martin, 1995: 14). The reception of these organised sounds forms the core subject matter of my research, with the 'effects' referring to the impact that music has on individuals, who ascribe meaning *to* it. The conception of music here is relatively broad. Indeed, McCormick (2012: 722-742) has noted how music has been operationalised by scholars "as a *text*²⁵, as a *product* of the social world or industry²⁶, as a *resource* in social action²⁷, and as *performance*"²⁸ (McCormick, 2012: 723, emphases in the original). In this thesis, I am sympathetic to these differing conceptions of music and recognise how they may play a role in illuminating the dynamic position of music as an expressive art, which is designed to produce particular effects. It must, however, be noted here that I am concerned in this thesis primarily with recorded (rather than live) music and specifically with exploring the meanings ascribed to recorded music disseminated through digitally compressed technology. Therefore, while these broader considerations do provide valuable context, they do not fundamentally alter the investigative focus of my thesis, which is centred on the reception and interpretation of digitally compressed music.

3.2.3 The digitally compressed audio format and technology

This thesis therefore examines music as a dynamic mode of expression, focusing specifically as it is consumed in digitally compressed audio formats. These formats are important. Not only do they provide the delivery mechanism through which music is *given* to the listener, but they also actively shape the user's musical experience. Each with their own characteristics and unique features, technology plays a fundamental role in mediating music to the consumer. From vinyl records (1912) and cassettes (1969) to CDs (1982) (see Theberge, 2001: 3-25), each format, with its unique characteristics, dictate how the music is packaged and presented to listeners including both its material/non-material presentation and its sonic characteristics. I am concerned, primarily, with the meanings ascribed to music via the digitally compressed format, which are mediums that encapsulate digital information. Examples include the MP3

²⁵ Among others, she cites Adorno (1978 [1932]), Subotnik (1991) and McClary (1991) as scholars who explore music as a text.

²⁶ See Bourdieu (1984), Alexander (1995) and Peterson (1978).

²⁷ See Hebdige (1979), Willis (1978) and DeNora (2000).

²⁸ See Small (1988) and McCormick (2006).

format (1992), but also AAC (1997) and OGG Vorbis (2000) (used by the popular streaming websites Apple Music and Spotify respectively).

As far as technology is concerned, my thesis is also sympathetic to the fact that the format fits within a wider constellation of objects. I consider, in agreement with Prior (2018), that we should consider music technology as “things” (namely objects) and as “sites where practices, discourses and symbols unfurl” (2018: 2). Music listening should not be considered through a vacuum, but also with reference to broader concerns about how listening is facilitated by objects, such as speakers and headphones. My thesis is therefore sensitive to the fact that we cannot view the the format in isolation, but as one component within a chain of technological mediation. Research, for example, from Zimmermann (2021: 231) indicates how “the local environment”, namely, “the membranes of the loudspeakers” and “the reflections of the walls” also play a role in affecting “the production” of sound. Although the format is one technological component that is involved in the practice of music listening, it is not the *only* component.

3.2.4 Everyday life

This thesis also examines everyday life, considering the position that digitally compressed music occupies in people’s quotidian experience. The term everyday life, in a sociological sense, refers to an “area of inquiry in which the study of the forms of social behaviour and social interaction that take place within everyday social settings and the analysis of more general social processes and relationships meet and intermesh” (Bennett and Watson, 2002: ix). Studies in everyday life also tend to focus on the “rhythms and routines of daily existence”, that is, the more mundane aspects of experience that relate to “how we get along on a day-to-day basis” (Bennett and Watson, 2002: x). In this thesis, I shall critically investigate how the meanings that people ascribe to digitally compressed music are incorporated into the everyday experience. As a starting point, I proceed from the position that digitally compressed music *ought* to be explored because it is woven into the fabric of many people’s everyday lives, at least in Western Society (see Bull, 2000; 2007; Beer, 2008; Sterne, 2012).

It is crucial to note that music is not merely present within people’s everyday lives but plays a fundamental role in allowing us to do things. It offers a resource or tool for emotional regulation (see DeNora, 2000:41-45), allowing us to de-stress (see DeNora, 2000: 16) or to transport us from one mood to another (see DeNora, 2000: 7). Music also has the potential to structure time, providing an accompaniment to our daily routines. From the everyday commute to work (see Beer, 2008) to the domestic chores we do at home (see Sloboda and O’Neil, 2001: 413-429), music often features as a soundtrack to facilitate activities that we engage in. Furthermore, music shapes our relationship with spatiality, as I have considered in the

literature review with relation to Bull's (2000; 2007) discussions about the potential for music to create personalized sonic spaces. The increasing popularity of streaming today (Marshall, 2015b) also points to the burgeoning role that digitally compressed music occupies in people's everyday lives more generally, thus necessitating sociological research. It is from this starting point that I outline, in the following section, my methodological approach and advocate for ethnography.

3.3 Methodological approach

In order to understand the meaning of actions, we need to research their context. The ethnographic approach, which accounts for and allows us to study the context of actions, can allow one to gain a more precise understanding of the meaning of actions. In ethnographic research, the researcher is placed into the same environment as the researched (Atkinson, 2012). Indeed, by placing the researcher within the same environment as the participants (subjects), we share the context of the situation, thus enhancing one's understanding of what motivates social actions (Atkinson, 2012: 25). With this in mind, the researcher can explore the meanings attached to human behaviour via observing (in both real-time and retrospectively) how individuals also involved within the research setting, react and respond to stimuli. This is important for understanding social behaviour. Since music is a practice which is not solely performed, but also received and interpreted, any study of meaning making processes, to reiterate this, must take into account the actor and how they go about constructing and ascribing meaning to music by asking questions (see Geertz, 1973: 10). As I have outlined in the literature review, existing scholarship (see Sterne, 2012) has neglected the extent to which the individual's interaction with choice of format influences meaning making. Thus, ethnographic research, with its emphasis on real-time meaning ascription (Atkinson, 2012), offers a tool to research the possible meanings that emerge in the field as they unfold. In short, it would be challenging for a researcher to understand meaning if they were divorced from the research setting in which these meanings arise and unfold.

As established in my literature review, the MP3 file possesses important aesthetic, social and political dimensions. In this thesis, I observe these dimensions through the lenses of meaning ascription in everyday life. They play an important role in sociological analysis and have also been recognised in the research questions that I have arrived at. For the purposes of orientation, I shall restate them here:

1. How do the aesthetic consequences of digital compression shape the meaning that actors ascribe to music in everyday life?
2. How are digitally compressed audio formats used in individual and social listening environments?

3. What are the political implications of the process of making meaning from digitally compressed music?

In order for me to explore the problem of meaning making in more detail, I found that these research questions called for the collection of empirical data. Studies into meaning making require the researcher to understand how people interact and interpret the world around them. As such, ethnography delivers a crucial approach for studies into meaning making, since it is premised upon the notion that social life should be studied through direct engagement with members of society (Atkinson, 2012). This means that the role of an ethnographer often involves immersing oneself within a group to study their culture (Becker, 1963). For studies into meaning ascription, then, ethnography provides a suitable link, since it allows meaning to be explored from the point of view of the listener, who, in turn, articulates the meaning of their experience to the researcher. As indicated in my literature review, a key lacuna within sociological research is the absence of studies into the relationship between the object (music) and the subject (people). My methodological approach aims to bridge this gap by addressing music as something that gains its meaning through being immersed in the collective activity of music listening.

According to Atkinson, ethnographic research refers to “the study of human group life via a researcher’s immersion in a particular social group, (sub)culture, scene or cultural setting of interest. An ethnographer becomes a participant in, and in many cases a fully-fledged member of, a group to study its everyday workings, to learn what the culture means to its members, to grasp how it shapes members’ worldviews and life practices, and to conceptualise how cultural life is organised and exercised” (2012: 24). It is commonly understood that ethnography can deliver rich insights into the experiences of a particular social group (see Geertz, 1973). This is because it allows researchers to immerse themselves in the group’s culture and practices, thus uncovering how people behave and *why* they behave in the way that they do. This is particularly important, for example, with reference to social action, since the meanings ascribed to action are important in outlining how meanings actively shape social phenomena. Crucially, I was concerned with how people ascribe meaning to music that had undergone technological processes of digital compression. As ethnography purports, in order to grapple with meaning, it is crucial to study the first-hand experiences of those within the research setting under inspection (see Atkinson et al, 2007). Without this engagement with participants, research risks representing and interpreting individuals’ meaning making strategies unfaithfully.

As I have outlined, meaning making with regards to technology is a mutable process that is shaped according to the individual’s own experiences but also through the social context in

which technology is used. In this sense, I make the distinction between individual experience as one that is isolated and framed in accordance with one's own phenomenological experience and social experience as something encountered in *relation* to other people, namely, as something shared. With this in mind, we ought to be sensitive to the fact that individuals ascribe a multiplicity of meanings to objects, and that this is not reducible to a "single, totalized, stable meaning" (McClary, 2015: 82). According to DeNora (2000), the meanings ascribed to everyday music listening may include a functional purpose as something that enables people to get "into action" (DeNora, 2000: 152). For example, one may play a techno tune on one's Bluetooth speaker in order to get ready for a big night out with friends. In contrast, another person may listen to the same song, but to relax, and as a form of recreation rather than regulation. The potential variation of meanings attached to music is evident here. It is worth noting that technological formats, by virtue of their interaction with humans, also have the potential to be used in ways that negate or subvert the function intended for them by their producers. For instance, whilst vinyl records were originally designed to be consumed as playback devices, during the 1980s, their meaning shifted towards the utilisation of the object as an instrument used by DJs innovatively to *produce* rather than to merely disseminate music (see Bartmanski and Woodward, 2020: 15). But whilst this example may illustrate a relatively obvious application of the format today, it is only by virtue of empirical observation that its usage and consequent meaning emerged as something more mutable than originally configured by manufacturers. Indeed, *a priori* assumptions about social life are important in helping the researcher to formulate hypotheses, yet they can hinder the construction of rigorous claims about phenomena (see Weber, 1914: 8-9; Hennion, 2011: 252). As social researchers, it is important to be sensitive to the fact that meaning making is shaped by context and therefore it is imperative to adopt empirical methods as a viable means to study such processes.

In order to study how people make meaning, I immersed myself in a research setting that actively involved the research subjects. Doing so enabled me to explore how subjects receive, interpret and ascribe meaning to digitally compressed music. Crucially, this closed the distance between myself - the researcher - and the participants (see Grazian, 2004). This is required primarily because of my research questions, but also since researchers (see Bull, 2000; 2007; Zeng, 2011; Prior, 2014) studying digitally compressed music have often been hesitant to engage empirically with people. By engaging with participants, I was able to explore the ways in which they think about their consumption of music. This allowed me to ascertain a deeper understanding of the ways in which my participants consumed digitally compressed music that may have not been obtainable with other methods, such as questionnaires, which would have limited my ability to probe participants. Although there will ultimately be some

distance between the researcher and participants (see Gold, 1958: 217-223), I found that by putting myself in the same 'space' as my participants, I was able to position myself in their shoes.

Moreover, my use of ethnographic methods gives an active voice to research subjects. As outlined in my literature review, Sterne's (2012) aim to reveal "the meaning of a format (MP3)" has not been fully met by his analysis because his analysis lacks sufficient engagement with how the subjects (i.e. individuals) interact with such technology (the music, disseminated via compressed audio). Indeed, Sterne makes the claim that meaning is inherent within the object itself, in its "sonic signature" (Sterne, 2012: 174). He adopts a "substantive" position (see Feenberg, 1999: 2-4) whereby the intrinsic properties of technology appear to determine the social conditions in which music is listened to.²⁹ This position is one-sided. By contrast, I proceeded from the assumption that meaning is subjective and not necessarily generated by the material properties of the 'thing'; rather, meaning making is an interactive process that involves human negotiation. It exists as a process unique to individual experience and also shaped by relationships with others. To investigate meaning sociologically, then, consideration should be given to how the actor *actually* engages with digitally compressed music. Gathering data through participant observation is, of course, one way in which I made sense of the meaning that individuals ascribe to music in social processes. We need to take these subjective and interactive processes into account.

Ethnography is an epistemological approach that has been used by sociologists exploring music ever since Robert Park introduced fieldwork into the Chicago School in the 1920s and 1930s (see Abbott, 1999; Anderson, 2001). During this time, music was studied primarily with a view to how it shaped urban life. For example, Reckless (1933) investigated the construction of African American identity, with ethnographic data (1933) revealing how jazz clubs in Chicago provided symbolic importance to the neighbourhoods in which they lived (see Reckless, 1933). Elsewhere, Cressey (1932) explored taxi dance hall, a practice where dancers (usually young women) called taxi dancers were paid to dance with (usually male) patrons (see Cressey, 1932). Relying on close participant observation and in-depth interview data, Cressey investigated the meanings that these dances had for those who had engaged in them, arguing that taxi hall played a key role in assimilating migrant communities into a familiarity with American culture. Thirty-one years later, Becker's seminal work (1963) *Outsiders* contributed another ethnographically informed study to the Chicago school's repertoire, detailing how jazz musicians negotiate their "unconventional" and "bohemian"

²⁹ Bull's (2000; 2007) investigations of MP3 listening in urban environments perhaps provides a useful counterpart to empirically solidify Sterne's assumption. His analysis, however, focuses overwhelmingly on how practices relate to spatial mobility and the urban experience. Very little analysis is given to the role of technology itself.

lifestyles in a society where those with low status and deviance are often looked down upon (Becker, 1963: 114-119). To conduct his research, Becker found that his position as a jazz musician – namely someone with insider status (Becker, 1963: 43; also see Back, 2024: 455-456) – enabled him to gather data (a matter I shall return to later) with relative ease.

Sociologists have thus advocated for ethnographic methods for studying music in various ways. However, it is worth noting that many studies, according to Grazian (2004), have situated music as a peripheral component of interest. He writes that “while the contributions of the Chicago school add to our knowledge of how music cultures operate in the urban milieu, it is clear that the study of music was always tangential to a more general examination of social organization and human ecology in the context of the American city” (Grazian, 2004: 198). Studies later attempted to address this gap by venturing into studying how musical content is incorporated into people’s lifestyles (see Willis, 1978). This is visible, for example, through the influence of the Birmingham Centre for Contemporary Cultural Studies, with studies outlining how youth subcultures (see Hall and Jefferson, 1975; McRobbie and Garber, 1975; Hebdige, 1979) employ music as a means to construct identity, but also as a means of resistance against more ‘mainstream’ forms of culture. Unfortunately, though, whilst these studies have undoubtedly provided valuable theoretical insights, they have been criticized for the failure to use rigorous empirical methods, “sometimes”, as Grazian argues, “at the cost of substituting armchair sociology for the rigors of fieldwork” (Grazian, 2004: 200; also see Schwartz, 1978).

It is only in the last thirty years, according to Grazian (2004), that sociologists investigating music have been successful in fully integrating ethnographic methods into their respective research designs. The last thirty years, have, for example, seen advanced ethnographies of the relationships, *inter alia*, between everyday life and music (DeNora, 2000) or the rave scene and identity (Thornton, 1996), explorations of gender inequality and the recording industry (Rose, 1994), and examinations of globalisation (Reynolds, 1999). More recently, advancements within the sociology of music have included studies of vinyl (see Bartmanski and Woodward, 2015; 2020) and the careers of hip-hop artists (see Lee, 2009). These studies, which make use of a variety of methods, including participant observation, interviews, and focus groups, demonstrate the potential of ethnography in sociological analyses of music. Yet, despite these advancements, it is worth noting that from many of these studies, a critical lacuna emerges, namely the absence of music itself. For scholars like Marshall (2011), this remains an issue. He explains that “there seems to be little in the sociology of music that deals with the specifically musical aspects of its subject” (Marshall, 2011: 157). Indeed, the sonic effects of music often appears at the fringes of discussion, with debate instead guided towards broader topics such as economic inequality (Jefferson, 1975), identity (Bourdieu, 1984; Force, 2009; Atkinson, 2011), and space (Bull, 2000; 2007). Whilst these topics are important for

sociological inquiry, they often trivialise the role of music. Marshall contends that whilst we should not lose sight of music “as an object to be bought, held, collected, traded, shared”, scholars should also view “music as music, as organized sound” (2011: 157). He adds that “the sociology of music skirts around music and, as a result, contains remarkably little discussion on how music creates particular effects, and relatively little on the experience of listening to music” (2012: 157).

In this section, I have described my methodological approach and have focused primarily on exploring the ethnographic dimensions of my empirical research. I explore why ethnography is suitable for exploring meaning making in situations where the integration of technology and social action features as a crucial element of everyday life. I have argued that in order to get closer to meaning, it is necessary to immerse oneself within the same environment as those being studied. My use of ethnographic methods provides an active voice to my research subjects, which in turn helps to alleviate some of the issues that arise in Sterne’s (2012) account of the MP3, namely, a pre-occupation with technological history at the expense of examining individuals and asking questions from those people regularly engage with such technology. I have also explored how ethnography has been used by sociologists investigating music in various ways, arguing that despite advancements in the field, a methodological lacuna emerges, namely, the music itself. If we are, therefore, to take music seriously, more research needs to be conducted on its sonic properties. In the following section, I will deliver a statement on the specific methods I adopted within my research and will provide justifications and a discussion on their implementation.

3.3.1 Methods: justification and implementation

The absence of music itself remains a problem for musico-sociological analyses. Yet ethnographic methods can offer various tools to address this. As Pink (2015) highlights, ethnography is “an approach to the world and to research that accounts for how sensory ways of experiencing and knowing are integral both to the lives of people who participate in our research *and* to how we ethnographers practise our craft” (2015: xi). I suggest that one way of addressing the absence of music (and particularly its sensory aspects) is to place music at the centre of sociological observations through using music elicitation methods. By placing music at the centre of observation, the researcher and the participants are *all* exposed to the *same* audio recordings. Allett (2010: 5) describes music elicitation as an “underexplored”³⁰ method within the social sciences, with researchers instead opting for visual forms of representation, such as photographs (see Mizen, 2005; Banks, 2001; Mason and Davies,

³⁰ She describes it as underexplored method insofar as scholars have neglected music as audio. She cites only two studies Keightley and Pickering (2006) and Hesmondhalgh (2007) which have integrated elicitation methods into their research design.

2009)³¹ to elicit data. Music elicitation, on the other hand involves the “integration of the music listening experience into research interviews to draw out or trigger memory, affective experience and descriptive in-depth discussion” (2010: 5). It is therefore worth noting that whilst Allett deploys elicitation specifically in interview settings, she does note that it plays a wider role within audience reception methodologies to see “how meaning is made out of reception” and does not necessarily have to be used as a tool to gather data solely in an interview setting (Allett, 2010: 5). In other words, music elicitation is an ongoing, experimental method that has licence to be used creatively.

For scholars within the sociology of music, this signals a welcome shift. The auditory aspects of music are brought to the fore, which, in turn, creates a research setting that integrates the sensory aspects of music itself, namely, its sounds. Given that music is an auditory art-form, I decided to explore its sonic components in an empirical setting that was not divorced from the researcher’s inquiry. This rationale was driven by my research questions and through my conviction that sociological studies of music ought to integrate music into the spaces that researchers investigate. In doing so, I sought to acknowledge music’s status both as an art-form, but also as a form of sensory stimuli. I tried to integrate music specifically by using elicitation methods. Thereby, I aimed to position music “as music”, to formulate it with Marshall (2012: 157, emphasis added). Its sensory (i.e. auditory) features were used to generate an environment where it played a more central role in the data collection process. Thus far, music elicitation methods have remained relatively under-used in qualitative research.

I also decided to use focus groups in my research. These were adopted with the view that they allow for interactions that “mimic”, to some extent, at least, “social interactions that occur outside of the interview setting” (Crawford, 2014: 487; see also Benzer, 2013: 1555). Although less common than traditional interviews, focus groups have been deployed as methods by numerous scholars studying music in various contexts. This ranges from research on the efficacy of musical higher educational institutions (see Everts et al, 2024) or on the integration of digital technology into the promotion of classical music events in the UK (see Crawford, 2014) to investigations of the impact of music on the quality of life of older people (see Hays and Minichiello, 2005). The notion that focus groups are designed to maintain a conversational flow (see Krueger and Casey, 2000) was frequently cited as a core reason for adopting focus groups as a method for data collection in these studies. This is particularly important because the meaning of music is often described as a phenomenon that is difficult to communicate and articulate in words (see Kristeva, 1989: 309; Shephard and Wicke, 1997: 20-23). Focus

³¹ It is also worth noting that the absence of sensory dimensions is a broader issue in qualitative research more broadly. Mason and Davies (2009: 600) state “too often social science research and knowledge is oddly abstracted and distanced from the sensory, embodied and lived conditions of existence that it seeks to explain”.

groups, were therefore used to uncover the meanings ascribed to music that cannot easily be described in words, a key problem outlined in the sociology of music literature (see Allett, 2010). By incorporating multiple individuals into a shared interview setting, it was anticipated that participants' contributions would help to prompt other participants to talk about their own experiences.

Given these considerations, I employed participant observation, integrating album listening parties as an innovative form of music elicitation, and focus groups as empirical methods for data collection. To collect data, I organised, attended and participated in four album listening parties involving a total of 36 participants. These were spread across June and July 2022 and conducted online through using a combination of Spotify, Google Meet and the interactive music listening software JQBX(also known as Jukebox but defunct as of April 2023). Album listening parties refer to social events where a group of people listen to an album in its entirety, together and in real-time. Originally conceived (see Billboard, 1982) and still used (see Waller, 2021; Bandcamp, 2024) as marketing strategies for artists' promotion, album listening parties today are arranged for various purposes. Album listening parties are organised for "immersive" aesthetic enjoyment (see Pitchblack Playback, 2024), as support for independent record stores (see Pearl Jam, 2024), or as more casual, private encounters at home, where an album is listened to primarily for entertainment and leisure and with no economic goals in mind.

More recently, Tim Burgess' (lead singer of the band The Charlatans) Twitter Listening Party provided an example of an event during which listeners can simultaneously listen online whilst also engaging in Twitter commentaries that involve members of the public and musicians (Burgess, 2020; Burgess, 2021). In this format, every participant begins listening to the same album at exactly the same time and tweets whilst the album is playing. These listening parties were very popular during the 2020 and 2021 Covid lockdowns and provided a forum for individuals to interact at a time where individuals generally felt more isolated (also see Brunow, 2020, for an alternative exploration of communal 'watch parties').³² Lee and Kao (2021: 36-52) argue that Burgess' parties delivered a novel means for music listeners to: (1) strengthen opportunities for active musical participation (through shared listening experiences), (2) stimulate feelings of collective nostalgia, and (3) build communities around shared musical interests. Intriguingly, they also argue that "the listening party is a way of opening a non-hierarchical relationship between audiences and musicians" (2021: 41).³³ Since people are in

³² Another good point of reference is McCormick's (2020) article on 'Marking Time in Lockdown'. Although she does not reflect explicitly on album listening parties, it is worth noting that such communal activities may help foster feelings of social solidarity.

³³ During these sessions, users on Twitter would reflect on an album, and commentary would come from one of the artists involved in the production of that album. For example, for the Blur album *The Great Escape*, commentary came from Dave Rowntree and Graham Coxon, who shared unreleased photos, tour diaries and lyric sheets. Fans

dialogue on the Twitter platform, the listening party is a space that, according to Lee and Kao, is “fairly democratic” (2021: 50). Burgess’ listening party does, indeed, point to novel ways in which digital media may be used in engaging ways to shape music listening experiences in today’s digital era.

The album listening parties I hosted for my study, however, followed a different approach. Although the listening experience was synchronous, with my participants all listening to music in an online, real-time environment, the music was disseminated solely through digitally compressed technology (in our case, OGG Vorbis, the lossy file format utilised by Spotify) rather than through a multitude of formats seen in Burgess’ listening party (e.g., vinyl, CDs, cassettes, see Lee and Kao, 2021: 39). The dissemination of music in this format was imperative, given that the investigation of digitally compressed audio lies at the heart of my research. The decision to integrate digitally compressed audio was taken to ensure the validity and thus strengthen the rigour of my data. It would have been unhelpful to ask my participants to listen to CDs during the album listening party, since the thesis does not focus primarily on audio recordings disseminated via CDs. The research environment, I found, played a focusing role, as everyone was listening to the *same* file. Another important distinction was the nature of the interactions. Since the album listening parties were hosted on Google Meet, rather than, for example, Twitter, participants could see each other by making their webcams visible. The boundaries of the interaction, I found, were distinctly private, given that it was only myself and the participants who were involved in the listening experience. My participants also had the opportunity to engage in conversation with members of the listening party, either via the chat box (on JQBX) and/or through speaking to each other by enabling their microphones.

JQBX was a free to use website that lets people (in collaboration with their Spotify accounts) play, sync and listen to music in real-time with friends (privately) or with strangers (publicly). JQBX lets people select tunes by “being the DJ”. Everyone in the chatroom has the opportunity to select tunes and queue songs on rotation. The software is designed to be interactive, as there is also a chat box where users can communicate with each other. The website also contains a ‘dope’ and ‘nope’ feature where users can express approval or disapproval for the songs being played. Although JQBX no longer exists, there are websites such as tt.live (Turntable Live) that are almost identical and contain many of the same features. In place of “dope” versus “nope”, for example, Turntable Live contains a “vibe meter” with the words “boring!” and “awesome!”. It is worth recognising that collaborative real-time listening apps are becoming

had the opportunity to ask musicians questions and engage in open dialogue, which arguably created a conversational atmosphere that broke down hierarchies.

more common practice, as is noticeable with Spotify's introduction of Spotify Jam, launched in September 2023.

Overall, I expected the format of the album listening parties as a shared experience to provide an important source of stimuli, not solely during the interactions themselves but also as an experience to reflect upon as a group afterwards. As has been pointed out (see Frith, 1996; Shepherd and Wicke, 1997), the meanings that people ascribe to music are sometimes difficult to put into words. Gathering data on the meaning of music has correspondingly been a difficult task for music sociologists. This is due to the fact that, unlike language, music has a 'non-denotative' character, which does not communicate something explicitly (Shepherd and Wicke, 1997: 20). Listeners, as a result, often struggle to articulate meaning in a coherent manner and often refer to imprecise formulations, such as "it's different from", "it's a kind of", "it sort of reminds me of", "I can't really say but, do you know what I mean?" (Feld, 1984: 14). This creates a problem for researchers, because, whilst music is undoubtedly very meaningful, its meaning is difficult to capture in words. As Cooke concedes, "when we come down to the fundamental musical experience, the transformation of sound into emotion, the professional is as tongue tied as the layman" (Cooke, 1959: 205).

Music, unlike poetry or paintings, for example, does not contain a visual component. For this reason, people often struggle to articulate the meanings that they ascribe to it. Listening to music is often a deeply emotional encounter, therefore expressing it in language appears as a challenge for those wanting to communicate meaning. In light of these considerations, to help people to get talking (see Clarke et al, 2021: 454), I decided to organise seven focus groups after the album listening parties had taken place. Participants in the focus groups (19 in total), had all attended the album listening parties. Merton *et al* (1956) define focus groups as:

"a form of group discussion in which there are several participants (in addition to the moderator/facilitator). There is an emphasis on a fairly tightly defined topic, and the researcher gives particular attention to the interactions that take place within the group. As such, the focus group contains elements of two methods: the group interview, in which several people discuss a number of topics; and what has been called a focused interview, where interviewees are selected because they are known to have been involved in a particular situation" (Merton *et al*. 1956: 3).

Since members of the focus groups also attended the album listening parties, it was thought that the previous interaction with my participants in these settings would support an environment that was friendly and familiar. The focus groups were also implemented with the intention that it would be possible to elicit data on topics that may not have emerged in the

album listening party. Similarly, in the focus groups I wanted to explore topics that spoke to my research questions, i.e. those relating to the aesthetic, social and political dimensions of experience. With this in mind, I devised an interview guide (see Appendix 1) that addressed these components. The interview guide contained a series of questions that were designed to interweave the components of everyday life into my questioning route. Indeed, this route was geared towards gathering information about my participants' daily listening habits and routines, with particular attention given to how my participants engaged with compressed audio that is not confined to manufactured research settings (as was partially the case with the album listening party). This guide was followed relatively strictly throughout the focus groups to ensure that all the questions I wanted to pursue were asked. I was, however, sensitive to the fact that unanticipated remarks or digressions might serve as an important source of insight within my findings (see Clarke et al, 2021: 458). Rather than approaching the guide as a "straitjacket" (Merton and Kendall, 1946: 548), I used it as a segue to incite further discussion. Therefore, if a participant mentioned something that was relevant to the interview guide, I would use their comments as a reference point that connected directly to my questions. Since I was aware of flow disruption, efforts were taken to keep the focus group as conversational as possible. Crucially, references to the album listening party were also made in my interview guide. I sought to use the parties as a prompt to assist memory recall to the earlier sessions.

It is important to point out that the album listening parties and the focus groups were closely related. The focus groups played a crucial role in responding to "the stimulus situation", namely, the album listening parties (Merton and Kendall, 1946: 542). Everyone who participated in the focus groups had also participated in the album listening parties. The "stimulus" (the album listening parties), however, did not solely function as an elicitation device to integrate a shared musical experience into the research setting, but was also a focal point for discussion (in the focus groups). Indeed, in referring to the album listening parties as a "particular concrete situation", my participants had the opportunity to reflect on this experience and others drawn from their everyday life in the focus groups (Merton and Kendall, 1946: 541). The album listening party video data was observed to analyse my participants' reactions and their use of various technological features (including those contained within JQBX and outside, for example, observations of whether my participants used speakers and headphones), but primarily in order to formulate questions for the focus groups. In this sense, the album listening parties operated as a key experimental vignette from which participants could reflect on in greater detail (see Pollock, Adorno, et al., 2011 [1955]).³⁴ To this effect, I sought to ensure

³⁴ The Frankfurt School used a fictional letter written by an allied soldier as stimulus material. Elsewhere, Merton and Kendall (1946: 541) describe how different forms of media, for example, films, radio programmes, pamphlets,

that my participants had something ‘concrete’ to anchor their discussions and therefore help alleviate the potential for abstract theorising to stymie their interpretations of musical meaning.

The album listening parties served primarily as a stimulus for the focus group discussions that followed. They acted as a device to concretize the shared, communal, experience of music listening and to identify potential points that would be addressed in the focus groups. Consequently, the album listening party data, therefore, was not subject to the same depth of qualitative analysis as the focus group transcripts. This was due to several factors. Firstly, the album listening data, which largely consisted of a combination of visual and textual data (on Google Meet and JQBX respectively) did not yield sufficient data on my participants everyday uses of digitally compressed technology, a core concern of my research. Secondly, despite observing interactions from the visual and textual data and recording these in summary reports, I found it challenging to produce a comprehensive data set that would be satisfactory for in-depth analysis. The focus group data, which contained over ten and a half hours of audio³⁵, produced a more extensive data set and therefore became the primary focus of my qualitative analysis. I will revisit the steps in this analysis in section 3.6 in this chapter.

3.4 Genre

The decision to integrate genre as a component within my research design was driven by two reasons. Firstly, it aligned with my acknowledgement that music is often categorised according to features that position ‘types’ or classifications of music as belonging to a shared tradition or set of conventions that bare an imprint on its aesthetic content, and (2) for practical and pragmatic reasons regarding recruitment. Music, indeed, can sound ‘different’ depending on its use of instrumentation, rhythmic patterns, tone, technique and so on. This, in turn, is important to consider when analysing music, since its genre will somewhat determine its sonic features, *vice versa*. I found that a consideration of genre played a role in allowing me to recognise how factors (in this case, genre) that fall outside the realm of the format, might influence the content of the object under scrutiny, namely, music. Whilst the format may shape *how* the music sounds once it is delivered, it is also important to consider *what* the music is in the first place. As previous research has also recognised, genre has important implications for how people use musical genres as a “resource” in their daily practices (see DeNora, 2000) and to structure “ideal listening scenarios” (see Stockfelt, 2004 [1993]). If we are to explore

articles or books might serve as vehicles for stimulus material. They describe the exposure to such material as a “particular concrete situation” (1946: 451). This is an encounter that uses media to serve as stimulus material.

³⁵ For transparency, the duration of the focus group times are recorded, in chronological order as follows: DnB FG1 - 1hr 22m, DnB FG2 - 1hr 38m, Rock FG1 - 1hr 18m, Rock FG2 - 1hr 18m, Rock 2 - 1hr28m, Hip-Hop FG1 - 1hr 32m, Hip-Hop FG2 - 1hr 32m, Jazz – 1hr 41m.

how actors ascribe meaning to digitally compressed music, then we should not overlook the relevance of genre, nor view it in complete isolation from the format.

As I describe below, in section 3.5, my initial strategy for recruitment involved approaching university music societies across the U.K. Although some of the societies I surveyed in the early stages of research design did include music societies that were enthusiastic about multiple genres (often defined as music appreciation societies), I decided that it would be beneficial to demarcate between genre as to allow for variation of musical classification across the sample. What I mean by this is that this demarcation would allow for both eclecticism by incorporating a mixture of genres and it would also allow me to split my album listening parties up into four separate events.

Whilst I eventually decided on four genres: rock, hip-hop, drum and bass, and jazz, my initial research design included the punk genre (replacing jazz later on). These genres were selected, firstly, for practical reasons. I had to consider the popularity of music genres that would feature at UK universities. I disregarded genres that I suspected would not have many university societies across the UK. Rock and hip-hop and drum and bass and punk were selected due to their popularity and therefore for increasing my chances of recruitment. Although my work as a DJ undoubtedly helped me to recruit participants following my amendment to my sampling strategy (see section 3.5 for more detail) and therefore provided a practical advantage (for a discussion on ‘the insider’, see Becker, 1963 and Back, 2024), it was initially selected due to my understanding that it is a popular genre within the dance music world and particularly among young people. Finally, although punk perhaps may be considered more niche and underground, I was surprised to learn that it was relatively popular among university societies, thus broadening the pool of potential participants.

The genres I decided on (rock, hip-hop, drum and bass, and jazz), I found, ultimately reflected an element of eclecticism across different genres of music. They reflected this insofar as they represented a number of different styles and sounds between them, both electronic and acoustic. If, I was for example, to decide to select metal, rock, indie and blues, I would have risked homogenising genres with sonic elements that sounded too similar to each other, namely, through guitar driven music. Likewise, if I was to select techno, house, dubstep and trance, I would have risked restricting my analysis to electronic genres of dance music. The same logic also applied to sub-genres³⁶, which although may comprise an intriguing study in its own right (for example, if I was to study subcultures) they did not, for my purposes of

³⁶ For example, drum and bass music encompasses numerous sub-genres within it, including liquid funk, jump-up, minimal and dancefloor.

classification, serve as a particularly useful way of conducting my research, since I did not want to limit my analysis to one specific genre and the intricacies within it.

3. 5 Participant recruitment

My recruitment strategy, from the outset, was shaped to a large extent to cater for COVID restrictions, which prohibited all in-person contact. Consequently, all my data-collection was conducted online. While this did pose a challenge for my research design more broadly (see section 3), it did mean that I had the opportunity to recruit participants across a larger geographical area. In the initial stages of my research fieldwork (August 2021-January 2022), I planned to recruit my sample from four university music appreciation societies across the UK: a Rock Society, a Punk Society, a Hip-Hop society and a Drum and Bass society. Unfortunately, after several attempts to make contact, members of the societies listed on my original ethics application did not show any concrete interest in participating. This led me to change the strategy for recruitment. Upon receiving ethics approval for amendments to my sampling frame, I broadened my approach to include two revised plans. This involved, firstly, approaching university music societies across UK universities, rather than only the four groups initially identified. Also, the genre punk was replaced with jazz, as I felt that the genre punk encompassed characteristics that were not too strictly different to rock³⁷. I also found that there were far more jazz university societies across the country. Secondly, as a contingency plan, the recruitment drive was also amended to include people beyond university societies. The only requirement for being an eligible participant was that the participant identify as a fan of at least one of the music genres played at the listening parties and be at least 18 years old. This entailed a form of self-selective, purposive sampling (see Clarke et al. 2021: 177), whereby the participant would self-select according to their interests in a particular genre of music.

My first amended strategy involved emailing over fifty regional university societies in April 2022. Focus was given to the genres rock, jazz, hip-hop, and drum and bass. Unfortunately, only two, a Rock society and a Drum and Bass society, responded with interest. However, upon following up with these societies, I found that enthusiasm waned. This led me to adopt my more flexible contingency recruitment strategy for reaching the required number of participants. Efforts to pool participants included advertising my research more widely on social media websites, such as Twitter, Facebook and Reddit (see Appendix 2 for recruitment poster). I also used my position as a drum and bass/jungle DJ to recruit participants at local events. Indeed, having insider status was beneficial, allowing me to approach people with relative ease (Becker, 1963: 43). In total, 36 participants were recruited for my research. They had heard about my research through a combination of social media, word of mouth and other

³⁷ Consider, for example, the conjunction “punk rock”.

people who had passed my contact details on to individuals who might be interested in participating. It is worth noting that my target was 40 participants, with 10 participants per album listening party. 10 was an ideal number since it created a relatively small environment that would help to stimulate a level of rapport and interaction with and amongst participants that may have been difficult to achieve in a big group. It was also hoped that if any technical glitches were to occur, there would be less risk of disruption due to the smaller size of the group. The reduction to 36 was the result of 'no-shows', that is, people who failed to turn up to the album listening parties.

The sample was relatively diverse with regards to age, with the oldest participant in their late seventies and the youngest aged nineteen.³⁸ Gender was comparatively balanced. 19 participants identified as male and 17 as female. My participants were overwhelmingly well-educated. More than 70 per cent of the sample were educated to university degree level, with some studying for postgraduate degrees at the time the data was being collected. Occupations also varied across the sample, ranging across employment within the education, health, media and retail sectors. My sample contained some participants who worked either full-time or part-time within the music industry. One participant, Jude, worked for a record label representative full-time. Three other participants, Nathan, Joel and Rob worked part-time as DJs. All participants lived in the UK, and all identified as 'music lovers', as specified in the participant information sheet and consent form (see Appendix 3). This was a good criterion for my sample, since I wanted to observe and speak to people who had incorporated music as a central part into their everyday lives.

In preparation for the ethnographic study, I organised a pilot listening party online in late May 2022 with a small group involving myself and six individuals. These people were *not* participating in the research, but rather included close friends, family, and one of my supervisors. The pilot operated as a small-scale preliminary event and functioned as a skills sharpener. It allowed me to get to grips with the technology with a group of individuals in advance of conducting the listening parties proper. According to Clarke et al (2021: 250), piloting "plays a role in testing whether the research instrument as a whole functions effectively" (2021: 250). For the pilot listening party, I used Google Meet and the software JQBX, a platform that allows listeners to play music online through Spotify. Since JQBX was a relatively new piece of software that had only recently passed beta testing (prior to the observation), I wanted to ensure that the technology would run smoothly. Testing for possible glitches at this point was imperative, and potential problems might have led me to adopt a different platform when conducting the album listening parties. I therefore encouraged my pilot

³⁸ This broader diversity in age was a particular advantage, as it allowed for the representation of older people. If I relied on university societies, the age range would have undoubtedly been considerably younger.

participants to experiment with all the features on JQBX. Overall, I found that the event ran very smoothly. The technology worked, which solidified its status as a research instrument that functioned effectively. All the members of the pilot group could hear the music in real-time, and my observations of interactions with features provided by JQBX enabled me to anticipate how participants might use these features during the actual listening parties.

In addition to the pilot, it is also worth noting that in April 2022, in preparation for my data collection and as a form of 'rogue' fieldwork³⁹ (Humphreys, 1970, Patrick, 1973), I attended a Jeff Buckley-themed album listening party in Manchester. This involved listening to Buckley's album *Grace* (1994) in its entirety in the dark. The album listening party was hosted by Pitchblack Playback, a company that hosts immersive album listening parties in the dark using high quality sound systems. In contrast to the participant observations that I organised for my project, these album listening parties disseminate audio using uncompressed technology and are designed to give listeners immersive experiences free from distractions. Produced and devised by London based DJ/Producer Ben Gomori, these events are geared towards providing spaces "where we can cut ourselves off from the noise and distraction of daily life" (see Pitchback Playback, 2025). After attending, I reflected in my memos on the multifaceted potential of album listening parties in presenting not only an ethnographic space to carry out social research, but also as a phenomenon that might provide an antidote to the vicissitudes of contemporary social life.

3. 6 The album listening parties

Following the success of the pilot, I organised and hosted four online album listening parties. These took place in June and July 2022 and were assembled according to the genres: drum and bass (10 participants), rock (10 participants), hip-hop (9 participants) and jazz (7 participants). In order to find a mutually convenient time and date, I sent out a Doodle poll to participants in early June with a list of potential dates. This was to allow my participants some flexibility regarding which listening party they would like to attend. For the purposes of convenience, they were scheduled during late evenings (UK time) to avoid clashes with participants' working patterns. I also asked in advance which genre they would be interested in listening to, with the selection of dates specified via email. Upon receiving confirmation, I asked my participants if they would like to suggest an album that we should listen to during

³⁹ I use the term 'rogue' fieldwork to describe fieldwork that deviates from established norms. Although my decision to observe listening parties in public settings was not in my ethics application, it did allow me to get a sense of how these parties have functioned in settings outside my research design. The references that I have included that follow here relate to empirical examples of 'covert' sociological research. Although one might not use the word 'rogue' to describe them, they do share some similarities with my research insofar as those who were involved in the studies were not aware that I was a researcher.

the party.⁴⁰ The tables below list the albums that participants suggested. I made it clear to participants that they would then vote for an album to listen to, with the most popular one selected on the night. In the event of a draw, I would use an online spinning wheel to select one of the two most popular albums at random. We listened to Shy FX's 'Raggamuffin Reloaded' (2020) during the Drum and Bass album listening party, Yard Act's 'The Overload' (2021) during the Rock party, Little Simz's 'Sometimes I Might Be Introvert' (2021) during the Hip-Hop party and Louis Armstrong's 'The Louis Armstrong Story, Vol. 1' (1956) during the Jazz party. With the exception of Little Simz, which was selected via the spinning wheel, the albums were those that had received the most votes from participants on the night.

Drum and Bass Album Listening Party (ALP) suggested albums (Thursday 23rd June 2022)

Hybrid Minds – Elements (2017) (duration: 1 hr, 5 mins)	Shy FX – Ragamuffin Reloaded (2020) (duration: 30 mins, 40 secs)	Sub Focus and Wilkinson – Portals (2020) (duration: 49 mins, 52 secs)	Wilkinson – Cognition (2022) (duration: 53 mins, 31 secs)
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⁴⁰ I am also conscious of the fact that some of these albums may be categorised as more accurately depicting sub-genres, such as alternative rock (Doolittle, Pixies and Only Revolutions, Biffy Clyro), post punk (The Overload, Yard Act), gothic rock (Garlands, Cocteau Twins) and indie (Hills End, DMA's). Since 'rock' may be considered rather broad, it is perhaps unsurprising that these suggestions spoke to various sub-genres. The decision to employ rock as a broad genre type, however, was by design. I did not want to limit my participants suggestions but give them autonomy in suggesting an album they would like to listen to.

Rock ALP suggested albums (Wednesday 29th June 2022)

Biffy Clyro – Only Revolutions (2006) (duration: 46 mins, 20 secs)	Cocteau Twins – Garlands (1982) (duration: 35 mins, 24 secs)	DMA's – Hills End (2016) (duration: 46 mins, 13 secs)	Pixies – Doolittle (1989) (duration: 38 mins, 38 secs)	The Strokes - The New Abnormal (2020) (duration: 45 min, 10 secs)	Yard Act – The Overload (2022) (duration: 37 mins, 10 secs)
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Hip-Hop ALP suggested albums (Tuesday 12th July 2022)

Action Bronson – Mr Wonderful (2015) (duration: 49 mins, 25 secs)	Big L – Lifestylez Ov Da Poor & Dangerous (1995) (duration: 48 mins, 46 secs)	Bruiser Wolf – Dope Game Stupid (2021) (duration: 38 mins, 45 secs)	Griselda – WWCD (2019) (duration: 46 mins, 26 secs)	Little Simz – Sometimes I Might Be Introvert (2021) (duration: 1 hr, 5 mins)	Mac Millar – K.I.D.S. (2010) (duration: 47 mins, 8 secs)	Mahalia – Love and Compromise (2019) (duration: 43 mins, 26 secs)
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Jazz ALP suggested albums (Thursday 14th July 2022)

Louis Armstrong and the Hot Five - The Louis Armstrong Story, Vol. 1 (1956) (duration: 36 mins, 32 secs)	John Coltrane - A Love Supreme (1965) (duration: 32 mins, 46 secs)
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The decision to make the album selection process as democratic as possible was implemented not least to afford my participants more agency within the research process (see Allett, 2010). This was to ensure that they were more involved in the ethnography and was also to establish that the albums selected would not skew the data. This could have occurred if I, the researcher, had selected an album. By affording more agency to my participants, I found, firstly, that this listening encounter would align more precisely with their tastes and reflect more faithfully what they listened to in everyday life. This component of my approach was consistent with Allett's (2012) mode of procedure in her research on the lives of extreme metal fans. By asking participants directly to suggest a specific recording to play and then discuss, the researcher creates an environment that embraces the participants' own identity. As Allett (2012) argues, music can give respondents "a means to express themselves" (2012: 26).

Secondly, the decision to allow for album suggestions was important in helping to craft a comfortable research environment for participants. Breaking down hierarchies where possible is an important prerequisite for successful ethnographic research, as it helps to redress the power imbalance between the researcher and the subject(s) (Berger, 2015). Strategies like voting, I found, acted as an important vehicle to engage participants and help them feel more involved in the research process. I also found that the spinning wheel helped evoke an atmosphere of transparency, as I shared my screen with participants when using this function. Ultimately, these methodological steps were supposed to help me to gather better data insofar as it reflected, as far as possible, a consensus in what listeners wanted to listen to.

After voting, we sat and listened to the respective album in its entirety. To minimise noise disruption, a problem that, as Carter *et al.* (2021) explain, "interfere[s] with data quality and the experience of other participants" (see Carter *et al.* 2021), I reminded my participants to

mute their microphones whilst the album was playing but also indicated to them that the chat feature was available on Google Meet and JQBX if people wanted to converse with each other. Numerous features were available on JQBX, including the chat box and a 'dope' versus 'nope' function with which participants could either 'up vote' or 'down vote' a song depending on whether they liked it or not. Splitting preferences for tracks into binary oppositions, I felt, might provide some useful insight into later testing how participants arrived at aesthetic judgements. This is an important avenue of discussion found in sociological research on music appreciation, with scholars such as Adorno criticising such binaries as inadequate for capturing the complexity of aesthetic judgment (see Adorno, 2005 [1963]: 220). Indeed, it would be relevant to interrogate *why* participants used this feature during the album listening party, especially since expressing preferences might act as an indicator for further explorations of meaning. Such concerns played a role in the design of the questions in my interview guide (see Appendix 1). I was interested in interrogating if the simple binary of 'dope' versus 'nope' could do justice to the complexity of arriving at an aesthetic judgement.

3. 7 The focus groups

After the completion of the album listening parties, I organised, conducted and moderated seven focus groups with a total of 19 participants. These focus groups lasted an average duration of 90 minutes per group. The focus groups were organised according to the respective listening parties: Drum and Bass FG1 (3 participants), Drum and Bass FG2 (2 participants), Rock FG1 (3 participants), Rock FG2 (3 participants), Hip-Hop FG1 (3 participants), Hip-Hop FG2 (2 participants) and Jazz FG1 (3 participants). My decision to split my participants up into smaller groups of 2-3 participants (as opposed to say, 4 to 6 participants) was driven by Krueger and Casey's (2000) recommendation that "smaller groups allow each person a greater opportunity to talk" thus allowing "for more in-depth conversation" (2000: 164). Larger groups also tend to "fragment" discussion, meaning that it risks interruption to the conversational flow of the environment (Krueger and Casey, 2000: 10). I asked in advance what dates and times participants could attend. Whilst I could have mixed my participants up into focus groups that spread across genres, I decided it would be best to include them in focus groups that aligned with the album listening parties they attended. This was to ensure that they were included in genres they were enthusiastic about, but also to try and strengthen rapport. Since participants had encountered each other in the album listening parties, my rationale was that they would be more likely to engage in discussion.

The focus groups took place online on Google Meet over the course of late August 2022 and concluded in early September 2022. All focus groups were recorded with the participants' written consent. To systematically explore the relationship between the communal experience

of the album listening about and to gather data on my participants' everyday music consumption, I employed a semi-structured questioning guide (or route) (see Merton and Kendall, 1946). This guide contained ten questions and was designed, primarily, to achieve two things: namely (1) to delve into observations I had made during and after the album listening party (that occurred one or two months before) and (2) to gather data on my participants everyday listening habits. The questioning guide thus played an instrumental role in delivering a bridge between the album listening parties and the focus groups. Indeed, it enabled me to guide my participants through a process of critical self-reflection. For example, I was able to ask them *why* they selected a particular album or whether they used the 'dope/nope' features provided by JQBX in the album listening parties. Additionally, I was able to ask questions about whether the technology they used (for instance headphones or speakers) in the listening party was representative of their everyday life encounters (see Appendix 4 for album listening party equipment table).

Through the questioning guide, I managed to identify and pinpoint a particular moment or observation in the album listening parties as a device for memory recall, whilst also opening up the opportunity in inviting my participants to reflect on their everyday listening habits more generally. This was, for example, demonstrated through questions like "the album listening party allowed you all to listen together. Would you usually listen to music with other people or alone?" and "For those of you who were listening on headphones: why were you listening on headphones? Would you usually listen on headphones?" (see Appendix 1 for questioning route in full). This provided an effective strategy throughout the focus groups since I was able to use the "particular concrete situation", namely, the album listening parties as a reference point to prompt discussion about the similarities and differences of how my participants usually encountered music in their everyday lives (Merton and Kendall, 1946: 541). This is also important to raise because album listening parties are a relatively peculiar space to listen to music. It was therefore important to address this through my questioning guide by designing questions in a way that opened up the potential to discuss the everyday.

3. 8 Challenges

It is also, however, important to reflect on the challenges of doing empirical research. Indeed, no empirical research is immune to challenges that may occur during data collection. Despite their overall success, I did experience some technical challenges when conducting the album listening parties. These arose largely from my use of the platform JQBX. The software proved to be unreliable at times. In particular, the audio failed to synchronise for some participants. In the first album listening party (drum and bass, conducted on the 23rd of June 2022), one of my participants volunteered to step up as the 'DJ', as I was struggling to get the audio working. It

was only after the 23rd minute that the music appeared to be audible to myself and my participants. Unfortunately, for two participants, the audio would not sync at all, which led me to request them to sync their devices manually via Spotify at a precise second. This was also an issue for the following three album listening parties, where an additional six participants could not hear the audio. Again, I asked them to sync their devices at a precise second. Music therefore was not listened to in precise real-time by a total of eight (out of thirty-six total) participants.

It is worth noting though, that steps were taken to ensure that the experience was as synchronous as possible. I was able to mitigate the issues by providing information about where we were up to. As Carter *et al* (2021) recognise, having a “back up plan” is significant when conducting qualitative research online, as it prevents the research from being “abandoned” in the face of technical difficulties. I also used back-up strategies for three other participants, who participated in the jazz focus group, Luke, Juliet and Hayley. Luke and Juliet did not have access to Spotify premium accounts, so I asked them if they could stream the album on YouTube instead. Overall, whilst this proved to be a good contingency strategy, it did mean that, for these participants, adverts disrupted the flow of the album, causing them to lose the real-time experience that other participants were exposed to. Luke encountered problems with his internet connection, which meant he kept dropping out of the Google Meet room. Hayley, an elderly participant, also did not have access to Spotify premium and was not confident using technology. Digital divides and digital exclusion, therefore, was a potential barrier to participation (see Wilson-Menzfeld *et al*, 2024 for an up-to-date account). This was something that I found did create a challenge for older members of my sample. As a contingency measure, I asked if Hayley could join the listening party via a phone call and I left her on speaker phone throughout the album listening party.

As far as recruitment was concerned, I encountered several challenges with regards to the sample. As I have mentioned, I had to deviate from the original sampling strategy, which was initially crafted to include university students. It would have perhaps been beneficial to investigate university societies, as they would arrive at the study as pre-established groups of individuals, rather than groups formed via a criterion of self-selection. The re-think in my recruitment drive undoubtedly delayed the progress of data collection, which could have been carried out at an earlier date. Also, I found that research restrictions caused by the COVID-19 pandemic had implications for the participant observation and focus groups. Whilst the online space meant that geographical barriers were less of an issue (Clarke *et al.*, 2021: 469), it would have been advantageous to have carried out the data collection face-to-face with my participants or perhaps face-to-face combined with online participation. In particular, it would have been intriguing to explore how the spatial parameters of participation, in person, would

have played out in contrast to the online sphere. This would have added an extra layer of data to my research. Additionally, it is worth noting that face-to-face data collection may have also fostered a more immersive sensory environment, where a fuller range of smells, sounds, and tactile sensations (see Pink, 2015) may have been beneficial for understanding the cultural context of meaning ascription.⁴¹

Indeed, the practice of doing ethnography online comes with some disadvantages. If I was to conduct an in-person observation of album listening parties, the everyday component of my project may have cohered more accurately with the social spaces in which they actually listen to music, namely, through their everyday contexts. Although virtual spaces of music listening are becoming more common in the post-lockdown era (see Lee and Kao, 2021; McCormick, 2020: 346), the opportunity to conduct in-person research might have resulted in the collection of better data, allowing me to get closer to people. It could be argued that the online album listening parties were to some extent manufactured and therefore divorced from more common quotidian contexts of music listening. Whilst I was aware that this was a potential limitation, these concerns were mitigated to an extent by asking in the focus groups how my participants listened in everyday life.

Although it would have been advantageous to study ‘the everyday’ in greater detail, perhaps by immersing myself, physically, in these everyday situations, this was not possible due to university restrictions. Indeed, as I have stated the COVID-19 research restrictions had meant that all my data collection *had* to be conducted online. This eliminated the opportunity for me to conduct in person ethnographic observations and face-to-face focus groups. This meant that I was navigating the challenges of what Gailloux et al claim to be “fieldwork without the field” (see Gailloux, et al. 2022: 1-17). The everyday aspect of my study, consequently, had not been researched as closely and faithfully as would have been ideal. Yet whilst the field-sight of my research, namely, online meeting rooms, did somewhat reflect the times that we were living in, they also created a challenge insofar as I felt divorced from settings in which people would *typically* consume music in their everyday lives. This created a barrier insofar as my only option was to carry out research online. I emphasise though, that this was a limitation beyond my control due to COVID restrictions.

Finally, it is important to consider the consequences of some of the challenges for the quality of my data in view of the research questions. The album listening parties did not produce enough substantial data in their own right to answer the three dimensions of my research questions, which were related to aesthetics, social life and politics. The data produced by the

⁴¹ Another method, for example, that could have been used to explore meaning making, in person, is “sensory walks” (see White and Davies, 2020). Building on the work of Bull (see 2000; 2007), this could be used experimentally to discern how people use portable devices in public spaces.

album listening parties was predominantly visual. These forms of visual data were undoubtedly useful in allowing me to interpret and understand how my participants responded to music in the listening parties. However, it soon became apparent that the data produced did not satisfy my demands to operationalise meaning. This was, for the purposes of my project, interpreted quantitatively through language (i.e. conveyed through speech, the words people used) (Frith, 1996; Marshall, 2011;). Whilst some participants did engage with the chat box on JQBX and Google Meet, this qualitative data was scarce in comparison to the dataset generated by my respective focus groups. As a result, more emphasis was placed on analysing my data set produced from the focus-group transcripts.

Having said that, whilst it would have been desirable to have gained more data from the album listening parties, positioning it as a stimulus has proven beneficial. I found that the focus-group dataset was extremely versatile in its range of codes (280 emerged from the first round of coding, which were narrowed down to 157 in the second round). This unanticipated level of depth allowed for a richer and more nuanced exploration of the research questions. Emphatically, I found that the large volume of codes revealed the multifarious and multifaceted ways in which my participants engaged with music in their everyday lives. This encompassed everything from insights about how they used music to help them sleep, to more technical observations the preferences of certain types of equipment when listening to particular genres. Overall, this versatility provided a huge advantage in allowing me to uncover patterns that might not have been possible, for example, with a smaller dataset. In the following section, I will discuss how I carried out the data analysis and interpretation. In so doing, I will detail the exact steps in how this analysis was conducted.

3. 9 Data analysis and interpretation

Following my data collection, I proceeded to transcribe (verbatim), analyse and interpret my data. This process lasted from October 2022 to April 2023. It entailed taking several steps which helped me to develop a deep understanding of the data collected, whilst also providing methodological rigour to ensure my analysis was executed systematically and in detail. As Marshall and Rossman (2006) states “raw data have no inherent meaning; the interpretative act brings meaning to those data and displays that meaning to the reader through the written report” (2006:157). In the proceeding sections, I will recount my analytical and interpretative procedure. I will describe (1) how I immersed myself in the data and wrote memos, (2) how I coded my data, (3) and how I conducted my thematic analysis (see Braun and Clarke, 2006).

First, I began to immerse myself in my data transcripts. This involved carefully re-reading my focus group transcripts in NVIVO. At this stage, I was not concerned so much with the organisation of individual items of data (i.e. coding), but rather with reading as an exercise for

memory recall and for strengthening familiarity with the substance of my data. Initial work with the text involved highlighting important passages and writing memos. According to Kuckartz's guide to qualitative analysis (2014), memos are used "to record things that strike [the researcher] as particularly interesting or relevant as well as any ideas [the researcher] may have regarding the analysis" (2014: 71). The memos primarily contained comments about the data drawn from passages in my dataset. I was particularly concerned with addressing data that might be relevant to my coding and thematic analysis later in the process, and so I often quoted passages from the transcripts as points of reference for further discussion.

Specific (handwritten) entries included, *inter alia*, brief summaries of how my participants used technology, such as formats, speakers and headphones, in their everyday listening encounters and how they listened to music whilst engaging in other, ostensibly non-musical, activities, for instance, work, study or exercise. These entries would often provide very brief descriptive summaries of what was found as I read through the data. Crucially, I identified and documented "latent" themes within the data, which, according to Braun and Clarke (2006: 84), require deeper interpretation in making sense of how these themes shape larger meaning structures. These themes were flagged for later, more detailed analysis. For the purposes of comprehension, my memos were created systematically, in the order in which the focus groups had been conducted. I had separate memos for Drum and Bass Focus Group 1 and Group 2 and the groups that followed. While they were preliminary, these memos did serve as a form of analysis. Highlighting and identifying passages were useful in facilitating comparative assessments between my data segments. If I noticed some recurring patterns in the data, I would often draw parallels and illustrate how they might relate to other statements found in other focus groups. Overall, I found that the memos acted as a fruitful tool in recording my thoughts in the early stages of my analysis and interpretation.

3.9.1 Coding process

First coding process

The first stage of coding comprised a relatively 'open' procedure of organising my data. At this stage, I sought to examine, compare, conceptualise, and categorise extracts from my focus group transcripts. This process required capturing the essence of participants' reflections and coding passages according to their "thin descriptions" (see Geertz, 1973). Namely, this involved capturing surface level descriptions of phenomena that are categorised according to their immediate features. To organise my codes in the first stage of coding, I began by applying in-vivo codes. According to Kuckartz (2014), in-vivo codes are "terms used by the participants, which the researcher then applies as codes". For example, when participants mentioned skipping tracks, all the references that contained the words "skip", or "skipping" in conjunction

with “tracks” (or something synonymous) would be coded as ‘skips tracks’. The definition of the code was created with the intention of ensuring that the codes were faithful to the content expressed by participants. In organising data through participants’ explicit characterisations, I therefore wanted to confirm that the relationship between the definition of the code and material found within it corresponded closely. The names of codes thus provided clear conceptual markers for identifying the substance of the coded passages. Crucially, the coded passages were classified through the similarity of the content contained within them (see, Saldaña, 2013: 4).

To demarcate my data, I sought to organise my codes in the form of both parent and child codes (see Dhakal, 2022: 271). Parent codes were created with the intention of capturing overall manifestations of the data from their in-vivo passages, whilst also splitting nodes into more specific markers of participants’ descriptions. To analyse how my participants formed their aesthetic preferences, I generated the parent code ‘aesthetic judgment’ which encompassed all the data (signified through more specific child codes) that explained their reasons for liking or disliking a song. These codes included categorisations of ‘triggers’ that my participants mentioned. For example, some participants mentioned that their triggers were emotional or driven by genre. To organise this data, I generated the child codes ‘depends on mood’ or ‘might depend on genre’. Other examples of child codes within ‘aesthetic judgement’ included the uses related to the JQBX application’s ‘dope’ or ‘nope’ function. The parent codes, on the other hand, were created with the intention of providing umbrella terms (e.g., ‘formats’, ‘ownership’) to encompass smaller child codes, which denoted the finer grains of detail. In total, I generated 280 codes in the first round of coding.

Second coding process

The second round of coding involved reducing the total number of codes by integrating codes from the first round and refining codes as required. As Kuckartz acknowledges, this is a common step in the procedure of conducting qualitative data analysis (Kuckartz, 2014). In my case, this step strengthened the coherence of my interpretation. Whilst 280 codes did capture much nuance within the dataset, the large number created problems, insofar as the fragmentation of the data was overwhelming, and thus difficult to synthesise and aggregate. In order to put the codes into coherent groups, I worked through them alphabetically, ensuring that child codes would encapsulate enough detail to signify their substance. For example, the parent code ‘distraction’ contained the child codes ‘distraction from the task’ and ‘distraction from the music’. These were clearly identifiable codes that supported me in conducting my analysis. In the case of ‘distraction’, I merged 5 child codes (‘skips tracks’, ‘music with lyrics creates a distraction’, ‘listens when going to bed’, ‘listens to music when driving’ and ‘music

mediated from vinyl can be a distraction from tasks') into two parent codes ('distraction from the music' and 'distraction from the task').

This is one illustration of how I refined my coding practices, that is, through formulating sharper distinctions in my coding. Another example concerns the distinction I made between "musical" and "non-musical" elements in my parent code related to aesthetic judgements. I found that establishing distinctions, although not always straightforward, did help in providing me, the researcher, with a tool to organise my data effectively. This is reiterated by preeminent scholarship on qualitative textual analysis (see Braun and Clarke, 2006: 80; Ely et al, 1997: 205-6) which has emphasised the *active* role of the researcher in making decisions about the demarcation of data and the relevance of data extracts to the research questions. In my own analysis, this involved actively interpreting and reinterpreting my codes to ensure that they accurately reflected the data itself and cohered with the focus and scope of my research. With these considerations in mind, it is worth noting that throughout the process of coding, I managed to reduce 280 codes to a total of 157.

3.9.2 Thematic analysis

Following such guidance, the second coding process involved making decisions about the relevance of my codes, which subsequently crystallised into pertinent themes. Ten overarching themes were identified towards the end of my second coding stage. These were integrated into the three dimensions of my research questions, namely aesthetics, social life and politics. The themes were as follows:

- Aesthetic judgement (which includes sound quality)
- Affordances of digitally compressed music
- Attention
- Control
- Distraction
- Nostalgia
- Profit
- Resistance
- Social life
- Technology

I found that they varied in size, which was evident in the quantity of particular references in NVIVO. Some themes contained as many as 101 references (aesthetic judgement) and others contained as few as 9 (nostalgia). However, it is worth noting that a theme is established by its ability to capture something pertinent to the research questions, which may be quite independent of the number of references (see Braun and Clarke, 2006: 82). Moreover, the focus group transcripts varied in terms of their content and relationship to certain themes. Most notably, data from the focus group on hip-hop contained the most references to participants' critical reflections of their experiences of Spotify, which, in turn, shaped the majority of segments included within the code 'lack of control'. Again, whilst particular extracts may not indicate reflections from across the *entirety* of the data corpus, they do provide insights into the meanings that participants ascribed to digitally compressed music, and therefore their significance should not be discounted solely because they appear less frequently.

I did, however, find that my dataset contained quantifiable data in the sense that it shed light on the consumption habits of my sample, for example, through illustrating how many participants decided to listen via headphones and how many used speakers as sound emitters (see Appendix 4 for table on equipment used by participants). The measurable aspects of the data were represented through child codes drawn from the umbrella code of 'formats', such as 'still listens to CDs', 'listens to the radio' and 'still consumes MP3s'. In this case, these codes were preserved from the first round of the coding process, since they offered contextual insight into participants' deployments of technology and the objects that featured in their listening habits (e.g. through using codes such as 'headphones' and 'speakers'). On the other hand, other codes functioned as fragments to provide the foundations of themes that revealed things that went beyond "semantic" expressions to identify the potential of establishing "latent" themes (see Braun and Clarke, 2006: 84), that is, codes that required a deeper level of interpretation before being pieced together to form larger constellations of meaning.

To further develop my analysis, I sought to draw links between my codes and the themes established, with particular focus on my research questions that concerned aesthetics, social life and politics. From the outset, some codes appeared to be in close correspondence with the dimensions. Those surrounding 'aesthetic judgement', of course, were tied to aesthetics. Similarly, my codes concerning the JQBX function 'dope or nope' were analysed in the context of aesthetics. In some ways, I found that explicit formulations of data coded in-vivo afforded a more faithful interpretation of the data because participants used words contained within the title of the code. By contrast, other codes required deeper levels of interpretation, e.g. those where participants had reflected on their use of streaming platforms, but in a way that might nod towards broader macro structures and constraints without explicitly mentioning them. This was most evident in newly generated codes that contained political resonances surrounding

‘resistance’, ‘profit’ and a ‘lack of control’. Moreover, I had to interpret data at a deeper level to identify the affordance my participants associated with digitally compressed music. Whilst participants scarcely deployed the word ‘affordance’, interpretation was required to identify if they were discussing the affordances of compressed music before classifying a passage as such.

3.10 Conclusion

This chapter has outlined the parameters of my thesis’ methods and methodology. I have discussed the theoretical components of my chapter and have explained the philosophical approach and methodological orientation. In doing so, I have provided a rationale for using participant observation (through music elicitation) and focus groups as methods for data collection, whilst positioning the former as a “stimulus” and the latter as the key source of my dataset. This methodological approach points to novel ways in which music might be used in musico-sociological research going forwards. Album listening parties, in particular, could be used as an innovative data gathering device for future research. In this chapter, I have also discussed how I approached the practicalities of research and have outlined my recruitment strategy, data interpretation and challenges encountered during the data collection process. In the following chapter, I will discuss my findings for the first substantive chapter sound quality.

4. Sound quality

4.1 Introduction

This chapter will explore the theme of sound quality by drawing on my participants' reflections. For the purposes of conceptual clarity, I define an assessment of sound quality as an assessment of the fidelity, accuracy, and audibility of the sound that is transmitted from an electronic device, which in turn, accurately represents the original musical event and renders it intelligible to audiences and listeners. Sound quality should be treated as a crucial element within the aesthetic dimension of digitally compressed music, not merely because it affects how the user both receives and interprets the music, but also because sound quality has been shown to influence how the actor comes to formulate an aesthetic judgement (Perlman, 2004; Pras et al, 2009). Ultimately, these steps (reception, interpretation, and articulation) in the making of meaning function as components in explaining how social action might be understood in the context of music listening.⁴² Whilst the meanings of music will, to an extent, be influenced by its aesthetic qualities (rhythms, harmonies, melodies, lyrics), attention should also be paid to how listeners assess the quality of sound reproduced by digitally compressed audio, since this technology alters how music itself can sound through processes of auditory and temporal masking (Sterne, 2012: 21). Although previous research in the sociology of music (see Stockfelt, 2004 [1993]: 88-93; Frith, 1996: 249-268) has detected the importance of technology in structuring normative conventions that shape 'ideal' or 'adequate' 'modes of listening', there has been a tendency to neglect the ways in which the everyday listener's assessments of sound quality operate in shaping their meaning making processes.⁴³

Indeed, a key flaw in the current sociological literature on digitally compressed technology remains the absence of social relations. Namely, the literature overlooks how interactions between individuals and groups are, in turn, related to the meanings ascribed to digitally compressed technology. As outlined in my literature review, Sterne argues in his monograph *MP3: The Meaning of a Format* that the meanings of MP3 files and of digitally compressed audio files more broadly are underpinned by their "sonic signature" (Sterne, 2012: 174). The sound design of the MP3 and the digital processes of encoding (i.e., auditory and perceptual masking), according to Sterne, come to shape its meaning through sonic "scripts" and "models" (Sterne, 2012: 2). This analysis is rather one-dimensional because, as I have argued

⁴² Reception refers to how music is *received*, namely, heard by the listener. Interpretation, refers to how music is *understood*, and *articulation* refers to how the actor explains and contextualises meaning, commonly as words.

⁴³ Stockfelt (2004 [1993]: 88-93) argues that, in order to study how meanings are ascribed to music, sociologists should take into account how and where the music is consumed. He focuses on how meanings are shaped by spatial factors that determine how certain genres of music are denoted as having a natural home. Stockfelt does not consider in much detail, though, the role of technological components in enabling listeners to get 'the right' sound. My empirically informed interventions in this chapter address this issue.

previously, Sterne's account overlooks the importance of analysing how meaning may be *ascribed to* music disseminated by an MP3 file *by individuals*. Meaning is conceived rather narrowly in Sterne's monograph, which rests on the assumption that meaning is a function solely of MP3 technology.⁴⁴ Despite its title, Sterne's monograph, quite remarkably, overlooks the importance of gauging how the user's subjective interaction with the object may also play a role in the shaping of the object's meaning. There is very little emphasis on the importance of understanding how the sonic signature is received and interpreted by listeners. To this end, I argue that assessments of sound quality, of course, cannot be captured without a thorough inquiry into people's experiences with this technology. Indeed, we cannot assume that the meanings ascribed to digitally compressed music files are the same for the *consumers* in comparison to the *creators* of this technology. More empirical research, as I have argued, is required to address this gap. We need to understand how people's relations with digitally compressed music affect how they ascribe meaning to its aesthetic components.

More recent accounts (Magaudda, 2011; 2021; Zimmermann, 2021), which have emerged within the STS fields (see Hennion, 2012), have provided a more nuanced treatment of digitally compressed music, often incorporating the non-human into explorations of how experience is entangled with objects. For example, Zimmermann (2021) has investigated how digitally compressed sound quality is influenced not only by the MP3 file, but also by vibrations related to the local environment, psychoacoustics, and the membranes of loudspeakers transmitting sound. But whilst Zimmermann's (2021) account provides a welcome addition to scholarly accounts of sound studies, he still tends to neglect the meaning that *people ascribe to* the sound quality of digitally compressed music in their everyday lives. If one is to take seriously the construction of the meanings of, and their ascription to, digitally compressed music, then researchers should grapple with how listeners do indeed receive and interpret this music (see Marshall, 2011). Such a task is essential, and indeed sociologists from Weber (2012) [1914]; (1958) [1920] to the more contemporary sociology of music (see Martin, 1995; Ebare, 2004; Bartmanskı and Woodward, 2015) have found that meanings ascribed to musical objects are not reducible to the objects themselves, but are actively constructed by actors and greatly mutable. This is not to say that the object carries no meaning whatsoever, but, rather, that the process of meaning ascription should lead sociologists to consider a move away from one-dimensional interpretations according to which the meanings 'built' into objects are received in a uniform fashion. Instead, meaning ascription should be outlined as an interactive process, where the meanings ascribed to objects are subjectively framed within the context of an individual's everyday experience.

⁴⁴ To reiterate Frith, "musical meaning is not inherent (however ambiguously) in the text" (1996: 250).

In this chapter, I will broaden the perspective of meaning ascription by exploring the processes in which my participants ascribe meaning to digitally compressed music with regards to sound quality. I will approach this by examining how human interaction, namely, how people engage with, receive and interpret digitally compressed music, constitutes a key factor within the meaning making process. To do this, I will explore the focus group responses of my participants to interpret and understand how they conceptualise their listening experiences. This, in turn, will enable me to illustrate how processes of meaning making unfold. The first section of the chapter investigates how participants raise sound quality as a topic through the lenses of the analogue-digital phenomenon. Building upon this, I examine my focus group data insights by developing specific formulations related to digital compression. These findings, I argue, reveal that the multitude of meanings ascribed to technology are often framed normatively, which can be seen via the everyday listener's pairing their consumption of musical genre with their consumption of an audio format. In the second section, I will focus on the role of loudspeakers in my participants' listening experience, as loudspeakers were often viewed by my participants as being more important than the format.

4.2 The compression phenomenon

In order to explore how participants reflected on the sonic differences between digitally compressed formats, such as MP3s, OGG Vorbis⁴⁵, and AAC⁴⁶, and sounds disseminated in other formats, such as WAV, which are typically transmitted by CDs and vinyl, it is helpful to revisit what compression entails in the context of sound reproduction. Although debates exist about whether listeners can, in fact, perceive the differences in the sound quality of compressed audio (compared to its uncompressed counterparts) (Crowdy, 2013: 155; O'Grady, 2021), it is important to understand that significant technical differences exist between compressed and uncompressed audio formats. Indeed, digitally compressed audio (also known as lossy audio) is sonically distinct from uncompressed audio (also known as lossless audio) insofar as its material properties are detectable through the transformation of the sound's waveform.⁴⁷ These waveforms are transformed when audio is dynamically compressed, leading to an increase in the average volume of the overall recording. As Devine (2013), whose ideas I have highlighted in the literature review, puts it, "increasing a recording's overall volume is achieved using a technique called dynamic range compression, whereby the difference in decibels between the quietest and loudest sections of a recording is reduced. This is accomplished by electronically squishing the sound signal so that the level of quieter

⁴⁵ Used by Spotify.

⁴⁶ Used by Apple Music.

⁴⁷ Although they are not synonymous with each other, a point of comparison could be audio definition with visual definition. One might, for example, point out the differences and improvement in the sharpness of quality from HD to 4K in a way that is similar to the comparison between lossy audio (MP3s) and lossless audio (WAVs).

songs is nearer the level of the loudest ones. Compression thus raises not the peak but the average volume of the recording” (2013: 163). Consequently, the volume of compressed audio tends to be consistently loud.

According to Devine (2013), consistently loud audio has been viewed as desirable for two main reasons. Firstly, there is an aesthetic argument that the reproduction of loud audio is ‘better’ because it is simply more audible than quieter audio. Since our ears are sensitive, and psychoacoustics picks up only a limited range of sound, loud audio can give the impression that it is superior due to its being easier to hear. Secondly, there are practical and cultural reasons for achieving loudness. Late modern society is often described by sociologists as being permeated by noise (Attali, 1985; Pinch and Bijsterveld, 2004). The sounds of bustling urbanisation, industry, and traffic feature as a perennial attribute of contemporary social life, with music often constituting an accompanied backdrop disseminated by portable devices (see Bull, 2000; 2007). Since the ways of listening to music are frequently characterised as background listening, it is assumed by some recording professionals that consistently loud, compressed (as opposed to uncompressed) recorded music provides a preferable listening experience for people and fares better in everyday scenarios where music is typically consumed (for instance, when driving a car or walking to work).

It is important to point out, though, that compression can occur at two stages. At the level of the studio, compression takes place after the audio recording has been mixed. This is known as the mastering process and is the final step before a recording is ready to be mass produced and distributed. Mastering engineers, according to Devine (2013), are responsible for “a variety of tasks, such as transferring data from one medium to another [e.g. analogue to digital and *vice versa*], setting the amount of downtime between songs, limiting unwanted noises like hiss and hum”, and so forth (163). Crucially, the mastering process also involves increasing a recording’s overall volume through compression. Here, the engineer plays a vital role in ironing out dynamic leaps that are deemed to disrupt the listening experience, thus achieving loudness at a more consistent rate throughout the whole recording (see Southall, 2006). It is during this stage that those most involved in the creation process have autonomy to accentuate certain sonic characteristics before the recording is distributed to listeners.

Compression can also happen at a second stage, at the level of post-production, namely, when the compressed audio recording is transferred to a digitally compressed audio format (e.g., MP3, OGG Vorbis, AAC). This stage occurs *after* the mastering has been completed and is ready for distribution. Compression, in this case, has occurred twice: first in the recording studio, where an engineer finalises the original mix from which copies are made, and second through the conversion of a master copy to a digitally compressed audio file, which

is then ready for distribution to the user via a download or stream. It is vital to be mindful of these stages (see Zimmermann, 2021) when discussing compressed audio, because compression can affect the sound quality of a recording during discrete events in both the recording and distribution phase of a master copy. An audio recording transmitted on a CD, therefore, could sound heavily compressed due to decisions made by an engineer at the mastering level without being subjected to compression by MP3 technology.⁴⁸ In contrast, music in a digitally compressed audio format could have undergone *two* stages of compression, that is, via creative processes undertaken in a studio *and* the utilisation of a digitally compressed file which has been compressed by algorithms.

In this chapter, though, I will focus more on compression from the perspective of the everyday listener's consumption of formats, that is, compression that has occurred at the second stage, rather than exploring compression as an aesthetic choice made by those within the recording industry, which has been the priority of the scholarship on audio compression so far (Devine, 2013; Southall, 2006). A key reason for doing so is that I am investigating meaning-making from the perspective of consumers, rather than of the producers of this technology. Indeed, we cannot assume that the meanings ascribed to digitally compressed music by the creators are the same that are ascribed to it by the consumers and that interpretations follow the same patterns. As Marshall (2011) emphasises, "it is important to recognize that listeners create musical meaning through their position within a discursive framework that gives them the tools to make sense of the sounds they hear" (2011:259). The discursive frameworks utilised by everyday listeners may differ to those used by people working in the creation process and, as such, require close empirical examination if we are to explore how listeners ascribe meaning to digitally compressed music.

4.3 Analogue and digital

Whilst, as stated in the literature review, the literature on MP3s does deal with sound quality, insofar as it focuses on the sonic, psycho-acoustic properties of digitally compressed music (see Sterne, 2012; O'Grady, 2021), some participants took the discussion on aesthetics into a different context, namely, on those debates surrounding sound quality with relation to arguments on analogue and digital technology. These participants attributed meanings to digitally compressed sound by describing differences in the audio quality of music between analogue (vinyl, cassette tape) and digital formats (CDs, MP3s, Ogg Vorbis, AAC), therefore requiring us to bring literature that is not directly concerned with the MP3 to bear on this

⁴⁸ Overly compressed albums, according to Southall (2006), include *Death Magnetic* (Metallica); *At War With the Mystics* (The Flaming Lips); *Hopes and Fears* (Keane); *Songs for the Death* (Queens of the Stone Age), *Mr Beast* (Mogwai); *What's the Story?* *Morning Glory* (Oasis). These albums, he argues, point to a larger phenomenon known as 'Loudness Wars' – whereby loud audio is favoured because it is seen as aesthetically pleasing, commercially more viable, and practically more suited to modern modes of listening.

discussion. In this section, I will therefore shed light on how these debates have appeared in the literature, before broadening these discussions to focus on their relevance to my data insights. I will consider, in detail, the cases of two of participants, Mary and Ciara.

Objectively, the pairings of digitally compressed vs. uncompressed, and analogue vs. digital are not synonymous with each other. However, for multiple individuals in my sample, descriptions of their consumption patterns referred to their use of analogue and digital technology. They frequently struggled to understand what I meant by uncompressed and compressed audio, which resulted in participants exploring their experiences of sound quality from a different perspective of analogue and digital dissemination. This provided a subjective anchor for helping participants to situate and talk about their experiences. The analogue-digital pairing requires attention, therefore, because it emerged as a key dimension of the data, since participants treated it as the primary distinction, and because the way the participants used that pairing indicates the complexity of discussing digitally compressed music. Crucially, if we are to investigate how meanings are made, then the actor's interpretation of the object requires interrogation.

Contemporary sociological discussions of the analogue *versus* digital debate serve as an illustrative pathway into the ways in which sound experts reflect on the sonic consequences of technological sound reproduction (see Hamm, 1973; Theberge, 1997; Crowdy, 2013; Auner, 2000; Stuhl, 2014). These debates concern the aesthetic preferences that those in the recording industry associate with analogue technology over digital technology, *vice versa*. Pertinently, it refers to whether either technology achieves a 'better' reproduction of sound. Although not synonymous, these debates do strike resonances with arguments that emerged in the 1960s from guitarists and record producers focused on amplifiers. Crowdy (2013) explains how those in the recording industry describe the sounds emitted by vacuum tube amplifiers (which sounds are disseminated by vacuum tube signals) as "warm" and those emitted by transistor amplifier (disseminated by the active vacuum signals) as "cold" (2013: 155-6).⁴⁹ The aesthetic terms deployed by sound critics, which emerged later, are often premised upon the desire to identify sonic differences in analogue and digital technologies. But whilst these distinctions will sometimes rely upon everyday language to concretize the meanings of these sonic qualities on a mundane level, Auner (2000) notes that the differences between analogue and digital can also point to a variety of interpretative frameworks that illustrate a range of aesthetic, temporal, and technological dimensions. In doing so, Auner

⁴⁹ It is thus worth acknowledging that disagreements about the 'better' sound can also occur within analogue recording communities. This is important to consider when positioning debates surrounding analogue *versus* digital.

refers to the construction of binary oppositions such as “authenticity vs. artifice, modern vs. postmodern, blackness vs. whiteness, and human vs. mechanical” (Auner, 2000).

These meanings, however, require further interrogation. In his research on lo-fi (low fidelity) recording cultures, Stuhl (2014) found that the desire of punk bands to convey a more authentic sound through affordable digital DIY recording technology was driven by an ethic of subversion and irony that sought to resist “fetishized” accounts of analogue technology that equate analogue technology – too simplistically, in his view – with authenticity (2014: 46). According to Stuhl, authenticity was not solely achieved within an aesthetics that offered an accurate representation of a musician’s sound, but also via their political inclination to adopt practices that align with their morals, in this case, to challenge the hegemony of major record labels and their extensive use of expensive analogue recording equipment (2014: 45). Consequently, the binary oppositions that emerge in these debates often turn out to be more complex on closer scrutiny. They are subject to contestation and often point to factors that transcend aesthetics. Indeed, Stuhl explains that whilst analogue sound design can be clearly audible through “imputed characteristics”, such as the distinctive “hiss” left over by cassette systems and the crackles, pops and clicks found in vinyl records (2014: 42), the imperfections in analogue formats represent for some musicians’ distinctive markers of meaning that challenge the refined nature of sound in the digital age.

It is worth stating, however, that the debates concerning analogue *versus* digital technology are not exactly congruent with the debates about uncompressed *versus* compressed sound. According to Matteson (2016), the term analogue refers to technology that “represents the actual, continuous sound waves generated by the artists and their equipment”, whereas “digital music is a COPY of analogue music and it is not a continuous recording. Rather, the sounds are captured using samples (generally several thousand times per second). For instance, a CD is usually sampled at a rate of about 44.1 kHz, which translates to over 44,000 times a second”. These samples are encoded into a binary logic of “ones and zeros”, which constantly activate and deactivate sound signals (Prior, 2018: 64). The key difference between analogue and digital, therefore, primarily lies in how they represent information. Whereas digital tends to be associated with ‘cleaner’ sound, ‘analogue’ tends to be associated with ‘noise’ (see Stuhl, 2014: 45-46).

Disputes circulating around uncompressed *versus* compressed audio (see O’Grady, 2021), it is worth acknowledging, are not synonymous with the disputes regarding analogue *versus* digital technology (see Stuhl, 2014), since they point, instead, to a key element of the music recording and its consumption. That is, they point to the process by which the gap between the loudest part and the softest part of the track is narrowed down, resulting in a more

consistent level of volume. These key differences are worth bearing in mind if one is to take sonic compression seriously, especially since analogue recordings can undergo processes of analogue *or* digital compression at the level of the studio and/or through listening to the recording by virtue of its mediation *via* a compressed format. For instance, processes of compression could be encountered by record producers and engineers with digital tools at a recording studio *and* through the reproduction of a recording by a music consumer, at home, say, via an MP3 file. It is important to be aware of these processes, especially when considering ‘where’ and ‘when’ compression might occur during the chain of events in both music production and listening.

Many of these discussions surrounding the aesthetic, social, and political consequences of either analogue/digital or uncompressed/compressed audio, though, have commonly been confined to the realms of the recording industry. Opinions, attitudes, and tensions are frequently raised by individuals working in these industries, who, according to scholars (Crowdy, 2013; O’Grady, 2021), have a vested (and often financial) interest in either endorsing or opposing the consumption of particular equipment and formats. Other groups of people, for example, audiophiles (see Southall, 2006; Perlman, 2004), have also received attention, but they (like musicians and engineers) represent only a small fraction of music listeners, who, admittedly, are more likely to express a pronounced interest in sound quality. How the everyday listener shapes the contours of aesthetic discussions on sound quality has remained unclear. All too often the everyday listener escapes the purview of academic inquiry into how people ascribe meaning to sound quality. We cannot assume, as Sterne (2012) infers, that the meanings ascribed to sound quality are the same for everyday listeners as they are for the creators of this technology. Further insight into the quotidian reflections of sound quality therefore require further attention, not necessarily because these views represent a less partial perspective, but because they provide crucial insights into how consumers receive and reflect on music.

To broaden these discussions, I shall begin with ruminations from Mary, a participant from my jazz focus group, who describes her preference of listening to vinyl recordings over CDs. Mary framed her experience of listening to jazz music by appealing to language reminiscent of public health, medicine, and religion. According to Frith (1996), language found in other (non-musical) discourses is frequently used in assessments of music because sound matter is often difficult to put into words. These provide what Frith calls “schemes of interpretation” that offer insights into the meanings attached to music (1996: 249). Mary commented on the differences between sound transmitted in digitised formats and sound transmitted in analogue formats by describing audio quality from a CD as “clinical” and “sanitized” containing “no glitches at all”.

In describing her preference for vinyl over digital, she explains:

Mary: "I quite like it being a bit off-key occasionally, the occasional dud note or something, or I don't really know what I'm trying to".

Ciara: "Yeah, you get to actually see the people, like behind the song".

Mary: "Yeah. That's the one and occasionally, it's this is just, what technology has done, the kind of like refining of everything. I'll give you an example actually, it was John Coltrane's *Love Supreme*, I don't know if you know the album. I mean it". ...

Sam: "Yeah, you suggested it [for the album listening party], Mary".

Mary: "I did because it's quite anthem-esque and people talk about it in quite hushed tones as though it's a hymn or something like that. It's the equivalent. And we always used to listen to it, me and my husband always listened to it on a vinyl and then digital came along, we got a CD and there was a flaw on the CD, just one, so like it was just like a click. But it was.... it felt like sacrilege, it absolutely did. It was the sort of sound that you wouldn't get on a scratched vinyl. I think that's the other thing, it took sort of the experience of listening, even to a scratchier vinyl was infinitely, more preferable to listening to this, kind of sanitized, you know, kinda like no glitches at all, and then there was this one flaw on the CD. And the noise was just that horrible, I can't describe it to you. So that's kind of like the difference for me".

The sound quality emitted by vinyl, by contrast, was conceptualised as being somewhat dirtier in comparison to digitised sound, with the latter tending to cleanse impurities "through a refining of everything". She expressed that she quite "like[s] it [jazz] being off key occasionally" with "the occasional dud note or something" and argued that more recent forms of technology (CDs, MP3 files) cleanse the flaws associated with older formats (vinyl). To put this into context, she described a digital listening encounter with John Coltrane's *A Love Supreme* as "sacrilege" and argued that her "experience of listening, even to a scratchier vinyl", as an "infinitely more preferable" event to listening to a CD. The ability of a vinyl record to transmit fragments of impurity was conceptualised by Mary as a key aesthetic attraction that provided meaning to the format.

Mary's assertions allow for insights into the meanings that might be ascribed to digital and analogue formats. Mary constructs a critique of digital formats transmitting jazz since they conduct, according to her, a practice of "refining everything", rendering the recording more "clinical". Through this construction, she appears to argue that the cleansing of flaws such as "dud notes" and "off-key" music violate the sanctity of music. These flaws act here, for us, in contrast, as key indicators of atonality. It should be stressed, however, that atonality refers to a compositional element of the music, whereby the composer or musician makes the

conscious choice to diverge from the conventional standards of Western composition. Such divergence is common within jazz music. Remarkably, this is not an attribute of sound quality or the format itself, but, rather, of the composition and of the performance. Here, Mary appears to be conflating the two, ascribing to formats what are – at least in part – attributes of the musical composition and performance. A flaw in a musical performance is distinct from a flaw in the format. For instance, a digital WAV file audio recording of John Coltrane's *A Love Supreme* may convey elements of atonality more faithfully than an old vinyl record. In fact, a scratch in the vinyl record may erase an important 'dud note', meaning that its authenticity could be compromised in the process.

Mary's treatment of authenticity and the fidelity of reproduction, therefore, point to a noteworthy contradiction. On the one hand, she believes that the representation of the music should be as accurate as possible and make atonal characteristics of the composition or performance perceptible to the listener. Yet, on the other hand, the representation should also be less "clinical", which will compromise the accuracy of the transmission of the performance. It is, of course, possible to interpret Mary's comments as providing a rather fetishized account of analogue technology – whereby the social processes congealed into works of art are obscured and are instead presented as features inherent within the object. Such accounts are not uncommon within discourses on sound quality (see Stuhl, 2014; Crowdy, 2013). But whereas these academic accounts suggest that the push towards the consumption of analogue technology facilitates in maintaining the capitalist status of music as a commodity (since the production of vinyl's requires expensive recording studios and the production of costly formats (vinyl's), that are not accessible for ordinary consumers), Mary's account appears to nod towards a more nostalgic attitude: she happily consumed jazz music on a scratchy vinyl with her ex-husband decades ago.

Additionally, because jazz music can be described as containing sonic flaws (such as dud notes) which she views as desirable, she draws an association between the genre and the vinyl format, which, again, is viewed as being more desirable because it contains what Stuhl (2014: 45) refers to as "imputed characteristics" (e.g., scratches, pops, clicks) that leave a less clinical, impurer sonic imprint on the format. For Mary, these imputed characteristics are, by proxy, representative of the music itself. This association, however, it should be stressed, is one drawn between the fragile material characteristic of the format (that is, the fact that a vinyl can get scratched and in turn affect the quality of playback) and the atonal characteristics of jazz music. Although she does not appear to draw the distinction between these separate features, she does believe that they signify the experience of listening to jazz music on vinyl as one that is less sterile and more relatable than an experience mediated by digital music. Her thoughts, intriguingly, also point to a more human-centred experience, especially if we are

to recognise these flaws (e.g. scratches and dud-notes) as caused by humans in the first place. This association between genre and format also comes to light when Mary explains that her consumption of electronic dance ('rave') music tends to be facilitated by other technologies. She claims that "the only music I find acceptable on digital is rave music", where she's "just going for the beat" as opposed to listening intently to all the different instruments on a vinyl recording. Asked why she prefers particular formats for particular genres, she explains that the experience of listening to vinyl is "different". She says "I think what we were saying about that subtle difference in sound quality, whatever that quality is from a vinyl". Indeed, she claims to acknowledge that these "subtle" sonic differences exist but struggles to articulate exactly what it is about the sonic properties (with the exception of surface noise) that distinguishes analogue formats from digital formats. Another participant from the jazz focus group, Ciara, intervenes, suggesting that, "well, I guess a lot of rave music is made digitally as well, you know. So, it's like there aren't people playing instruments, they're on a computer, splitting sound". Mary agrees, stating, "Yeah. You're right. Yeah".

This suggests that some participants were aware that music enters a phase in the studio where digital or analogue tools are adopted to provide particular aesthetic features. This phase occurs before audio is converted to an analogue or digital format. Such processes can inform and prescribe how we *ought* to listen to certain genres of music. Mary's dissatisfaction with jazz music disseminated by CDs, therefore, may imply that she also prefers the experience of listening to jazz on vinyl because it was recorded with analogue technology to begin with. In other words, jazz music consumed in an analogue format may provide a more authentic listening experience since it was *intended* to be listened to in an analogue format. With this in mind, it could be argued that the jazz-vinyl couple comprises what Stockfelt (2004 [1993]: 88) labels an "adequate mode of listening" whereby music listening is not placed in a vacuum but correlates to the situations in which it is produced. But whereas Stockfelt (2004 [1993]) stresses the pertinence of spatial setting, it is worth emphasizing that another component, namely the technological format, delivers an additional element. This constitutes a normative arrangement that advocates how we ought to listen to particular music genres. In short, jazz requires vinyl, whereas dance/rave music is enabled by digitised formats.

Although Mary struggled to identify explicitly what it is about the sound of vinyl that lends jazz an acceptable delivery mechanism, Ciara's comments insinuate that the way music is created should cohere with how it is consumed. This is, of course, evident through their respective consumption patterns, which point towards a normative coupling of genre-format that binds the technology used to capture music to the technology used to reproduce it. Indeed, the recording of live performances is often facilitated by the use of analogue technology, which contains human elements that do not accord with the conventional 'scripts' found in digitised

binary codes. This is frequently thought to be more meaningfully captured and reproduced in analogue (Bartmanski and Woodward, 2015). Crowdy (2013), for example, notes that this is something that record producers find with digital sound reproduction. He draws on an interview conducted with the eminent producer Geoff Foster, who states: “there’s a hollowness that you get with digital. It’s like there’s something about the digital format which loses some of the essence, the humanity. I’m not saying analogue is perfect – you’re not capturing exactly what’s leaving the desk necessarily – but analogue preserves the humanity of the performance” (2013: 156). Digital technology, particularly in dance music, is, rather crudely, perhaps, presented as containing robotic, cold, clinical elements, whereby ‘live’ elements are manipulated through the use of digital audio workstations (see Prior, 2018: 62). This gives the impression that they are somehow less ‘human’ through the practice of artificially ‘splitting sound’ that Ciara refers to.

4.4 Digital compression

The normative coupling of genre and format was a theme that also emerged from other participants’ contributions within my sample. These participants, however, appeared to display greater knowledge about the sonic effects of compression and framed their experience and constructed their meanings with reference to the distinctions between uncompressed and compressed audio, rather than from an analogue-digital perspective. In parallel with the data insights discussed thus far, some participants framed their experiences of sound quality in a way that was akin to the establishment of “ideal” or “adequate” listening scenarios (Stockfelt, 2004 [1993], 88-93). The pairing of genre and format was persistently acknowledged as enabling the sonic characteristics of particular genres to cohere with the respective format and to amount to a unified whole, with uncompressed formats providing a conduit for allowing a more faithful reproduction of certain genres. Whilst many participants did not appear consciously to articulate how sound quality was affected by processes of digital compression, one participant did comment on how these created consequences for how we receive music and, therefore, for how we ascribe meaning to it. Such insights challenge previous literature that casts doubt on sonic effects of digital compression from a perspective of the everyday listener (Crowdy, 2013).

The normative coupling of the genre-format was, for example, evident in the case of Peter, a participant from the hip-hop focus group, who observed the ways in which the jazz genre appeared to be more appropriately suited to the vinyl format. Peter explored his experience of listening to jazz three-piece Go-Go Penguin via compressed formats (on YouTube) and juxtaposes this with his experience of listening to the band on vinyl. According to Peter, vinyl recordings provide a more accurate representation of the live performance because they

transmit, with greater fidelity, the actual sounds of the instruments as they were recorded live. To provide more context:

Sam: "Would you ever stream something and then buy on vinyl, if you really liked the album?"

Peter: "Um, yes I did with Gogo Penguin, who are a contemporary Jazz group. So I discovered them purely from Spotify. Had a look on YouTube, which again, which the sample rate is, the quality is no, no different, really [to streaming services like Spotify and Apple Music], and then I thought I must have one of their albums on vinyl".

Sam: "Okay. And then why did you decide to buy it on vinyl?"

Peter: "Well, other than just the fact that I liked all the compositions, they are a particularly acoustic group? So, it's double bass, drums and quite a stripped back minimal drum kit and piano".

Sam: "Okay".

Peter: "So probably, you know, the three instruments, other than any woodwind stuff, that you're going to get the most benefit and hear the difference from on vinyl".

Sam: "So, there's a difference in the sound quality for that particular group, on vinyl?"

Peter: "Yeah, hundred percent, hundred percent".

Sam: "Okay".

Peter: "Without going down the music nerd route, when you actually hear a double bass, if you've ever been in the room with a double bass, like they're pretty loud man. Like there's a lot of body there. You can't ignore the fact that it's in the room. You know, in a 72-piece orchestra, whereas you might have 30 or 40 violins or violas, they will only have, well, two or three double basses probably... when you think about vinyl and all that, you get all the nuances, the players' [or player's] hands on the instruments, the wood creaking in rest sections, and that sort of thing. It just all jumps out of the midst, a lot more... we're so used to hearing loads of heavily compressed and very prominent bass sounds in all modern music" and that "when it's compressed you just can't get all of that, there's not enough room".

In other words, Peter recognises that the dynamic range within vinyl records is unadulterated (i.e. lossless, see O'Grady, 2021: 1082) which, in turn, enables the vinyl to transmit a greater spectrum of frequencies compared to compressed/lossy audio. Since the volume remains untouched, the range of frequencies is more pronounced within the recording. This enables double bass sounds to be more evident to the listener. Though whilst Mary's preferences for jazz music on vinyl are driven by "imputed characteristics" (Stuhl, 2014: 42) that are embedded

through the format's material imperfections (e.g. the potential for scratches), Peter argues that, in the case of jazz, the sonic characteristics of the format provide, in contrast, a more faithful reproduction of the music. Indeed, his preference for jazz through vinyl is driven by his belief that the genre is reproduced more faithfully and with greater definition and accuracy. The ability of uncompressed music on vinyl records to let the elements of the live instruments 'breathe' and resonate is associated with sonic qualities that do not curtail the dynamic range of volume, as is the case with compressed audio, but, instead, accentuate the presence of live instruments. For Peter, jazz music, therefore, is best transmitted by the vinyl format because of its ability to transmit "nuances" (such as those connected to the materiality of particular instruments) that are less prominent when compared to compressed formats, such as MP3s.

This is a finding that also echoes prior sentiments found within discussions on the sound quality transmitted from uncompressed and compressed audio from sound experts. Peter's comments, for example, resonate with Perlman's (2004) observations, who, in his empirical study on audiophiles, recognises that listeners who are more knowledgeable about sound are more likely to argue for the superiority of the vinyl record in transmitting sound quality faithfully. Perlman, too, found that one participant was particularly enthusiastic about the capacities of vinyl records to capture the authenticity of a double bass. Perlman's participant Jack stated that "on a CD you can hear the pluck of a double bass, but on a LP [long-playing record] you can hear the body of the instrument, the wood" (2004: 786). The 'body' of the instrument, its material properties, and the human action behind the generation of the instrument's sound were thus interpreted as an essential characteristic of jazz music. As such, both Peter in my sample and Jack in Perlman's study argue for a faithful reproduction. If the music's authenticity is to be maintained, rather than compromised, then the reproduction should convey to the listener the whole spectrum of sound, ranging from the formidable volume of a double bass to even the most subtle indications of human interaction with the instrument.

It is also worth noting that his formulations here, do strike some resonances with Adorno's work on 'The Radio Symphony' (2002) [1941]. As I have outlined in the literature review, despite not directly addressing the MP3, which emerged as a format, thirty-three years after his death, his theories on the constraints imposed by technology on musical experience remain relevant for understanding its effects. Adorno's work describes how the commodified nature of music is pervaded by an undercutting of sound quality. Adorno famously lamented that a Beethoven symphony, transmitted over radio, failed to capture the nuances of sound from an orchestra. He contends that "differences, such as those between first and second violins are automatically eliminated" (Adorno, 2002b [1941]: 260). The inability of radio to transmit these meanings (conceptualised as nuances), in turn, resulted in the listener not being able to interpret the totality of the piece, and in doing so, understand and appreciate

how smaller parts fit together to give meaning to the whole (Adorno, 2002a [1941]: 256). Similarly, Peter recognises that audio transmission, in the case of MP3s, has the potential to obscure the authenticity of a live performance, with the sound emitted from particular instruments downplayed through compressed reproduction.

It is illuminating is how Peter's reflections strike affinities with Adorno's concerns about the manipulation of volume in radio music, which, like lossy audio, is also affected by the "compression of the dynamic range" (Adorno, 2002a [1941]: 259). This can be seen through the language used by Peter to describe his experience of how the double bass plays a vital role in generating volume. For Peter, the loudness of a double bass creates a unique somatic affect, that is, is the feeling of being overwhelmed by the physics of sound, a sound which cannot be ignored. Similarly, Adorno's reflections on the live orchestra account for such experiences. He writes that "only if the sound is 'larger' as it were, than the individual so as to enable him to 'enter' the door of the sound as he would enter through the door of a cathedral, may he really become aware of the possibility of merging with the totality which structurally does not leave any loophole" (Adorno, 2002a [1941]: 256). The process of aesthetic immersion, here, is delivered by the intensity of the volume which creates dynamics that are difficult to replicate via mechanically reproduced mediums. Just as radio failed to transmit the full range of sound for Adorno's account of the symphony, Peter believes that digital compression also has the potential to obscure the rich sonic properties of a jazz performance, with those quieter sounds (which should be accentuated) flattened because of compression. These insights demonstrate that, whilst digitally compressed music might conventionally have been designed to save file space at the same time as maintaining the 'audible' qualities of sound (see Sterne, 2012), some participants were not unaware of the consequences that this had for sound quality.

It is relevant to note, though, that Peter explicitly mentioned that he was "not an audiophile". His ability to recognise the fine subtleties of jazz transmitted through vinyl recordings illustrates that even those who fall outside the sphere of audiophilia still exercise and engage in aesthetic judgement in a reflexive and critical manner. More pertinently, the ways in which he constructs the meaning of jazz on vinyl is not too dissimilar to the ways in which sound experts also come to their conclusions (Perlman, 2004). The vinyl is here, too, posited as offering a natural home for jazz music, which is facilitated through an emphasis on pure and unadulterated sonic immersion. Despite its fragility, namely its potential to get scratched and therefore transmit scratchy reproductions of audio, the vinyl is praised, here, for its ability to convey music more accurately when compared to compressed formats. This is due to the greater scope or 'room' afforded by uncompressed sound. The vinyl remains untampered by the audio codecs that are found in compressed formats and that could potentially mute quiet noises (such as wood

creaks and/or the players' hands on instruments). Peter's insights help to frame the meaning of uncompressed audio as constituting a less refined, less faithful and less authentic form of audio. His comments positioned compressed audio as a more human and real representation of the music.

The category of refinement thus featured as a recurring theme within my dataset. This could be observed through my observations of Mary's and Peter's statements regarding their utilisation of uncompressed and compressed audio formats. However, the ways in which they framed the meaning of refinement were, in deeper analysis, shaped by notable distinctions. For Mary, the vinyl record, and, by proxy, uncompressed audio, was less refined in comparison to digital audio, partly due to its material, tangible characteristics. The fact that a vinyl record is a fragile medium that could get scratched and transmit surface noise was conflated with flawed reproductions that she associated with atonal features located within the performance itself. But whilst I found that this conflation revealed a contradiction, it is also worth noting that her account was situated within the context of her own biographical experience. Indeed, she relates the vinyl to a particular time, place, and social situation, namely listening to John Coltrane with her ex-husband. The sonic qualities, therefore, should not be seen in isolation, but rather as qualities connected to memories and experiences.

On the other hand, Peter frames refinement exclusively through reference to the sonic elements afforded by uncompressed audio and celebrates the clarity made possible by the dynamic range of uncompressed audio. This clarity, in turn, lets the listener hear more because the sounds remain unadulterated. His comments are articulated within the context of psychoacoustics. Peter displays knowledge of the spatial parameters of sound afforded by uncompressed audio technology. But whilst his comments do somewhat resonate with Mary's acknowledgement that digitally disseminated music is more clinical (removing elements such as scratches and surface noise), the steps in their meaning-making processes take different directions. Crucially, these steps also demonstrate how meaning is framed epistemologically. Peter's thoughts about uncompressed and compressed audio hover closer towards an engineering interpretation of sound, i.e. one that is supported by the authority of science, control, and objectivity. Peter argues that the sonic characteristics inherent in uncompressed audio allow musical qualities to become more apparent to the listener. Compressed audio, however, is framed as an antagonist, which Peter quite rightly acknowledges as being an inhibitor to conveying the full spectrum of sound. His comments mirror, in engineering terms, an accurate view of psychoacoustics. Digitally compressed sound signals, which are encoded in ones and zeroes, can, as I have discussed in the literature review, mask certain frequencies. These thus represent the manipulable capacities of modern society, whereby world-mastery is afforded through the ability to encode music into measurable components (see Jenkins,

2000⁵⁰; Ritzer, 2001). Music is quantifiable through compression encoding processes, which in turn means that the subjective experience of music are represented as an objective, measurable entity. Compression in turn, allows for precise manipulation and reproduction, which leads to music being conceived as a standard commodity with identical features.

Indeed, from a Weberian perspective, processes of compression could be described as conforming to a broader trend of disenchantment, namely the movement towards a society that is becoming increasingly characterised by rational modes of thought, logic and science and less so by magic, belief and religion (Weber, 1991 [1917]: 139). The fact that data is converted into music today via encoded compression processes is a broader illustration of how technological innovation tends itself towards “calculability”, a key feature discerned in Weber’s account of modernity (Weber, 1991 [1921]: 215; Weber, 1991 [1917]: 139). This is because digitally compressed audio files can be measured and calculated in bits and bytes, ones and zeroes, which allow, in practice, accurate differences between sensory stimuli to be detected and calculated. The existence of ABX listening tests, which aim to determine if listeners can detect the differences between two types of audio, for example, are a case in point and therefore exemplify a drive for calculability (see Perlman, 2004: 797-800). It could also be argued that today, with the advent of compression technology, recorded music reaches a point where it is stripped of its mystery and subjective qualities and instead transformed into measurable and calculable components. The ‘quality’ in sound quality, therefore, is reflected in Peter’s comments, with reference to how the more obscure musical differences may be compromised or revealed by processes of compression.

On the other hand, Mary’s scheme of meaning-making emerges from the nostalgic relations that she draws between vinyl, jazz and auto-biographical experience. Her views symbolize countertendencies whereby the affective qualities of music are not calculable through compression processes but are instead driven by the relationship between emotion and memories. These qualities are arguably more mysterious and arise from experiences that cannot be quantified in the same way that digital information can. Indeed, Mary does not appeal to science in her interpretation, but rather to the nostalgic relations between the format, the music itself and her memories. It is here where she locates the meaning of the sound quality emitted through both analogue and digital formats and not through a technical understanding of compression processes. Though whilst the way in which she draws these links may be viewed as being scientifically questionable, this does not render the meaning that she attaches to compressed music any less important. Rather, Mary and Peter appeal to

⁵⁰ As Jenkins recognises, “in a disenchanted world everything becomes understandable and tameable, even if not, for the moment, understood and tamed” (Jenkins, 2000: 12).

differing sources of subjective experience in framing meaning. Both generate meaning and both need to be taken seriously in their respective schemes of interpretation.

4.5 The importance of equipment

A serious investigation of sound quality, though, cannot be conducted without also considering equipment. This is important to my investigation since participants brought equipment up as a major factor in their discussions regarding sound quality. This also happened to resonate with existing scholarship, where material hardware, such as loudspeakers and headphones, played a crucial role in transmitting the (in)fidelity of digitally compressed music (see O'Grady, 2021: 1087; Zimmermann, 2021: 227-238). These technological artefacts, I found, invariably operated in conjunction with the format (O'Grady, 2021: 1087; Zimmermann, 2021: 227-238). As such, discussion surrounding formats cannot be framed in isolation from these artefacts since music in those formats cannot be made audible without the help of other material objects. I found that my participants did reflect on sound quality in relation to their use of technological equipment, which, in turn, enabled them to situate their experiences beyond a simple binary logic of analogue-digital/uncompressed-compressed audio. Whilst superior sound quality did, indeed, emerge as a desirable feature in many participants' listening experiences, I found that my participants often ascribed *more* importance to the equipment disseminating the format than to the format itself. This is decisive for understanding the ways in which my participants constructed and attributed meaning to digitally compressed music.

My participants constructed hierarchies regarding their use of equipment, often separating 'low' quality equipment from that of 'better' equipment, which was perceived as providing superior sound quality. Phone speakers and laptop speakers, though sometimes used by participants, were frequently conceptualised as the lowest common denominator of an audio set-up.

Refusal to listen to music on laptop speakers, for example, was reported by Jude (Drum and Bass, FG), who protested:

"I'm not listening to music out of laptop speakers, you're kidding me, disgusting. I think it's got to be... do you know what I mean? Yeah, kind of echoing what the other guys have said. I like good-quality speakers or headphones. But that's just because I'm an audiophile, like, I like richness and sound, I'm a music fan. So, I wouldn't really want to listen to any other way".

Sam: "Okay. So, you said that you wouldn't like to listen through your laptop speakers?".

Jude: "I mean, yeah, it's not the end of the world but like, it wouldn't be a preference. But it's important to note that a lot of music is mixed for that purpose because I feel like most people do listen to music that way".

Others expressed similar reluctance, stating: “I wouldn’t want to listen to it [music] through my laptop speakers” [Jeff, Drum and Bass FG] and “I don’t ever listen, or rarely ever listen, directly out of my phone” [Esme, Drum and Bass FG]. Justifications were often similar, with participants reflecting on the “tinny” [Esme, Luke], “naff” [Mary and Luke], and “crap” [Luke] sound emitted by phones and laptop speakers. The “tinny” sound reproduced by phone speakers partially resonates with Adorno’s (2002 [1965]) criticisms of the phonograph record, which are found in his essay ‘The Curves of the Needle’. Here Adorno complains about the phonograph and argues that its commodification has led to passive ways of listening. Similarly, he argues that the phonograph has led to a degradation of sound quality, which is displayed through ways in which it fails to capture sonic fidelity.⁵¹ But whereas Adorno explains how the gramophone speaker is “incapable of conveying high tones” (Adorno, 2002 [1965]: 274), my participant Joel reflected on the inability of the phone/laptop speaker to transmit more bass-heavy tones. He claimed that “if the song has got a massive sub bass, you might only be able to hear that through studio monitors or proper speakers, rather than like a laptop or your phone. You just can’t hear it”.

Phone speakers and laptop speakers were, therefore, criticised by some of my participants as providing inferior sound quality. In contrast, hi-fidelity audio, or, at the very least, ‘acceptable’ (or good enough) audio quality, was frequently mentioned by my participants as being an essential quality of their listening experience. The speaker equipment used by participants during the album listening party and their everyday lives more generally ranged from a mixture of high-end speaker brands, such as KRK Rokit, Pioneer and Sub-Zero, to more affordable set-ups like Amazon Echoes and Google home devices. In numerous reflections, participants considered the importance of the speaker in disseminating high-fidelity audio (which was often deemed desirable) and often gave it priority *over* the format used. Good sound quality was frequently expressed through the *quality of the speakers*. Speakers that were characterised as premium were deemed to be more important than the music format used (e.g., MP3, WAV, or vinyl).

These priorities were illustrated by my participant Jeff, who claimed: “I wouldn’t think about, am I going to use an MP3 or a CD or a Wav file, or how much it’s streaming, like the quality you’re streaming it at. For me, the biggest difference is the quality of the speakers by a million miles. Like you know, I wouldn’t think, oh, I’m using my laptop speakers so I can use a really compressed MP3”. The equipment used to disseminate the audio format was often viewed as the most important actor in providing ‘good’ sound quality. It was a key factor in the arrangement of an audio set up. The format, indeed, as far as sound quality is concerned, was

⁵¹ He refers, for example, to the failure of the phonograph to accurately transmit the female voice (Adorno, 2002 [1965]: 274).

frequently considered a more trivial aspect of the listening experience. Again, the quality of the speakers was reflected upon by Joel (a local Drum and Bass DJ and producer), who rarely used WAV files and explained: “I don’t think that [compared with the MP3] there’s that much sound quality difference, if it were just to come out of big speakers really”. Similarly, Jude claimed: “if you go into the venue, unless it’s like an old-school DJ, nine times out of ten, they’re playing digitized tracks, like you, unless you’re seeing them mixing vinyl, it’s coming out of a massive speaker system. You’re not going to be able to tell the marginal differences between a twelve-inch press and a track you bought on Beatport, like a minute ago. Do you know what I mean? Give me a break”. Jude is sceptical about the perceived superior qualities of lossless audio and considers it a “purist” notion connected with aesthetic snobbery.

The ability to distinguish between the sound of one format from another was thus for Jude, not solely an aesthetic judgement, but a judgement infused with social and political implications, that is, a judgement by aestheticians to create divisions between “the masses” and those more involved in the creation process. He continues:

“I think you’ve got to be a certain type of someone to be like, ‘I’m not listening to this. It’s only WAV.IAF.’ Do you know what I mean? I think I feel like the everyday consumer or, fuck that, I feel like the everyday person, whatever, most people aren’t going to care. If you’re outside of the creation process, if you’re talking purely just listening, I’m consuming some music, no one will care. I think people say that to make themselves feel better [than other people]. It’s like, oh, it’s the same thing as saying on vinyl it sounds better, but it doesn’t really sound better, it’s old, it’s like a purist thing again... it’s just something cool to say down the boozer”. He goes on to state that the subscription service Tidal (which offers customers uncompressed audio) isn’t “better enough [audio quality] for me to pay twenty pound a month as opposed to nine-ninety-nine [the price of Spotify]” (Jude, drum and bass focus group).

Jude’s reflections here strike parallels with De Boise’s (2016) application of Bourdieu’s theory of taste to empirical music sociology (1984; 1993), which helps us to understand how tastes generate and reproduce social hierarchies. Similarly, they build on how considerations of O’Grady’s (2021) notion (of which I have discussed in the literature review) “audio capital” may be exhibited in everyday spaces, such as the pub. Though whilst previous research (Bennett et al, 2008: 75-93; Atkinson, 2011: 169-186) within the Bourdieusian framework has frequently attempted to map these hierarchies through the relationship between class and genre, his considerations reveal how (despite a democratisation of music access) the recognition and articulation of aesthetic nuances between formats may also exhibit broader divisions. Access to (sometimes very expensive) HI-FI equipment and specialised knowledge might serve to privilege certain listeners, which creates a gap in music appreciation (see Perlman, 2004).

These divisions have multiple dimensions. They, for example, may manifest themselves socially, through generating discourses that separate the masses from those in the creation process, which echoes the sentiments of Bourdieu in his discussions surrounding the connection between knowledge, language and taste and how they interact in reproducing inequalities between the “experts and the layman” (see Bourdieu, 1984: 464). Although Jude is ultimately sceptical of the ‘marginal differences’ between file formats, he does acknowledge that articulating a knowledge of these differences enables one to differentiate oneself from others as being superior.

Discussions about the differences between different formats can, therefore, support and reproduce existing divisions. Indeed, there is no reason why the symbolic differentiation (namely, the differences in tastes) between different formats cannot be reconstructed in a similar way to how individuals approached the analogue-digital debate that I discussed earlier in the chapter. Building on Auner (2000), who explains how discourses surrounding technology can be split into binary oppositions, a similar logic may also apply to the advent of lossy in contrast to lossless formats, which are symbolically categorised as being ‘worse’ or ‘better’. Jude’s comments provide some insight into how normative judgements continue to construct hierarchical points of differentiation. Likewise, just as genre, composer and venue (see Bourdieu, 1984: 122-23) performed the role of key signifiers in demarcating superiority/inferiority in Bourdieu’s sociology, my findings show us how formats can exercise a similar function in demarcating social divisions.

This is important to emphasise because, even if Jude himself is unconvinced about the superior sound quality found in formats such as vinyl and WAV, he does recognise that accessing (Tidal, for example, through a premium price bracket) and displaying an awareness of these nuances to other individuals can serve to express a form of ‘coolness’ that provides uncompressed audio with meanings tantamount to pomposity and a cultural aesthetics of elitism. His comments therefore demonstrate numerous ways in which the appreciation of sound quality is a concern that goes beyond the aesthetic domain and filters into the social and economic realms as a key signifier of distinction. By appearing more knowledgeable, Jude recognises how preferences for audio may be appealed to in attempts to mark oneself as ‘cool’ or different from the mainstream. The aesthetic preferences that are presented here, do according to Jude, seek to reproduce divides and draw boundaries between groups of people.

The notion that a hierarchical differentiation of file formats creates a new basis, here, for outlining distinctions demonstrates the potential in situating formats as objects that map differences between those who have the knowledge of and access to hi-fidelity audio and those who do not. The data insights from Jude, in parallel with Bourdieu’s work on *Distinction*

(1984), in particular, proves fruitful in shedding light on how these differences might manifest empirically and be articulated by those who use both lossy and lossless audio formats. This also resonates closely with comments from Prior (2018), who adopts a Bourdieusian approach to his analysis and argues:

“we should not isolate music from the means and mechanisms by which it is played, which are arguably also shot through with logics of cultural and economic distinction: the cost of an iPhone and its alignment with an aesthetics of purity, for instance, or the bit rates one downloads music at, both of which might be conceived as differentiating choices which position audiences in certain ways as high-status experts and audiophiles” (Prior, 2018:53).

As Prior (2018) recognises, whilst these distinctions might be demarcated socially through discourses, it is also worth noting that they are permeated with economic inequalities, too. For example, having access to more expensive premium subscription services (such as Spotify premium) or a sophisticated audio set up, too, acts as a key marker of distinction. So, too, may the possession of vinyl records, which were also acknowledged as being “expensive” by my participants⁵² (Jacob, Rock FG, Peter, Hip-Hop FG, Jadon, Hip-Hop FG), such that they were reluctant to purchase them on a regular basis and requested them, instead, for special occasions such as birthdays or for Christmas. Crucially, though, whilst the purchase of vinyl may point to further economic forms of distinction, I found in my data, overall, that access to premium equipment was generally positioned as being more important than the format itself. This reveals that, whilst Jude’s awareness that discourses can serve to create tensions socially, these divisions might also be expressed economically through the possession of material objects, which do undoubtedly enhance (as the equipment gets more expensive) the individual’s experience of sound quality.

4.6 Conclusion

In this chapter, I have demonstrated how my participants ascribe meaning to the sound quality of music transmitted in digitally compressed formats. In doing so, I have illuminated the multifarious nature of meaning ascription and underlined that meanings are not inherent within digitally compressed technology (as argued by Sterne, 2012) but dynamically constructed and ascribed by the users who actively engage with such technology. In the case of my own research, I refer to the everyday listener and have compared them with sound experts.

Overall, I have found that my participants critically reflect on sound quality and ascribe meaning to it by using language as a conceptual device to draw differences between the sound

⁵² This is also something that Bartmanski and Woodward recognise in their study on the vinyl format. They note, for example, that vinyl editions regularly cost 30% to 50% more relative to other listening formats (see Bartmanski and Woodward, 2015: 7).

quality emitted by compressed (e.g., MP3, Ogg Vorbis, AAC) and uncompressed formats (e.g., WAV). I have found that, in many cases, my participants could not discriminate between whether the sonic differences of audio contained in compressed and uncompressed formats sounded 'better' or 'worse'. With the exception of Peter, who did, admittedly, claim to notice the differences in audio quality for jazz music, transmitted by vinyl, my participants often disregarded any significant variation in sound quality between formats.

Though whilst these descriptions provide crucial insight into the aesthetic effects of digital compression, they do not emerge in a vacuum but, rather through a more complex web of interdependent components (including genre and equipment). As I have found, the normative association between genre and format was important as particular formats (e.g. vinyl and digital formats like MP3) were viewed as going well together with particular genres. In short, patterns in the data appeared to point to the jazz genre requiring vinyl, whereas dance/rave music was enabled by digitised formats. This reveals that format, and genre shouldn't be viewed in isolation, but rather, intimately related to one another in how people experience and ascribe meaning to music.

These meanings should, however, not be viewed solely through the lens of aesthetic enjoyment but also through their social and political effects. As I have described with reference to both the discussion about equipment and formats, tastes often reveal things about us that are tied to the reproduction social and economic inequalities (see Bourdieu, 1984; De Boise, 2016). Whilst more expensive equipment revealed a more noticeable difference in how these divisions might present themselves 'materially', Jude's interventions point to novel ways in which, people's usage and discussion of formats may seek to generate and preserve hierarchical distinctions.

What I would like to stress above all, though, is that often the meanings ascribed to sound quality are generated in respect of other technological objects, such as loudspeakers. I found that equipment played an equally, if not more, important role in affording 'good' sound quality. Indeed, equipment was a preponderant factor influencing how my participants ascribed meaning to sound quality, which generated a profound insight within the chapter itself and the thesis as a whole. While the format did influence to some extent how sound quality was experienced by my participants, ultimately the quality of the object transmitting sound had a more profound impact on how they both received music and interpreted it. Equipment often gave my participants a concrete reference point, allowing them to speak in terms they felt confident in. The quality of the speaker, therefore, was more influential than the quality of the format. Lossless or lossy, formats, I found, played a secondary role to the equipment used to transmit music.

5. Attention and distraction

5.1 Introduction

Whereas the previous chapter explored how digitally compressed music sounds, through an examination of how its quality is attributed by my participants, this chapter will shift focus to explore how my participants engage with digitally compressed music. To do this, I will be raising the theme attention and distraction. This was a pertinent theme that emerged from my analysis of the focus group data in light of my research questions. In particular, this theme drew strong resonances with my second research question ‘How are digitally compressed audio formats used in individual and social listening environments?’ which sought to shed light on how usage is not conceived in a vacuum, but in relation to the context in which people listen and the activities in which they engage in.

This chapter will begin with a discussion of the literature pertinent to attention and distraction. Since this theme primarily emerged inductively from the data, it required engagement with literature items not directly drawn from my survey of the literature concerning the MP3 file in chapter 3. It is worth stating that these themes have been studied in a number of different ways in the social sciences, with a focus on both attentive and distracted listeners (Rosing, 2008 [1984]); Stockfelt, (2004 [1993]); Lilliestam, 2013) and listening (DeNora, 2000; Supper and Bijsterveld, 2015). I will therefore explore how these categories emerge in the literature before exploring their implications for sociological analyses. In this chapter, I will advocate for the examination of listening as a practice, rather than a study of listener typologies. In doing so, I will draw on my empirical data to explore how individuals listen to music in their everyday lives and examine the position that attention and distraction occupy in people’s everyday listening habits. Two main activities will be discussed: music alongside work and music alongside studying. Moreover, I will argue three analytical points. Firstly, I will argue that attentive listening was often faced with the problem of time. Secondly, I will argue that my data supports the notion that, whilst music enables us to “get into action” (see DeNora, 2000), it can also perpetuate exploitation in the interests of capitalist production. Finally, I will argue that the format used to disseminate music plays a crucial role in helping to understand how attentive and distracted listening is facilitated.

5.2 Conceptualising attentive and distracted listeners

Before exploring the themes attention and distraction in greater depth, it is worth examining how these categories have emerged and have been discussed in sociology and the social sciences more broadly. Since attention and distraction was a theme that emerged through the data, this necessitates an engagement, again, with literature not directly related to the MP3

format. As such, I shall start with a discussion of the attentive listener and the distracted listener, which are two commonly applied labels to listeners today. Attentive listener and distracted listener are categories of people that are sometimes presented as binaries. On the one hand, attentive listeners are framed as interchangeable with “active” or “focused” listeners, whereas distracted listeners are often viewed as being akin to “passive” or “background” listeners (Clarke et al. 2010: 65). These dichotomies could also be presented on a continuum, with sonic immersion illustrated at one - the attentive - end and absolute indifference at the other - the distracted - end. Furthermore, scholars (Csíkszentmihályi, 1990) have posited that there is a distinction between “listening” and “hearing”, with the former implying that individuals concentrate on and pay attention to the music, whilst the latter points towards various kinds of absent-minded, non-focused musical perception that one may equate with distraction.

Narratives surrounding active and passive listeners have persistently featured in mainstream media criticism. They date back to the early 20th century and therefore should not be considered new (see Hesmondhalgh, 2022). These accounts include characterising music disseminated via radio as a decorative item or wallpaper (Stoller, 2018), conceptualising listeners as “cabbages” or “stones” (Supper and Bijsterveld, 2015: 124) and castigating society in general as culpable for allowing a “culture of degraded listening” to emerge (Suisman, 2009: 240-272). Many of these scholars upheld the importance of music and argued that ideal, or attentive, listening constituted the behaviour and attitude of listeners who are “ready to merge completely with the music” (Supper and Bijsterveld, 2015: 124). With these narratives, typologies consequently emerged in the scholarship, whereby listeners were described as exhibiting particular tendencies within their listening practices.

One major contributor to the music listener typology is Theodor W. Adorno, who has established seven listener types in his *Introduction to the Sociology of Music* (1997 [1962]): 1-20). By means of these listener ‘types’, Adorno distinguishes between listeners on the basis of how they listen to music. He focuses primarily on how these types of listeners engage with and respond to music in order to illuminate different forms of musical reception. In doing so, however, Adorno does not prioritize *listening* conceived as a practice but rather *listeners* as a typology. Through a descending scale, he begins with the ‘expert’ listeners, who typically comprise “professionally trained musicians” (1997 [1962]: 4). According to Adorno, these listeners are characterised by “entirely adequate hearing” and their ability to decipher even the smallest details of musical components (1997 [1962]: 5). The ‘expert listener’ has the ability to analyse complex pieces and joins them together so they “crystallise into a meaningful context” (1997 [1962]: 4). At the other end of the scale, Adorno locates “entertainment listeners”, namely those who use music as a “comfortable distraction” to help them cope with the drudgery of their wretched lives (1997 [1962]: 15). Indeed, he explains that, for these

listeners, the consumption of music is akin to the impulsive consumption of addictive substances, such as nicotine and alcohol. Their listening habits do not invite a contemplative experience, but rather enable them to recreate their labour power following the working day (Adorno, 1991 [1963]: 189; Adorno and Horkheimer, 2016 [1947]: 131). In short, music chiefly functions to fulfil a purpose in capitalist production.

In between these extremes, Adorno identifies the 'good listener', the 'culture consumer', the 'emotional listener', the 'resentment listener', and the 'jazz expert and jazz fan'. Whilst he praises the 'good listener' as one who engages sufficiently with musical details and understands how music raises connections with language, Adorno expresses contempt for the latter four types, which he attributes to the regression of listening in capitalist modernity. This is exemplified in Adorno's description of the 'culture consumer' (see also Adorno and Horkheimer, 2016 [1947]: 120-167), who symbolises listeners that consume music as a "cultural asset" to further their social standing (1997 [1962]: 7).⁵³ Rather than consuming music in order to appreciate its status as a work of art, the culture consumer places value upon their record collection and their ability to name popular songs. According to Adorno, the cultural consumer's listening is characteristically both "atomistic" and "fetishistic" (1997 [1962]: 7). The consumption of music here reinforces "conformism" and "conventionality" without the listener necessarily aiming for this (1997 [1962]: 7).

The 'emotional listener', on the other hand, is most oblivious to how music works and how its architecture and compositional components fit together. They are, however, most vulnerable to the influence. This listener uses music as a kind of "sonic stimuli" to satisfy the economy of their own drives whilst also "drawing from it the emotions they miss in themselves" (1997 [1962]: 9). The 'resentment listener' sacrifices their individualism for the sake of collective stability and tradition, even if this means capitulating to "reactionary ideologies" that stymie social progress (1997 [1962]: 10). Unlike the 'emotional listener', this type rejects a romantic vision of music as self-expression. Finally, Adorno refers to the 'jazz expert and jazz fan' (see also Adorno, 2002 [1936]: 470-495), that is, jazz listeners who are enthusiastic about the 'avant-garde' and expressive elements found within jazz music. For Adorno, jazz is in fact bounded by the rigid rules that structure standardised popular music (1997 [1962]: 14).

It is worth noting that whilst Adorno's listener typologies can point towards how different audiences *may* receive and engage with music, according to Lilliestam "Adorno does not build his typology on any empirical material whatsoever" (Lilliestam, 2013: 2). At first glance, this lack of an empirical underpinning may appear as a problem for sociological inquiry. One may

⁵³ DeNora argues that "this type is very much the type of culture consumer described in the 1980s sociology of culture by Bourdieu, DiMaggio, and Peterson and Simkus in their respective studies of taste and social distinction" (DeNora, 2003: 85).

ask what the legitimacy of these types is, if they are not based on empirical evidence to begin with? Such an interjection seems reasonable, given that Adorno is describing how people listen to music. However, Adorno does acknowledge that these types should serve as conceptual devices for demarcating points of crystallisation that emerge through Adorno's own theoretical reflections. He therefore stresses that "the listening types do not occur in chemical purity" (1997 [1962]: 2). Instead, they should be recognised as "ideal types" (see Weber, 2002 [1914]: 6-10) that serve as abstractions and exaggerations (see also Honneth, 2005: 53-54). In strong resonance with Weber, Adorno understands ideal types as heuristic tools that are "made in order to be tested" (1997 [1962]: 2). They are not designed to mirror reality but to provide a yardstick or a measuring rod. The heuristic and analytical nature of these types, as I shall explore later, provides a methodological advantage for investigating how the complex attributes of reality may diverge from the conceptual purifications that researchers often find themselves using.

There are, admittedly, still numerous contentious issues associated with Adorno's typology. His sliding scale of listener types suggests a hierarchical differentiation (see DeNora, 2003: 85) of listeners that is infused with value judgements (see Martin, 1995: 118; Middleton, 1990: 57). Moreover, separating more 'authentic' forms of intellectual musical engagement from 'pseudo' forms of engagement indeed risks labelling certain types of audiences as superior and others as inferior. It also infers that a 'better' way of listening exists within society. Perhaps more pertinently, though, Adorno's schema assumes that listeners are incapable of exercising their own autonomy. This is because he tends to overlook ways in which consumers might engage creatively with media products, thus challenging dominant narratives. This is the common line of critique (see Baudrillard, 1994 [1981]: 162; Murphy, 2006: 48-53; Anderton, 2006: 163-166) that is applied to his work on the culture industry, whereby Adorno suggests that "the passive mass" are "psychologically weak" and susceptible to group conformity (Middleton, 1990: 57). This characterisation is perhaps most notable in Adorno's depiction of 'the entertainment listener' and 'the cultural consumer'.

For thinkers like Walter Benjamin (2006 [1939]), by contrast (see also Leslie, 2000: 130-167), so-called 'distracted' audiences may engage with, critique and question forms of mass consumption (which include listening to music) by analysing how their daily encounters with exploitative consumer capitalism mirror the exploitation found within their consumption of musical artefacts. Benjamin's (2006 [1939]) 'The Work of Art' essay, for example, provides an optimistic challenge to Adorno's work on the culture industry. Whilst Adorno saw distraction as a means of control, Benjamin argued that it could be used as a stimulus for critical engagement. He posits that in moments of distraction, for example, such as those experienced in mass gatherings (2006 [1939]: 281) or at the cinema (2006 [1939]: 264), individuals can, as

a collective, perceive the underlying structures of power congealed into cultural products (including music). This mode of reception, although may be conceptualised as involving ‘distracted’ listeners, was not, however, passive, but according to Benjamin (2006 [1939]), potentially revolutionary since it allowed for the collective awakening of the masses.

By outlining how audiences, not just the elite, may use art to question the discontents of reality, Benjamin, therefore reveals the potential for subversion to surface as an empowering alternative for the masses. He locates this within the “progressive reaction” of audiences to film (2006 [1939]: 264). According to Benjamin, the masses have the option to adopt “critical or uncritical attitudes”, which allows them, in principle, to become a “quasi-expert” (2006 [1939]: 264; 262). In taking art out of its traditional context (something he accords with “cult value”) (2006 [1939]: 257) and placing it in a new context (associated with “exhibition value”) (2006 [1939]: 257), the work of art becomes more accessible to audiences. To illustrate this transition from cult value to exhibition value⁵⁴, Benjamin describes how works of art, which are embedded in ritual and religious contexts are rooted in their invisibility, with artworks, for the most part, hidden from individuals to protect its status as a sacred object. Exhibition value, on the other hand, prioritises the visibility of the artwork (also see Leslie, 2000: 150). This in turn, means that novel forms of critique can emerge. In the digital age today, the purported “democratisation” of music (Beer, 2008; Sterne, 2012; Prior, 2018) raises important questions for exploring how the everyday music consumer may exercise resistance in a society that appears to be permeated with constant distractions.

To explore the themes of attention and distraction further, it is helpful to turn to empirical data and compare them to the conceptual pure types I have drawn from Clarke et al (2010). In doing this, I will demonstrate that a shift away from the focus upon listeners as typology towards *listening* as a practice is necessary, since it points to a more faithful and helpful understanding of how listeners ascribe meaning to their listening in the context of their daily lives. Indeed, as Lilliestam (2013) contends, scholarly work on listener types often implies or assumes that people fit discreetly into these categories. It is inferred that “people *are* a certain kind of listener” and “you always listen to music in the same way” (Lilliestam, 2013: 4). Listener typologies, like Adorno’s, often fail to grapple with gauging how the individual may move through a plurality of types of listening. These types may shift, depending on, for instance, ‘what’ a listener is doing, ‘where’ they are and what ‘stage’ they are at in their life. The conception of listening as a practice, or as a set of practices, on the other hand, enables a

⁵⁴ It is worth noting that technology is very important in allowing this transition to occur. According to Benjamin, “technological reproduction can place the copy of an original in situations which the original itself cannot attain. Above all, it enables the original to meet the recipient halfway, whether in the form of a photograph or in that of a gramophone record. The cathedral leaves its site to be received in the studio of an art lover; the choral work performed in an auditorium or in the open air is enjoyed in a private room” (Benjamin, 2006 [1939]: 254).

more flexible approach, which is more attuned to situating how listening is bounded by social context. The fabric of contemporary social life is marked by its fluidity and rapid change. While music listening is an activity in itself, it is always influenced by the context in which we experience it. Indeed, for many listeners, reference to one's own subjective experience cannot be limited to the categorisation of types.

5.3 From listeners to listening

In this chapter, I will therefore shift the focus from the *listener* types to *listening* as a practice. In so doing, I will examine my empirical data gathered from my focus groups. I will demonstrate that, and how, attentive and distracted listening very much depend on the context of listening. According to Hesmondhalgh (2022), many of the concerns about 'passive' listening voiced in the 20th century have resurfaced in relation to the popularity of consuming music on streaming platforms. Consequently, empirical data is fundamental to determine if these critiques hold true and to understand how individuals actually listen to, interpret and ascribe meaning to music in practice.

Attentive and distracted listening are two categories that are concerned with practices of how people listen to music in certain scenarios. In my research, I shall deploy the concepts of "attentive listening" and "distracted listening" as ideal types (see Weber, 2012 [1914]). They will serve as methodological tools to explore how my participants pay attention, or do not pay attention, to the music that they consume. To aid the construction of these ideal types, I refer to Clarke et al.'s description of (2010) attentive listening as the practice of listening "in which the sonic properties of music seem to be the primary focus of attention" (Clarke et al., 2010: 65). In its purest form, such a scenario means that the listener remains undisturbed by other (both internal and external) stimuli. By contrast, distracted listening refers to the practice of listening whereby "music is assimilated in situations where it is background to some other task" (Clarke et al., 2009: 77). This could include activities such as work and exercise, which play a primary role in occupying the listener's attention and thus hinder the individual's ability to focus solely on the music.⁵⁵

'Attention' and 'distraction' work well as ideal types precisely because they often do not occur empirically in the way that they are conceptualised as pure types of social action. These pure types are abstractions. Indeed, music can occupy more attention at particular times than at others, depending on what the listener or listeners are doing. It seems unrealistic that a listener

⁵⁵ Other scholars have referred to other, slightly more nuanced, modes of listening, including "parallel listening" (Lilliestam, 2013: 5-6) and "ubiquitous listening" (Kassabian, 2013). Given that attention and distraction emerged as two major themes within my research, I will mobilise these two types of listening as the ones most prevalent in this chapter. Moreover, attention and distraction are two processes that can map onto alternative models of listening with relative ease.

would devote all their full and undivided attention to musical components constantly. Likewise, listeners often will not be completely distracted from music, but only partially so. As Lilliestam (2013) states “our concentration, even when we sit in the concert hall and ‘listen to’, ‘hear’ or ‘perceive’ a symphony, flows back and forth, wanders in and out, gets stronger and weaker” (2013: 13). The concepts of attention and distraction are approximations to actual listening. They allow for these deviations to occur in social reality. The ideal types are framed with reference not to Adorno’s typology but to Clarke et al’s (2010) description of attentive and distracted listening. Moreover, they are abstractions from my own data. I will use this data to interpret *listening* as a practice rather than *listeners* as a typology. In so doing, I will argue that it is fruitful to depart from descriptions of what a person is to explore the practices that people carry out and engage in.

As a starting point, it is possible, therefore, to proceed from Clarke et al’s (2010) conceptually broad definition of attentive as opposed to distracted listening: the practice of *focusing* on a piece of music *as opposed to* listening to music to accompany, facilitate, enhance or drive an additional activity such that music plays a secondary role. Yet whilst these binary theoretical types provide illustrative devices for mapping the essence of this chapter, it is worth noting that these practices of attentive or distracted listening are structured normatively by their context (see Lilliestam, 2013). They are structured according to particular conventions that denote “ideal” (in the everyday, rather than Weberian sense)⁵⁶ or “adequate” modes of listening (see Stockfelt, 2004 [1993]). For example, one might argue that listening to a recording of a movement of a Vivaldi concerto on Spotify alone one evening would demand and enable greater levels of attention when compared to listening to the same movement during a brief shopping trip to the local bookshop. Whilst the music remains the same, and could perhaps be disseminated by the same format, the role of music in these contexts might be to achieve very different effects that consequently result in the ascription of diverse meanings (see Pederson, 2020; Kassabian, 2013). In the context of shopping, Vivaldi may be constituted as background listening, whereby the customer pays little attention to music and focuses more on the books they want to buy. Conversely, in the context of solo listening at night, Vivaldi may afford a state of rigorous attentiveness, a state of sonic immersion, where one loses oneself in the music completely. Whilst the latter may denote attentiveness and the former may denote distraction in these scenarios, how music is interpreted is often shaped by the context through which it is received.

Importantly, this is emphasized by scholars (DeNora, 2000; Frith, 1996: 249-268) who have found that these states of immersion or distraction are driven not solely by the music itself but

⁵⁶ The term ‘ideal’, in everyday language tends to refer to things as desirable or as the best possible, whereas in Weber, ‘ideal’ denotes an intellectual, conceptual construct, outlining the boundaries of a social phenomenon.

also by the circumstances through which music is received by the listener. The 'mode of listening' structures listening practices that are appropriate for the different spaces of auditory experience (Stockfelt, 2004 [1993]). Since portable devices are so ubiquitous today, it is perfectly possible to subvert these traditional conventions. One could easily listen to classical music outside of a concert hall, for example. Likewise, the internet has spread dance music genres (e.g. hard-trance, gabber and tekno) that would have previously only been heard at free parties and raves to broader audiences via streaming services like Spotify and SoundCloud. The affordances delivered by modern technology, therefore, allow people to take music out of its traditional context (or home) and consume it in a new context. One would not need to be at a concert hall or at a rave to listen to and appreciate these genres today, but could be anywhere. Whilst this has clear political implications and resonances with Benjamin's description of the transition from cult value to exhibition value (2006 [1939]), the links between technology and space also has important implications for how people approach attentive or distracted listening practices today, because the levels of concentration may differ, at any time, depending on what the listener is doing. Moreover, it is also worth considering how the format may play a role in facilitating attentive or distracted listening practices by virtue of how the music's information is designed to be presented to listeners. As I have discussed in the literature review, scholars (see Sterne, 2012; Devine, 2013; O'Grady, 2021) writing on compression appear to argue that music disseminated through lossy formats tend towards supporting listening practices that veer towards distracted or "casual" (Sterne, 2012: 174) listening. According to Devine (2013), compression is desirable because it is deemed "more ear catching than quiet music" (2013: 164). He explains that "the argument here is that whereas people 'actually listened' to records in the 1970s, nowadays more listening happens on the go, in the car, at the pub, and so on. In such situations, less compressed and quieter songs can be hard to hear (because the ratio of music to environmental noise is low) and risk being lost in the shuffle, so to speak" (2013: 164). It is therefore worth noting that recorded music today is designed with the assumption that listeners listen whilst doing other things.⁵⁷ Compression fares well because it has to capture the listener's attention, as they may be pre-occupied with other tasks and activities and listen in environments where other noises are also present.

This points to the fact that music is not, as I have emphasised and reiterated throughout, consumed in a vacuum, but often in ways that complement the situations that we frequently find ourselves engaged in throughout our everyday lives. This notion of music's contextual

⁵⁷ To emphasise this point further, Devine (2013) quotes the Chicago-based mastering engineer Bob Weston (n.d.) who claims "In this age, we all do tend to listen to music in much noisier environments and generally, perhaps, pay less attention to the music we hear. In such an environment, it is tempting to try to make your music 'shout-out' the loudest" (2013: 164).

consumption, as previously explored, is central to Tia DeNora's (2000), empirical landmark study *Music in Everyday Life*. She explores how actors frequently use music in a multitude of ways to "get them into action" (DeNora, 2000: 8). She argues that music offers a "formative, albeit often unrecognised, resource of social agency" whereby the self (or the agent) is regulated and constituted through their consumption of music in everyday life (2000: 152-53). People, she acknowledges, commonly use music as a catalyst to manage their everyday lives. This ranges from the uses of music to alleviate boredom (2000: 8), de-stress (2000: 16), bring back memories (2000: 41-43), concentrate on work or studying (2000:59), move our bodies faster (2000: 99), and so on. The practice of listening to music, DeNora argues, transcends its aesthetic enjoyment as a leisure pursuit by moving closer towards music's conceptualisation as a resource for self-regulation. She claims that music is often listened to in order to mitigate the challenges associated with late capitalist modernity (see Giddens, 1991; Lash and Urry, 1994).⁵⁸ According to DeNora, agents actively use music "as a technology of self" (2000: 46-74) to help regulate their emotions, shift energy levels or to care for themselves. Whilst attention and distraction does play a key role in users' listening habits, DeNora agrees that these categories should not be seen in a vacuum, but through close interrogation of empirical material. In the proceeding sections of this chapter, DeNora's notion of using music to 'get into action' will be deployed as a critical vantage point. In so doing, I shall explore how these themes operate within the context of my participants' reflections in the focus groups. In abstraction from my data, I will use Clarke et al's (2010) definitions of attentive and distracted listening as conceptually pure types to see how they operate in conjunction with my findings. These pure types comprise the template of how attentive and distracted listening operates as a purified abstraction. Thus, I use them as a heuristic to explore how attentive and distracted listening *actually* operates in conjunction with my data.

5.4 Moving beyond binary oppositions: practices of everyday listening in context

Whilst listener typologies are often organised according to binary oppositions and are frequently infused by value judgements, attention and distraction – as *listening* types – were clearly key in different ways to how my participants ascribed meanings to music and how they experienced music in their everyday lives. It is worth noting that absolute attention, as an instance where individuals concentrate on just the music itself, without any distractions present, was a rare occurrence for my participants. Indeed, in most cases, participants were engaging in a range of other activities whilst they were listening to music. This was often either to achieve a desired state of focus on, or to induce a state of distraction from, another task or

⁵⁸ Despite its Foucauldian (see Foucault, (1992) [1982]) undertones, DeNora situates the technology of self largely within the context of British sociological discussions on modernity in the 1990s (Giddens, 1991; Lash and Urry, 1994).

activity, or to achieve focus on or generate distraction from the music itself. In this chapter, I shall focus primarily on two kinds of activity that my participants were engaged in whilst also listening to music: work and study.

In discussing these two themes, music listening during work and music listening during study, I will make three main analytical points. Firstly, I will argue that my data insights raise the problem of a lack of free time as a key barrier to the attentive listening experience. Indeed, whilst music appeared to be a regular feature of people's quotidian experience, many of my participants simply did not have the time to listen to music whilst remaining undisturbed by other stimuli. Commonly, their everyday lives were dominated by commitments that created distractions and made immersive listening both difficult and impractical. When immersive listening was experienced, however, I found that it was invariably delivered by the vinyl analogue format as opposed to digitally compressed technology. Immersive listening was framed by my participants as a privilege and a luxury; it was not something that occurred on a frequent basis. Secondly, I will show how my participants' use of music during work and studying often reflected DeNora's (2000) argument that we use music to 'get us into action'. This was demonstrated by a multitude of ways in which my participants use music reflexively as a technology of the self to enhance focus and productivity. On the flip side, however, by building on the work of Adorno and Foucault, I will explore how my participants' use of music to 'get into action' in their working lives can also seek to reinforce and exacerbate practices of exploitation. Finally, I will argue that whilst, on the surface, the format used to disseminate music may seem trivial, in many ways my participants' listening habits were precisely facilitated by the affordances, such as portability and convenience, of the digitally compressed format. The digitally compressed format allowed these practices to occur with much greater ease and therefore was fundamental to allowing these practices to happen in the first place.

5.4.1 The problem of a lack of time

Attentive listening was an infrequent occurrence for many of my participants. Many felt that, whilst it was possible to listen to music without doing much else, this was not the norm. Music was usually consumed alongside another activity. Some participants felt that they could "just focus purely on the music" but that this was also "quite difficult to do" (Stephen, Hip-Hop FG). Similarly, it was rare that participants found the time to just listen and just focus on the music. When they did, they sometimes felt guilty for paying sufficient attention to the music without doing anything useful.

Ciara (Jazz FG), for example, explained that "usually, if I'm listening to music, I'm doing something else as well. But if I'm in like an emotional mood, or if a new album has just come out by an artist I love, then I will probably just set some time [aside]. And like lie in bed usually

and listen to it. I think a lot of it is that I'm not really doing nothing a lot of the time, I'm usually doing something. So, for me to sit and listen to music. It's kind of like almost, oh I'm wasting some, like, some time. So, it tends to be more of a background thing".

Ciara's time commitments were often filled with the combination of obligation towards her academic studying and sporting activities, which often tended to consume her week and therefore reduced the realistic opportunity of allowing her to engage in attentive listening experiences. As a response to my question "Is it possible for you to sort of just sit there and immerse yourself in the music?", she states "It's possible. I wouldn't say I do it regularly. But, I mean, I probably would if I had more, like, more time on my hands, but I'm always rushing around". Whilst Ciara did report scheduling in time for attentive listening encounters, which "excited" her and provided a technology of self (DeNora, 2000: 46-74) to help regulate herself when she was "in an emotional mood", these encounters, which were underpinned by how she thought she should be spending her free time, emerged in Ciara's case as a somewhat double-edged sword. Indeed, attentive listening was characterised simultaneously by feelings pertaining to both guilt and privilege. Despite seeing the value and appeal of attentive listening, she felt guilty for just listening to music when she could have been spending her time doing something productive. Equally, she felt that if she did have more time available, which is a special (or elite, as I shall explore) privilege not enjoyed by everyone, then she would have opportunities to engage in attentive listening more regularly.

The problem of a lack of time thus emerged as a significant barrier for those wishing to engage in attentive listening practices. Such a problem shows the importance of considering how much time listeners realistically have for listening and *only listening* to an album or piece of music whilst remaining undisturbed by internal and external stimuli. Many of my participants had commitments to their careers, to education and to friends and family, which simply made it more difficult for them to participate in attentive listening. Upon being questioned about his listening habits, Luke (Jazz FG) similarly states that, whilst he enjoys listening to an album from start to finish without distractions, "often I don't really get much time to do it these days. I'm always running around after the kids and working and things that, but yeah, I think it's nice.... I like getting drawn into an album [in its entirety], I think there's more depth to it". But whilst my participants did, therefore, see the value in total immersion and expressed a desire for the attentive listening experience, some did not see it as being realistic.

This raises the potential for framing attentive listening as something exclusionary, as something closer to a high-bourgeois, almost aristocratic, ideal practice that is associated with the elite "leisure class" (Veblen, 2009 [1899]) or the classically trained "expert listener" (see Adorno, 1997 [1962]: 4). This is sociologically noteworthy for pointing to potential barriers that

listeners face in their everyday listening practices and the implications of these barriers. As Veblen (2009 [1899]) famously argues in his critique of the “leisure class”, those who abstain from paid labour have more opportunities to engage in practices that encompass “the non-productive consumption of time” (Veblen, 2009 [1899]: 21-22). According to Veblen, the leisure class can engage in leisure pursuits without facing the obstacles of having to exert themselves throughout the working day. In a sense, they are time rich, meaning that they have more opportunities to engage and pursue activities that are meaningful and important to them. Immersive music listening, of course, is one example of how this leisure time may be spent. But, for many, opportunities to engage in immersive listening are frequently obstructed by life commitments. Even though Luke and Ciara expressed a desire for the attentive experience, they did not see it as being realistic. They were time poor, or at least, deprived of time. The notion of time being time poor refers to “a popular impression across developed societies that we are now busier, harder-working, longer-working, more time stressed and stretched than previously” (Gershuny, 2009: 38). Due to longer working hours that ate into the potential for my participants to engage in leisure pursuits, immersive listening was also seen as being resource intensive. This in turn positions the attentive music listening experience closer to a rare privilege, rather than representing the actual, everyday experience.

It is important to consider the importance of potential structural barriers, here, in understanding what might curtail opportunities to engage meaningfully engage in attentive listening. Luke, who worked part time, both as a courier for a parcel delivery company and as a graduate teaching assistant in higher education, found that his hours, whilst sometimes flexible, varied from week to week. Due to the precarious nature of his employment as a delivery driver, sometimes Luke would be working more than 50 hours a week. He felt that these hours were hugely demanding, especially alongside parental commitments. Likewise, Ciara, who also worked as a graduate teaching assistant and as a crew member at a fast-food restaurant, found that the long hours associated with the precarious employment sector, curtailed her ability to schedule in time dedicated to attentive music listening. I am thus sensitive to the fact that the occupations of my two participants, here, presented a barrier for them.

5.4.2 The importance of the format

Indeed, the reality for most of my participants was that their listening habits were conditioned by their material circumstances. For a variety of reasons, sonic absorption, for many, did not seem practicable. These practices should not, though, be seen in isolation from formats. I found that digital technology (alongside time-commitments) also facilitated a more distracted experience. Some of my participants played down the importance of file formats and made comments like “I wouldn't think ‘oh, it needs to be MP3 or a WAV file’” (Jeff, Drum and Bass

FG) and “It’s the situation that I am physically in, that influences that [whether they would use headphones or speakers] more, as opposed to the file format” (Caroline, Drum and Bass FG). And yet it was clear that the affordances of digitally compressed technology influenced how people would listen to music, whether they were conscious of this influence or not. Jacob (Rock FG), for instance, reflected on how “the joy of streaming” allowed users to assert more control over their listening habits. By “dip[ping] in and out” of what he wanted to listen to, Jacob was able to listen to something without committing to a full-length album experience. Zeke (also from the Rock FG), likewise, praised contemporary technology for allowing him to dabble in other genres that he would not usually listen to, in his case hip-hop. The abundance of music now available on streaming services has enabled the listener to develop a greater diversity of tastes, which in turn has created opportunities for listeners to form more “omnivorous” musical identities (see Atkinson, 2011; Peterson, 2005; Katz, 2010: 184). This “omnivorousness” represents, according to Atkinson (2011), the “eclecticism” and “variety” of musical taste (2011: 171). Rather than opting to listen to one genre of music, an association that Bourdieu (1984) drew, for instance, between the dominant classes and classical music in 1960s France, contemporary social life, in the UK at least, mirrors for Atkinson (2011) a less hierarchical division, since people’s tastes are more diverse.

However, for my participants, this ‘dabbling’ was accompanied by a common practice, namely skipping tracks. Participants opted for listening to an artist and song in short bursts, before deciding to move on to listen to something else. The absence of long, attentive listening, which has been thematised in the literature (Prey, 2020; Pelly, 2018), was also common for my participants, who streamed their music. Skipping tracks was, again, made possible by the technology. Since most (over 75 per cent) of my participants streamed their music, having remote access to a catalogue of tunes meant that it was possible to disengage or re-engage with songs as they felt inclined to. This arguably afforded more control for the listener.

I also found that my participants would turn to pre-made playlists on Spotify or Apple Music to either accommodate or shift their mood (e.g. to reinforce feelings of sadness, relax them, make them sleepy) or to supplement activities that they were engaged in (e.g. cleaning) (Pederson, 2020). This was, for instance, something that Oylum commented on. I ask:

Sam: “Would you turn to Spotify playlists to help you engage with the task?”.

Oylum: “I do not have so many playlists that are ready-made, like I sometimes go to albums or... I mean, I have a couple of playlists. I occasionally listen to them, but I love listening to other people’s. There are a couple of users that I follow just for their playlists. So, I go to their playlists”.

Sam: “Would there be playlists for particular tasks?”.

Oylum: “I definitely have playlists that I, for instance, if I'm angry, I have specific playlist that I go to chill me. There are functions of.... I mean, I do not have, I think I do actually like have a cleaning playlist, definitely because I hate cleaning, but I have to do it, and I do it. So, I go to a specific playlist to do that. But in other times, it depends on my mood. Like, again, if I'm like I have some reactions to some personal or work matter, I try to chill myself with a specific playlist and I know a couple of playlists that works for me. I go to them...”

Pre-made playlists, although not synonymous with skipping tracks, did, therefore, enable some of my participants to find alternatives to the effort of committing oneself to listening to the same artist during a full album-length experience. They would also be able to ‘dabble’ with different genres or artists without disrupting the mood. This provided a more readily available alternative to compilation CDs or mixtapes, which would have comprised the proto ‘physical versions’ of mood or activity playlists. Overall, the use of these (pre-made) playlists was important in allowing my participants to manage their emotions and to facilitate certain activities. This was convenient in enabling patterns of listening that shifted away from the traditional practice of listening to an album in its entirety.

Others felt that, if they were to focus solely on the music for long periods of time, then it would require dissemination from a vinyl record. As vinyl record players are stationary items that could not be carried around, my participants felt that vinyl listening offered what Benjamin (1939) might call a more “auratic” experience compared to digitised mediums. The necessity of the turntable needing to be “physically near” the listener meant that “it requires all my attention”, according to Oylum (Rock FG). She continues: “for vinyls, it gives you a different pleasure. It gives you, like a full, almost like you’re spending all your time to consume the music”. The conceptualisation of vinyl as something that requires more attention in turn positioned it as a listening experience that was distinct from listening via digitally compressed formats. This was an insight that also emerged from Jadon (Hip-Hop). In response to my question, “would you say that you engage more deeply with music if it’s on vinyl?” Jadon answered “Yeah. I listen to it more because it’s an event, it’s not just background noise. It’s turning on a record and sitting down and having a drink and actually listening”. He added: “it’s nice to sit down and have the physical act of putting a record on. It’s [that] the sound quality might be a bit better, but that’s not hugely.... It’s more of a physical act of actually doing it”. Jadon’s conceptualisation of vinyl listening as “an event” and as a “physical act” pitches vinyl as a format that is situated at a particular time and in a specific place and as one that is attached to *how* we listen to music. As opposed to just hitting play on a portable device, this experience demands more physical effort from the listener, requiring them to invest themselves in the experience.

The vinyl record, compared to digitally compressed formats, was positioned as adding more ritualistic and aesthetic value to an attentive listening experience, which is closely aligned with Benjamin's depiction of 'cult value' outlined earlier. Practically speaking, the vinyl needs to be physically close to the listener in order to be appreciated. Listeners could not skip tracks as easily when compared to digitally compressed formats, since they would need to move the needle to precisely where a song finished or began. The vinyl's double-sidedness, too, assumes that the listener would flip the format to listen to the second half of the record. This, therefore, requires more attention from the listener, since they are responsible for prolonging the listening experience. Rather than the automated progression of a streamed playlist, vinyl listening transforms the listener into an active participant. This is a sentiment also echoed by cultural sociologists Bartmanski and Woodward, who write, in their book *Vinyl: The Analogue Record in the Digital Age* (2015): "the invention of compressed computer files extends the potential playback time to infinity, permitting different kinds of easy sound manipulation. While this facilitates music consumption in a number of situations, it is hardly the ultimate goal of music listening. For one thing, our focused attention can hardly be sustained as a long uninterrupted flow. Without any segmented structure and breaks, our perception can rather quickly become fatigued."⁵⁹ An unbroken chain of music may work well as a background sound or as a mixed DJ set, and even in those cases changes and breaks prove desirable" (Bartmanski and Woodward, 2020: 72). Therefore, whilst it is feasible to see how one would derive pleasure from having access to a format that allows for continuous playback and remotely controlled skipping, some of my participants saw vinyl dissemination as a more focused listening encounter which required focused attention.

Moreover, vinyl listening was sometimes praised for its tangible properties. As described by Jadon, vinyl listening constitutes "an event" rather than merely "background noise". The "physical act of putting a record on" comprised a unique practice that challenged the more mainstream practices of music listening. Despite my participants' concerns about the high cost and fixed position of the vinyl record, they did feel as if they were more engaged with the music during a vinyl listening experience due to the physical attributes of the recording and because of how they would need to move their bodies to play the recording. Mary (Jazz FG), for example, spoke in ways almost reminiscent of religious practice and claimed that she liked "handling things" and that she enjoyed "the ritual" associated with vinyl listening. With digital listening scenarios, the rituals do not demand the same level of human engagement and care. The listener does not need to take the phonograph out of the sleeve, place it on the turntable, move the needle onto the groove and switch the speaker on. Similarly, they do not need to

⁵⁹ Devine (2013) describes how listening to constantly loud music is not desirable because listening to heavily compressed music all the time induces ear-fatigue in listeners.

apply the same level of care that a fragile phonograph requires (see Aldersley, 2021), since digital files cannot be physically scratched. The listener cannot press ‘pause’ or ‘play’ at the drop of a hat; they are locked in from the outset. This feeling of being ‘locked in’ helps to facilitate an immersive listening experience where the overpowering qualities of the music can come to the fore.

In this sense, my data demonstrates that the vinyl record, despite being a mass-produced commodity, does appear to possess “auratic” qualities that situate it in a particular time and place and with particular meanings attached to it (see Benjamin, 2006 [1939]). According to Gilloch (2002), the aura refers to “the particular power which an image or object has by virtue of its singularity, authenticity, and embeddedness in the fabric of tradition” (Gilloch, 2002: 182). Whilst my data do not fundamentally challenge Benjamin’s contentions insofar as the actual musical performance’s aura is not conveyed by the vinyl format listened to, because the performance is de-contextualised, my participants do suggest that the vinyl *listening experience* itself contains aura because it evokes affective qualities that are tied to listeners’ perceptions of the “here and now”, as Benjamin (2006 [1939]: 260) puts it. Indeed, the physical act of listening to the work of art here can be situated in a particular time and place and involves almost ritual-like practices that are unique to vinyl listening. “Sitting down” and being “physically near” the vinyl record helps to facilitate an experience that is not easily replicated by digital formats. Whilst it is, of course, possible for a listener to sit down and listen to an MP3 file on their laptop, these digital listening scenarios do not demand the same “modes of listening” (Stockfelt, 2004 [1993]). In digital encounters, the listener can flip between paying attention to the music and then diverting their attention towards something else. This is exemplified, for example, through the pause and play feature available on devices that supported digitised ways of listening. With the vinyl record, however, there is a constant (audio and visual) reminder that the music is playing. One cannot choose to stop listening with as much ease as a portable device. They cannot simply pause the music and play it again. Music listening here, therefore, tends to be given primacy over other activities. Again, the vinyl experience compels the listener to engage in listening practices that tend towards immersion.

Overall, this type of listening poses a challenge to the digital control that users typically exert over their digital listening practices. My data suggest that listeners participated in a more focused engagement with music if it was disseminated through vinyl, partly by virtue of a certain lack of control. Similarly, the vinyl’s status as a mass-produced commodity does not appear to degrade the listener’s engagement with the work of art, as depicted by Adorno in his analysis of phonographs and ‘the culture consumer’ (1997 [1962]: 6-7; 2002 [1965]). In fact, it facilitates and enhances the contemplative experience. Whilst the original performance itself is admittedly decontextualized, there can be a sophisticated way of listening to a

recording. Rather than signifying an industrial, low-brow, mass-produced product that is used merely as a piece of domestic furniture (see Adorno, 2002 [1965]: 273), I contend that the vinyl listening experience presents an opportunity to immerse oneself in sound that aligns more closely with Adorno's depiction of the 'good listener' (1997 [1962]: 5). Such modes of listening contend narratives surrounding "background listening" that are predominant today in the digital age of streaming (Pederson, 2020). This being said, whilst my data does suggest that listeners pay greater attention to music disseminated by vinyl, it also highlights the broader issue of time. For many, attentive listening practices simply were not deemed realistic or practical because they felt as if they did not have the time.

5.5 Activities: Work

In order to assess how "attention" and "distraction" operate as abstractions from reality, it is worth exploring how they might be used as heuristics connected to other activities. Indeed, these abstractions serve in enabling us to conceptualise how people may engage with listening. Yet, they provide only simplified constructions of our understandings. We need to, therefore, explore how they operate in context. I found that my participants often listened to music not in isolation but in accompaniment with additional activities. This included listening to music alongside: household chores, such as cleaning and cooking, physical exercise or whilst commuting. The two most prevalent activities alongside listening to music that emerged from my data analysis, however, were working and studying. Whilst the previous empirical section explored attention and distraction from the point of view of listening more broadly, in this section, I will thus investigate how "attention" and "distraction" operate in conjunction with these two activities. In so doing, and by drawing on the work of DeNora, Adorno and Foucault, I will show that my data insights have a number of key sociological implications for how we explore music listening practices. Saliently, I illustrate how the format plays the role of a double-edged sword. Whilst it enables people to 'get into action', we should also be aware of how the portable nature of the digitally compressed music can exacerbate conditions of exploitation that can be attributed to late capitalist society.

Like DeNora (2000), who finds that listeners use music as an aid for "getting into focus", to structure and seal off an environment and to aid concentration (2000: 58), I found that many of my participants listened to music whilst working. They used music as a tool for a multitude of purposes, including to prevent distractions from other work colleagues (Jacob, Rock FG), to aid focus and concentration on work (Trevor, Hip-Hop FG; Charlotte, Rock FG) and to speed up work in order to increase productivity (Jeff, Drum and Bass FG; Joel Drum and Bass FG; Nuha, Hip-Hop).

Jacob (rock FG), for example, explains how he uses music as a device for cocooning himself into an environment conducive to work and for drowning out unwanted distractions from this environment: “I listen at work as well, off my phone. And I bought some headphones, especially for doing that, some kind of mobile headphones because I work in an open plan office and not so much these days, I work from home more but when I'm in the office, I find it really distracting. And I really like to put the headphones on just for an hour or two during the day and listen to music, I can find it easy to crack on with things rather than being distracted by what other people are saying and what's going on around me, and so I use headphones”. This provided a hermetic seal and allowed him to close off the sounds of a busy work environment.

Jacob's comments strike resonances with sociological work on auditory experience. Indeed, the individual's consumption of music through headphones to create cocoons or “auditory bubbles” is not a new phenomenon, but has been researched in urban settings for the last twenty-five years (see Bull, 2000; Jungnickel and Aldred, 2014; Prior, 2014). For example, Bull's (2000; 2007) research, which I have explored in the literature review, provides an ethnography of how users deploy Walkman devices to develop strategies for tackling the bustling demands of urban life. In developing a “critical phenomenology of the auditory urban experience” (2000: 3), his concept “auditory bubbles” (2007: 3) refers to the way in which users separate their auditory experience from the outside world through headphone use. He finds that by playing music with “sufficient volume to drown out the industrialised sounds of the city” (2000: 21) strategies are often deployed to “bolster the user's sense of power and control in urban space” (2000: 25). The headphones therefore act as a bubble, whereby the user feels both protected and withdrawn from their environment. This was particularly evident in how users incorporate headphone listening into their daily routines, most notably, in Bull's case, the role of headphone listening during the commute. However, Jacob's reflections here also reveal that music can be used as a way to draw boundaries and cut out distractions within a fixed and private space, rather than within a transient public space. This, in turn, provides a valuable insight into how digital formats are used *during* the working day.

Moreover, I found that my participants used music as a ‘tool’ to aid focus and concentration at work. Trevor, for example, comments: “like the job I have now, I listen to ambient music, pretty much the whole time. I've got maybe, there's maybe 20 or so and ambient albums that I just listen to, on repeat sometimes, like, multiple times a day. And when I'm working, I don't even notice it's on. And it just, it just helps me concentrate. And that's kind of all it's there for, it's just a tool”. Trevor's conceptualisation of music as a ‘tool’, here, reveals how music allows him to ‘get into action’ (De Nora, 2000) and to help him concentrate during work. He continues to explain that, whilst he now enjoys listening to the ambient music outside of work, initially it was

deployed as a genre reserved solely for this practice. Similarly, other genres that were conducive to affording concentration and focus at work for other participants included classical (Charlotte, Rock FG; Jacob Rock FG), down-tempo (Oylum, Rock), drum and bass (Jeff and Joel, Drum and Bass FG) and jazz (Jacob; Rock FG). Instrumentally driven music, I found, was deemed most conducive to affording a focused work environment. This resonates with DeNora's insight that "the music that promoted concentration typically did not give prominence to lyrics" (2000: 65).

In fact, my participants did discuss how music that contained lyrics would distract them from work and disrupt their capacity to concentrate. Caroline notes:

"If I'm doing particular types of work, I cannot listen to anything with lyrics, I can't. If I'm doing a very repetitive task, like a data entry task for example, then yeah, absolutely. You can stick on anything that's like a really amazing song with lyrics chunked in there. But yeah, if I'm doing something that's more intellectually demanding, so yeah, I don't know, that.... if I'm just like reading journal articles, for example, there is *no* way I'm gonna be doing that, like, listening to Beyonce".

Music with lyrics was frequently perceived as a distraction, which consequently motivated participants to listen to instrumental music. This was also echoed by Stephen (Hip-Hop FG): "If I'm doing some programming, I might listen to music without lyrics, I tend to notice. I listen to something that doesn't have much lyricism in it". He goes on to say: "I don't think I do it intentionally, but I feel like certain music kind of accommodates for certain tasks a little better. And like I've just said, the lyricless music for when I'm programming or trying to do like a task in general. I find it just allows me to concentrate a little bit easier".

Another key finding was that some participants referred to how music helped them to perform at a faster pace, enabling them to complete a work-related task more quickly. Jeff (Drum and Bass FG), for example, explained that "if I'm working and we've got to do a load of boring data input, I will be far more focused and get it done a hell of a lot faster if I've got some good drum and bass on in the background. It doesn't need to be necessarily heavy, [it] can be, like, some liquid drum and bass or something or the other, but personally that... that really helps [as an aid to help complete the task]". This was a common insight in the drum and bass focus group. Joel (drum and bass FG), who worked as a builder, also reported that "if I'm working, I listen to higher beat music, you know, just to get the job done quicker or whatever... So, like drum and bass, obviously, in my personal opinion, gives you more energy". Faster paced genres, such as drum and bass, which range, usually, from 170 to 175 bpm, were associated with the practice of completing tasks at a faster pace, by comparison to not playing these genres at all.

As previous scholarship indicates (see Foucault, 1991 [1975]) : 151; Attali, 1985: 66-67), the drum plays the role of a fundamental driver of pace. In their depictions, Foucault (with a focus on 17th Century military officials) and Attali (with a focus on orchestra conductors in 1913) both explain how bodies are adjusted to the musical commands of leaders. The drum serves as a reminder and driver of movement, which ought to be respected with the utmost discipline. Foucault, in particular, emphasises the role of the drum in organising action, rhythmically, through marches. The repetitive beat of the drum, combined with highly regimented drills, forces the body to conform to a particular pattern. This plays a role in disciplinary power, insofar as the actor becomes docile, meaning that they are both useful and obedient. This also strikes some similarities with research conducted by cultural sociologist Paul Willis (1978) who finds that activities (fast motorbike riding) were strongly connected to the tastes of bikers, who listened to fast rock music. This music, of course, is characterised by a strong beat and pulse, which in turn compelled the bikers to drive faster (1978: 73).

Curiously, in my data, the aesthetic content (speed, repetition) of these genres did converge with the nature of the task. Work-related tasks that needed completing at a fast pace were connected closely to the repetitive fast beats contained within drum and bass or techno music. In this sense, they formed what DeNora might refer to as “music’s structuring properties”, which are “actualized in and through the practices of musical use, through the ways music was [is] used and referred to by actors during their ongoing attempts to produce their social situations” (2000: 5-6). Music materialises in these cases as a force conditioning bodies, which in turn enables agents to perform labour at a faster rate. In this sense, music and its rhythmic structure synchronised with the speed of their labour to produce my participants’ social situations. This in turn, suggests, that music is used as a ‘tool’ that people use to shape their environment and actions within that environment. The inherent properties of the music, in this case, tempo, closely interact with human behaviour and practices. That is, the speed of music facilitates increasing the speed of work. The body, as I have stated, also plays a fundamental role within this convergence between the object (music) and the action (work), since music acts as a force that compels us to perform bodily functions, in this case, working at a faster pace and in aiding concentration. My data insights here point to unique ways in which music’s function as a structuring device is actualised in the performance of the actor.

But whilst these properties may be interpreted as a benefit, namely, as enhancing the actor’s performance to get them ‘into action’ during work, there also exists a more problematic side to this relationship between music and productive labour. Indeed, if music is being used to increase better output and provide a distraction away from the monotony and tedium of what Jeff (who works as an environmental assistant warden) describes as “boring data input”, it can simultaneously also result in higher rates of productivity. The rewards, in turn, are, ultimately,

appropriated by the business owner who then benefits from a more productive workforce. From a Marxist perspective, therefore, it becomes clear how the practice of listening to music at work can become instrumentalised for capitalist ends (see Marx, 2010 [1867]: 120-136). Numbing the reality of work keeps the actor at bay.

Music, in this sense, can keep the actor at their chair and at their machine. In providing them with more “energy” to work, music is used as a tool by my participants to remain distracted. They are, however, still subjected to its control, since deciding not to listen to music might result in less productivity, which has the potential to make the tedious reality of work more noticeable through the passage of time appearing faster. It is important to stress however, that the worker is not politically onside in any straightforward sense, but rather suffer from the existential dilemma of using music to maintain productivity, even when they are uninterested in what they are doing for work. The pressure to use music as a device to increase productivity for the actor (though not always consciously) consequently reveals nuanced ways in which control might be imposed or exerted, both through the music itself and the social situation the individual is in.

As I have mentioned, the notion that music is instrumentalised for capitalist ends resonates with the line of argumentation pursued by Adorno (Adorno and Horkheimer, 2016 [1947]: 120-167; Adorno, (1962 [1997]) within his analysis of capital in the totally socialised society. Music here functions as a “comfortable distraction” which operates as a distraction for dealing with what Adorno refers to as “atomization”, a concept that describes how capitalism, and the culture industry, in particular, fragments social bonds and isolates individuals from one another (1997 [1962]: 15) According to Adorno, recorded, commercialised forms of music, are present in “occupying men’s [or women’s] senses from the time they leave the factory in the evening to the time they clock in again the next morning with matter that bear the impress of the labor process they themselves have to sustain throughout the day” (Adorno and Horkheimer, 2016 [1947]: 131). As he also argues in a later essay, ‘Free Time’, originally published in 1963, it is during this time between working hours, that music is listened to for the “recreation of expended labour power” (Adorno, 1991 [1963]: 189). Music thus plays a fundamental role in recharging the batteries of the exploited working classes. Crucially, though, during leisure time before the next working day.

However, whilst Adorno primarily referred to the role of music in helping regenerate labour power *after* the working day (Adorno and Horkheimer, 2016 [1947]: 131), keeping them functional and compliant, my data here illustrates a shift towards the potentially more radical role of music which is being used *during* the working day to harness and enhance productivity. This points in distinct directions, not solely because it demonstrates how music occupies a

more ubiquitous role within our daily lives but also because it points to how users may willingly use music as a device to generate productive labour and therefore (but perhaps also inadvertently) satisfy the demands of profit driven capitalism. Because music is actively integrated into the labour process itself, the user's reliance on music during work, therefore, puts the subject in a difficult position. The distraction of the individual from work *via* music both masks or obscures the monotonous reality of work and labour processes (for instance, Jeff's reference to 'boring data input') but, at the same time, also contributes or enhances its formation. This highlights the paradoxical role of music, as both a form of escapism and a reinforcement, that is, a driver of productive labour.

Again, whilst the format might have appeared to my participants to play a more trivial or superficial role within these practices, it was, in fact, fundamental to the development of their listening habits. This in turn reveals that the meanings ascribed to digitally compressed music, whilst instrumental to understanding one's listening habits, frequently operated a level that was largely unconscious and implicit for my participants. In Jeff's case, digitally compressed music files enabled him to consume music at work with greater ease and convenience. He could easily select a two-hour liquid drum and bass mix on YouTube, BBC sounds, or SoundCloud and then hammer through his data-input for a couple of hours. If he was, however, opting to listen to an analogue vinyl record, then more effort would be required, since he would need to set the turntable up, move away from his desk and flip the vinyl over, etc. This would divert his attention away from his work task and in turn slow down the rate of his input. By the same token, my participant Joel, who worked as a builder for a construction company, would often listen to drum and bass via Spotify on his phone at building sites. The compact and portable characteristics of these files enabled him to consume music again with ease and convenience. Although he was not tied to a desk like Jeff, the close proximity of his phone and the digitally compressed files stored on it enabled him in his words "to get the job done quicker". Whilst these passages do reiterate the importance of the format, it is also important to understand that the meanings that they are ascribing to their listening habits point to a divergence between the participants' subjective understanding of the formats influence and its objective influence on their listening habits.

5.6 Activities: Studying

In some ways, there was a close parallel between using music to speed up productivity with work and using music as a tool to speed up the processes of studying. The genre of music also played a vitally important role in enabling my participants to get into action and to transition from one mood to another. For example, Esme (Drum and Bass FG) associated fast

music with a sense of urgency. She reflects on her time during busy assessment periods at university and explains:

“I listened to more fast-paced music when I was like writing an essay, and obviously the essay would be my primary focus because I’d be thinking about what sentences I was writing or forming. But I think the tempo of the music would help me keep, like, ‘okay, I’m going to keep this speed going through it and I’m gonna keep typing’. Whereas when I was doing research or revision, I listened to like slower music. And again, it’s like, if I was reading or revising, it would be the focus, but I’d have that kind of like calming tempo”.

The tempo, in Esme’s case, would be adjusted according to the demands of the situation. She would set the tone carefully by selecting music that matched the time-constraints of the task. The tempo of the music was treated, in some ways, as a tool to help her meet the deadline by which the task needed completing. This was emphasised by Esme’s comment that “I left all my essays to the last minute, so I had like a number of hours to write them”. Music that was characterised by a faster tempo, in effect, was meant to drive her to work at a faster pace to meet deadlines. The music provided a constant pulse, which, in turn, reminded her to keep working at a high speed.

Although the music, in her words, was not “the primary focus”, it did function somewhat as a tool or reminder of what lay ahead. The beat here might be compared to the role of a ticking clock in aiding concentration or focus. Equally, music provided a disciplinary tool for Esme, in allowing her to remind herself that she was only hours away from a deadline and must therefore write with as much efficiency as possible. The notion of disciplinary power, developed by Foucault (1991 [1975]); (2006 [1973]), offers a useful framework for helping to understand Esme’s case. According to Foucault, disciplinary power provides a regulatory function, by structuring individuals’ behaviour through organising space (e.g. architecture) (1991 [1975]: 249-255), time (e.g. timetables) (1991 [1975]: 220) and people’s activity (drills, posture, and movement) (1991 [1975]: 135-36). Foucault (2006 [1973]), for example, refers to how, in the Eighteenth Century, workplace discipline in factories is governed by rules that prohibit music: “hymns sung while working must be sung quietly so as not to disturb one’s fellow workers. There are regulations against telling bawdy stories when returning from lunch or dinner, because this distracts the workers who will then lack the calmness of mind required for work” (2006 [1973]: 51). Music was perceived as resulting in a distracted workforce. Distraction, in turn, results in a lack of discipline, which makes work harder.

Esme’s case, however, illustrates that whilst music was still a distraction, it in fact, *enhanced* discipline, making essay writing easier. Whilst one may describe her use of music here as one that accords with “background” listening (Clarke et al. 2010: 65) (since music was not the

primary focus), it did operate as a device to aid the speed at which she was typing. The operation of disciplinary power in Foucault's sense was also particularly evident through the ways in which Esme's bodily movement would shift depending on the nature of the task (e.g. revision compared with essay writing). Notably, her pace would speed up when the time approaching the deadline for an essay became thinner. The act of increasing the pace of one's typing is illustrative of how one may adjust one's body according to intrinsic time pressures. The connection between music, format and task remain fundamental components within this relationship between work, speed, and discipline. Without music, Esme admits, she would have found it very difficult to motivate herself when approaching deadlines. It was a tool that enabled her to get into action and to focus. The format, too, whilst it may appear, at first sight, a more trivial or latent element, it does play a crucial role in allowing us to understand how these practices emerge. Although my data did not appear to speak directly to the connection between the aesthetics of compression and distraction (as I have outlined previously, see Devine, 2013: 164), there were ways in which their practices were facilitated by the format itself. This was seen through Esme's practical control over her music selection, which enabled her to flip easier between genres depending upon the nature of the deadline (e.g. exam revision = slow music, essay = fast music). She was also able to control her music often without leaving her laptop. As was the case with Jeff, if Esme was listening to music via CDs or vinyl during work, leaving her desk would have inhibited her ability to maintain a fast-typing speed. Moreover, it would have been harder to concentrate on a particular task, especially when considering that my data points to vinyl listening as an experience that requires *more* attention from the listener.

5.7 Conclusion

As I have demonstrated through the analysis of my data, my participants appeared to approach their music selection with a considerable degree of reflexivity. They associated particular musical properties (e.g. genre, tempo, lyrical [or lack of lyrical] content) with forms of being or doing. Their music listening habits were, among other things, conducive to generating speed and aiding concentration or provided a strategy to alleviate boredom through distraction. While music might provide a catalyst for identity formation (see Bourdieu, 1984), it also allows us to get into action and it enables us to navigate our everyday lives with greater ease.

This chapter has therefore illustrated *how* my participants engage with music, with particular focus on two activities: music listening during work and music listening during studying. Overall, I found that attention and distraction has served as useful conceptual categories for exploring their listening habits. Crucially, I have found that the format has played an important,

albeit more latent role within these constellations of listening. Participants often did not realise the importance of digitally compressed technology in allowing them to listen to music in specific ways. This insight is revealing, insofar as demonstrates how digitally compressed music was crucial to participants' daily practices, yet commonly taken for granted. Although my participants often were not concerned with the technical details of how digitally compressed music was delivered (see sound quality chapter for a more in depth discussion), their deployment of such technology with reference to particular activities, for example, work and studying, revealed subtle ways in which the format does allow them to "get into action" (DeNora, 2000).

It is also worth noting that my participants were not actively aware that the compression of audio is thought to be well suited to activities that typically involve 'distraction'. As I have previously discussed in the literature review and sound quality chapter, scholars (see Devine, 2013; Sterne, 2012) have argued that compressed music tends to be more suitable in situations where participants appear to be distracted. Sterne has observed from his research on the listening tests that were instrumental to the design of the MP3, that people were focused on "hearing the codec" at work, rather than the music itself (2012: 153). Likewise, Devine (2013) notes that compression tends to sound better in environments where casual listening is the norm, since it is "consistently louder" and therefore more noticeable for listeners. My data insights did, somewhat, appear to confirm the notion that compressed formats facilitate distracted listening, insofar they were commonly used to facilitate listening in environments where they were doing something else. This did not was, however, it should be noted, driven by an aesthetic preference and pre-occupation with sound quality, but rather, but, rather by the practical considerations of convenience.

Finally, as I have shown through my interpretation, the distinction between digitally compressed formats and vinyl listening in this chapter has demonstrated that different ways of listening are often facilitated by the (non)material characteristics of the format. The format thus played a significant role in constructing ideal listening scenarios for my listeners, which, in turn, informed how they engaged with music. In the following chapter, ownership and control, I will consider the material characteristics of formats in greater detail, among a series of other important reflections.

6. Ownership and Control

6. 1 Introduction

In this chapter, I will explore the final theme that emerged from my data gathered from my focus groups, namely the theme ownership and control. This theme, which speaks to a number of key controversies regarding the politics of music ownership, and control over listening practices more broadly, will foreground meaning making at the heart of these discussions. This is imperative given that ownership and control featured prominently in my participants' ascription of meaning to digitally compressed music. In this chapter, I shall explore how my participants, through their discussions about owning and controlling their music libraries, revealed their meaning making processes in relation to digitally compressed music. I will explore how a series of prospects and challenges for my participants in their consumption of digitally compressed music often relate to the changing landscape of the digital era. To investigate these matters in depth, I will first explore how scholars have addressed the issue of ownership and control. It is worth noting that the debates on these issues are complicated, multifaceted and often centred around how the mechanics of the digital economy have shaped the music industry. Whilst scholars have illuminated the distinct political dimension of these themes, I shall argue that they often tend to neglect the processes of meaning making that listeners are engaged in. Empirical data should be considered to see how these political dimensions might reappear within the context of the everyday listener's ascription of meaning.

Keeping this in mind, I will argue, as I have before, that objects (e.g. formats) and art (i.e. music) do not *determine* meaning per se. Rather, meaning was often framed in the context of my participants' experiences. This is important to consider because experience helps people to understand and interpret the world around them. The meanings ascribed to technology are often framed within the context of how people engage with the material world. As I have argued in opposition to Sterne's (2012) analysis, we cannot derive meaning directly from the object but should consider people's subjective interpretations when assessing *their* processes of meaning making. In this chapter, I will argue that whilst some of my participants did demonstrate a capacity to exercise moments of resistance and challenges against mainstream modes of listening, ultimately, experience is still very much situated in an age of corporate control. This was something that my participants were simultaneously aware and critical of. However, despite a critical awareness of the current climate of digital listening, fundamentally, it is worth noting that many participants felt as if they had to conform to the pressures and demands of corporate power due to its underlying affordance of 'convenience'. Indeed, the ease of use afforded by technology today meant that many of my participants'

critiques of the shortcomings of the digital landscape had been eclipsed by notions of convenience.

6.2 The ownership and control of music in the digital era

Today, digital music consumption is at an all-time high. Data from IFPI (International Federation of the Phonograph Industry) (2023) reveal that 73% of people listen to music via licensed audio streaming services. ‘Traditional’ music purchases, for example, of CDs, vinyl or cassettes, only accounted for 9% of music sales (IFPI, 2023). Digital music consumption, and streaming in particular, remains hugely popular in today’s climate. Many people listen to recorded music via subscription-based audio streaming services, such as Spotify, Apple Music or Melon (South Korea’s largest music subscription service) (32%), but also through video (both long-form and short-form) streaming platforms, such as YouTube and TikTok (31%) (IFPI, 2023). Digitised music and the internet remain bedfellows in helping to facilitate listening practices today. They do so predominantly by virtue of streaming. It is no surprise, therefore, that scholars have referred to the contemporary climate as the ‘digital age’ or ‘digital era’ of music consumption (Rogers, 2013; Bartmanski and Woodward, 2020), with digitisation being heavily integrated into people’s listening habits globally. Those commenting on the digital economy have also used terms like “the weightless economy” (Quah, 1996) and “the intangible economy” (Haskel and Westlake, 2017) to describe how ongoing dematerialisation represents capital flows in bits and bytes, rather than in a concrete physical and material form.

In many ways, digital music consumption is an extension of these larger ongoing processes of dematerialisation. Digitally compressed audio files are encoded in bits and bytes, in binary digits, ones and zeroes. This does not represent sound per se, but indicate carriers of digital information. Notably, digitally compressed audio files are distinct from their ‘tangible’ predecessors (vinyl, cassettes, CDs), insofar as digital files cannot be touched physically. Whilst scholars have accurately noted how this presents a wider reflection of a culture geared towards the “miniaturisation and portability” of music formats (Theberge, 2001: 23), this has led some scholars (Magaudha, 2011; López, 2013) to also characterize the current state of music consumption as one associated with “dematerialisation”. Although these authors are not ultimately convinced that “dematerialisation” captures the full complexity of the situation (especially given that we still live in a society where the physical bearers of music dominate, phones and laptops being ubiquitous examples), they do recognise that the proliferation of digital audio has complicated the realms of what we might mean by ownership.

Indeed, López (2014) notes how the “original” and the “copy” have shifted due to the reproduction of identical digital audio files. According to López, “original” music may be represented through the object of the master copy, and musical copies through its duplication,

traditionally indicating a referential but non-identical reproduction of the original. This could exist, for example, as digital copies of analogue recordings, or live performances as representations of musical scores (see Adorno, (1978) [1932]: 146; Cook, 2013; McCormick, 2012: 724). With digitally compressed music, though, we experience a paradigm shift: the traditional preservation of one or a few material “master” embodiments is substituted by potentially an endless multiplication of entities, each one of them with exactly the same capability to be a “master” (López, 2014: 98).

He explains in further detail: “the making of copies apparently also remains in place after this analog-digital dematerialisation (again, even more so, due to the ease, accessibility and ‘immateriality’ of this process). But it is precisely here where a fundamental change has taken place: while an analog copy is indeed a copy because it is not identical to the original (by means of noise incorporation in the duplication process), there is not, in essence, such a thing as a digital ‘copy’ of an already digital ‘original’ (other than in a virtual or metaphorical sense). Instead, in the digital realm we have an identical replication without noise, a *clone* without *recombination*, a multiplication without unique reference. The fundamental difference is of course not ‘sound quality’, but the qualitative change in [the] ontological, economic, and even political status of the ‘original’ and ‘copy’ in this realm” (López, 2014: 93, emphasis in original).

In practice, this means that the distinction between the original and the copy breaks down. To “own” a digital download would mean owning a container of digital information that is identical to the original as soon as it has been duplicated. To build on López’s earlier point, digitisation has the power to subvert surrogate representations of reality, insofar as the mass duplication of compressed digital audio files do not imitate an original, but rather clone it. These processes have political and economic implications as digital files generate, by virtue of technology, the capacity to distribute “non-rivalrous” identical files, without limiting other people’s consumption (see Katz, 2010: 183). In theory, everyone using a streaming platform would have access to *the same* file. What this means, among other things, is that the feelings ascribed to ownership may shift, following novel forms of digital re-production. Downloading a digital file would entail ‘cloning’, rather than ‘taking’ a file from a finite pool of commodities. This technological innovation overturns previous modes of consumption where rare pressings of vinyl copies, for example, may drive the consumer’s quest for originality. Scholars have paid less attention, though, to how *listeners* feel about how these shifting relationships between the original and the copy play into the meanings that they ascribe to the ownership and control of digital formats. As I have reiterated throughout the thesis, it is crucial to consider how meanings can be constructed by the actor. We ought, therefore, to move away from the notion that meaning is lodged in the object itself to how meanings are ascribed to digitally compressed music by people who actively engage with it

According to Beer (2008), whose ideas I have also discussed in the literature review, the proliferation of digitally compressed music also changes how we think about ownership, as it marks a departure from owning music materially in the form of a traditional record collection towards circumstances in which music is reconfigured as a non-material “virtual artefact”. Here Beer highlights how music is not ordered physically through an album collection, but as “menus, lists and playlists” (2008: 78). Beer draws on Benjamin’s (1968 [1931]) essay ‘Unpacking My Library: A Talk about Book Collecting’ to explore how the practice of record collecting is embedded with feelings that are ascribed to the material properties of sonic artefacts. The possession of material things is often “immersed in memories and narratives” (Beer, 2008: 75). The connection that one has with things emerges not from the text or the music alone, but from the “unique relations that the collector has with that particular *object*” (2008: 75, emphasis added). Like Benjamin, who reminisces about the biographical events (1968 [1931]: 67) that he associated with his book collection, Beer considers how the practice of ‘unpacking’ his CD collection performs a similar function in recollecting past events. He writes: “in the case of music, for instance, I have CDs in my record collection that still have stickers on the case from a small independent record store in Derby city centre. These labels bring to mind memories of times spent, during my youth, riffling through the shelves of the store, an experience that is recalled merely through the presence of these sticky labels” (2008: 75).

Beer argues that physical collections are often tied to our memories, trajectories, and feelings of nostalgia. Yet, it is unclear how digital artefacts fit into this relationship between affect and the object. Does the same apply when we consider digital collections? This opens further potential avenues for interpretation when we consider music ownership in the digital arena. Beer claims that the MP3 revolution should be taken seriously since it “affords a series of cultural *reconfigurations*, the transformation and redefinition of the materiality of the artefacts of consumption, and *recontextualisations*, the alteration, mobilisation or realignment of the time and space of the musical experience” (2008: 74, emphasis in original). He is primarily concerned with how iPod use redefines people’s practices. Digital music technologies often tend to mask or conceal the understandings, rituals, or identity forming properties attached to musical experience, thus hiding behind what he refers to as a “veneer of simplicity” (2008: 72). What he means by this is that the complex practices that are linked to musical experience (e.g. ripping and burning, spatial mobilities, practices of collecting) are commonly obscured by the technology itself (Beer, 2008: 81). We tend, according to Beer, to think about the object itself rather than the practices associated with or enabled by the device. He claims that “its sleek and seductive design (and marketing) is a distraction from the complexity of its processes and practices as it becomes incorporated into everyday life strategies” (Beer,

2008:80). Thus, more should be done to explore how such objects redefine the mundane routines embedded within everyday life.

Indeed, researchers have not paid much attention to the meanings that an individual attaches to their consumption patterns in the digital age, according to Beer (2008) because the practices associated with music listening (e.g., practices such as music collecting/archiving, ripping and burning) are frequently and particularly in the digital age, concealed by the object itself. To illustrate how these practices occur, Beer draws on the work of Hayles (1999), using the concepts of “inscription” and “incorporation” to develop a “theory of iPodding” (see Beer, 2008: 79-84). Inscription refers to the practices that “correct and modulate the performance” and “incorporation” refers to practices that “perform the bodily content” (see Hayles, 1999: 200). To substantiate his points, he refers “to the search and navigation functions of the software” as an example of inscription and “soundtracking a walk to work” as an example of incorporation (Beer, 2008: 82).⁶⁰ Beer’s theoretical interventions here do help us in understanding how practices are influenced by digital technologies and related to materiality. However, such research does lack involvement with empirical material. This necessitates a more thorough engagement with empirical data to understand how dematerialisation might affect the everyday meanings that people ascribe to music.

6.2.3 Copyright, the changing contours of the music industry and ethics

It is worth noting, however, that ownership has also been explored through other ways in the literature (Haupt, 2006; Katz, 2010; Marshall, 2015b). Rather than merely identifying ownership with the possession of an object, it is important to recognise that ownership also refers to the legal fact, namely the right of control, which is protected under copyright legislation. Whilst one may possess or own the physical bearer of the music (e.g. a vinyl, a CD, a phone or a computer), consumers are not the ‘legal’ owners of music products. Nor are they the copyright holders. This is, rather, enshrined through copyright law, which “offers protection for cultural expressions that are original” (Marshall, 2015b: 288). These protections underscore control. This means that “a copyright holder is entitled to sell that copyrighted work, to reproduce it and authorize others to reproduce it, to generate derivative works from it (translations, remixes, etc.), to perform the work publicly, and to seek legal remedies when these rights are violated” (Katz, 2010: 200). Control *can* be violated through the unauthorised duplication and distribution of copies. This is something that the record companies argue is tantamount to theft, even though many people do not see it this way (Marshall, 2015b: 296;

⁶⁰ Other examples of inscription, drawn from Beer, include “data search and retrieval”, “the internet and it’s governance”, “specialized MP3 software packages” and “previous technologies (radio, tape, telephone)” (2008: 82). Other examples of incorporation include “music collecting and collections”, “cultural events and participation” and “ripping and burning” (2008:82). According to Beer, these objects, infrastructures and practices are invisible and obscured by the presence of the iPod.

Katz, 2010: 200). Katz explains that because the rights to music often reside with powerful record companies and publishing companies, offenders potentially face prosecution for reproducing and distributing music without the permission of the copyright holder. Fines have historically been the method of punishment for infringing copyright law, but jail-time also serves as a potential penalty (Katz, 2010: 196).

This legal angle therefore complicates what might be *meant* by ownership and control, illustrating an analytical shift away from the material and non-material relationships that people have with music, towards one that is codified through legal protections. These legal protections, which uphold the power imbalance between the interests of corporate organisations and the consumer, for example, through enforcing restricted access and use of music⁶¹, have been documented extensively by scholars (Lessig, 2001; Marshall, 2002). Although scholars have highlighted that historically the problem of copyright violation has been a battle that the major labels have fought since cassette tapes rendered the reproduction of recordings more convenient in the 1970s (Sterne, 2012: 206; Lessig, 2005: 69), the early 2000s saw copyright infringement trigger fresh debates (Marshall, 2002; McCourt and Burkart, 2003: 334). These discussions primarily focused on how the combination of MP3 technology and P2P (peer-to-peer) file sharing had facilitated piracy. As I have also outlined in my literature review, scholars have noted how the consumer's opportunity to engage in practices of music sharing in the early 2000s were unprecedented (see Burkart and McCourt, 2010: 334). Yet whilst this combination undoubtedly reduced barriers to music consumption, the major record labels, on the other hand, rejected how consumers took advantage of technological innovation. To counter the acquisition of free MP3s on P2P sites, a series of lawsuits were launched against P2P file sharing companies, most notably against Napster, which ceased its file sharing service in July 2001.⁶² The argument put forward by the record companies was that the unlawful acquisition of music posed a threat to sales. Ironically, this was in spite of the fact that CD sales actually rose during the early 2000s (Katz, 2010: 190)

An analysis of the Napster era of the early 2000s offers a series of political insights that are related to the ownership and control of music in the digital age. As I have discussed in the literature review, Richard Barbrook (2005), for instance, has explored how the internet and the digital commons offer novel ways for individuals to engage in "gift exchange" (see Mauss,

⁶¹ There are numerous ways in which this power imbalance materialises. Digital Rights Management (DRM) technologies, for instance, can be used to enforce copyright by prohibiting the playback of music on devices through encryption software (see Hesmondhalgh and Li, 2024: 12). Another example worth noting is the asymmetric legal relationship between companies and consumers. Large record companies have the capital to launch legal challenges against those who download illegally, whilst those on the receiving end are often unable to defend themselves (see Katz, 2010: 197).

⁶² *Metallica vs. Napster, Inc.* (2000) was the first case brought to court involving a musician suing a P2P file sharing company. Later Napster was sued again by A&M records in *A&M Records, Inc. vs Napster Inc.* (2001). They were both landmark cases which upheld the power of the record companies in retaining copyright ownership.

2002 [1925]). Barbrook calls this the “hi-tech gift economy”. In many ways, P2P file sharing platforms, albeit less popular now, reflect utopian ideals⁶³ that posit a move towards the exchange of information for free rather than its sale as a commodity. This was premised upon the principle that it is possible to live in a society that subverts the state and the market. According to Barbrook, “for most of its users, the Net is somewhere to work, play, love, learn and discuss with other people. Unrestricted by physical distance, they collaborate with each other without the direct mediation of money or politics. Unconcerned about copyright, they give and receive information without thought of payment. In the absence of states or markets to mediate social bonds, network communities are instead formed through the mutual obligations created by gifts of time and ideas” (Barbrook, 2005). P2P file sharing is a key example of where ‘gifts’, namely digital music files, are exchanged for free, yet in contrast to gift exchange according to Mauss (2002) [1925], who posits gift exchange as an “obligation”. But whilst Barbrook does acknowledge that many users participate in practices of gift-exchange for “entirely pragmatic reasons” (and may be aware or not of their political and economic implications), the internet provides, for him, radical normative potential to undermine traditional economic models associated with ownership and intellectual property (Barbrook, 2005).

By extension, Haupt (2006), whose ideas have also been explored in the literature review, is more insistent in his analysis, claiming that although MP3 file sharing offers users more agency and convenience, it can also provide a political tool for those wishing to undermine the power and authority of corporations. He states that “consumers were now able to bypass conventional retail outlets and access only those songs on specific albums that they preferred, as opposed to buying the entire album” (2006: 116). According to Haupt, file sharing is “counter-hegemonic” insofar as it represents a viable opportunity for artists⁶⁴ and listeners to bypass the major record labels, who are traditionally viewed as the gatekeepers to music (2006: 116). He compares the Napster challenge to Hip-Hop producers’ use of digital sampling in the late eighties and early nineties, arguing that “the significant uptake of mp3 technology among end users marks a return to some key fears that the Big Four labels [Empire-Universal Vivendi, Sony-BMG, AOL Time Warner, and EMI] faced when they challenged hip-hop artists’ use of digital sampling technology in earlier legal battles” (2006: 108). To make his case, Haupt (2006) adopts Hardt and Negri’s theory of ‘Empire’ (see Hardt and Negri, 2000) to liken the major record labels’ control over music production and distribution to that of Empire and suggests that it is reminiscent of imperial control over resources in global capitalism. In

⁶³ These utopian ideals, Barbrook argues, are informed by the situationist movement in France (see Debord, (1994[1967])).

⁶⁴ This might be seen, for example, through unsigned artists uploading their music for free to P2P file sharing websites.

locating “agency”, he draws on Hebdige’s (1979) ideas surrounding cultural literacy, rebellion and deviancy to assert that users of P2P file sharing sites’ subversive use of commodities represents a threat to traditional modes of ownership. This is in spite of the fact that the short-lived hype of Napster was ultimately won by the record companies through a process that Hebdige and Haupt both refer to as “recuperation”, namely a process whereby previously un-commodified units of consumption (in this case ‘pirated’ MP3 files) are then appropriated by capitalists and sold as commodities (Hebdige, 1979: 94; Haupt, 2006: 113).

Today, however, the prominence of digital downloads has decreased, meaning that the political elements associated with the consumption of digital music should be reconsidered. Hesmondhalgh and Meier (2018) note how from 2008 to the present day, the consumption of digital music has occurred mainly through cloud-based streaming platforms rather than via digital downloads (which was predominant from 1999 to 2008) (Hesmondhalgh and Meier, 2018: 1564). Here the contours of ownership change for the consumer: music is not purchased in the same way that a physical album (or even a digital track) might be bought by the consumer and then preserved in a record collection or playlist, but rather music is ‘rented’ by the individual. According to Marshall (2015a), the streaming climate today demonstrates a “significant reconfiguration of recorded music consumption, from being based on ownership of music to being based on access, renting rather than buying records” (Marshall, 2015a: 179; see also O’Dair and Fry, 2020: 65). No studies, exist, however of how the listener ascribes meaning to digitally compressed music with regards to ownership when these dynamics change. It is therefore worth exploring how they might conceptualise ownership in an age where music is ‘rented’, rather than ‘purchased’ through traditional means.

Various scholars have commented on a broader trend towards “rentier capitalism” (Christophers, 2022; Sadowski, 2019). They have focused on how the changing landscape of the digital economy, e.g. the rise of big data and rent extraction, has led to shifts in the mechanics of how companies generate capital in contemporary society. Legal scholars Perzanowski and Schultz (2016) have echoed these discussions, going as far as to characterize the current condition of rentier capitalism as one signifying *The End of Ownership*. They claim: “all of this talk about ownership assumes that we will still be buying music, movies, and books in the near future. If current trends hold, however, *a la carte* purchases could soon be the exception rather than the rule. Every day, more people are choosing digital subscription services over individual purchases” (Perzanowski and Schultz, 2016: 48). They note that commodities, for instance music, film, or books, are not necessarily purchased or owned by consumers but are rather ‘rented’ by us through end-user-license agreements (EULA). These agreements are commonplace for companies like Amazon,

Spotify and Apple Music⁶⁵, which enable users to access services (e.g. music, films, books) when they sign a contract at the beginning of a subscription period. This signals a shift not only in the relationship between the object and the user, but also in how labels of ‘ownership’ may muddy the waters in an age where individuals are moving away from traditional modes of acquisition.

For Perzanowski and Schultz, whilst these shifts may seem innocuous at first glance, they do carry significant implications for the power that an individual or service may exert over our digital libraries. For example, these agreements enable companies to effectively ‘wipe’ people’s access to content, as occurred in 2009, when Amazon erased George Orwell’s *1984* from people’s Kindle devices (Perzanowski and Schultz, 2016: 1). This is in stark contrast to the traditional market-model, where individuals, although prohibited from making copies, have personal ownership over things “to do with as you chose” (Perzanowski and Schultz, 2016: 2). It would seem absurd to imagine that a representative from UMG (Universal Music Group) comes to my house overnight and takes away my vinyl copy of Pink Floyd’s *Dark Side of the Moon*. In today’s landscape, however, the possibility of losing one’s access to music does not seem fanciful. This is because in cloud-based streaming models, we simply do not own the physical bearers of music, but instead rent access to music in the form of a subscription ‘service’. Often these services can exercise considerable control over access. Perzanowski and Schultz (2016) explain that:

“although we call them subscriptions, these services don’t have much in common with analog magazines or newspaper subscriptions. If you decide not to renew your *National Geographic* subscription after a year or a decade, you still own the stack of issues they’ve sent you. If you cancel your Spotify subscription, you don’t keep anything. Instead, the digital subscription model allows you to pay a flat monthly rate – or patiently endure advertisements – in exchange for access to large libraries of streaming content. And for many of us, that’s an attractive proposition” (Perzanowski and Schultz, 2016: 43).

Subscriptions to services like Spotify, Apple Music, Deezer and Tidal form the overwhelming basis for these companies’ revenue (Marshall, 2015a: 182), which, in turn, has contributed to their success. Indeed, the market model for consumption today is based on a framework where access to music is secured by continual rather than one-off (unlike the iTunes store) payments, which, in turn, maintain these streaming services and allow them to be profitable. Data reveals that Spotify has an estimated 236 million premium subscribers (Statista, 2024), whilst Apple Music had 93 million (Demand Sage, 2023). These numbers point to a large user-

⁶⁵ Services like Netflix could also be mentioned here.

base today, which also demonstrates the popularity of streaming services and how they have attained success through attracting customers and, in many cases, sustaining their loyalty.

This popularity is perhaps unsurprising due to the affordances associated with streaming platforms. Spotify boasts that listeners can discover, manage and enjoy up to 100 million tracks, 6 million podcast titles and 350,000 audiobooks (Spotify, 2024).⁶⁶ On the surface, users encounter a considerable amount of choice, immediacy and convenience, with cloud-based streaming services enabling users to listen to music on demand. The affordances associated with the streaming model thus set it apart from previous modes of consumption, where users could listen to music on the move (see Bull, 2000; 2007) but were constrained not by the lack of an internet connection but by the limited storage capacity of devices like The Walkman, iPod and later Apple iPhone (see Perzanowski and Schultz, 2016: 43). Furthermore, the possibilities afforded by cloud-based streaming have mitigated the challenges associated with earlier formats, for instance piracy and the iPod, much to the delight of the major record labels, who have, according to Marshall (2015a), “been very supportive of both Spotify and on-demand streaming more broadly” (2015a: 184). This is partly due to advancements in technology and Spotify’s ability to monetise existing user behaviour.

But whilst the major record labels’ attitudes towards consumer behaviour signal a shift in adapting to technological advancements to make it work for them, the streaming market model is not without controversy (Marshall, 2015: 177-189). Marshall (2015a), for instance, explores how companies like Spotify have “received a large amount of criticism, most notably from artists about the levels of remuneration they receive from the service” (2015a: 179). These criticisms, mostly by artists and songwriters, are levelled against the royalties accumulated from individual streams, which amount to paltry payments per stream to the artists. They reflect deep-seated anxieties surrounding the perceived value of music and the ethics associated with ‘fair’ payments. According to Marshall, “musicians argue that on-demand streaming services undermine sales of digital files and physical media and, therefore, they are not a financial model that can sustain their musical careers” (2015a: 181). Current data reveal that artists earn approximately between \$0.0003 to \$0.0005 per stream, which amounts to roughly \$2,185.00 per 500,000 streams (Ditto Music, 2024). To earn the monthly minimum wage in the U.K. (see Gov. UK, 2024), an artist would need to accumulate around 105,000 streams a month, a figure simply unsustainable for smaller and often unsigned artists.⁶⁷ It is often the bigger artists and record labels that profit from Spotify streams, with more than 99% of audio streaming consisting of ‘streams’ for the top 10% of tracks (Beaumont-Thomas and

⁶⁶ Likewise, Apple Music celebrates a catalogue containing 100 million tracks (Apple Music, 2022).

⁶⁷ They would need to reach 1,256,900 streams per year. It is also worth noting that approximately 70% of revenue is paid to rights holders, with Spotify taking a 30% portion of the pie (Marshall, 2015a: 182).

Snapes, 2018). To put this into perspective, Ed Sheeran earns around £5 million a year from streams of his song 'Shape of You' (Sanderson, 2022).

According to Marshall (2015a), whilst, *prima facie*, streaming platforms might be perceived as a disruptive force within the music industry, on closer inspection "the recorded music landscape in the streaming era is beginning to bear many similarities to that of the CD era: financial success depends upon scale and catalogue, the major labels have a stake in music distribution networks, and the vast majority of artists do not make any money" (2015a: 186). Whilst criticisms from artists are well known, it has remained unclear how listeners view these changes. In sociological research, there is a lack of understanding of *how* the listener might conceptualise critiques associated with music consumption in the digital era. Addressing this lacuna is important, especially given how ubiquitous streaming is today. Just as scholars have interpreted how changes in cyberspace (Barbrook, 2005) and music consumption (Haupt, 2006; Katz, 2010) have the potential to deliver scope for resistance in the era of P2P file-sharing, more empirical attention is also needed to understand how ideas of ownership and control play a role in the listener's ascription of meaning.

This is the task of this chapter. I will explore the role that notions of ownership and control play in the ascription of meaning to digitally compressed music. Whilst the literature I have surveyed does contain a series of insightful interjections about how material and legal relationships have shifted in the last twenty-five years, they often neglect the micro processes of meaning-making that are constructed by the listener. Analysis, instead, often focuses on the macro implications of the digital age, notably on how rapid changes in the music industry have affected consumption patterns and listening habits (Pederson, 2020). Very little attention has been given to how everyday *listeners* make meaning in light of these transformations. In my analysis, I will provide a comprehensive analysis of how these two themes illuminate numerous key sociological insights about how the individual ascribes meaning to music. As I have stated, these themes are complex and multi-faceted. My data interpretation thus adopts a Weberian (2012 [1914]) framework where meaning is not considered a fixed entity but something that is situated through contextual factors, such as time and place. To organise my analysis, I shall focus on various sub-themes that emerged throughout my data analysis: materiality, control, awareness and critique of corporate power, resistance and conformity .

6.3 Materiality

Materiality was a key sub-theme that emerged from my data. I found that my participants often conceptualised ownership through a concern with their possession of material and non-material goods. Indeed, 'having' and 'touching' were important factors in how my participants related to their music collections. These factors were in, many ways, influenced by the tactile

properties of these objects and the practices that were associated with their consumption. The physical presence of music was highly valued, which in turn reveals how meanings are part of a multisensory experience that are not solely attributed to the auditory, but entangled with other senses, such as touch. My participants' discussions about materiality consequently shed light on how meaning making was part of a rich and memorable experience not purely reducible to how music sounds.

I found that the value that my participants placed on the materiality of their music collections was evident in their enthusiastic remarks. For instance, Jude (Drum and Bass FG) stated "I like the tangibility of owning art and like saying I bought this album" (Jude, Drum and Bass FG), and Mary (Jazz FG) echoed this through her comment "I like handling things, I like having a CD". This enthusiasm and appreciation for the tangible properties of artefacts was also linked to specific practices. Some participants applauded the tangibility of physical artefacts because they associated them with the practice of gazing over the artwork or flicking through album sleeves to read the lyrics. This practice, I found, was also nostalgic insofar as it was connected to participants' past memories. As Esme (Drum and Bass FG) explained "I think I like having a physical copy because I like looking at the album art, or like looking at the lyrics on the little like leaflet that they have inside...I was definitely a big fan of CDs. I think that's probably.... definitely a nostalgic thing. And like stacking them and looking at the covers and having them, yeah". Similarly, the practice of perusing through CD album sleeves was a practice that also resonated with Caroline, also from the Drum and Bass focus group, who states: "I could spend hours poring over the album sleeve and the album artwork – where they have the lyrics in there". Through these practices Esme and Caroline both describe a sentimental attachment to formats from the past that involves active immersion in the material aspects of a physical artefact.

Furthermore, Mary (Jazz FG) adds that she found the practice of looking through album sleeves "educational". As she explains "I learnt much of my musical education was going into record shops and flicking through albums. Even if it was CD covers, there's this little kind of hands-on stuff, which I miss, you know, and to be able to sit down and read all the information on an album....which of course, this is why when we were listening to Louis Armstrong, I was asking you what the tracks were, and I was googling them to find out, because that's part of my enjoyment of listening to music". Album sleeves, therefore, added an additional layer of detail then went beyond simply appreciating the lyrical content of the songs, but also information about the album, and when and where it was recorded. To provide more context, this is something that Mary reflected on during the focus group, with direct reference to her experience of the album listening party. She reflects on how accessing information is also part of her experience of listening to music. We discuss this in more detail:

Mary: “there may be a story there. And which I want to read about, some symbolism which I might kind of research up on about, I don't know - what does that mean? And about the artists themselves, you know, the bees and their bonnets, that associative stuff that would, I suppose enhance the experience of listening to my music, you know, where are they coming from? And I can just, I can though just listen to music, but I do like to have a bit of some groundwork there, I obviously did, I've not reflected on it before until this discussion at all. But recognize that that's what I like”.

Sam: “Yeah”.

Mary: “Yeah”.

Sam: “Okay. And how would you go about sort of finding out that extra information about the artist?”.

Mary: “Well now I have one of these *holds up phone* and I so... when we were listening to Louis Armstrong, I just Googled that particular track, The Heebie Jeebies, and then I learned about what year it was made, that album, and that was the year my mum was born. She was born in Detroit, so it meant more to me”.

Sam: “Okay”.

Mary: “It, literally did, if I was enjoying it, it meant more to me when I got those bits of information”.

The idea that this extra information *meant* more to Mary here is revealing, since it demonstrates how musical experience is not divorced from context. She describes a desire to understand “story” behind the music, it's symbolism and the artists intentions, articulated through her phrase the “bees and their bonnets”. With this, she also recognises that this groundwork enhances her experience of listening to music. Whilst she may be partially distracted through the process of information seeking, it is worth noting that she isn't, however, passively consuming the music but drawing connections between the milieu from which the music materialises and her own personal life. This was, for instance, demonstrated through the links she sketches between the music, her mother's birth year and the location (Detroit). Such links here play an instrumental role in allowing Mary to construct meaning, thus illustrating a move that seeks to unpack the “why”, “how” and “where” behind artistic creation and how that understanding shapes the listener's experience.

Overall, these reflections upheld the significance of artefacts' physicality, directly challenging Quah's claims of a “weightless economy” (Quah, 1996). The affection that my participants had for music here reveals that it is not necessarily the auditory qualities of the music itself that

they attach meaning to. Instead, they also actively interpret the tangible features of these formats, such as album artwork and lyric sleeves and the physical act of stacking CDs on top of each other. These are components that foster contemplation and deeper engagement with the musical artefact. They imbue musical encounters with a sense of 'weight', reaffirming experiences that felt emotionally and physically more significant than those compared to digital music consumption, whereby lyrics or information about an album might be looked at, but on a screen. Similarly stacking might be conducted through the act organising music via playlists. Specifically, the presence of album sleeves, in Mary, Esme and Caroline's case, compelled them to engage more deeply with the physical format, which in turn indicates a desire for a more immersive and meaningful musical experience.

The connection between music and materiality is also something echoed by Trevor, (Hip-Hop FG), but from a slightly different angle. Trevor goes into more detail and explains how the appreciation of the album artwork plays a key part in his fondness of tangible goods.

I asked: "You mentioned the artwork, Trevor? Is it the fact that the works are bigger [compared to a digital format] and you can look at it?".

Trevor responded: "Yeah, I mean it's amazing how much you miss when it's that small. It is nice to just see it as, especially if it's an older album, as it was sort of intended to be seen. That's quite nice...It's more about having the album artwork its proper size rather than, you know, about 10 pixels by 10 pixels. Having something that feels good and can't be sort of taken away from you by some big companies over the drop of a hat. Feeling like, it's the first, if it's a new album that's dropped on vinyl, you know, 180 gram, feeling like you were there almost, like part of the scene and if it's conversely, if it's a sort of classic album, or an older album that you're really attached to, feeling like you're reaching back into the past a little bit...so it's that sort of more, what's the trendy academic word now? Affective stuff".

Three key facets emerge from Trevor's reflections, namely those pertaining to (1) aesthetics and authenticity, (2) control over his music library, and (3) the affective attachment to the object. I shall return his comments on the second facet later in this chapter, but before, it is worth considering how authenticity and affect played a key role in how Trevor ascribed meaning to physical albums. Trevor praises the physical album (notably vinyl) for its ability to deliver artwork to the consumer "as it was sort of intended to be seen". He describes a preference for its "proper size rather than, you know, about 10 pixels by 10 pixels". The physical size of a vinyl record artwork is important to Trevor. The experience of 'looking' at an album artwork today would typically entail observing an artwork digitally through a laptop, phone, tablet or any other relevant digital instrument. Physical mediums do not tend to reduce the intended size of the artwork to the same extent as digital formats. In fact, digital files are

often paired with artwork far smaller than the original. This may lead the subject (in this case, Trevor) to “miss” features and thus ascribe a certain meaning to the music. This mirrors the broader trend towards the “miniaturisation” (Theberge, 2001: 23) of formats that we encounter in the digital era. A by-product of miniaturisation, as discussed in the sound quality chapter, is that formats also result in compression processes. But rather than referring solely to missing *sonic* details (which would potentially occur with compressed audio files) (see Southall, 2006), Trevor’s remarks also reveal that digitisation has the potential to obscure the nuances and subtleties found within an album’s artwork and therefore how its whole meaning might be both communicated to and in turn interpreted by the listener.

The notion that digital technology miniaturises, diminishes or distorts the meaning of an artefact is a point that is also raised by Adorno (2002 [1941]): 251-269) in his exploration of ‘The Radio Symphony’. In his discussions on the sonic deterioration of classical music over radio (see Adorno’s *The Current of Music* (2009 [1941]) for a more extensive account) Adorno compares the deterioration of live classical music’s sound quality over radio to the miniaturisation of architecture. Through using the example of Italian cathedrals, he writes:

“A cathedral acquires an essential condition of its actual function, as well as its aesthetic meaning, only in proportion to the human body. A model of a cathedral in table size is something totally different from the actual cathedral, not only quantitatively but also qualitatively. On the Campo Santo in Geneo, there is a tomb in the form of a diminutive imitation of the Milan dome. The building itself, which is of highly questionable architectural value, becomes plainly ridiculous in miniature: the impression one has is much like the one received upon seeing the sugar-coated architecture of wedding cakes. The question of absolute dimensions in architecture has its counterpart in music in the question of absolute dynamics” (2002 [1941]: 256).

Trevor’s comments do highlight some important parallels with Adorno’s work in describing how authenticity operates when an original is confronted with an imitation. Although both are discussing different delivery mechanisms (Adorno with live classical music and radio, and Trevor with vinyl artwork and compression), they do point out the miniaturisation that occurs when the presentation of an artefact when it is reproduced and presented in a different format. It should be stated, however, that in Trevor’s case, he is referring to the contrast between album *artwork* presented physically on a vinyl, to smaller, more pixilated artwork found on a digital screen. Whilst both passages highlight how miniaturisation causes us to “miss” vital features of the artwork that give meaning to the whole, in the case of Adorno, his cross comparisons between Campo Santo and Milan Cathedral, refer primarily to the deterioration

of audio. This is in contrast to visual, material qualities that are presented to us physically through an artefacts' packaging.

Overall, it is evident that the physical features of formats like vinyl had shaped the meaning that Trevor ascribed to his experience of vinyl. In addition to the aesthetics, according to Trevor, it is also about "having something that *fee/s* good" (emphasis added). Although feeling can be attributed to the sensory features of the vinyl, feelings should also be recognised as something that is attributed to emotions and memories. As discussed earlier in this chapter, Beer (2008) draws on the work of Benjamin (1968 [1931]) to draw parallels between the practice of book collecting and the practice of record collecting in the 21st century, arguing that the unique relationship the collector has with a particular object is often infused with memories. This is something that Benjamin posits when he claims that "this or any other procedure [collecting] is merely a dam against the spring tide of memories which surges toward any collector as he contemplates his possession" (Benjamin, 1968 [1931]: 61). The act of contemplation for Benjamin and Beer often involved tracing back the artefact to the time when they purchased the book or album, respectively, with them both situating the context of the purchase uniquely in time and space. Evidently, a key temporal-spatial dimension emerges from their quasi-autoethnographic analysis. Benjamin speaks fondly of how his possession of books provides tangible relics connected to his autobiography, with them reminding him of places he has visited across Europe (1931: 68), the book shops he has been to (1968 [1931]: 66) and the auctions (1968 [1931]: 67) he has taken part in. The act of 'unpacking' his library, which is a tactile practice in its own right, reminds Benjamin that objects (books in his case) often stimulate memories and emotions. As he states, "ownership is the most intimate relationship that one can have to objects. Not that they come alive in him; it is he who lives in them" (1968 [1931]: 69). The meaning ascribed to objects, therefore, cannot be divorced, objectively, from personal experience and the subjective intervention of the subject.

The temporal dimension is also apparent in Trevor's comments about his love for the vinyl record, but from a slightly different perspective. His use of the phrase "affective stuff" deepens the tangible connection that he forges with his collection. This connection allows him to navigate the duality of temporal landscapes in constructing an identity by "feel[ing] part of a scene" (through the purchase of modern vinyl's) but also "in reaching into the past a little bit" (with the acquisition of older, classic vinyl's). This temporal dimension, however, should not be located within events drawn from his own biographical experience, but rather, through a desire to revive a time capsule of the past, a window or portal into how music was consumed at the time of its reproduction. His comments echo with Benjamin's claim that "as he holds them in his hands, he seems to be seeing through them into their distant past as though inspired" (1968 [1931]:62).

The vinyl record here becomes *more* than an audio format but transforms into a conduit for experiencing a particular historical moment. The physical object thus allows the collector to connect with the past in a personal and meaningful way. However, given Trevor's relatively young age (23), it is reasonable to assume that with older albums Trevor is not necessarily relating to his own biographical experience, but relating to the artefact as a historical memento, namely a reminder of how the music was packaged at the time of its release. He goes on to explain how "more recently, I've only really bought albums, where I used to buy like a like a new issue of a new record that I was excited about on vinyl, it's more an artist, I really liked, and I want to like own a sort of a piece of their history or whatever, so like I bought a few [Stone] Roses albums, a few months back" (Trevor, Hip-Hop FG). The phrase "owning a piece of their history" reveals how the practice of collecting is also connected to his enjoyment of vinyl as something that brings him closer to the artists through his physical possession of the artefact, but also in 'feeling' more connected to the artist through the sense of inheriting a cultural legacy.

6.4 Control

This sense of connection, intertwined with the act of possessing the material object, naturally led to another theme that emerged from my data, namely, control. I conceptualise control through reference to how much autonomy individuals have in selecting the music that they want to listen to. To substantiate this, I draw on DeNora (2000). DeNora claims that "music may imply and, in some cases, elicit associated modes of conduct. To be in control, then, of the soundtrack of social action is to provide a framework for the organization of social agency, a framework for how people perceive (consciously or subconsciously) potential avenues of conduct" (2000: 17). To reiterate, understanding how much control an individual has in selecting the music that they want to listen to is important because it helps us to unpack how individuals make choices and selections, namely, how they exercise freedoms and structure their decision making within the constraints of a particular context. As explored in the previous chapter, it is important to recognise that music shapes what we do. Consequently, selecting the music that we want to listen to plays a part in choosing what we also do and how we act and participate in the activities we engage in our everyday lives. .

In the digital era, scholars have explored how music may be 'curated' by means of technologies such as MP3 players (Bull, 2000), the Apple iPod (Bull, 2007) and the Apple iPhone (Eriksson et al., 2019: 44). Literature has also focused on variations in the user experience. This ranges from the experience of personal curation, namely using digital music libraries through decisively selecting songs drawn from one's already existing music collections (e.g. replicating 'physical' libraries with digital copies) (see Katz, 2010: 177-211),

to using shared collaborative ('blended') playlists as a way to connect with others (Jael, 2023: 28-43).⁶⁸ Additionally, emerging accounts that have investigated streaming have underlined the significance of algorithms in shaping people's listening habits and have associated algorithms with the undercutting of people's capacity to make decisions (Prey, 2020: 1-11; O'Dair and Fry, 2020: 65). In the proceeding sections, I shall explore how control emerged as a crucial component in my data analysis.

As discussed in the previous chapter, in my research the practice of selecting music often emerged as a careful and thoughtful process, with my participants often using music as a catalyst to "get into action" (DeNora, 2000). These processes appeared through the execution of various tasks, including music to help facilitate work and studying. Often these tasks were associated with particular genres, which provided conducive environments for my participants to engage in. Despite this, however, many of my participants did not feel as if they had adequate control over their listening habits. This was seen through their awareness that their listening choices could be constrained by the actions of corporate organisations. Stephen (Hip-Hop FG), for example, reported that "I feel like Spotify really wants to be in control of what I should be listening to". My participants also felt that the music that they did hear on Spotify was sometimes pushed or imposed on them by the big streaming companies. This was the case for my participants who used both the free or premium versions of streaming services.

Nuha comments: "It does tend to push forward probably more popular musicians just because those are the musicians that people will tend to like, so it can be harder to find certain musicians, probably, just because of that. When I did not have like Spotify Premium, I only had the one that was free, I noticed that there's like a lot more ads and like the bigger like artists tend to obviously like have more money for like promo and stuff like that. So, you hear more of their music, rather than what you would want to hear. Because I don't think there's, I don't think you can skip songs without having to hear ads" (Nuha, Hip-Hop FG).

When listening to music via streaming services, Nuha was not oblivious to corporate control but was reminded that she was listening in a climate that was somewhat dictated by commercialisation. In this context, corporate control refers to the ability of streaming platforms to wield influence over what songs and artists are recommended to listeners. They are often distributed through recommendations and advertisements, determined by algorithms. As Hesmondhalgh and Meier (2018: 1564) recognise, advertisements play a key role in enabling streaming services to function and are not dissimilar to how advertisements funded radio in the pre-streaming age. Advertisements provide a reliable revenue stream for companies such

⁶⁸ An additional example would be Spotify's relatively recent feature 'Spotify Jam', which enables people to listen together by queuing songs to a mix.

as Spotify. In exchange for the use of its free service, listeners are faced with the trade off with having to endure advertisements. For context, advertisements generally pop up every 15 to 30 minutes for users with access to the free version of Spotify.

But despite streaming services' claims about the unrivalled interactivity and abundance of their services (see Marshall, 2015a: 178), my participants were sceptical about the degree to which they had control over their music libraries. Here Nuha recognises that popular songs are effectively plugged (see also Adorno, (2002 [1941]):447-48) to an audience, with users of the free version of Spotify exposed more to the bigger artists. This, however, isn't a novel observation, but one that dates back to radio broadcasts in the 20th Century. According to Adorno, plugging refers to "the ceaseless repetition of one particular hit in order to make it successful" (Adorno, 2002b [1941]: 447). He continues, arguing that the repetition of tracks "leads the listener to become enraptured with the inescapable. And thus, it leads to the institutionalization and standardization of listening habits themselves. Listeners become so accustomed to the recurrence of the same things that they react automatically" (2002 [1941]: 447). This was, though, not the case for Nuha. Rather than her listening being wholly influenced by the use of advertisements, she recognises that advertisements served as a reminder of what she *did not* want to listen to.

Overall, my participants, recognised how advertisements featured within their listening habits. Yet whilst they didn't seem to appear influenced by the prominence of these adverts in directing what they wanted to listen to, they did acknowledge how these adverts played a prominent role in everyday life and accepted this as a norm. For instance, to my question "Do you guys think that the free version is fair? You know, the fact that there's ads on there" Jadon (also from the hip-hop focus group) responds, recognising that this is standard practice for streaming services:

"Yeah, that is the money-making model, right? Like you either pay for it, or you've got to have some way of making money on it. I mean YouTube is a free service, but there's ads on it, it's a pretty accepted thing. You know, if you're an online company and you're offering a free model, there has to be a way to pay for that... at a basic level. If you're getting something for free, yeah, getting some ads. You know, that's just part of modern-day life: telly, YouTube Radio, Spotify. It's all the same, there's ads".

Nuha and Jadon's observations here together speak to an important point, namely, the acceptance that advertisements are a common feature within music listening today. Though whilst they both admittedly had more control over avoiding adverts through paying for streaming services in premium subscription packages, they did appear to accept that the dominance of advertisements across streaming services were part and parcel in today's digital

age. This resonated with Adorno's earlier point that plugging comprises an "inescapable" part of people's everyday experiences of listening to music (Adorno, 2002b [1941]: 447). We see, therefore, a recognition that music is commodified and marketed through advertisements. However, in contrast to Adorno, who is critical of plugging and who sees it as a form of social control by lulling listeners into a state of passive acceptance, for Jadon, at least, this was viewed as a fair trade-off. He recognised that streaming services functioned as a business that had to find ways to generate money outside of subscription revenue. Advertisements were viewed as a normal and accepted part of everyday life. Though whilst this acceptance of advertisements does undoubtedly point to one facet of how control, or a lack of control, may be manifest within people's listening habits, it should also be noted that control was spoken about in relation to playlists. This is key to note because streaming undoubtedly opens up fresh opportunities for listeners to engage in practices associated with participatory culture, a concept that describes how people are actively involved in the creation and circulation of media (see Jenkins, 2006; Arditi, 2021: 1-22). Streaming, indeed, does provide individuals with opportunities to tailor content to their own needs (see Jenkins, 2006; Arditi, 2021: 1-22). Creating playlists on Spotify or engaging in Spotify blends would be an example of this (Jael, 2023). I found, however, that for my participants who did use the premium version of Spotify, their control over their music libraries was compromised by the streaming service, which interfered with their playlists and added songs without their permission.

Peter (Hip-Hop FG) reflects on this with reference to the curation of his own liquid drum and bass playlist and explains: "every time I open my phone up, it'll chuck a load of other playlists it thinks I should be listening to up in there. I have absolutely no control as to what playlist is displayed. It's not in alphabetical order, it's not by genre or anything. You can filter, but even then, it will fill, you know, drum and bass anthems, jump up drum and bass, which I would argue, without going down the genre route, there's no links to that and the liquid playlist". Ciara explains how she had a similar experience after making a techno playlist on Spotify. She reported: "I've made a techno playlist, like acid techno, and I went on it and there was like some drum bass and stuff on there. And I was like, just because techno is like rave music, it doesn't mean that it's similar enough to drum and bass that I want to listen to that".

My participants were frustrated with streaming services and highlighted how the platforms often interfered with their playlists. Two key factors are pertinent here. Firstly, my participants often felt as if Spotify had undermined the control they had over their music selections. This was apparent when Spotify entrenched the personalised curation of their tastes. Secondly, what is evident here is that Peter and Ciara felt that these services bundled genres together without making sufficient distinctions between their core nuances, for example, Spotify's

conflation between “liquid” and “jump-up” (in Peter’s case) and drum and bass with techno (in Ciara’s case).

According to O’Dair and Fry (2020), “the decline in the importance of the album is nothing new: the process of ‘unbundling’ albums into single tracks began with the launch of iTunes. What *is* new is the fact that individual songs are now ‘pushed’ to listeners by playlists, rather than being actively sought out” (O’Dair and Fry, 2020: 66). But as O’Dair and Fry (2020) note, there are often “subtle systems in place that push listeners toward certain artists or songs, and away from others” (2020: 67). It is not exactly clear how Spotify’s algorithm does this. Terms like “opaque” (Fry and O’Dair, 2020: 70; Jael, 2023: 28; Prey, 2020) and “mysterious” (Jael, 2023: 68) are used, for example, to describe the obscurity of Spotify’s algorithmic recommendation systems. In this thesis, however, I do not intend to provide an analysis of Spotify’s algorithms, but to explore how meanings are ascribed to digitally compressed music. Since people’s use of streaming services constitutes one facet of this experience, it thus requires attention. What is clear, though, from my participants’ reflections, is that the meddling in their own playlists *by* Spotify was something that they felt had compromised their ability to have control over their music selections.

6.5 Awareness and critique of corporate power

These reflections point to a broader problem within the conditions of digital listening. They indicate an awareness that corporations often have a considerable degree of control over people’s listening habits. I observed that my participants were not passive recipients of music, but critical about the ways in which corporate power operated. I define corporate power as the influence and control that businesses exert over society. Trevor’s earlier point about vinyl records that stresses the importance of “having something that feels good and can’t be sort of taken away from you by some big companies over the drop of a hat”, is key as a starting point for wider analysis. Not only does this reveal how materiality might be connected to resistance, through claiming the physical possession of something (as opposed to the resistance of ‘non-materiality’, originally associated with file sharing) (see Barbrook, 2005 and Haupt, 2006), but it also reveals his awareness that streaming services like Spotify could wipe out music collections (see Perzanowski and Schultz, 2016: 1).

Trevor, who previously used Spotify and now uses Apple Music explains however, that his primary decision to leave Spotify, was driven by the fact that he found himself “too reliant” on their algorithms and because of Neil Young’s decision to remove all his music from Spotify. Trevor, who proclaimed that he was “a massive Neil Young fan”, felt that he “wanted to listen to Neil Young” but “couldn’t do that on Spotify anymore”. For context, Spotify removed his music from the platform in January 2022. Young had accused the platform in spreading

disinformation regarding the COVID-19 vaccine through broadcasting the podcast *The Joe Rogan Experience*. He gave the podcasting the ultimatum of either continuing to broadcast the podcast or taking down his music (for more information, see BBC News, 2022). Spotify ultimately adopted to keep the podcast on their service, according to Trevor, “presumably, because it was more profitable”. Trevor proceeds to discuss how streaming services and “big companies like these will just do whatever is profitable, if there’s more profit in the social aspect of the app or the podcast aspect of the app”. Ultimately, he argues that they opt to orientate their business model around profit rather than delivering quality music.

The pursuit of profit was consequently recognised as a key factor that motivated streaming services. Peter agrees with Trevor’s comments: “the big thing here is like when Trevor is saying like, they’re not, it [Spotify] is not a music platform. It’s a business. It is an online platform whatever that is”. Trevor and Peter both felt as if these services were ultimately driven by money and commercial goals rather than the aim of catering to the user’s tastes. This had implications not only for how they viewed platforms but also for how music was made. Peter claims: “I think in terms of, you know, how often do we sit and listen to albums....I think I’ve caught myself a few times perhaps over the last six months or so, where I was putting a playlist together for when I was gonna go to the gym or work out and I couldn’t believe like how short some of these songs were by popular artists or whatever. We’re talking about two and a half, three minutes. An album of two and a half minute songs, just perplexes me, and I would actually say its predominantly hip-hop artists doing that”. “Why”, I ask, “do you think that is? Why do you think that albums are shorter nowadays?”. Peter responds: “I suppose because it’s profitable is the quick answer.” He later draws attention to the example of Drake’s double album *Scorpion*, expressing criticism of its use of shorter songs, presumably to accumulate more income on streaming platforms.

Crucially, this level of analysis and critique from my participants, reveals that they demonstrated an awareness of the economic and socio-political implications of the current streaming market model. Listening, and the consumption of music more broadly was not viewed in isolation from production and distribution, but as a commodity intrinsically linked to capitalist society. My participants were aware that is difficult to separate music from corporate power, even despite the purported narratives about the democratisation of music in contemporary society (see Marshall, 2015b). Music services today, as has always been the case in the music industry, are driven primarily by delivering music, first and foremost, as a commodity to be bought and sold. Even whilst its status as a commodity is somewhat distorted by the aspects of music access as a ‘rented’ service, my participants were aware that musical content and delivery was shaped, primarily, by economic goals.

This critical awareness, I found, pushed back against the arguments made by Adorno (see Adorno and Horkheimer, 2016 [1947]: 120-167) and his colleagues (see Marcuse, 1964⁶⁹, for example) that I have mentioned in the attention and distraction chapter. Adorno and Horkheimer describe in their seminal chapter on *The Culture Industry* (2016: [1947]), how the actor loses the ability to think for themselves. They claim the “industry robs the individual of his function. Its prime function is to do his schematizing for him” and characterise consumers as “the deceived mass” (1947: 124; 134). Yet, in resonance with critiques levied against Adorno et al. (see Baudrillard, 1994 [1981]: 162; Middleton, 1990: 57), far from depicting subjects as “psychologically weak” (Middleton, 1990: 57) or “passive dupes” unaware of the influence of corporate enterprise (see Murphy, 2006; 48-53); (Anderton, 2006:163-166), my empirical data, on the other hand, reveals that the pursuit of profit was commonly applied to participants consumption of music via streaming platforms. My participants did not engage with streaming services passively, but actively and reflexively criticised these delivery services and recognised that their motives for success were, in many ways, economically driven.

6.6 Resistance

My participants also mentioned attempts to exercise resistance against mainstream music listening in numerous ways. This entailed both conscious (aware of one’s surroundings) and sub-conscious (the part of the mind where one is not fully aware) strategies to regain control over one’s listening habits and exercise control in meaningful ways.

For example, Trevor had opted to leave Spotify and recreate ways of listening to music that resonated with his prior experiences of listening before the streaming age: “When I moved over from Spotify to Apple music, I spent a long time taking my library over, so my library of saved albums from Spotify to Apple Music, which took a long time. But the reason I did that is because I’ve tried to recreate... I’ve essentially tried to recreate the iPod thing, with streaming, so just a cheaper version of that. So, I have a library I can scroll through rather than just searching or having stuff recommended or whatever. I’ve got a library, so I can, I’ve got the albums I really like, and I can look through them and be reminded of stuff”. He admits that whilst his desire to stay in control of his music selection is also influenced by a need to get away from algorithms, recreating the iPod experience affords a way of listening to music that offers him greater control. They “do” he tells me “try and feed you stuff, but that is a lot less in your face. I still use it for suggesting new albums, but that's it”.

Other participants expressed ways of resisting mainstream modes of music listening through supporting artists through platforms that paid more generously. This was the case for Stephen,

⁶⁹ Marcuse (1964: 10-11), for example, uses the term “one dimensionality” to describe how individuals, in capitalist Western Society can no longer think for themselves.

who used Bandcamp⁷⁰ as a platform to support unsigned artists, claiming: “if the musician is smaller, I’d want to support them because maybe they’re less likely to keep making music”. Likewise, Jacob (Rock FG) used Tidal⁷¹, another platform focused on fairer compensation for artists, although he explained that this was primarily for aesthetic reasons rather than anything else and cited superior audio quality and higher bit rates as his primary motivation for using the service. Overall, my participants did appear to acknowledge that Spotify had a reputation for undercutting artists. This was, for example, a point also raised by Jadon (Hip-Hop FG), who stated that whilst the streaming model was “good for the consumer”, it was “bad for the industry”. He continues, “yeah I think you’re paid nought point nought, nought one, whatever, per stream. You know, you’ve got a million streams on your song and Spotify is paying you twenty quid or something, it’s ludicrous”. But whilst his reflections here might exaggerate the reality of the situation (see Hesmondhalgh, 2021), they do serve as a stark reminder of the streaming model’s failure to adequately support artists. As an act of resistance, Jadon supports his favourite artists by purchasing their vinyl records, albeit “once in a blue moon”.

6.7 Conformity

Though in spite of these possible opportunities for resistance, my data revealed that, ultimately, my participants decided to continue streaming. No participants in my study decided to abandon streaming altogether. Decisions to continue streaming were primarily driven by the convenience of using streaming services. In response to my question “How come you keep using Spotify, Peter? What is it that, you know, is grabbing you?”, Peter tells me:

“the convenience is all-encompassing, man. I’ll be honest. You know, it’s kind of like what again, Trevor was saying earlier that, you know, if I jump in the car, I’m not taking loads of CDs, a lot of them don’t make CDs with their music. You know, and I just want to get in the car and go. I can have it on my phone, listening on my AirPods, I can log into my PC and just fire up the Mac, and it will just, you know, the player is linked. So, it knows what you’re listening to and it’s almost seamless. It’s all, it’s within a split second. I could take my AirPods out, and it’ll start coming through my speakers, the same track. It just, you know, you can pause the speakers from your phone and everything like that. You can get in the car and do the same thing”.

⁷⁰ Bandcamp is an online music distribution platform founded in 2008. Unlike Spotify, musicians have more control over their music, how it’s presented and how it is sold. Distribution works through purchasing channels, where the user purchases and downloads tracks. As opposed to streaming services like Spotify, Bandcamp is more reminiscent of the iTunes store era that was dominant from 2003 to 2008.

⁷¹ Tidal pays artists around \$0.0125 to \$0.013 per stream (see Ditto Music, 2025), compared to Spotify, which pays \$0.0003 to \$0.0005 per stream (Ditto Music, 2024). Another key selling point of Tidal is that they use FLAC, a lossless audio file.

Likewise, Caroline (drum and bass FG) points to how the “convenience of having the whole, what feels like the whole library of music ever in your pocket” was a significant factor in driving her consumption. Music consumed through streaming platforms here thus satisfied a core ‘need’ for my participants, that is, the need to consume music wherever and whenever they wanted. This was a need afforded and satisfied by the convenience of streaming. As stated, though, my participants continued to demonstrate an awareness that these market models were primarily motivated by the pursuit of profit. This line of thinking strikes resonances with Adorno, who argues that “the role of music in the social process is exclusively that of a commodity; its value is that determined by the market” (Adorno, 1978 [1932]: 129). Undoubtedly, music satisfies needs, but these needs are, following Adorno, satisfied only incidentally, as a side-effect of production for profit. In fact, the market here plays a key role in both responding to, but also “predetermining”, needs in order to stimulate the ongoing cycle of capital accumulation (Adorno and Horkheimer, 2016 [1947]: 142). The convenience of streaming platforms in many ways ensures that consumers have the opportunity to consume music and curate their own playlists but also with the existing caveat of being enticed to listen to music that has been plugged by record labels to consumers on daily mixes, advertisements, and via Spotify’s general use of algorithms (see Jael, 2023). Conceptualising convenience through the breadth of music available on Spotify was a routine thread found within my data. The broadness of Spotify’s music library was also commented on by Stephen (hip-hop FG). But rather than universally praising the convenience afforded by Spotify, Stephen’s comments characterised it as both a blessing and a curse.

He noted that “Yeah, usually I think streaming services in that sense kind of spoil us, it’s really easy to do that [move on to new music frequently]. There’s almost an endless amount of music to get through and feels like there’s not enough time to get through it sometimes. So, it’s tempting to just move on to something new quite often, at least in my experience”.

I responded, saying: “Okay, so digital technology facilitates that [short listening encounters] I guess, doesn’t it? In the sense that there’s a sort of huge catalogue of music out there available to the masses?”, to which Stephen responded:

“Yeah. Absolutely. But it’s intimidating at the same time, and I feel like maybe I’m not giving things that I would really enjoy like a proper chance because I’m just feeling compelled to just move on to something new so often that like, I might listen to something once, think I really enjoyed it and then never listen to it again, or maybe listen to it like a few years later, I’ve noticed that starting to happen since I started using streaming [services]”.

The notion that consumption is a laborious process, an obligation, requiring both time and effort is a viewpoint also expressed by Zygmunt Bauman in his diagnosis of “liquid modernity”

(see Bauman, 2000). The opportunity for consumers' needs to be satisfied becomes increasingly rare in contemporary society. Consumption is built on ephemeral conditions, where goods are desirable only for a limited time and, as such, carry "a 'use by' date" and are "stripped of their allurements by the competition of 'new and improved' offers" (Bauman, 2000: 72). "Satisfaction", he argues, "would not last long, since in the world of consumers, possibilities are infinite, and the volume of seductive goals on offer can never be exhausted" (Bauman, 2000: 72). Bauman's diagnosis here strikes parallels with Stephen's encounters with Spotify. Possibilities to consume music are both "endless" and "infinite", which in turn entice listeners to move on quickly to consume more goods. This, in turn, places pressure on the consumer, due to the amount of 'goods' out there. Whilst the convenience of today's streaming climate means that *more* music is available, in Stephen's case, the situation became overwhelming and overstimulating, particularly in an environment where a lack of time posed a restriction to the adequate satisfaction of his needs.

I wanted to know more about Stephen's thoughts and asked:

"how do you find that experience? Did you find that frustrating or...", to which he responded: "um, it's different. It is frustrating in a sense that when, like I tried to think about what I've enjoyed recently and what I've listened to recently and what I can go back to again to experience it again, and sometimes my mind kind of just goes blank and I can't think of anything. And that's a bit more frustrating, and I think it's made me possibly even made me want to listen to music even less actually, because sometimes I just can't think of something to listen to. So, it's impacted me in that way".

Unfortunately for Stephen, the voluminosity of music available on streaming platforms had a detrimental effect on his listening habits. Rather than feeling as if he had the freedom and autonomy to select and satisfy his needs, the infinite library of options available on streaming platforms actually deterred him from listening to music.

I asked: "okay, do you think that potentially the volume of music is just a little bit intimidating then, on Spotify?". Stephen tells me "Um, yeah, definitely. It's very easy for you to kind of find something you want to listen to and then bookmark it and save it because that takes 10 seconds. But then to actually commit to it and listen to it, if it's an album, well it takes you 30, 60 minutes, two hours, if it's a longer album and that's a lot more commitment than just clicking a button and saving it for later. So, I think that yeah, that definitely has an impact in its own way".

The breadth of Spotify's music library, therefore, was not universally praised by all my participants. In Stephen's case, it featured as something akin to a barrier to listening, causing him to feel overwhelmed. Streaming platforms create needs and dilemmas for people.

Ultimately, though, when asked about whether he felt like he could leave the service, he stated: “yeah, I've considered it a fair few times, but I think the convenience wins me over, it's just a very convenient way to have all my music organized, so I can quickly pick it up and listen to it, even despite the shortcomings, but yeah, because I pay for it, I feel like I can be a little bit more critical on certain points, but I don't think I'm completely ready to drop it yet”.

The notion that consumerism has a damaging effect is not a new idea but something that scholars have recognised previously. This is articulately outlined by Heath and Potter (2006), who argue that “there seems to be something pathological about consumption habits in our society. We are obsessed with acquiring more and more consumer goods, even though this leads us to make unreasonable sacrifices in other areas of life” (2006: 104). Stephen's comments could be described as echoing these pathological tendencies, namely with the compulsion to consume more and more, but not really having the time or capacity to do so. Furthermore, this displays the struggle of wanting to independently decide what to listen to, whilst at the same time being entrapped by the convenience of streaming platforms. At it's extreme, this resulted in the deterrence of him from wanting to listen to music when he engaged with streaming platforms. Paradoxically, abundance was met with the effect of scarcity, namely, a scarcity exhibited through the ‘blank’ ness or void of what he thought he could listen to. Though a loss of enthusiasm for music listening, I observed, was partially salvaged by the convenience that he ascribed to streaming platforms. In Stephen's case, it was the only thing preventing from leaving these platforms altogether.

6.8 Conclusion

In this chapter, I have explored a number of key ways in which ownership and control relate to people's ascription of meaning to digitally compressed music. I have found that whilst these concepts have been helpful in articulating how my participants have been affected by the current digital landscape, ultimately meaning is constructed through people's experiences and in ways not simply determined by the technology itself. Factors such as the shift from materiality to non-materiality have reshaped ways in which subjects engage with musical artefacts. This is not least due to the shift in their tangible and nontangible properties, but also through ways in which music is available today. In an age of ostensible abundance, the convenience of streaming was heralded as a primary motivational factor in driving listening habits. With this in mind, though, it is also worth stating that my participants were aware and critical of how the music industry operated. But whilst I observed that there were some glimmers of opposition and disapproval, the element of ‘convenience’ afforded by these services had hindered people's capacities to engage in practices of resistance. Conformity to the system was largely the norm described by my participants.

7. Conclusions

This thesis sought to explore the meanings individuals ascribe to music transmitted through digitally compressed files. Despite the ubiquity of digitally compressed music files today (IFPI, 2023; Rogers, 2013; Prior, 2018), there is a lack of sociological literature that delves into how people - listeners, consumers in their everyday lives, in particular - ascribe meaning to digitally compressed audio files. As I made explicit in the literature review, explorations of digitally compressed music, most notably Sterne's (2012) investigation, have often overlooked how people ascribe meaning to digitally compressed music. Such discussions have tended to be confined to the expert realms of sound engineers, musicians and audiophiles (Sterne, 2012; O'Grady, 2021; Perlman, 2004). Indeed, there has been a remarkable lack of discussion of the meanings ascribed to digitally compressed music by consumers of music transmitted through this technology in everyday life. This lacuna called for fresh empirical research that is devoted to examining meaning ascription in the digital age.

In addressing this lacuna, my project sought to investigate meaning ascription by capturing and analysing everyday listeners' reflections on digitally compressed music. I organised and conducted four album listening parties and seven focus groups with a total of 36 participants from a range of social backgrounds. My fieldwork was executed with a view to understanding how music transmitted through digitally compressed files was received and interpreted by my participants. In situating everyday experience at the heart of my thesis, I was primarily concerned with how my participants ascribed meaning to music disseminated via digitally compressed audio. I found that my dataset, generated from the focus group sessions, provided a range of insights into the meanings ascribed to digitally compressed music. My analysis of the data led me to identify three overarching themes: sound quality, attentive and distracted listening, and ownership and control.

In this conclusion, I will reflect on the key findings of my research and underscore the significance of my project as a whole. I will outline the ways in which my research contributes to the sociology of music and identify key gaps identified at the early stage of the process. Furthermore, I will summarise my findings from my substantive chapters and indicate some future directions for the sociology of music.

7.1 Situating the project

Music plays a major role in many people's everyday lives. From mundane activities, such as travelling on a bus or shopping at a local supermarket, to specific musical settings, such as nightclubs or concert halls, in Western societies, at least, people are exposed to music almost everywhere (see Martin, 1995: 1). Whilst the frequent exposure to music may lead us to

become desensitised, sociologists such as Martin (1995), DeNora (2000) and Hesmondhalgh (2013) have maintained that music still evidently *means* something to many people. These meanings, however, are not inherent in, or fully determined by, the music itself. The meanings of music are socially constructed in relation to people's own experiences. As Martin (1995) states, "we [the researcher] must learn to see the world in ways which are consistent with other people's categories, and think with their concepts, so far as this is possible. Above all, we cannot presuppose the universality of even such an apparently innocuous concept as music" (1995: 15).

In other words, in order to ascertain the meaning of music, it is important to research how people ascribe meaning to music and situate this in the context of their own experiences. This is not to say that without people, music is completely devoid of meaning. Rather, music has meaning that is negotiated and established between individuals. These processes are, to varying extents, influenced by both the music itself and factors which fall outside its immediate aesthetic qualities (see Marshall, 2011; O'Grady, 2021). To express it in the most succinct terms, music, and, more broadly, art, is worthy of further social research because it simultaneously affects and is affected by cultural processes of meaning production in everyday life (see Alexander, 2011).

In this thesis, I have focused on one particular aspect of the musical experience, namely the meanings ascribed to digitally compressed music files. When people listen to recorded music today, they frequently listen to music disseminated via this technology. Digitally compressed music inhabits both private and public spaces. Digitally compressed music listening is a ubiquitous phenomenon that has seen several waves of transformation starting with the introduction of the MP3 file in 1992 (Sterne, 2012) to the contemporary era of music streaming (see Rogers, 2013; Hesmondhalgh and Leslie, 2018). Indeed, one of the key reasons why digitally compressed music calls for sociological investigation is precisely because the format is so ubiquitous (Bull, 2000; Beer, 2008; Sterne, 2012). It is estimated that 73% of listeners globally consume music via digitally compressed music files (IFPI, 2023). People commonly listen to music on their personal devices whilst in the car, at work, at the gym, and so forth. Observations of other people's behaviour from a weekly commute on public transport often serve as a reminder of the pervasiveness of such technology (see Beer, 2008: 72).

But despite the ubiquity of digitally compressed technology, people often do not pause to reflect on their consumption patterns. Since our practices are embedded in the fabric of everyday life, they tend to be obscured from the everyday users' realm of contemplation. Music listening, consequently, is seen as a habitual activity, something mundane and something familiar to the listener (see DeNora, 2000). The role of sociology, in turn, is, to borrow a

formulation from Bauman and May, to “defamiliarize the familiar” (Bauman and May, 2001:10). In uncovering the conditions that characterise contemporary music listening, one becomes more conscious of the role that it plays in meaning making. It is the function of sociology to uncover and to reveal how meaning is made in these contexts.

As I have emphasised consistently throughout the thesis, in the social sciences, accounts of digitally compressed music (most notably, Sterne, 2012) have often failed to unpack how meanings are *ascribed* to such technology. This is a problematic characteristic of the existing scholarship. Indeed, according to Sterne’s (2012) monograph *MP3: The Meaning of a Format*, the meaning of the MP3 file is underpinned by its sound design, namely something that he refers to as “the sonic signature” (2012: 174). Meaning is thought to be contained solely within the algorithm itself, which, in turn, reflects a broader history of the progress made in psychoacoustics, a field Sterne traces back to Thomas Edison’s work in the late 19th century. Sterne assumes that meaning, therefore, is derived primarily from the object, with little involvement from the subject. This assumption is problematic, as I have argued throughout, because it neglects how individuals respond to and interpret music that has been affected by technological processes of reproduction.

7.2 Major contributions

In this thesis, I have attempted to address this oversight, namely the absence of meaning making, by carrying out empirical research to explore how meanings are ascribed to digitally compressed music by everyday users of this technology. This forms the first major substantive contribution of my research, which addresses the subjective experience of meaning ascription through understanding and interpreting the multifarious ways in which people ascribe meaning to digitally compressed music. In addressing the concerns that stem from my literature review, my methodological strategy sought to tackle the absence of subjective interpretation by integrating myself into a research environment that actively involved research participants. In so doing, I was able to talk with a range of people about the role that digitally compressed music played in their lives. Crucially, in my analysis, through mobilising Weber’s (2012 [1914]) framework for sociology, I found that the insights afforded by my data were multifarious and encapsulated a range of meanings related to the aesthetic, the social, and the political dimensions of digitally compressed music. Meaning, I found, was often not derived *from* the object itself (see Sterne, 2012) but was something that was ascribed *to the object* by my participants. This contributed fresh understandings to studies of meaning ascription in relation to both music and technology.

The meanings that were ascribed to music and as I will discuss and reiterate below in my findings (7.3), were often framed holistically and in relation to the *context* in which they are

listening, namely where they are, what they are doing and in relation to the objects used to transmit the music itself. This holistic nature of meaning ascription, as I have also outlined in the introduction, forms the second major contribution of my research. My findings confirm that we cannot view meaning ascription through a vacuum but should consider its place within a wider constellation of objects, environments and activities (see DeNora, 2000). We need to consider what people are doing and consider *how* they are listening before coming to decisive conclusions about the meanings that they ascribe to music disseminated by digitally compressed technology in everyday life. In addition to this, we should be sensitive to the fact that meanings are derived from people's personal experiences and are connected to memories and emotion.

Finally, I also found that by both exposing participants to music (something recommended by Allett (2010)) and allowing them to verbalise their responses (something advocated by scholars such as Frith (1996) and Shephard and Wicke (1997)), I was able to bring digital compression to the centre of my observations. Methodologically speaking, this formed the third key contribution of my thesis. Indeed, I sought to address the absence of music itself by integrating its sonic features into a shared collective experience with my participants. Through the album listening parties I was able to concretize music's role within the research process and provide a "stimulus" (Merton and Kendall, 1946) for further discussion in the focus groups. The album listening parties also served as a novel research instrument to conducting sociological enquiry (see 7.4 for further discussion). In the following sections, I will provide a summary of my key findings drawn from my data collection and discuss their implications for the thesis as a whole.

7.3 Key findings and implications for the thesis as a whole

7.3.1 Sound quality

My first substantive chapter sought to explore the meanings my participants ascribed to sound quality, a key theme in my data. This analysis was also apposite in the context of my research questions. It was important because my first research question was: "How do the aesthetic consequences of digital compression shape the meaning that actors ascribe to music in everyday life?". Indeed, this requires attention because compression affects the sonic elements, and thus the 'quality', of recorded music (see O'Grady, 2021: 1079-1080). In this chapter, therefore, I provided a detailed exploration of the ways in which my participants assessed sound quality in the context of their listening habits. I proceeded from the fact that, since music today is commonly compressed, we ought to consider how these processes may impact the aesthetic meanings people ascribe to it. In view of my research questions, I sought to probe whether technological forms of transformation, which are quite subtle, e.g. auditory

and temporal masking (see Sterne, 2012: 21), would, in fact, be noticed and commented on by my participants. Indeed, scholars (see O’Grady, 2021: 1075-1091) and journalists (see Southall, 2006) alike have pointed to how processes of compression can lead to concerns about the “degradation” (see O’Grady, 2021: 1075) of the quality of recorded sound. These concerns, though, have largely been confined to engineers (Crowdy, 2013), musicians (O’Grady, 2021), and audiophiles (Perlman, 2004). What is missing from these debates are more detailed accounts of the role that sound quality plays in audio compression from the perspective of the everyday listener.

I found that while my participants did generate interpretations of and ascribe meaning to digitally compressed music, they frequently struggled to understand what I meant by audio compression. Despite this technology’s major role in people’s daily listening habits, participants did not tend to identify and attach the labels of lossy or lossless audio to their usage of respective digital formats (e.g. lossy audio to MP3 files, lossless audio to WAVs). Instead, participants interpreted their listening habits, through the much broader opposition between analogue and digital technology. As I noted in the chapter, this provided a subjective anchor, that is, a “scheme of interpretation” (Frith, 1996: 249) in helping participants to situate and talk about their experiences. The deployment of this distinction was useful and relevant, since it pointed to a different divide that enabled them to speak openly about their listening habits. In my focus groups, discussions often centred on listening via streaming services in comparison to listening on formats such as vinyl.

Perhaps more pertinently, though, I found that uncompressed audio and the technical terms that are used to describe its transformation of sound quality frequently eluded the attention of my participants. They were not often thinking about sound quality when describing their experiences with different formats. The vinyl record, for example, played an intriguing role in connecting to participants’ memories, their attachments to the physical and tangible, and in facilitating sophisticated ways of listening. This was a recurring insight throughout my data analysis as a whole, and it is an insight that I shall return to in later passages in this conclusion. Despite its being a lossless format, the vinyl’s arguably superior sound quality was not positioned as the most important feature. This was in contrast to the arguments commonly put forward by audiophiles (Perlman, 2004). Mary, for instance, spoke about her experience of listening to vinyl in relation to those of its characteristics that suggest inferior sound quality, in her case, a scratch on the item, which she related to the auto-biographical experience of listening to John Coltrane’s *A Love Supreme* with her ex-husband. Admittedly, she did claim that sound quality in vinyl reflected ‘a subtle difference’ from digital formats, but, like many of my participants, she struggled to articulate ‘whatever that quality is’ that vinyl supposedly has.

With this in mind, however, it is worth noting that some participants did appear to demonstrate a knowledge of and articulate the differences between compressed and uncompressed audio. For instance, Peter used the example of the three-piece jazz band Go-Go Penguin to explain how jazz sounded richer on vinyl when compared to compressed formats. He provided an analysis of how the sounds of a double bass are more suited to vinyl technology because of the dynamic range of this format and explained how ‘the room’ afforded by such technology allows certain instruments to ‘jump out of the midst’. Overall, I found that Peter’s comments, although he denied being an audiophile were similar to those expressed by hi-fidelity enthusiasts (see Perlman, 2004). Intriguingly, in these passages he also explained in detail how vinyl provided a natural home for jazz. This was a common thread throughout my data, with participants pairing particular genres with particular formats. This provided another successful anchor in connecting the instrumental characteristics of certain genres to the transformations underpinned by digital compression. Indeed, because jazz music was commonly recorded via analogue means, in my data there appeared to be a desire for *reproducing* the genre via analogue technology. Similarly, my participants expressed a preference for electronic dance music recorded via digital means to be reproduced digitally. For the latter, though, there was, admittedly, a lack of discussion concerning the potential impact of compression processes.

The consequences of compression, I found, played a somewhat minor role in my participants’ views about sound quality. Whilst my participants undoubtedly valued good sound quality, this was in many cases afforded by the *quality of the equipment* that they used to make sound audible. Indeed, one of the most pertinent findings from my chapter on sound quality, and of the thesis more broadly, was the divulgence that the format invariably played a *secondary* role to the equipment.⁷² This was perhaps most succinctly expressed by my participant Jeff, who explained, “I wouldn’t think about, am I going to use an MP3 or a CD or a Wav file, or how much it’s streaming, like the quality you’re streaming it at. For me, the biggest difference is the quality of the speakers by a million miles. Like you know, I wouldn’t think, oh, I’m using my laptop speakers so I can use a really compressed MP3”.

My participants seemed to identify the key differences in sound quality through their assessments of equipment rather than via the audio format. This was, for instance, illustrated through my participants’ lamentations about the poor audio quality transmitted through laptop and phone speakers.⁷³ As a response, many of them felt a commitment to purchasing equipment that they felt was adequate enough for transmitting faithful sound quality, most

⁷³ ‘Crap’, ‘tinny’, ‘naff’, ‘disgusting’ were the adjectives that my participants used to describe audio quality transmitted from laptop and phone speakers.

notably, an investment in good quality headphones and speakers. With high-quality speakers, especially, my participant Jude argued that the performance of the speaker had the power to supersede the marginal differences between lossy and lossless formats. He ascribed the recognition of these marginal differences emphatically to a form of snobbery and cultural reproduction that was reminiscent of Bourdieu's (1984) sociological critique of taste.

Given these considerations, I posit that we should view explorations of the sound quality of digitally compressed music holistically. As scholars like Zimmermann (2021) recognise, listening cannot be viewed in a vacuum, but only through its interaction with a multitude of material objects. We cannot analyse the format without also taking into account the importance of the object that makes the music audible to the listener. Such considerations prove decisive for understanding the ways in which meaning is ascribed to formats.

7.3.2 Attention and distraction

But whilst the equipment participants used was fundamental to the scenarios that they engaged in, it is also crucial to consider what my participants were *doing* whilst they listened to music (either in compressed or uncompressed formats). This is important because music has powerful cultural expression and is often interpreted and received in different ways depending on *how* people engage with it. Context, I found, proved to be a key element that was central to my exploration in the attention and distraction chapter. In this chapter, I sought to address the themes attention and distraction by investigating the practices that my participants engaged in whilst listening to music. It should be stated, however, that attention and distraction was a thematic dualism that emerged inductively when I was conducting my analysis. This was closely tied to my research question "how are digitally compressed audio formats used in individual and social listening environments?".

In respect of this theme, I advocated for an approach that shifted the emphasis away from conceptualising listeners as a typology (see Adorno, 1997 [1962]: 1-20; Stoller, 2018) to conceiving of listening as a practice (see Stockfelt, 2004 [1993]). Rather than putting people into categories and using labels to describe the identity of listeners, I argued that a more fruitful analysis of listening would entail a consideration of how attention and distraction might be situated as mutable practices incorporated into people's daily practices. The dichotomy of attention and distraction, which I abstracted from my data, functioned as a useful heuristic device (see Weber, 2012 [1914]) for mapping how people engaged with music.

I concentrated my analysis on two activities, in particular, that were raised and addressed by my participants, namely work and studying. I explored numerous ways in which music accompanied, facilitated, or drove the activity, as opposed to people purely focusing on the music and doing nothing else. In so doing, I utilised the work of several theorists (Veblen, 2009

[1899]); DeNora, 2000; Adorno, (1997 [1962]); Foucault, 2006 [1973], 1991 [1975]) to draw conclusions on *how* my participants listened. Such analysis allowed me to discern how my participants ascribed meaning to different formats via their connection to different technologies.

One key finding that emerged from this chapter was the problem of time poverty, which resonated with the theoretical arguments put forward by Veblen (2009 [1899]). Attentive listening, which Clarke et al (2010) understand as the practice of listening where “the sonic properties of music seem to be the primary focus of attention” (2010: 65), was a rare occurrence for many of my participants. This was not, however, because my participants wanted to avoid immersive listening, but because they simply did not have the time for it. The daily lives of Ciara and Luke (both from the jazz focus groups), for example, were consumed by a series of commitments to careers, family life and hobbies (such as sport). I found that immersive listening, instead, was positioned as something exclusive and as a luxury typically enjoyed by elite groups, much like unproductive leisure activities criticised by Veblen (2009[1899]). Indeed, the trend that appeared in my data, and which has also been diagnosed by existing scholarship (see Prey, 2020), was that streaming services enabled my participants to engage and disengage with music in ways that facilitated or accompanied other activities. On the other hand, where attentive listening practices were adopted, they were mostly facilitated by the vinyl record, which, in turn, was approached by many of my participants as a sophisticated way of listening that demanded more attention than compressed formats. Unlike with the MP3, listeners could not simply pause the vinyl recording of a song. They felt as if their attention had to be given to the format in order to appreciate the music.

Two activities that I gave specific emphasis to were music alongside studying and music alongside work. In parallel with DeNora’s analysis (2000), I found that my participants frequently used music as a tool to help get them “into action”. Music was not merely listened to for pleasure, but also to help my participants conduct particular tasks. I found that music helped my participants “get into focus” (DeNora, 2000: 58). In work settings, they used music as a tool and as a resource for a multitude of purposes, including to prevent distractions from other work colleagues, to aid focus and concentration on work and to speed up work in order to increase productivity. Participants, indeed, felt that music was a useful tool for creating an environment conducive to work. In particular, they argued that music was functional alongside tasks that were deemed boring. In relation to studying, my data revealed similar patterns, where music was used as a tool to speed up productivity, particularly if there was a deadline to meet. Crucially, I found that if music was listened to in these ways, it was disseminated by digitally compressed formats. This was a key component of the meaning that my participants ascribed to digitally compressed music.

However, my analysis also revealed a more problematic flip side to this relationship. Whilst participants believed that the effects of music were beneficial in helping them increase their productivity, it is also possible to posit that in distracting oneself from work, one becomes less aware of the exploitative and alienating conditions that characterise many working environments. In other words, music at work becomes instrumentalised for capitalist ends. In doing so, it obscures the monotonous and exploitative reality of work whilst also contributing towards its formation. My analysis here mobilised the work of Adorno (see Adorno and Horkheimer, 2016 [1947]; Adorno, 1997 [1962]) to illustrate the potential of music to increase patterns of exploitation. Yet, in contrast to Adorno, I argued that the utilisation of music was to increase productivity more immediately than envisaged by his and Horkheimer's culture industry thesis, namely that it could be used as a tool to facilitate work *during*, rather than merely *after*, the working day. Adorno's work (1991 [1963]: 189) tends to focus on music's role as a tool to reproduce labour power through an analysis and critique of how people approach music in their leisure time, after work. Furthermore, I found that Foucault's (2006 [1973]; 1975 [1991]) work on disciplinary power was helpful for exploring how my participants used music to help them study. Yet rather than music serving as a distraction to diminish discipline (see Foucault, 2006 [1973]: 51), the assertions of my participants suggested that it in fact *enhanced* discipline, for instance, making essay writing easier for some of them. This was afforded, in particular, through repetitive, up-tempo music that served as a reminder for my participants that they had a deadline to meet.

Overall, my findings in this chapter afforded a series of insights into how distracted and attentive listening featured in my participants' everyday lives. Although its role here may have appeared more trivial, it is worth emphasising that the format did play a key role in allowing and facilitating these practices. This function of the format, however, appeared as a more latent (see Braun and Clarke, 2006: 84) component within my analysis. Although my participants were not talking too explicitly about their use of digitally compressed music, its affordances, such as portability and convenience, enabled these practices of distracted listening to occur with much greater ease. Through my interpretation, therefore, I was able to demonstrate the salience of the format via its connections to *how* my participants engaged with music. Indeed, this was illustrated by the ways in which the MP3 afforded possibilities for my participants that would not have been as easily created through their engagement with different formats. This revealed that although the format appeared less visible in these passages, it did play an important role in the meaning that my participants ascribed to music, particularly in how it enabled them to get into action (DeNora, 2000).

7.3.3 Ownership and Control

My third substantive chapter focused on the themes of ownership and control. I dealt with this theme because I found that possession and control are notions which are involved in my participants' ascription of meaning to digitally compressed music. They raised the problems of the 'possession' of their music libraries and the 'control' that they had or did not have over their listening habits when speaking about their consumption of digitally compressed music. My analysis involved detailed discussion on a series of insights gathered throughout my data collection. The chapter on ownership and control spoke most explicitly to my third research question: "What are the political implications of the process of making meaning from digitally compressed music?". I found that meaning making processes were often connected to the broader changing landscape of the streaming era (see Marshall, 2015b; Perzanowski and Schultz, 2016) and thus explored how shifting patterns of (de)materiality and legality are reflected in the micro-processes of meaning making. In so doing, I also examined how my participants may or may not exercise resistance to the current digital climate. Intriguingly, I found that whilst my participants were critical of corporate power and of how streaming services exercised control over their listening habits, for the most part, they continued to stream.

One key sub-theme that emerged from my data analysis was materiality. I found that this sub-theme had important implications for how my participants ascribed meaning to digitally compressed music. Indeed, my participants spoke fondly about how 'having' and 'touching' were important to their relationships with their record collections. Among the issues surfacing here was the practice of handling album artwork, appreciating its visual components and flicking through album sleeves and reading the lyrics. Overall, my data suggested that my participants enjoyed using physical formats because their tangible components served as a device for recalling nostalgic memories (see Benjamin, 1968 [1931]: 62-69). This was, for example, articulately spoken about by my participant Trevor, who professed his love for vinyl through reference to how it invoked emotions and allowed him to "reach into the past". With regards to the artwork, he was particularly full of praise for how vinyl artwork delivered its design to the consumer through conveying artwork as it was intended to be seen by the artist. He contrasted this to the delivery of artwork via digitally compressed music, which would, according to him, often cynically be presented to the listener "about 10 pixels by 10 pixels". Perhaps most pertinently, though, Trevor described how owning records was important because they could not be physically taken away from the consumer by the big record companies. I found that having control over one's listening habits was very important for my participants. This was notably illustrated through my chapter on attention and distraction, with participants using music as a catalyst to "get into action" (DeNora, 2000). Music selections, as

I have discussed, were often made with thoughtful care and consideration, which in turn meant that my participants could exercise more control over their actions.

This was demonstrated by participants who would use music as a tool to help them conduct particular tasks. In many ways, the affordances of streaming enabled my participants to decide what music was appropriate to the scenarios that they found themselves in. This allowed them to adapt to situations. The abundance of genres found in libraries like Spotify and Apple Music (Marshall, 2015b) also meant that they could pair a particular vibe with an activity. Whilst this was an important insight, on the other hand, I did observe that control had been undercut. Participants spoke about how streaming services like Spotify would ‘push’ bigger artists to the forefront of their attention, particularly if they had not paid for the premium version. Perhaps more strikingly, though, my data also demonstrated ways in which Spotify would meddle with my participants’ playlists, often adding songs without their consent (Peter, Hip-Hop FG; Ciara, Jazz FG). Overall, my participants, quite in tune with some existing scholarship (O’Dair and Fry, 2020; Jael, 2023), demonstrated apprehension and uncertainty about how Spotify’s algorithm operated.

Such insights reveal how control was undermined by corporate companies. My participants were not oblivious to ways in which their control had been destabilized by forces outside their immediate sphere of influence. In many cases, they displayed an astute awareness that companies like Spotify were ultimately driven by the pursuit of profit. Hence, they were dissatisfied with the service. My participant Trevor, for example, decided to leave the platform in solidarity with Neil Young and because he felt “too reliant” on the algorithm. As a result, Trevor moved away from Spotify and attempted to recreate the iPod experience by using Apple Music as a platform to organize and have more control over his library. His actions displayed here can be seen as an act of resistance or at least refusal. Similarly, Stephen, another participant who was critical of corporate power and ownership, exercised resistance by deciding to support artists through streaming services like Bandcamp.

Yet, despite these opportunities to resist corporate power, the overwhelming majority of my participants ultimately capitulated to the demands of the recording industry. This was primarily due to the convenience offered by streaming. In other words, whilst my participants were aware of how their listening habits were undermined or, to some extent, controlled by corporations, they continued to stream, largely because of the convenience offered by such services. Indeed, participants had invariably praised the breadth of music found on services like Spotify and Apple Music and celebrated the abundance of the music libraries offered by these platforms. This did, however, leave my participant Stephen feeling paralysed and unable to decide *what* to listen to. My participants’ experiences resonated with what Bauman (2000)

observes of contemporary consumerism, namely the paradox whereby abundance is met with scarcity. Upon my asking Stephen if he would leave Spotify, he responded noting how the convenience of using the format trumped the overbearing abundance offered by contemporary streaming libraries. According to Stephen, the convenience won him over. Overall, I found that resistance was not commonly exercised as the norm in subverting conventional ways of listening to music.

7.4 Future methodological directions

So far in this conclusion, I have illustrated how my thesis fits into the sociological scholarship on music and what it has contributed to the field. I have also discussed my findings drawn from my data and summarised the complex meanings ascribed to digitally compressed music from the perspective of the everyday listener. I would like briefly to reflect on the opportunities for future research in the sociology of music created by my methodological strategy.

As I have outlined, much previous research within the sociology of music has neglected music itself - conceptualised by Marshall (2011: 157) as “organised sound” - in its analysis. As Marshall states, “the sociology of [popular] music skirts around music and, as a result, contains remarkably little discussion on how music creates particular effects, and relatively little on the experience of listening to music” (Marshall, 2011: 157). In addressing this gap, my research has sought to incorporate the musical listening experience into the sociological research design. To do this, I organised and took part in four album listening parties with my participants. This involved listening to music in real-time with participants and thus provided a “particular concrete situation” (Merton and Kendall, 1946: 541) where everyone was exposed to the same sonic material. Music was, therefore, incorporated into the research environment in a way that acknowledged its essence as a discrete sensory experience, rather than a peripheral component of interest (Grazian, 2004).

These album listening parties, however, as I have outlined in my methodology chapter, functioned primarily as a “stimulus” (Merton and Kendall, 1946) for formulating questions generated for my focus group interview guide. As such, they played a secondary role to my focus groups, insofar as they did not generate a coherent dataset. However, this is not to say that album listening parties cannot be used for future research in the sociology of music, perhaps with a central focus on how they constitute a phenomenon, or even a method, in their own right. Indeed, music elicitation methods are not commonly used (Allett, 2010; Allett, 2012) by sociologists, despite their merits for “trigger[ing] memory, affective experience and descriptive in-depth discussion” (2010: 5, 3). Album listening parties could be used as an experimental form of music elicitation to gather insights into how music shapes social life. Since music is played in real-time, album listening parties add promising new opportunities for

research. This also applies, in particular, for those wanting to reflect on how the auditory components of music enrich the practice of *doing* ethnography (see Pink, 2015).

7.5 Final thoughts

As I draw this thesis to a close, I would like to briefly emphasise its overall contribution and offer an overview of both the thesis' findings and their implications for future research. This thesis has established deep insights into the meanings ascribed to digitally compressed music, with specific focus on those who regularly encounter such phenomena in their everyday lives. In so doing, I position myself within the sociology of music, using Sterne's (2012) text (which was admittedly written more from a sound studies perspective) as a catalyst for critique and further development. I contend that in order to grasp meaning making, we ought to consider that meaning is not inherent in the object but constructed through the individual's interaction with the object (in this case digitally compressed music).

The sociology of music literature and Weber's work especially, provides a framework for uncovering and assessing the intricacies of meaning-making. In particular, this scholarship offers fresh and fruitful ways for understanding how meaning-making processes unfold for music listeners. In my empirical chapters, I have described how meaning forms a central part of people's experiences of listening to music. I have stressed throughout that it is important to return back to music conceived as sound, namely, music as an auditory phenomenon based on what we, as listeners, can *hear*.

With this in mind, however, it is also important to note that meaning was not necessarily associated exclusively with sound. It was layered. As the findings from my data revealed, meaning often superseded the auditory. Although sounds were undoubtedly important to the construction of meaning, it is also worth recognising that people often spoke about meaning in relation to objects, memories, experiences and activities. Meaning was not constructed in isolation but via a constellation of intervening factors. Whilst meaning was framed in relation to specifically musical aspects, such as genre, it is worth bearing in mind how my participants framed meaning according to extra-musical practices, such as work and studying. These were processes existing without an immediate sonic imprint. What I found was that music was often used as a medium to allow my participants to "get into action" (DeNora, 2000). Invariably, it was often digitally compressed formats that were used in relation to practices that were involved and actively incorporated other activities. These findings highlight the complexity of meaning making as a phenomenon entangled into the fabric of everyday life.

Weber's work, as I have described in the thesis, undoubtedly allows us to shed light on how meaning making should be understood as a process that is formed from human interaction, with the object and the subject both playing a vital role. I proceeded methodologically from Weber's belief that understanding is gauged from talking to and putting ourselves in the shoes

of participants, which forms the basis for the term known as *verstehen* (Weber, 2012 [1914]: 6). Indeed, to explore meaning and the subjective meaning and motives one attaches to the behaviour, one must immerse oneself in the cultural and social context in which that meaning might emerge. My use of participant observation, most notably, through the album listening parties, offered a way to study music listening in a social context without remaining divorced from the object in focus. This methodological use of music elicitation can make a major contribution to the sociology of music because it brings music back to the centre.

We should, though, also consider how Weber's work may be used to describe the MP3 itself and how its creation may mirror broader tendencies present in society. As I have made clear in the thesis, digitally compressed music (and digital music more broadly) is a peculiar phenomenon insofar as it is composed of data, namely, bits and bytes that contain computer code. What is peculiar about digitally compressed music is that it is coded to reduce and reformat digital information (and thus music) into a small file. We often don't think about music as data and as digital information. Rather, we tend to think about music as sound. Yet we *should* also consider how Weber's work, which is becoming increasingly influential in the sociology of music (Darmon, 2015; Inglis, 2016; Peng, 2023), might contribute to understanding music and music listening in novel ways.

As I have mentioned in reference to my data insights in chapter 4, the contemporary era of digital compression could be seen as echoing the broader trends of rationalisation described by Weber in his writings on bureaucracy and disenchantment (Weber [1922] 1991; Weber, [1917], 1991). The fact that the data transmitted in music files can today be quantified and calculated with precision signals a shift towards an increasingly rationalised society that is reflected through the ways in which music is now produced, stored and consumed. Rather than conceptualising music listening as a subjective, qualitative experience, it is now a quantifiable, data-driven product that is easily measured and controlled by distributors, producers and consumers of music alike. The low-storage size of an MP3 file (or other similar files such as Ogg Vorbis, AAC), for example, is a convenient prospect, allowing us to consume more and more music, even to a point where it is overabundant. Digital compression has undoubtedly played a huge role in facilitating the ubiquity of music streaming today.

Weber's work here provides food for thought insofar as processes of rationalisation speak to both the scientific make-up of digitally compressed music formats and the ever-expansive logic of music distribution worldwide. Indeed, it should be stressed that digitally compressed formats are very efficient. The compression algorithm (through processes of masking) plays a key role in discarding audio which is deemed inaudible to the human listener. In turn, this strips away data that is redundant, allowing people to consume the most amount of music with the

least amount of storage space. Moreover, this lends digitally compressed music faster download speeds and easier sharing among listeners. Just as Weber described how tendencies towards rationalisation were important in encompassing more efficient processes that dictate how we organise social life in modernity⁷⁴, we do see a similar phenomenon occurring here with the predominance of digitally compressed music. I would therefore like to stress that whilst this thesis has undoubtedly engaged with the methodological strands of his thought, there are future avenues to explore in relation to his more macro-level view of modern society. The sociology of music could benefit fruitfully from such an examination going forwards.

⁷⁴ For an illustration of how Weber's work on rationalisation might be used to describe changes to everyday interaction, see Ritzer's (2013) book *The McDonaldization of Society*. Here he uses the fast-food restaurant McDonalds as a case model. Weber's ideas on bureaucracy and rationality play an instrumental force in helping Ritzer to discern four dimensions of McDonaldization: efficiency, calculability, predictability and control.

8. References

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9. Appendices

Appendix 1: Interview guide (questioning route)

Opening questions:		
	1	'Was this your first album listening party?'
	2	'Why did you choose to listen to that album?'
	3	'What format would you usually listen to music on (e.g. vinyl, CD, mp3, radio)? Why would you choose to listen through this format?'
Key questions:		
	4	'For those of you who were listening on headphones: why were you listening on headphones? Would you usually listen on headphones?' Follow up: 'For those listening on speakers, why did you decide to listen in this way? Would you usually do this?'
	5	'The dope/nope feature was a feature on the Jukebox streaming website that allowed users to express a 'like' (dope) or 'dislike' (nope) for a song. How would you usually evaluate music? How do you come to a judgement?'
	6	'The album listening party allowed you all to listen together. Would you usually listen to music with other people or alone?' Follow up: 'Can you elaborate on that, please?'
	7	'When you are listening to music, do you tend to do other things at the same time?' If they ask 'what sort of things?' I could add 'for example, during the album listening party some participants were looking at their phones during the album listening party. Some of the other participants were eating and drinking'.
	8	'During the album listening party, no one commented on the lyrics of the songs on this album. When listening to music with lyrics, do you usually pay attention to the lyrics? How important <i>are</i> the words?'
	9	'Did the requirement to set up a Spotify premium account cause any problems for accessing the album listening party?'

Closing question	10	'Have I missed anything? Is there anything we should have talked about but didn't?'
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Appendix 2: Recruitment poster

PARTICIPANTS NEEDED!



ARE YOU A MUSIC FAN?

**DO YOU LISTEN TO MUSIC PRIMARILY
VIA DIGITAL PLATFORMS?**

**DO YOU LISTEN TO ROCK, JAZZ, HIP-
HOP AND/OR DRUM AND BASS?**

**WOULD YOU LIKE TO PARTICIPATE IN
AN ONLINE ALBUM LISTENING PARTY
AND FOLLOW-UP FOCUS GROUP FOR
MY PHD RESEARCH?**

**These are scheduled to take
place in late June and late July,
2022.**

**All data collected will remain completely anonymous.
This project has been granted ethical approval from the University of
Sheffield.**



CONTACT ME AT:

Sam Aldersley
smaldersley1@sheffield.ac.uk

ABOUT MY RESEARCH

I am a PhD student based at the department of sociology at the University of Sheffield. My research is interested in exploring the meaning that social actors ascribe to digitally compressed music. It intends to explore the aesthetic, social and political aspects behind meaning making processes when shaped by technological reproduction.

Appendix 3: Participant information sheet

Samuel Aldersley, PhD student in the Department of Sociological Studies

Email: smaldersley1@sheffield.ac.uk

Webpage: <https://www.sheffield.ac.uk/socstudies/people/research-students/samuel-aldersley>

Participant information sheet – Album listening party and focus group

Research title

‘How does the experience of digitally compressed audio formats affect the meaning of music in everyday life?’

Supervised by Dr Matthias Benzer (m.benzer@sheffield.ac.uk) and Dr Alex Dennis (a.dennis@sheffield.ac.uk) Department of Sociological Studies, University of Sheffield.

Invitation

You are being invited to take part in a research project. Before you decide whether or not to participate, it is important for you to understand why the research is being conducted and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Email me (Samuel Aldersley, smaldersley1@sheffield.ac.uk) if there is anything that is not clear, or if you would like more information before giving informed consent. Take time to decide whether or not you wish to take part. Thank you for reading this document.

The research will involve me observing an album listening party, where you will listen to an album selected by members of your group. After the sessions have taken place, you will be invited to participate in a focus group (containing 5 participants), whereby topics surrounding aesthetics, social life and politics will be discussed in detail. These will take place approximately 3 to 5 weeks after the session has occurred.

All forms of data collection will take place online and will be recorded. The participant observation will be video, and audio recorded, but participants have the option to switch their cameras off for the focus group. Similarly, they can decide to blur their faces in the video recordings if they wish.

What is the project’s purpose?

This study entails a sociological exploration of people’s experience with digitally compressed audio formats in everyday life. Digitally compressed audio formats encompass mediums which disseminate audio (including music) to people across society and are commonly associated with formats such as MP3, OGG Vorbis and AAC. These are commonly used across streaming platforms such as Spotify and Apple Music.

The research will generate the substance of my PhD qualification at the Department of Sociological Studies, University of Sheffield.

Why have I been chosen?

You have been selected as a potential participant for this study due to your avid interest in a particular genre of music (jazz, hip-hop, drum and bass). Given your enthusiasm for a love of music, you form an ideal target participant who can shed light on the experiences of digitally compressed audio formats.

Do I have to take part?

It is up to you to decide whether or not to take part. Participation is entirely voluntarily. If you do decide to take part, you will be given this information sheet to keep (and be asked to sign a consent form) and you can still withdraw at any time without any negative consequences. You do not have to give a reason. If you wish to withdraw from the research, please contact me at smaldersley1@sheffield.ac.uk.

Please note that although it is up to you to take part in the study, there is a cut-off point by which you may not request your data to be used in the study. The point by which you may request your data to be withdrawn is any time after the data has been collected. After this window-period, you may not request to withdraw your data. This duration of time has been selected due to the time constraints of completing a PhD and writing up data collection. Please be reassured, however, that all names of participants (including you) will be pseudonymised to protect the participant from being identifiable in the thesis or in any resulting publications.

Also note that by choosing to participate in this research, this will not create a legally binding agreement, nor is it intended to create an employment relationship between you and the University of Sheffield. You (the participant) are not entering into any formal contract of employment (which would have legal and tax implications). Further guidance from HR on this issue can be found here:

<https://www.sheffield.ac.uk/hr/guidance/contracts/volunteers>

What will happen to me if I take part? What do I have to do?

You will be involved in the data collection process for a total of two months (June to August, 2022). Data collection will consist of two stages. The first stage will involve a participant observation of an album listening party, the second will entail focus group. For the participant observation stage, you will not be required to answer any questions from myself. I will observe and make notes on the Album Listening Party. It will only be in the second stages of data collection (focus groups) where I will ask questions concerning your experiences of the album listening party. Unlike conventional interview settings, the focus group gathers multiple individuals in one space, with the nature of discussion designed to put participants in the driving seat. Here you will be expected to contribute towards discussion and offer your reflections on the topics raised during the focus group. I (Sam) will be acting as the moderator of the focus group, and I hope this will entail a relatively informal, free-flowing process whereby I will ask general questions concerning aesthetics, social life, and politics. Though whilst it will be structured around these topics, please do not omit anything that might be relevant to these dimensions, as I am sure as much information provided as possible will be beneficial to the study! Your insights are highly appreciated.

You do not have to answer any questions that might trigger discomfort. If anything does not make sense or needs rephrasing, please do let me know. I anticipate that these sessions will take approximately 90 minutes in total. Comfort breaks will be provided as and when required. Please do let me know if you require a comfort break, you do not have to give a reason why.

What are the possible disadvantages and risks of taking part?

Due to COVID-19 restrictions, the research will take place online. This is potentially conducive to sociologists gathering data and participants, particularly because the problem of geographical distance and potential dangers of travelling during a pandemic can be mitigated online. However, there are some risks that participants should be aware of when taking part in this study.

Although the research does not intend to address highly sensitive issues, what participants decide to bring up is entirely up to them, especially considering that this research concerns everyday life. Therefore, whilst I will be asking participants to be respectful of one another, sensitive issues could emerge. If you feel negatively affected by any issues talked about, you will also have the opportunity to raise it with me after the focus group has finished. Here I will be able to sign post you to the relevant services available.

Can I please ask that you refrain from taking recreational drugs during the study, as this poses potential harm to those being studied and potentially those around them.

What are the possible benefits of taking part?

It is hoped that this work will fill an important gap within the Sociology of Music literature. That is, the meaning that actors ascribe to digital audio formats in everyday life and consequences for the meaning of music more generally. Your insights will act as important channels for how sociologists might make sense of such phenomena. Furthermore, your data gives added value to research and makes it more worthwhile, should it result in academic publication.

Will my taking part in this project be kept confidential?

All the information that we collect about you during the course of the research will be kept strictly confidential and will only be accessible to members of the research team, that is, myself (Samuel Aldersley) and my primary and secondary supervisors, Dr Matthias Benzer and Dr Alex Dennis. Although quotes from responses will be used in the PhD thesis, you will not be able to be identified in any reports or publications, unless you explicitly wish to be identified. If you agree to us sharing the information you provide with other researchers (e.g., by making it available in a data archive) then your personal details will not be included unless you explicitly request this. If you do wish to be identified according to your real name, I will inform you on the potential implications of this (e.g., potential for negative feedback, the potential impact on families and friends, and the fact that once your name is published it cannot be withdrawn).

Pseudonyms will be used in the published thesis, so participants are not identifiable. For example, if your name is 'Adam', I may use the name 'Jack' as a fictitious item. Any direct quotes from the verbal transcriptions will be put under this name, unless the participant explicitly requests their real name to appear in the findings. After the focus groups have been transcribed, the audio recordings will be deleted. Please also be reassured that your personal details such as name, phone number, address, and email address etc., will not be revealed to people outside the project.

In some cases, however, it may not be possible to safeguard the confidentiality of the data. Indeed, because these sessions entail the use of focus groups, there will be four other individuals present. I will make it clear that whilst confidentiality cannot be guaranteed (as there are other people present in the focus group), I ask participants to respect privacy and to not repeat what is said to other individuals' outset the research setting and/or research group.

I may also be obliged to report to the relevant authorities, for example, if there is a possibility that a participant may disclose information about criminal activity or risks to public safety. In

cases where a safeguarding intervention is required, I will contact the Department's Ethics Administrator, Tim Highfield (t.j.highfield@sheffield.ac.uk) in the first instance.

What is the legal basis for processing my personal data?

In cases where I will be collecting your personal information (i.e. data which may make you identifiable to a third party), I will inform you on the legal basis for processing (i.e. collecting and using) your personal data. According to data protection legislation (GDPR, 2018), we are required to inform you that the legal basis we are applying in order to process your personal data is that 'processing is necessary for the performance of a task carried out in the public interest' (Article 6(1)(e)). Further information can be found in the University's Privacy Notice <https://www.sheffield.ac.uk/govern/data-protection/privacy/general>.

What will happen to the data collected, and the results of the research project?

Once your data has been collected it will be stored securely in accordance with the University's protocol for data management in a secure Google drive. Any physical copies of the focus group transcripts will be locked away safely in a locker in the Departmental PhD office. In addition, all data sets will be stored securely on a USB stick, which will be locked away in a safe for ten years. The only party with access to this digitised data will include members of the research team. All personal data collected will be pseudonymized upon completion of the data transcripts.

The results of the research will be published in my thesis and can be requested from myself upon the successful completion of the PhD. The publication will also be made available via the University's repository, White Rose e-Theses Online (WREO). The full text of the thesis will then be made available open access via WREO and the British Library's EthOS repository. This will make my thesis discoverable by search engines and will increase the chances of citations and downloads. This will be made available via Open Access and will be stored for a period of ten years. If results are published in any following articles, chapters, books, conference talks, etc. I will inform the participants via email on where they can find the academic work.

Again, please be reassured that (unless requested otherwise) your data will be pseudonymised, so you are not identifiable to third parties. Any information that links you directly to the raw data provided will be pseudonymized upon completion of the data transcripts.

Who is the Data Controller?

The University of Sheffield will act as the Data Controller for this study. This means that the University is responsible for looking after your information and using it properly.

Who has ethically reviewed the project?

This project has been ethically approved (27/01/2022) via the University of Sheffield's Ethics Review Procedure, as administered by the Department of Sociological Studies.

What if something goes wrong and I wish to complain about the research or report a concern or incident?

Participants involved in or affected by the research should report incidents or concerns to the Department's Ethics Administrator Tim Highfield (t.j.highfield@sheffield.ac.uk), who will also act as the Designated Safeguarding Contact (DSC). If they feel that reports or incidents have not been handled adequately by the DSC, then they should contact the Departmental Head of Department Nathan Hughes (nathan.hughes@sheffield.ac.uk). This will be reiterated verbally and communicated via email before the research process begins.

Contact for further information

Should you wish to obtain more information about the study, please contact me (lead researcher) at smaldersley1@sheffield.ac.uk. In case I am unavailable, you can contact my supervisory team Dr Matthias Benzer (m.benzer@sheffield.ac.uk) (first supervisor) and/or Dr Alex Dennis (a.dennis@sheffield.ac.uk) (second supervisor).

Thank you for taking your time for reading this and I hope you can take part in the project

Participant consent form – Album listening party and focus group

Please tick the relevant boxes below if you agree to take part in the project:

Taking part in the project	Yes	No
I have read and understood the project information sheet created 28/04/2022 or the project has been fully explained to me. If you answer 'No' to this question, please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.	☐	☐
I have been given the opportunity to ask questions about the project.	☐	☐
I agree to take part in the project.	☐	☐
I understand and agree that taking part in the project will involve an observation of an album listening party and participating in a follow-up focus group.	☐	☐
I agree that whilst I am participating in the album listening party, video recordings will be made. I agree to being video recorded and for these videos to be used in the research.	☐	☐
I understand that by choosing to participate as a volunteer in this research, this does not create a legally binding agreement nor is it intended to create an employment relationship with the University of Sheffield.	☐	☐
I understand that I can withdraw from the research/study, with or without notice, at any time. I understand that I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.	☐	☐
How my information will be used during and after the project		
I understand my personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.	☐	☐
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	☐	☐
I understand and agree that other authorised researchers will have access to this data in an anonymised format.	☐	☐
I give permission for the focus group data that I provide to be deposited in my repository in a Google drive so it can be used for future research and learning.	☐	☐
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs in an anonymised form.	☐	☐
So that the information you provide can be used legally by the researchers	☐	☐
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	☐	☐

Name of participant [printed]

Signature

Date

Samuel Aldersley (researcher)

Signature

Date

Appendix 4: Album listening party equipment table

Equipment table

Genre/group	Speakers	Headphones
DnB ALP	5 listeners	5 listeners
Rock ALP	7 listeners	3 listeners
Hip-Hop ALP	5 listeners	4 listeners
Jazz ALP	6 listeners	1 listener

Appendix 5: Screenshot of ethics approval



Downloaded: 13/04/2025
Approved: 27/01/2022

Sam Aldersley
Registration number: 200272579
Sociological Studies
Programme: PhD in Sociology

Dear Sam

PROJECT TITLE: How does the experience of digitally compressed audio formats affect the meaning of music in everyday life?
APPLICATION: Reference Number 043129

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 27/01/2022 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 043129 (form submission date: 24/01/2022); (expected project end date: 25/10/2024).
- Participant information sheet 1097207 version 2 (16/12/2021).
- Participant information sheet 1097206 version 1 (31/08/2021).
- Participant information sheet 1097171 version 6 (31/08/2021).
- Participant information sheet 1097205 version 1 (31/08/2021).
- Participant consent form 1097194 version 6 (31/08/2021).
- Participant consent form 1097209 version 1 (31/08/2021).
- Participant consent form 1097208 version 1 (31/08/2021).
- Participant consent form 1097204 version 2 (31/08/2021).

If during the course of the project you need to [deviate significantly from the above-approved documentation](#) please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter.

Yours sincerely

Tim Highfield
Ethics Admin
Sociological Studies

Please note the following responsibilities of the researcher in delivering the research project:

- The project must abide by the University's Research Ethics Policy: <https://www.sheffield.ac.uk/research-services/ethics-integrity/policy>
- The project must abide by the University's Good Research & Innovation Practices Policy: https://www.sheffield.ac.uk/polopoly_fs/1.6710661/file/GRIPPpolicy.pdf
- The researcher must inform their supervisor (in the case of a student) or Ethics Admin (in the case of a member of staff) of any significant changes to the project or the approved documentation.
- The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.
- The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.