University of Southampton

Faculty of Social Science

School of Economic, Social and Political Science

Taste in the Digital Age: Music Streaming Services and the Performance of Class Distinction

by

Jack Webster

ORCID ID 0000-0001-7183-5652

Thesis for the degree of <u>Doctor of Philosophy</u>

March 2019

University of Southampton

<u>**Abstract**</u>

Faculty of Social Sciences

School of Economic, Social and Political Science

Thesis for the degree of <u>Doctor of Philosophy</u>

Taste in the Digital Age: Music Streaming Services and the Performance of Class Distinction

by

Jack Webster

Music streaming services, such as Spotify, have the potential to disrupt the social dynamics of music consumption in ways not previously encountered. Not only do these platforms offer anytime, anywhere access to vast catalogues of music at little or no cost, they are seeking to manipulate what and how people consume it. Combining the judgements of music experts, extraordinary volumes of data about people's identities and interactions, and computational techniques designed to extract and predict similarities and differences in musical preferences at scale, music streaming services are adapting what music is selected and presented to individuals on an increasingly personalised basis.

Drawing on mixed qualitative methods and working through the case of Spotify, the market leading service in the UK, this thesis explores if and how music streaming services are shaping the part music taste and consumption play in the reproduction of class. In the 1960s, Pierre Bourdieu (1984) demonstrated how patterns in cultural tastes and consumption practices are shaped by class background and – at the same time – serve as a mechanism through which class divisions are reproduced. On the one hand, this thesis demonstrates that Spotify challenges existing class practices by undermining the potential for musical expertise and a capacity to appreciate music as an end in of itself to function as a source of distinction for the middle classes. On the other hand, this thesis argues that Spotify creates opportunities for the middle classes to (re)deploy their cultural assets both 'on' and 'off' platform, through practices such as playlist creation and vinyl music consumption. In doing so, this thesis contributes to debates about the social dynamics of music consumption and the changing nature of the cultural assets underpinning class privilege in the 21st century.

Table of Contents

Table of Tables

Table of Figures

Research Thesis: Declaration of Authorship

Print name:	Jack Webster

Title of thesis:	Taste in the Digital Age: Music Streaming Services and the Performance of Class Distinction

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;

2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;

3. Where I have consulted the published work of others, this is always clearly attributed;

4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;

5. I have acknowledged all main sources of help;

6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;

7. None of this work has been published before submission.

Signature:		Date:	

Acknowledgements

I would like to thank my supervisors, Prof. Susan Halford, Dr. Brian Hracs and Dr. Nicholas Gibbins, for their enduring support over the past four years. They made the experience of doing a PhD immeasurably more rewarding and less daunting – for that, I am grateful.

I would like to thank my parents and brother for their unconditional support throughout this process.

I would like to thank Colin Pattinson for being my sounding board and challenging me to be more strategically-minded.

I would like to thank the following friends who have inspired and supported me on this journey at different points in time in their own unique ways: Bianca Borg, Chira Tochia, David Phillips, Jack Bishop, Jessica Ogden, Josh Brown, Lucrezia Crisci, Rima Jalba and Yara Al Wazir.

I would like to thank the Web Science Centre for Doctoral Training and the UK Engineering and Physical Sciences Research Council for giving me the opportunity and financial support to undertake a PhD.

Finally, I would like to thank all of my participants who shared their time with me and made this thesis a reality.

Chapter 1   Introduction

1.1   The Streaming Age

Music streaming services, such as Spotify, Apple Music and Deezer, have the potential to shape the social dynamics of music consumption in ways not previously encountered. These services offer anytime, anywhere access to vast catalogues of licensed at little or no cost. In exchange for a monthly subscription fee of around £9.99 a month, or for free in exchange for exposure to third-party advertisements, people have on-demand access catalogues of over 30 million songs using an Internet-enabled device, such as smartphone or PC. Whereas access to music was once confined to what a person owned, music streaming services rent access to the history of recorded music at the touch of a button.

Not only are music streaming services making more music available than ever before, they are seeking to shape what and how people consume it. By integrating immense volumes of digital data about user behaviour, the judgements of music experts and the latest advancements in music recommendation technologies, music streaming services are shaping what and how music is made available through the strategic selection, arrangement and presentation of music. Music streaming services are engaged in the 'datafication of listening' (Prey 2016), the extensive and pervasive collection of data about music listening habits. By providing the socio-technical infrastructure (that is the social, technological, organisational, legal etc. means) through which people access music via the Internet, music streaming services are uniquely positioned to collect immense volumes of digital data about the identities of listeners and the nature of the interactions they have with music, individually and at scale. These platforms are 'digital enclosures,' capturing as much data as possible about micro-interactions with music (Andrejevic 2007). Every song choice every person makes, every time someone searches for their favourite artist and every time they turn up the volume when they hear a song they like, a digital footprint is left behind. These platforms are tracking what time people access and engage with music and collect information about where people are located. Indeed, if a person has linked their Facebook profile to their music streaming account, these platforms have the potential to augment the data they collect with social network information, such as who a person is 'friends' with. As Prey (2016,

2) puts it: "… on contemporary music streaming services all listening time is data-generating time."

This data is being combined with the latest advancements in music recommendation technologies to extract and predict patterns in musical taste (Webster et al 2016; Morris 2015; Beer 2013). Music recommendation technologies are computational systems programmed to make predictions about music's relevance to an individual or situation by analysing patterns in past listening behaviour (Schedl 2015). They categorise individuals on the basis of similarities in music taste and use these categorisations to determine what music to select and present to individuals (Goldberg et al. 1992, Resnick et al. 1994, Hill et al. 1995, Shardanand and Maes 1995). In recent years, music streaming firms have invested heavily in their music recommendation capabilities. In 2014, Spotify acquired the music data analytics firm, The Echo Nest, which was one of the leading music recommendation and targeting advertisements firms (Spotify 2014). Meanwhile in 2017, Apple acquired the music detection software firm, Shazam, a service that enables people to detect the name of a song playing in the background using their smartphone (Neate 2018). This acquisition gives Apple unprecedented access to data about the types of music that is catching people's attention in their everyday lives.

The development of a feature called 'Time Capsule' by Spotify illustrates the extraordinary predictive capabilities of music streaming services. Seeking to conjure up feelings of nostalgia, Time Capsule is a personalised playlist which, according to its website, is designed "… with songs to take you back in time to your teenage years."[1] It is a compilation of 30 songs based on predictions about what an individual likely listened to when they were a teenager based on the analysis of patterns in current listening behaviour combined with demographic information. Of

---

[1] https://timecapsule.spotify.com

Spotify's 180 million monthly active users (Sanchez 2018), anyone who is over the age of 16 and has been using the service for more than two weeks receives their own custom-made Time Capsule playlist.

Alongside computational prowess, music streaming services are also cultivating their editorial authority (Barna 2017; Sweney 2015; Barton 2015). They are assembling teams of music editors, composed out of individuals who used to work in the music press and radio, who create and manage suites of branded playlists, from activity and mood-based playlists to the latest in new music. Recent high-profile hires include the hiring of the former BBC Radio 1 DJ, Zane Lowe, by Apple Music, and the former head of BBC Radio 1, George Ergatoudis, by Spotify (Sweney 2015; Barton 2015). Music streaming services mobilise these individuals' musical expertise and tastes to make judgements about what music is relevant for particular situations, activities and moods, and what constitutes the 'best' new music to be featured in these platforms' most popular playlists. For instance, Spotify's 'Rap Caviar,' a playlist of new hip-hop and rap music, has over ten million followers (people who have added the playlist to their own libraries and subscribed to updates) worldwide.

1.2   The Social Significance of Music Streaming Services

These radical changes to the availability of music and the ways in which it is mediated raise some fundamental questions about the role that cultural taste and consumption play in the reproduction of class inequalities. The influential work of Pierre Bourdieu (1984) reminds us that music taste is not neutral. His research demonstrated how cultural tastes and consumption practices are shaped by class background. What cultural goods are consumed and how, from music to fashion, is a product of class background and serves to affiliate and differentiate people on the basis of social class. At Bourdieu's time of writing, a cultivated appreciation for classical music and jazz defined the tastes of the upper and middle classes, whilst popular culture was associated with working-class taste. In turn, being able to consume the 'right' culture in the 'right' way are mechanisms through the which the dominant classes exclude the dominated from social and economic opportunities. For example, Bourdieu (1984) discusses how the education system rewards individuals with the vocabulary to confidently talk about highbrow culture, which is typically members of the dominant classes who are immersed in highbrow culture at home, such

as through access to musical instruments and recordings. Because of its convertibility, cultural taste functions as one of the assets – what Bourdieu (1984) conceptualises as 'cultural capital' – underpinning middle and upper-class privilege.

Over time, sociological accounts about how class identities are performed through cultural taste and consumption have changed. The concept of the cultural omnivore was introduced by Peterson and Kern (1996) to describe changes in how the dominant classes communicate status through taste and consumption. Rather than being defined by the exclusive consumption of highbrow culture, such as classical music, Peterson and Kern demonstrated that the tastes of the dominant classes have become more omnivorous, displaying tendencies to consume culture spanning hierarchies of highbrow and lowbrow. This concept of the cultural omnivore has subsequently been refined, highlighting that *how* people engage with diverse cultural forms is as important to claims to middle-class distinction as the diversity of *what* cultural goods people consume in of itself (Savage and Gayo 2011; Bennett et al 2009; Warde and Gayo-Cal 2009; Savage 2006). For example, omnivorousness is performed by some through cultural expertise and a capacity to confidently manoeuvre between diverse cultural forms (Savage and Gayo 2011).

1.3   Music Taste, Consumption and Class in the Streaming Age

The classed nature of music tastes and consumption practices invites us to consider if and how music streaming services are shaping the part that music taste and consumption play in class reproduction. Both the abundance of music they make available combined with their attempts to shape what and how people engage with it have the potential to shape the relationship between music taste, consumption and class in ways not previously encountered. These companies are amassing immense volumes of data about classed music tastes and consumption practices and are using this information to shape what music is made available to people on an increasingly individualised basis.

It has already been acknowledged that music streaming services have the potential to function as new kinds of 'cultural intermediaries' (Webster et al 2016; Morris 2015; Beer 2013; Lange 2016).

Referring to Bourdieu's (1984) concept of 'cultural intermediaries,' which refers to the individuals located in the space between cultural production and consumption who shape the formation of cultural hierarchy and class taste, music streaming services have the potential to shape the formation of taste at an unprecedented rate and scale. The music recommendation systems used by these services to make determinations about what music is relevant to people on an individualised basis have the potential to undermine the influence of class-related socialisation processes, such as friendship networks and the consumption of the right type of broadcast media, on the formation of taste (Beer 2013; Morris 2015). In addition, music recommendation technologies have the potential to reinforce social divisions in exclusionary ways (Wright 2015; Prior 2018; Prey 2016). By personalising the experience of consuming music and giving people more of what they are familiar with, these services have the potential to reproduce the classed differences in what people consume. In doing so, music streaming services may be closing down the potential for the abundance of music they make available to broaden cultural conversation and dismantle class-based cultural hierarchies (Wright 2015).

Beyond its implications for Bourdieusian class analysis, the commercial application of music recommendation technologies has raised questions amongst musicologists and the sociologists of music about the commodification of taste and the rationalisation of culture (Born 1995; Taylor 2013a; Morris 2015; Vonderau 2014; Hesmondhalgh and Meier 2017). For some time, taste has functioned as a commodity. The cultural intermediaries described by Bourdieu (1984) 'sold' their taste as labour, converting cultural capital into economic opportunities through employment in the institution of mass media, such as advertising agencies. However, music streaming services have transformed the rate and scale at which taste is commodified and who and what contributes to its commodification (Taylor 2013a; Vonderau 2014; Hesmondhalgh and Meier 2017). Music taste has been informationalised (that is, rendered as digital data and enrolled in processes of information generation, processing and transmission) and employed to serve commercial ends (Taylor 2013b). No longer is taste and musical knowledge the preserve of 'human' cultural intermediaries; rather, knowledge about music tastes is being created through the analysis of large volumes of data about ordinary people's interactions with music. Knowledge about what people like to consume is exploited at an unprecedented rate and scale to satisfy the commercial aims of music streaming services, major record labels and other profit-seeking content creators. Through the employment of computational systems, we are witnessing the rationalisation of music at a rate and scale not previously encountered.

Yet, the existing literature discussed here is limited. It usefully sets an agenda for further research but do not consider why and how music streaming services are seeking to shape music taste and consumption practices in the first place or engage with the classed practices and perspectives of the people who use these platforms. The large body of literature on cultural intermediaries makes clear that motivations, material practices and spatial and temporal dynamics shape what and how cultural goods are mediated (Joosse and Hracs 2015; Maguire and Matthews 2014; Jansson and Hracs 2018; Maguire and Matthews 2012; Cronin 2004; Nixon and du Gay 2002). For example, Joosse and Hracs (2015) discuss a range of motivations underpinning the work of food curators in Sweden, such as building communities, encouraging sustainable food consumption and cultural heritage, which shape what goods are curated, such as ethically-sourced and organic food in the case of sustainable food curators. This suggests that the socioeconomic context in which music streaming services are embedded needs to be incorporated into a conceptualisation of what music streaming services are, as this context has the potential to shape how they are performing as a new kind of cultural intermediary. This includes a consideration for the strategic aims underpinning why these firms are collecting data about user identities and interactions, why they are investing in the latest advancements in music recommendation technologies and cultivating their editorial authority, as well as how the labour of this heterogeneous assemblage of actors is mobilised to shape what and how people consume music. This will enable us to be more specific about what aspects of what music streaming services do to mediate access to music that have implications for the relationship between music taste, consumption and class.

In turn, in order to understand if and how music streaming services are shaping taste, the classed practices and perspectives of the people who use these platforms need to be considered. As Bourdieu's (1984) theoretical framework presupposes, cultural intermediaries' influence on taste formation is relational; they only have influence over what counts as 'good' taste (i.e. what is relationally understood as legitimate taste) if they are understood and engaged with by others as culturally-authoritative actors (Maguire and Matthews 2014; Nixon and du Gay 2002; Piper 2015). Without considering why and how people engage with music streaming services, little can be said about why and how they are shaping the part that music taste and consumption play in the reproduction of class.

Recent empirical studies of class and consumption provide important evidence suggesting that music streaming services and similar online platforms have the potential to become implicated in the performance of class distinction. The concept of emerging cultural capital has been introduced to refer to the cultural tastes and consumption practices of the young and well-educated (Savage et al 2013; Prieur and Savage 2013). Confidence with and appreciation for so-called forms of 'new media,' such as social media and video games, as well as the consumption of popular culture for its own sake, characterise the tastes of younger generations of the middle classes (Savage et al 2013; Savage 2015). Engagement with these cultural forms serves to distinguish the young and middle class both from people located in other class groups, as well older generations of the middle classes. In turn, speculation has been made about whether these practices have the potential to represent new kinds of cultural assets for the middle classes (Savage et al 2013; Friedman et al 2015; Prieur and Savage 2013).

This research provides important evidence about the potential for music streaming services to become enrolled in claims to class distinction, yet the methodological approach adopted in this type of research gives little consideration to the ontological complexity of these forms of 'new media.' This thesis is driven by an understanding that music streaming services are not simply 'artefacts' or symbolic projections of capital enrolled in games of distinction. These platforms are socio-technical systems which are dynamically adapting what and how music is made available to individuals in response to changes in user behaviour. Why and how these platforms mediate access to music has the potential to shape how they are implicated in the performance of class distinction. Therefore, it is insufficient to pay attention to the classed practices and perspectives of the people who use music streaming services without considering what these platforms are and why and how they seek to shape music consumption practices in the first place.

1.4   Aim

This thesis aims to address these gaps in existing literature by establishing, on the one hand, what music streaming services are and why and how they seeking to shape music taste and consumption practices, and, in turn, it uses this as a foundation for exploring if and how the mediation performed by these platforms is shaping the performance of class identity and distinction. By integrating these avenues of empirical enquiry, this thesis is better positioned to

explore *why* and *how* music streaming services are shaping the role that music taste and consumption play in the reproduction of class. More specifically, this thesis poses the following questions:

> • Why and how are music streaming services seeking to shape how people access and engage with music?
> • If and how are music streaming services used to access and engage with music by individuals from different class backgrounds?
> • If and how are music streaming services shaping how class distinction is performed through the consumption of music?

My research questions are explored through the analysis of empirical data collected through mixed qualitative research methods. Working through the case of Spotify, the market leading service in the UK, I conducted interviews with 22 music industry key informants and 20 consumers who use Spotify, collected and analysed over 120 documents about the music streaming marketplace and conducted app 'walk-alongs' with my 20 Spotify user participants. Interviews with music industry key informants combined and the document analysis were used to explore what, why and how Spotify is seeking to shape what and how people access and engage with music. Interviews with Spotify users and the app walk-alongs, where individuals 'walked through' how they use Spotify to access and engage with music (Light et al 2016; Jørgensen 2016), were used to examine if and how using Spotify has become enrolled in the performance of class identities. This data was synthesised to attend to the question of if and how the ways in which Spotify mediates access to music are shaping the role that music taste and consumption play in the reproduction of class.

The task of integrating a consideration for what, why and how Spotify mediates access to music with the classed practices and perspectives of the people who use the platform to consume music demands an interdisciplinary approach. It requires us to explore the socioeconomic context in which music streaming services are embedded and engage with literature about the political economy of the recorded music industry to understand how these platforms are positioned in

relation to the actors and processes of music production. It requires us to turn to the computer sciences to better understand how, in technical terms, Spotify achieves personalisation through the use of music recommendation technologies. And it requires us to engage with the sociology of class and consumption to better understand how class identities are performed through music taste. As I demonstrate in this thesis, incorporating perspectives from across disciplines, such as sociology, economic geography and computer science, allows me to engage with Spotify's ontological complexity and begin to unpack why and how the platform is shaping how class identity and distinction are performed through music taste and consumption.

1.5   Key Findings

This thesis makes three important claims about how Spotify is shaping how class identity and distinction are performed through music taste and consumption. First, I argue that Spotify undermines the relationship between cultural hierarchy and class position, which underpins Bourdieu's (1984) model of the relationship between taste, class and consumption. Bourdieu argued that the tastes of the dominant classes are defined by a cultivated appreciation for so-called forms of highbrow culture, such as classical music. In turn, dominated groups in society are excluded from social and economic opportunities on the basis of their lack of familiarity with highbrow culture.

The omnivore debate has demonstrated how cultural abundance has undermined previously-established class differences in what culture people consume. Omnivorousness is seen to be, in part, a consequence of the widespread production and circulation of forms of both highbrow and lowbrow culture which accompanied the expansion of the creative industries in the latter half of the 20th century (Peterson and Kern 1996; Warde et al 2008; Wright 2011, 2015). Whereas once the tastes of the dominant classes were defined by the exclusive consumption of highbrow culture, the concept of omnivore illustrates how the tastes of the dominant classes has reacted to and incorporated cultural abundance, underpinned by increased toleration and liberalism amongst the middle classes (Savage and Gayo 2011). In doing so, it has been suggested that the composition of class taste is a potentially less divisive part of how class structures cultural life (Savage and Gayo 2011; Bennett et al 2009; Warde et al 2008; Atkinson 2011). I argue that the on-demand access to vast catalogues of licensed music offered by Spotify further undermines the

potential for differences in what music people consume to function as a source of class distinction, as exclusivity and restriction are harder to maintain. This is because Spotify is making it easier to access and engage with music which some people might otherwise have been excluded from due to insufficient access to economic (i.e. financial assets) and cultural capital (i.e. valued cultural knowledge and dispositions).

Secondly, I demonstrate how Spotify is undermining existing middle-class practices and claims to class distinction. Not only is the concept of the cultural omnivore used to demarcate changes in *what* cultural goods people consume, it is also used to capture changes in *how* people consume it (Atkinson 2011; Savage and Gayo 2011; Warde and Gayo-Cal 2009; Rimmer 2012; Bennett et al 2009). Studies of the omnivore have demonstrated how the middle classes communicate status through their cultural expertise and confident handling of diverse cultural forms (Savage and Gayo 2011; Ollivier 2008; Bennett et al 2009; Atkinson 2011; Prieur and Savage 2013). Existing literature studying music streaming services as new kinds of cultural intermediaries suggests that these platforms are undermining the opportunities to cultivate and deploy such expertise (Beer 2013; Morris 2015). For example, in a context where culture now 'finds us,' Beer (2013, 95-96) suggests that the accumulation of cultural capital may become detached from '"… socialisation processes that are more dependent on friendship groups and the consumption of the right type of broadcast media." I build on and extend this existing literature by demonstrating how both Spotify's attempts to personalise the experience of consuming music, combined with the accelerated rate at which music is mediated by the platform, are undermining opportunities for some members of the middles classes to mobilise their cultural capital in the form of musical expertise. In contrast for members of the middle classes for whom musical expertise is not an important part of their claims to class distinction, as well as for some members of the working classes, the stakes are different. I demonstrate how these people are more receptive to how Spotify seeks to shape the experience of consuming music.

Thirdly at the same time as undermining existing class practices, I argue that music streaming services are opening up opportunities for some members of the middle classes to (re)deploy cultural capital both 'on' and 'off' platform. Bourdieu (1984, 1986) insists that what constitutes

capital is in a constant state of flux; the convertibility of the cultural assets underpinning class privilege should not be taken for granted. Recent studies of class and consumption have demonstrated that the use of Web and digital technologies are becoming an important part of the tastes of younger generations of the middle classes and have the potential to represent emerging capital (Savage 2015; Savage et al 2013; Friedman et al 2015). I build on this literature by empirically demonstrating that using Spotify has created opportunities for some to accumulate economic, cultural and symbolic (i.e. status and prestige) capital. The creation and sharing of playlists are ways for some individuals to convert cultural capital into economic opportunities and symbolic status. At the same time, I argue that the renewed interest in consuming music in physical formats, such as vinyl LPs, is a way for some members of the middle classes to mobilise economic and cultural capital by resisting the immaterial and ephemeral nature of consuming music through Spotify. I argue that these practices privilege younger members of the middle classes who have the disposable time to dedicate to consuming music in these ways (Reeves 2014).

1.6   Contribution

This thesis contributes to debates about class and consumption in the 21st century. In particular, it offers much-needed consideration for the disruptive potential of the on-demand music streaming platforms, such as Spotify, which have come to dominate how many people access and engage with music. It furthers our understanding of how class identities are performed through the everyday practices of music consumption and elaborates on the changing nature of the cultural assets underpinning class privilege.

This thesis makes a methodological contribution by demonstrating the value of looking beyond the classed practices and perspectives of the people who use music streaming services and engaging with the ontological complexity of platforms. Following the lead of many class scholars, I could have focussed exclusively on exploring why and how people from across class backgrounds engage with music on Spotify. I could have treated music streaming services as an object people engage with and enrol in strategies for achieving distinction. However, this approach would overlook an important aspect of what music streaming services are. As I go on to demonstrate, these platforms are dynamic socio-technical systems which are actively seeking to shape what

and how people engage with music. Instead, I provide an empirically-informed account of the data-driven forms of mediation performed by Spotify and I use this as a basis for identifying specific aspects of what Spotify does to mediate access to music which have implications for the performance of class identities.

By engaging with Spotify's ontological complexity in this way, this thesis contributes to the study of music streaming services as new kinds of cultural intermediaries (Webster et al 2016; Morris 2015; Wright 2015; Beer 2013; Lange 2016). This thesis examines music streaming services as contextualised market actors. It explores the commercial relationships Spotify holds with its three key user groups: music rights holders (e.g. major record labels), brands wanting to advertise on the platform and people who use the service to consume music. I identify the need to drive user engagement as being an important motivation behind Spotify's attempts to shape music tastes and consumption practice, which has implications for how the platform mediates access to music in material ways. These findings contribute to literature discussing how the work of cultural intermediaries is shaped by their relationship to different actors and stages of cultural production (Maguire and Matthews 2010, 2012, 2014; Nixon and du Gay 2002; Negus 2002).

My examination of what, why and how Spotify is seeking to shape how people consume music contributes to debates about what strategies, resources and actors are used by cultural intermediaries to ascribe meaning to music and accomplish influence (Joosse and Hracs 2015; Jansson and Hracs 2018; Cronin 2004; Ocejo 2010; Maguire and Matthews 2014). I elaborate on how the practice of curation, the strategic selection, presentation, arrangement and ascription of value(s) to cultural goods (Joosse and Hracs 2015), is adopted and adapted by Spotify. For some time, curation has been an important strategy performed by cultural intermediaries in the music marketplace, such as record label talents scouts and radio DJs, to filter the oversupply of talent and music-related goods and services (Jansson and Hracs 2018; Hracs and Jansson 2017; Barna 2017; Bhaskar 2016; Kjus 2015; Negus 2002). In an age of abundant access to music, it has been acknowledged that the importance of curation is intensifying, as various retailers and distributors, such as independent record stores, are using curation as a value-adding strategy and source of competitive advantage (Jansson and Hracs 2018; Hracs and Jansson 2017; Kjus 2015), whilst

helping consumers to alleviate the social and psychological burdens of radically-expanded choice (Schwartz 2004; Bhaskar 2016; Luck 2016). Existing literature on curation has largely focussed on its performance in physical spaces, such as the space of the record store, and given limited attention to the new forms of data-driven curation made possible by the use of music recommendation technologies and the virtual spaces in which they are performed. I demonstrate how the datafication of listening increases the rate and scale at which curation can be performed, by enabling the use of computational techniques, whilst also creating a mechanism through which the impact of curation can be empirically measured in relation to the strategic aims underpinning its performance.

This thesis contributes to debates about the power of the cultural assets underpinning middle-class privilege. Bourdieu (1984) examined how taste and cultural knowledge are not only a product of class background but they also serve as a mechanism for excluding people from social and economic opportunities. Taste is one of the assets underpinning the position of privilege occupied by the middle and upper classes and are deployed in social arenas, such as the education system, to reproduce privilege. Whilst the concept of the cultural omnivore captures a change in how the dominant classes deploy cultural capital, moving away from the exclusive consumption of highbrow culture to a more pluralistic engagement with cultural goods, the omnivore debate maintains that taste is an important asset possessed by the dominant classes (Peterson and Kern 1996; Savage and Gayo 2011; Bennett et al 2009; Bellavance 2008). The findings presented in this thesis demonstrate that Spotify is undermining existing strategies for achieving distinction through music taste and consumption. By alleviating the economic and social risks associated with accessing and engaging with music an individual might not normally engage with, I suggest that Spotify is further undermining the potential for differences in what music people consume to reproduce class divisions. Whereas for Bourdieu (1984) the boundaries between class groups were policed by differences in what culture people consumed, with highbrow culture associated with the dominant classes, and so-called forms of 'popular' culture associated with the dominated classes, I demonstrate how Spotify is making more music available to more people in more inclusive ways.

Furthermore, the accelerated rate at which music mediated by Spotify, combined with its attempts to anticipate taste through personalisation, are undermining opportunities for members

of the middle classes for whom musical expertise is an important part of their claims to distinction to mobilise cultural capital. The omnivore debate demonstrates how cultural confidence and expertise is one way in which some members of the middle classes communicate status through consumption (Savage and Gayo 2011; Ollivier 2008; Bennett et al 2009; Atkinson 2011; Prieur and Savage 2013), yet Spotify is limiting opportunities to perform omnivorousness in this way. In doing so, Spotify is undermining the cultural assets underpinning middle-class privilege.

Finally, the findings presented in this thesis also contribute to debates on emerging forms of capital and new forms of class distinction (Savage et al 2015; Savage 2015; Friedman et al 2015; Prieur and Savage 2013). I demonstrate how Spotify is creating opportunities to mobilise capital and achieve class distinction. I identify how the ways in which the platform mediates access to music are creating new opportunities to mobilise capital both 'on' and 'off' platform, notably in the form of vinyl music consumption and online playlist creation. Indeed, the recent resurgence in vinyl music consumption has received increasing scholarly attention in recent years (Maguadda 2011; Hracs and Jansson 2017; Bennett and Rogers 2016; Bartmanski and Woodward 2015; Kjus 2015). This thesis contributes to these debates by incorporating a consideration for the class dimension of these practices. In doing so, my findings speak to the persistence of the cultural forms of power possessed by the middle classes and how those well-endowed with capital are able to adapt to structural shifts and consolidate their position of privilege, even in the face of rapid technological change.

1.7   Outline

My thesis is structured as follows:

In Chapter 2, I explore the changing relationship between music taste, consumption and class. I begin by introducing Pierre Bourdieu's (1977, 1984, 1986, 1991) theoretical and conceptual framework which forms the foundation of this thesis. I then reconcile Bourdieu's theory of taste with more recent changes to the way music is produced, distributed and consumed that foreshadow the findings presented in this thesis. In particular, I discuss how the expansion of the

creative industries, digitalisation and the Web and the more recent rise of 'platform capitalism,' within which I situate music streaming services, have – and continue to – challenge our understanding of how music taste and consumption are implicated in the reproduction of class. This chapter identifies and discusses the limitations in existing research on music streaming services and makes explicit how thesis builds on current research.

In Chapter 3, I outline my methodological approach and research design. I begin by discussing my methodological approach to the study of class. I adopt what is widely known as a culturalist approach to class analysis, which acknowledges the implicit and individualised ways class manifests through routine practices such as music consumption (Bottero 2004, 2005; Devine and Savage 2000; Crompton 1998; Savage 2000; Savage 1992). After considering the strengths and weaknesses of this approach in relation to the aims of my thesis, I demonstrate how I incorporate a consideration for the study of music streaming services' ontological complexity into my research on taste, class and consumption. I outline an approach which draws on platform studies (van Dijck 2013; Mackenzie 2017; Langley and Leyshon 2016), which I combine with Bourdieu's (1977, 1984, 1986, 1990) theoretical and conceptual framework. I then outline my mixed qualitative methods research design, describing the data collection and analysis I conducted and the ethical considerations that were raised.

In Chapter 4, I begin analysing my empirical material. This chapter presents an empirically-informed account of what, why and how Spotify is seeking to shape how people access and engage with music in everyday life. I identify the need to increase user engagement as being the driving force behind why Spotify curates the experience of consuming music. I elaborate on what Spotify does to curate, elaborating on the importance of editorially-curated and personalised playlists and recommendations, as well as the adaptive presentation of content. In addition to user engagement being important to revenue generation, I demonstrate how engagement also matters because it creates the data Spotify uses to achieve personalisation. In doing so, data becomes a product and producer of user engagement and serves to stabilise Spotify's position as a cultural intermediary. I conclude this chapter by discussing some of implications of what, why and how Spotify seeks to shape how people access and engage with music for the relationship between taste, consumption and class.

In Chapter 5, I explore how Spotify's attempts to shape how music is accessed and engaged with, discussed in Chapter 4, are experienced by people who use the service. I begin by using the subjective histories of my participants to identify and discuss some of the objective possibilities opened up by Spotify, such as how the platform makes music more affordable. I then go on to consider the implications of these objective possibilities for the role that music taste and consumption play in the reproduction of class. Firstly, I consider how Spotify is shaping class identity and distinction are performed through *what* music people consume. I suggest that Spotify is undermining the potential for differences in what music people consume to contribute to the reproduction of class. Secondly working through vignettes discussing the practices and perspectives of four participants in detail, I examine how Spotify is shaping how class identity and distinction are performed through *how* people consume music. I demonstrate that for members of the middle classes for whom musical expertise is an important part of their claims to class distinction, Spotify is undermining opportunities to mobilise cultural capital.

In Chapter 6, I explore how Spotify is creating new opportunities to reproduce class. I discuss how Spotify is creating opportunities to mobilise capital both 'on' and 'off' platform. In particular, I discuss how the renewed interest in consuming music in physical formats, such as vinyl LPs, represents one way for people to mobilise capital in ways that resist the immaterial and ephemeral nature of consuming music on Spotify. Secondly, I identify how using the platform itself has the potential to become implicated in claims to class distinction. I discuss how playlist creation is one way in which people are able to convert their cultural capital into social and economic opportunities.

In Chapter 7, I bring this thesis to a close with a concluding discussion about the broader implications of my research and set an agenda for future research. I identify several themes that emerge out of this research which represent potential areas for further research. I discuss how the data that Spotify shares about user behaviour on its platform with third parties has the potential to be used in social-scientific research. With the appropriate skills and resources, there are opportunities to use this data to learn more about how Spotify collects data about music tastes and consumption practices and tease out its significance for the relationship between

taste, consumption and class. I demonstrate the need for further research exploring music streaming services' disruptive potential for actors in the field of music production, such as major record labels, and the political economy of the recorded music industry. I discuss how there is an opportunity to explore generational differences in the use of Spotify and how the platform is shaping adolescent identity formation. Finally, I speculate about the democratising potential of music streaming services and what this might mean for working-class identities.

Chapter 2   Music Taste, Consumption and Class in the 21st Century

The aim of this chapter is to unpack the changing relationship between music taste, consumption and class in the 21st century. Taking Pierre Bourdieu's (1977, 1984, 1986, 1990) theories of class and consumption as its departure point, this chapter examines how changes to the way music is made available – from the accelerated growth of the creative industries in the latter half of the 20th century to the rise of so-called 'platform capitalism' in the 21st century – have shaped our understanding of music taste's role in processes of class reproduction.

Whilst Bourdieu was by no means the first or last person to write about class and consumption, I chose to build on his approach in my thesis because he provides one of the most nuanced accounts of how taste and consumption are implicated in processes of class reproduction. His theories encompass both the social formation of taste (i.e. how taste formation is shaped by class background) and the social function of taste (i.e. how taste is implicated in the reproduction of class divisions). He is sensitive to the mutually-constituting relationship between cultural production and consumption, acknowledging that what and how cultural goods are made available to consumers shapes what and how goods are enrolled in the performance of class distinction, and vice-versa. And he incorporates an intricate conceptual framework – in the form of the concepts of capital, habitus and field – which helps to empirically demonstrate how taste and consumption relate to processes of class reproduction.

However, I identify two major limitations of Bourdieu's theoretical and conceptual framework. The empirical research upon which Bourdieu's theory is built is rather dated. Bourdieu was researching and writing in France in the 1960s and his findings pre-date many important changes to the way music is made available, most notably related to digital technologies and the Web. This raises questions about Bourdieu's relevance and whether his account of the tastes of different class groups holds true today. In this chapter, I argue that whilst the empirical content of Bourdieu's theory is dated, his conceptual and theoretical framework is not historically bound (Stewart 2013; Lizardo 2014; Gartman 2002). I demonstrate how Bourdieu skillfully accommodates for change in his theoretical framework because of how the interplay between

habitus, capital and creates opportunities for social change. Secondly, Bourdieu's theoretical and conceptual framework is limited when it comes to technology and accommodating non-human agency (Webster et al 2016; Halford and Savage 2010). He reduces technologies to artefacts and symbolic projections of capital enrolled in the games of class distinction, rather than addressing technology's socio-materiality and how technologies enable and constrain action. In the next chapter, I address this limitation. I outline how I draw on platform studies to incorporate a consideration for music streaming services' ontological complexity into my Bourdieusian study of taste, consumption and class.

This chapter begins by exploring Bourdieu's conceptual framework. Bourdieu's concepts of capital, habitus and field form the foundation for Bourdieu's theory of taste and it is necessary to introduce these concepts first. I then examine Bourdieu's theory of taste in two parts, beginning with Bourdieu's theory of the social formation of taste, followed by Bourdieu's theory of the social function of taste. After this exposition, I critically consider the relevance of Bourdieu's theories for my thesis. I argue that whilst Bourdieu's theories may seem outdated, due to the historically specific nature of his empirical content, his theoretical constructs remain valuable because of how the interplay between capital, habitus and field accommodates for social change. The chapter then seeks to reconcile Bourdieu's theories with major changes in how music is produced, distribution and consumed since the 1960s, specifically related to: (1) the expansion of the creative industries; (2) the Web and digitalisation; and (3) platform capitalism and music streaming services.

2.1   Bourdieu's Conceptual Framework

An important contribution of Bourdieu's is his conceptual trio of capital, habitus and field. These concepts help Bourdieu to explain the formation and reproduction of social class and move us beyond an understanding of class as merely an economic category.

2.1.1   Capital

The concept of capital is fundamental to Bourdieu's (1984, 1986) understanding of social class. Bourdieu argues that class structure (e.g. whether an individual is working, middle or upper class, broadly defined) is organised in terms of the volume and composition of economic, cultural and social capital possessed by individuals. Economic capital refers to financial assets in the form of money or institutionalised in the form of property rights. Social capital refers to social connections and obligations which can be used to access social and economic opportunities, such as getting a job. Meanwhile, cultural capital refers to the cultivation of knowledge and sensibilities.

Capital can be converted across these guises. For example, cultural capital can be institutionalised as academic qualifications, and economic capital can be converted into cultural capital by affording a person the time to indulge in educational pursuits. Cultural capital can exist in at least three forms: in the embodied state of cultural knowledge and dispositions; in the objectified state, which is realised in the form of cultural goods (e.g. pictures, books, machines, music); and in an institutionalised state, a form of objectification which is set apart because it confers original properties on the cultural capital in guarantees, such as educational qualifications (Moore 2014; Bourdieu 1986).

Bourdieu's concept of cultural capital has proven to be particularly influential. Bourdieu's introduction of this concept has helped to demonstrate how class inequality is more than an economic phenomenon. Inequalities are not only based on the unequal distribution of financial assets; rather, cultural resources, such as education and taste, play an important role in producing and maintain class divisions and excluding dominated groups in society from social and economic opportunities (Savage 2000; Savage et al 1991; Bottero 2005).

2.1.2   Habitus

The concept of habitus is the second key element in Bourdieu's theoretical framework (1977, 1990). This concept is used by Bourdieu to help negotiate the dialectic between structure and agency, objectivity and subjectivity, an issue which pre-occupies many social theorists. Habitus can be thought as the 'lens' through which individuals act and think in the world. The formation of

habitus is shaped by class background. The conditions of existence (e.g. family relations, neighbourhood, schooling, social networks) in which an individual grows up shapes the formation of habitus as individuals take on the ideas and values they are exposed to. In doing so, habitus structures new experiences in accordance with the structures produced by past experiences (Bourdieu 1990, 60).

Bourdieu uses the concept of habitus to help explain how coherent sets of practices emerge amongst individuals who occupy similar positions in class structure (as determined by the volume and composition of capital they possess). Bourdieu uses the notion of class habitus to refer to the shared system of internalised structures and schemes of perception common to any social class. Individuals who occupy similar conditions of existence (i.e. similar class backgrounds) form similarly structured habitus because the types of experiences, ideas and value they are exposed are relatively similar due to their shared location in class structure. Consequently, relatively coherent sets of tastes and practices emerge which come to define class identities.

2.1.3   Field

The concept of 'field' refers to the social space in which individuals are located and interact (Bourdieu 1984). Rather than just focussing on what was said or what happened, the concept of field emerged out of Bourdieu's commitment to examining the social space in which social interactions take place (Thomson 2014). Individuals occupy a position in a shared social space which consists of multiple social fields, such as the economic field, the education field and the musical field. An individual's position in the field is determined by the volume and accumulation of capital (Bourdieu 1984). Each of these social fields can be thought of like a football field (Thomson 2014). There are shared rules that govern how interactions in the field occur (like the rules of football) and these rules constrain action.

Power relations structure fields; positions are either in domination, subordination or equivalence depending upon agents and institutions' access to the capital at stake (Jenkins 1982). Positioning in the field corresponds with class position and fields are guided by the logic of competition. The

logic of competition is the pursuit of resources (economic, social and cultural capital) at stake in a given arena (Bourdieu 1984). In the economic field, for example, agents compete for economic capital through investment strategies, whereas competition in the cultural field is often driven by the pursuit of recognition and prestige (Bourdieu 1993). Like a game of football, the field is a competitive space, where various agents use differing strategies to maintain or improve their position in the field through the accumulation of capital. Bourdieu (1998, 40-41) describes field as a:

> Structured social space, a field of forces, a force field. It contains people who dominate and people who are dominated. Constant, permanent relationships of inequality operate inside the space, which at some time becomes a space in which various actors struggle for the transformation of preservation of the field. All the individuals in this universe bring to the competition all the (relative) power at their disposal. It is this power that defines their position in the field, and, as a result, their strategies.

Individuals occupy multiple fields at the same time. Some of the fields which Bourdieu uses in his theoretical framework include the economic field, the educational field, the political field and the cultural field. These fields can be broken down further depending upon the intentions of the researcher. There is a relationship of similarity (or homology in Bourdieu's terminology) and exchange between fields. The structure of practices and the agents who are dominant in fields are similar, as those with high levels of capital deploy their resources in respective fields. There is also exchange between fields, as an individual's position in one field (e.g. education field) can shape their success in another field (e.g. economic field). Indeed, events occurring in adjacent fields and external to fields (e.g. technological change, de-regulation, natural disasters) can produce change within a given field (Stewart 2013; Corrigan 1992).

Bourdieu's conceptual framework is integral to understanding his theory of taste. As I will demonstrate in the next section, the concept of habitus helps Bourdieu (1984) to explain how class position, as determined by the volume and composition of capital possessed by an individual, shapes the formation of taste and consumption practices. In turn, the concept of capital helps Bourdieu to explain how taste and consumption practices contribute to the

reproduction of inequalities by functioning as assets (capital) which can be converted into social and economic opportunities in a field.

The concepts of habitus, capital and field shape this thesis as I use them to address the question of if and how music streaming services are shaping how music taste and consumption are implicated in processes of class reproduction. I am concerned with how class habitus has been shaped by structural changes to the fields of music production and consumption (more specifically, changes to the way music is made available in the field that have accompanied music streaming services' transition from a niche to the dominant mode of distribution) and if and how these changes have created opportunities to accumulate and deploy new and/or existing forms of capital.

The following section outlines Bourdieu's theory of taste, which serves as the theoretical foundation of this thesis. I explain Bourdieu's theory of taste in three parts. I begin by discussing his theory of the social formation of taste (i.e. how class background shapes what and how we consume music). I then consider his theory of the social function of taste (i.e. how taste and consumption are implicated in processes of class reproduction). And, finally, I unpack Bourdieu's theorisation of the relationship between the fields of cultural production and consumption, highlighting the importance of considering how cultural goods are mediated when addressing how cultural consumption practices are implicated in processes of class reproduction.

2.2   Bourdieu's Theory of Taste

Bourdieu's (1984) theory of taste provides an account of both how taste is cultivated and the social function taste plays in reproducing class. He explains how our upbringings in society shape the formation of cultural preferences and how these preferences affiliate us with individuals who occupy a similar class position and distance us from those located in other parts of social space. In turn, Bourdieu discusses how taste is a mechanism through which individuals are included and excluded from social and economic opportunities.

2.2.1   Social Formation of Taste

Bourdieu's concept of habitus is central to his understanding of how taste is cultivated (Lizardo 2014). Habitus is the mechanism through which tastes are produced and the tastes of others are classified and evaluated. The formation of habitus is shaped by the conditions of existence that accompany an individual's position in the field, as determined by the volume and composition of capital they possess. For example in his discussion of music taste and consumption practices, Rimmer (2012) discusses how forms of what he calls primary socialisation (e.g. sounds heard in the home; regularity of listening; materials of consumption; relational interactions around music; precedents set by parents about value of music; nature of attention to be given to music) and secondary socialisation (e.g. mass media; the work of cultural intermediaries; influence from extended family) shape the formation of habitus. Bourdieu (1977, 1990) emphasises how past experiences have a greater bearing over newer encounters. Whilst habitus changes over time in the face of new objective possibilities presented in the field, earlier experiences are stickier and there is a kind of cumulative effect, as past experiences are used as a basis for judging and negotiating new opportunities. As Lizardo (2014, 15) puts it:

> Persons choose those settings that most effectively allow them to enact their
> accumulated skill, with a heavy weight given to those skills that were acquired earliest
> and which are therefore an inherent component of the person's 'second nature.'

Through the operation of habitus, individuals are pre-disposed to like – they feel at home with – particular kinds of cultural goods and experiences. The choices we make as a consumers (i.e. what music we choose to listen to, or our choice of restaurant and the food we eat) are a product of past experiences, internalised through habitus, and taste can be thought of as an expression 'what an individual expects to like' rather than necessarily 'what an individual likes' (Lizardo 2014). By the same token, individuals tend to avoid cultural goods and experience that they are not pre-disposed to like, meaning things that an individual has not had the objective opportunity to acquire a pre-disposition towards.

Taste is not only understood by Bourdieu (1984) in terms of what culture individuals consume, but also *how* individuals consume it. He introduces the notion of 'modes of acquisition' to refer to

the differentiated ways individuals engage with cultural goods (ibid). Alongside producing preferences and affinities for particular cultural goods and experience, habitus also produces manners of appreciation. For example, at Bourdieu's time of writing, the dominant classes' mode of acquisition was characterised by a 'distanced' or contemplative appreciation for so-called forms of highbrow culture, whilst the mode of acquisition possessed by the dominated classes emphasised immediate satisfaction. The conditions of existence in which habituses are formulated introduces people to ways of engaging with cultural goods and demonstrating our familiarity and appreciation. For example, Bourdieu (1984) discusses how the education system furnishes individuals with the symbolic mastery of taste; it provides them with the language and schemes to aestheticise culture and discuss highbrow culture. Indeed, the dispositions produced by habitus are transferable as they guide the practices of people across the gamut of cultural fields, from music to fashion, in a consistent manner.

Habitus produces stylistic unity amongst the tastes of individuals from similar class backgrounds (Bourdieu 1984). Individuals who share similar conditions of existence cultivate similarly structured habitus which in turn translates into similar pre-dispositions for particular cultural goods and experiences. In *Distinction* (1984), Bourdieu's identifies three zones of taste: legitimate, middlebrow and popular taste (Stewart 2013; Wright 2015). At Bourdieu's time of writing, legitimate taste refers to highbrow culture such as classical music and the fine arts and was associated with the professional middle and upper middle classes in France. Middlebrow taste encompasses the "minor works of the major arts […] and the major works of the minor art" (Bourdieu 1984, 16), such as *déclassé* forms of legitimate culture (e.g. classical music popularised through television and film, light opera and musicals, or best-selling novels). Meanwhile, popular taste is associated with the working classes and is antithetical to legitimate taste. Although this unity may not reflexively be recognised by individuals, it serves to affiliates those who occupy similar class positions and differentiates individuals from different class backgrounds. Or as Bourdieu (1984, 49) puts it:

> Like every sort of taste, it unites and separates. Being the product of the conditionings associated with a particular class of conditions of existence, it unites all those who are

the product of similar conditions while distinguishing them from all others. And it distinguishes in an essential way, since taste is the basis of all that one has – people and things – and all that one is for others, whereby one classifies oneself and is classified by others.

This section has summarised Bourdieu's theory of the social formation of taste, identifying the centrality of Bourdieu's concept of habitus for understanding how class shapes taste. In Chapter 5, I explore how class habitus shapes how people engage with music on Spotify and identify how the ways in which Spotify mediates access to music comes into contention with people's habitus and classed dispositions towards music.

2.2.2 The Social Function of Taste

In addition to Bourdieu's theory of taste formation, he also provides us with an account of how taste and consumption practices are implicated in the reproduction of class divisions. He demonstrates how taste is used by the middle and upper classes to naturalise and perpetuate their privilege and dominance in society.

Taste is both a product and producer of class. Whilst the class conditions of existence in which our habituses are cultivated shape the formation of taste, cultural goods and the ways we engage with them at the same time perpetuate class divisions. Bourdieu's concept of cultural capital is central to understanding how taste is enrolled in claims to class distinction. Taste has the potential to function as *embodied* cultural capital and cultural goods have the potential to function as *objectified* cultural capital. As I will discuss in what follows, these assets can be mobilised to improve or maintain an individual's position of dominance in field and police the boundaries between class groups. As Bourdieu (1984, 59) puts it:

The manner of using symbolic goods, especially those regarded as the attributes of excellence, constitutes one of the key markers of 'class' and also the ideal weapon in strategies of distinction.

According to Bourdieu (1984), one of the ways that the dominant classes exploit their cultural resources is by converting them into tastes for what he describes as 'legitimate' culture (i.e. highbrow culture). Legitimate culture is positioned in society as culture which demands knowledge and a cultivated disposition – embodied cultural capital – to appreciate. Legitimate culture functions as objectified cultural capital because it transmits or objectifies the value that can be derived from the possession of the embodied cultural capital needed to appreciate it. In turn, the objectification of cultural goods as capital contributes to the reproduction of class divisions, as members of the dominated classes are excluded from social and economic opportunities on the basis of their lack of familiarity (embodied cultural capital) with the goods objectified as cultural capital (highbrow culture). For example in *Distinction* (1984), Bourdieu discusses how familiarity with highbrow culture is both cultivated and rewarded in the educational field. It has also been discussed how attendance at events, such as the symphony or the opera, has the potential to create opportunities for elite groups to acquire social capital (Bennett et al 2009). Therefore, highbrow culture acquires and retains its value as objectified cultural capital because access to it is restricted to the individuals who have the embodied cultural capital needed to access and appreciate it.

Indeed in the same way that access to highbrow culture is restricted (thereby enabling it to function as objectified cultural capital), the cultivation of a distanced appreciation of culture is not available to all. It is a mode of acquisition which demands time and sustained engagement to acquire, a luxury that can be afforded by the wealthy, whilst access to education furnishes individuals with the vocabulary and schemas for practical mastery of highbrow culture. Indeed, there are also distinctions within the dominant classes between those who acquire familiarity with legitimate culture through immersion and those who learn it through education (Bourdieu 1984). These restrictions enable the dominant classes' mode of acquisition to function as embodied cultural capital. In turn, the ability to consume culture in the 'right' way serves as a basis for including and excluding individual and groups from social and economic opportunities.

Bourdieu's theory of taste presents a compelling account of how taste is both a product of class background and also implicated in implicated in reproduction class divisions. It makes a significant

contribution to sociological understanding of processes of class reproduction by highlighting the importance of culture and taste. Rather than treating class as merely an economic category, Bourdieu highlights how cultural power is also integral to how the dominant classes reproduce their position of dominance in society.

Yet Bourdieu's theory of taste is not only focussed on the 'demand-side', but in the following section I explain how Bourdieu (1993, 1984) also considers the dynamics of cultural production and how they shape the social formation and function of taste. This aspect of Bourdieu's theory is consistent with the claim made in this thesis that attention needs to be given to both why and how Spotify mediates access to music as well as the classed practices of the individuals who engage with music on these platforms.

2.3   Cultural Intermediaries and The Field of Cultural Production

The field of cultural production is the site where the cultural goods used in claims to class distinction are produced and circulated (Bourdieu 1993). According to Bourdieu (1984), there is a 'homologous' relationship between the fields of cultural production and consumption, whereby a change in the cultural products produced results in a change in tastes, and a change in tastes produces a change in the products created by actors in the field of cultural production. This is because cultural producers are led by a logic of competition and other interests associated with their position in the field (as determined by the volume and composition of capital possessed). Not only do cultural producers seek to attune themselves to the demands of consumers through techniques such as market research, but because the field of cultural production is also a classed space (i.e. organised in terms of the distribution of capital where individual practice is guided by habitus), different cultural producers – guided by habitus – produce cultural goods that are consistent with the demands of consumers who occupy a structurally similar position in field of cultural consumption. As Bourdieu (1984, 229) explains:

> The functional and structural homology which guarantees objective orchestration between the logic of the field production and the logic of the field of consumption arises from the fact that all specialised fields (*haute couture* or painting, theatre or literature) tend to be governed by the same logic, i.e. according to the volume of the specific

capital that is possessed (and according to seniority of possession, which is often

associated with volume), and from the fact that the oppositions which tend to be

established in each case between the rich and less rich in the specific capital [...] are

mutually homologous (which means there are numerous invariants) and also

homologous to the oppositions which structure field of social classes (between the

dominant and dominated) and the field of the dominant class (between the dominant

fraction and the dominated fraction).

The 'objective orchestration' of demand and supply ensures that there is 'something for

everyone' with regards to what cultural goods are produced and consumed (Bourdieu 1984, 229).

For example, Bourdieu subdivides the field of cultural production into the subfield of restricted

production and the field of large-scale or mass production (Bourdieu 1993). In the field of

restricted production, the stakes concern the accumulation of cultural and symbolic capital, rather

than economic capital, and consists of producers with high levels of cultural capital and

dispositions consistent with those actors in the field of cultural consumption who have high levels

of cultural capital (dominated fraction of the dominant class or the 'intellectual bourgeoise').

These groups prefer cultural goods that are contemplative and ascetic rather than expensive and

self-indulgent, which is consistent with the kinds of cultural goods the avante-garde artists

competing for symbolic profits in the subfield of restricted production are seeking to obtain.

Meanwhile in the field of mass production, economic capital is at stake. The producers of

commercial cultural goods in the field possess less cultural capital than those in the restricted

field and the goods produced cater to those consumers who are similarly deprived of cultural

capital (petite bourgeois and the working class). The goods produced and consumed by these

actors are described by Bourdieu (1984) as 'kitsch' and described by Gartman (2002, 258) as "…

profitable but crass, catering to unmitigated self-indulgence and simple hedonism."

In Bourdieu's (1984) discussion of the relationship between production and consumption, he

draws our attention to the work of members of the petite bourgeoise known as 'cultural

intermediaries.' Cultural intermediaries is a conceptual term originally defined by Bourdieu (1984,

359) to include "… all the occupations involving presentation and representation" of cultural

goods and services. They are the taste makers and vendors of symbolic goods, such as advertising and marketing material, magazine reviews and editorials and lifestyle advice and pedagogy, located in the space between cultural production and consumption. They mediate cultural goods and ideas to new economic and social spheres, creating the conditions for consumers to identify their tastes in cultural goods.

In the 1960s when Bourdieu was writing, cultural intermediary occupations included the producers of cultural programmes in radio and television, advertising and marketing creatives, as well as press *attachés*, public relations officers, critics, museum curators and gallery directors (Bourdieu 1984, Fyfe 2004, Maguire and Matthews 2014). Indeed, Bourdieu (1984, 325-326) argues that the professions associated with cultural commentary and embedded in institution of mass media are most indicative of the class of occupations known as cultural intermediaries, where "… the most typical of whom are the producers of cultural programmes on TV and radio or the critics of 'quality' newspapers and magazines."

Underpinned by their claims to cultural authority and expertise in specific cultural arenas, cultural intermediaries produce symbolic goods and services, such as marketing material, fashion and lifestyle magazines, or the production of radio and television programmes. These symbolic goods and services result in the production and framing of symbolic value in relation to specific cultural activities (Featherstone 1991). The framing of symbolic value refers to the way in which these occupations 'forge a sense of identification' between the cultural product and its potential consumer (Negus 2002). This manifests in the imparting of forms of knowledge, expertise and skills in support of the consumption of specific cultural products, such as food, music and fashion.

The specific activities involved in the production of symbolic goods and services varies. Some actors are engaged in activities such as search and selection, influencing what cultural goods and services are produced or distributed (Negus 2002, Foster et al 2011, Larson 2015); discursive activities influencing the reception of cultural goods among specific audiences (Frith 1983, Thornton 1995, Koreman 2014); and curation, which refers to the sorting, organising and ascription of symbolic value to cultural goods (Joosse and Hracs 2015, Baker 2012). For example in the articles they write, cultural critics are engaged taste making and classificatory activities as they discursively frame and classify cultural goods as interesting or worthy of consumption (Frith

1983, Thornton 1995, Koreman 2014). Meanwhile, press *attachés* and public relations officers co-produce the public identities of individuals and organisations by shaping and selecting what information and insights reaches the media (Edwards 2012, Hodges and Edwards 2014).

The work of cultural intermediaries is significant because they affect hierarchies of taste and sources of class distinction because they position cultural goods in relation to specific classed practices, lifestyles and tastes (Maguire 2014). For example Baker's (2012) study on retro retailing explores how the selection, organisation and presentation of furniture within the store ascribes and communicate value as it appropriates symbols of the working class and (re)presents them to middle class consumers as 'retro' and 'alternative.' On the one hand, cultural intermediaries' impact on hierarchies of taste and class distinction because they help consumers to cultivate 'good' taste and identify the 'right' goods to consume, making the culture and tastes of the dominant classes more interpretable and accessible, thereby enabling people to accumulate cultural capital. On the other hand, by identifying and promoting the 'right' culture to consume, they construct hierarchies of value and reinforce the effect that having the 'right' tastes confers advantage and reward in any given field.

Bourdieu's theories demonstrate how the ways in which cultural goods are produced and circulated are an important part of how taste and consumption are implicated in the reproduction of class divisions. There is a dynamic relationship between the fields of production and consumption and it is important to recognise that changes in how cultural goods are produced and distribution has implications for how it is consumed and vice-versa.

The impact that cultural intermediaries have on taste formation demonstrates how the ways in which cultural goods are mediated matters. What and how cultural goods are presented in the field of cultural consumption shapes the symbolic value they possess and if and how they relate to notions of 'good' taste. This thesis shares a concern for the significance of how cultural goods are mediated. Building on Bourdieu's theoretical approach, it considers the ways in which music streaming services mediate music is shaping the performance of class identity and distinction.

2.4   Bourdieu in the 21st Century

Bourdieu provides a detailed account of how cultural taste and consumption are implicated in processes of class reproduction. His theories provide explanations of both the social formation and function of taste, and he incorporates a consideration for how the ways in which cultural goods are mediated shapes how they are enrolled in claims to class distinction.

However, Bourdieu's theories pre-date many important changes to the way cultural goods are produced, distributed and consumed in the cultural field. Bourdieu was researching and writing in the 1960s in France and his account precedes important structural changes in the fields of music production and consumption, including the accelerated expansion of the creative industries in the latter half of the 20th century, the democratising potential of affordable digital production technologies and the Web, as well more recent changes related to music streaming services and curated experiences these platforms provide. Notably, music has become significantly more abundant since Bourdieu's time of writing (Wright 2011; Wright 2015; Bhaskar 2016; Anderson 2006; Schwartz 2004). Mass media (e.g. radio, television) and the expanded commercial production of music contributed to the mass circulation of forms of both highbrow and lowbrow culture (Schwartz 2004; Wright 2011, 2015; Hesmondhalgh 2013). The Internet has created new ways of legally and illegally distributing music, such as illegal peer to peer file sharing networking and digital download stores, which has made music available at little or no cost (Anderson 2006; Hracs 2012; Leyshon 2014). Meanwhile, as this thesis addresses, music streaming services have made more music available than ever before (Morris and Powers 2015; Marshall 2015; Bhaskar 2016).

Whilst this list is by no means exhaustive of the types of changes that have occurred in the fields of music production and consumption, it highlights the dated nature of Bourdieu's account. It invites us to question whether the 'distanced appreciation' of 'legitimate' culture (i.e. high arts, classical music, fine art, opera), as Bourdieu understood it, carries the same symbolic currency in the 21st century, and raises the question of whether the tastes of the dominated classes and ways in which they deploy their cultural capital have changed, incorporating new cultural forms and ways of engaging with it.

Yet, the dated nature of Bourdieu's empirical material does not mean that his theories should be discounted as irrelevant when studying taste, class and consumption in the 21st century. Rather, a wider reading of Bourdieu's work highlights how he skillfully accommodates the potential for change and that his theories need not be read as historically bound (Stewart 2013; Lizardo 2014; Gartman 2002). For example, Bourdieu (1986) acknowledges the contingent nature of capital, explaining that what functions as capital in any given field at any point in time is in a constant state of flux. Meanwhile whilst habitus is the mechanism through which past experiences shape actions in the present, habitus is subject to change as individuals are confronted by new objective possibilities in the field. As Bourdieu (1994, 7) puts it: "Habitus, as a product of social conditionings, and thus of history (unlike character), is endlessly transformed."

In the following section, I consider Bourdieu's approach to change. In particular, I introduce Bourdieu's (1977, 1990) concept of 'hysteresis' which I use as a tool throughout this thesis to make sense of how structural changes to the fields of music production and consumption have and continue to shape the role that music taste and consumption play in the reproduction of class divisions. I then examine three states of hysteresis that have occurred in the fields of music production and consumption to illustrate how changes to the way music is mediated have had implications for its role in processes of class reproduction. More specifically, I address the impact of the accelerated expansion of the creative industries in the latter half of the 20th century and the mass circulation of forms of highbrow and lowbrow culture that accompanied its growth; the Web and digital production technologies and the emergence new forms of cultural authority and expertise; and, finally, platform capitalism and the disruptive potential of music streaming services. The discussion of this third state of hysteresis is key to framing the questions that drive the remainder of this thesis.

2.5   Bourdieu's Approach to Change

It has been suggested that Bourdieu's theoretical approach is overly deterministic, unable to adequately account for social change (Jenkins 2002; Lamont 1992; Garnham 1993). These critics argue that the operation of habitus, the application of previously acquired dispositions shaped by

an individuals' classed conditions of existence, is deterministic, suggesting that class – through habitus – *determines* how individuals act and interact with each other, leaving little room for manoeuvre.

However, this is an overly-rigid reading of the concept of habitus. Bourdieu's broader theory of practice demonstrates to us how moments of disruption produce opportunities for change (Stewart 2013; Gartman 2002). Bourdieu insists that there is a dynamic and mutually-constituting relationship between habitus, capital and field. For example, habitus is the product of the conditions of existence which accompanies an individual's position in the field (as determined by capital), yet at the same time habitus invokes the structures in which it internalises; it gives meaning to the structures of that field (Wacquant 1989, 44).

The concept of habitus is used to describe what practices are *likely*, not what is predetermined. Rather than habitus being a determining force, it places constraints on action, orientating people towards what is familiar and consistent with past experiences (i.e. where a person feels 'at home'), rather than determining what people do in any given situation. The structure of habitus changes over time in response to new experiences, but change is gradual as people tend to favour situations which are familiar, therefore situations which do not demand an unfamiliar response. Consequently, we can say that habitus has an improvisational quality (Stewart 2013). Individual action is not pre-determined, but the actions available to an individual is shaped both by what is objectively possible, access to economic, social and cultural capital, and also constraints and biases introduced by habitus. As Bourdieu (1984, 170-171) puts it:

> This classificatory system, which is the product of the internalisation of the structure of social space, in the form in which it impinges through the experience of a particular position in that space, is, within the limits of economic possibilities and impossibilities (which tends to reproduce in its own logic), the generator or practices adjusted to the regularities inherent in a condition.

Or as Stewart's (2013, 60) jazz-music analogy usefully translates:

Accomplished jazz musicians are free to improvise but are constrained by the extent of their ability and technique, the structure of the specific piece of music, and more broadly, the parameters of the genre.

Meanwhile, what constitutes capital in a given field is in a constant state of flux. Assets, such as financial resources or education, only function as capital in a Bourdieusian sense if they are convertible into other forms of capital and social advantage (Bourdieu 1986). As certain assets become widely available, such as increased access to higher education through the lowering of tuition fees, the rarity – thus convertibility – of higher education is brought into question. When the tastes of the dominant classes are appropriated and imitated by dominant groups, such as through the mass production of high-end fashion replicas, the potential for these cultural goods to function as markers of class distinction is undermined (Veblen [1899] 1912).

Indeed, what constitutes capital not only changes within in the context of a field, but also in relation to individual life-course (Reeves 2014; Bennett et al 2009; Savage et al 2013). As individuals get older, what is considered to be 'respectable' changes and individuals deploy their capital in new ways to conform or deviate the norms of and conventions of being 'young' or 'middle-aged.' For example, Reeves (2014) discusses how the nature of cultural engagement changes as individuals have more disposable time (e.g. when they are teenagers or retired), whilst the recent Great British Class Survey demonstrated that there are increasingly palpable differences in the tastes and cultural practices of different generations of the same class (Savage et al 2013).

On the issue of social change, Bourdieu (1977, 1990) introduces the concept of hysteresis to refer to the state of discontinuity – a kind of time lag – between field and habitus that occurs as a result of structural changes to a field. Whilst structural changes to a field can be relatively fast, such as through the introduction of new legislation or technological innovation, changes to habitus are gradual. This is because the historical conditions in which an individual's habitus was cultivated (e.g. influence from family, early schooling) have a greater influence over practices compared to newer experiences and encounters (Bourdieu 1990). When structural changes to a field occur, a

state of discontinuity – hysteresis – is produced as habituses adapted to older conditions of the field are confronted by new objective possibilities. The concept of hysteresis draws our attention to how new practices are produced – in often unpredictable ways – by these new conditions and how actors succeed or fail in profiting from the opening up of new opportunities (Stewart 2013; Lizardo 2014; Gartman 2002). For example, Bourdieu's (1996) study of the French literary field demonstrated how growth in the number of educated readers created opportunities for upwardly mobile writers located in the petite-bourgeoise and the working classes, such as Emile Zola, to distinguish themselves from the established bourgeoise as credible writers whose aesthetic was shaped by their working class or lower middle-class origins (Gartman 2002).

In summary, Bourdieu's theoretical framework accommodates for change. Whilst his theories are in some ways limited by their dated nature, his theoretical and conceptual framework remains valuable for studying how taste and consumption are implicated in the reproduction of class divisions in the 21st century. In particular, the concept of hysteresis helps to us to reconcile how structural changes impact on class practices. It encourages us to consider how habitus is adapting to changes to the way music is mediated and be attentive to the closing down and opening up of opportunities to accumulate and deploy capital.

Inspired by Bourdieu's concept of hysteresis, the following sections (2.6-2.8) of this chapter reconcile Bourdieu's understanding of the relationship between taste, consumption and class with important changes to the way music mediated which have been alluded to in this chapter. In particular, I address three states of hysteresis in the fields of music production and consumption: (1) the significance of the accelerated expansion of the creative industries and the mass circulation of forms of highbrow and lowbrow culture which accompanied its growth; (2) the significance of the Web and affordable digital production technologies and lowered barriers to entry into music production and commentary enabled by these changes; and (3) the rise of 'platform capitalism' and the significance of the data-driven ways music streaming services seek to shape what and how music is consumed on their platforms.

I draw on a wealth of sociological research about taste, class and consumption which extends and updates Bourdieu's theories and I combine with this with literature from across the social sciences about the evolving music marketplace and the more recent rise of 'platform capitalism.' As part of

my discussion of music streaming services (section 2.8), I identify and discuss where there are gaps in current research about if and how these platforms are shaping the relationship between music taste, consumption and class, setting the stage for the contributions of this thesis.

2.6   Hysteresis #1: The Rise of the Cultural Omnivore

The fields of cultural production and consumption experienced significant change in the latter of half of the 20th century, in the period after Bourdieu was writing on *Distinction*. In Europe and North America, the creative industries experienced accelerated growth, contributing to the mass production and circulation of diverse cultural forms, spanning hierarchies of highbrow, middlebrow and lowbrow forms of culture. In this section, I discuss how these changes produced a state of hysteresis in the fields of music production and consumption, shaping our understanding of how taste and consumption are implicated in the reproduction of class.

2.6.1   The Expansion of the Creative Industries

The notion of the 'creative industries' refers to "… those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property" (DCMS 2001, 4). I use the notion of the creative industries instead of the 'cultural industries' because it encompasses a broader range of activities and heterogenous actors which shape cultural production and distribution (Florida 2002; Hesmondhalgh 2005).[2] At the creative industries' core are individual creators, such

---

[2] The popularisation of the term 'creative industries' at the turn of the 21st century was also politically-motivated, especially in the UK under the New Labour government. The adoption of this term was underpinned by the application of export values and employment metrics to arts and culture, enabling the government to justify their funding in the face of budget cuts. Moreover, it was used as a term to signal a 'new beginning' and a burgeoning new economy, portrayed in a positive light (see Pratt 2008).

as artists, but it also refers to industries traditionally associated with the 'cultural industries,' such as music, publishing, theatre and broadcasting, alongside supporting industries that help finance, promote and distribute creative goods and services (e.g. graphic design, software development, broadcast distribution) (DCMS 2001).

There was a myriad of economic, political, social, cultural and technological factors which contributed to the growth of the creative industries in the latter half of the 20th century (Wright 2011, 2015; Hesmondhalgh 2013). Technological change, in terms of new reproduction formats, such as tape and later the CD, created new opportunities for distributing music and re-distributing older catalogue in new forms, whilst improvements in telecommunications opened up other avenues for music distribution and marketing (Hracs 2012; Anderton et al 2013; Watson 2015). The creative industries globalised, with the manufacturing of consumer electronics, such as hi-fis and CDs, moving to other countries, such as China, where the labour was cheaper, which enabled companies, such as major record labels, to maximise profits (Scott 1999). The creative industries also grew against a backdrop of neoliberal governance. Neoliberalism is characterised by the promotion of marketisation through reduced public spending and de-regulation (Hesmondhalgh 2013). Consequently, policy makers paved the way for the growth of the creative industries through greater enforcement of intellectual property law, de-regulation and privatisation of telecommunications (Pratt 2016). These political, technological and economic changes were underpinned by rising prosperity in the Global North and increased leisure time, which increased demand for cultural goods and services (Shipman 2004; Peterson and Kern 1996; Wright 2011).

The establishment of the cultural industries (e.g. commercially and mass produced, music, literature theatre and cinema) in the early 20th century, which set the stage for the expansion of the creative industries in the latter half of the 20th century, was a source of much scholarly concern for the 'Frankfurt School' (Wright 2015). Adorno and Horkheimer ([1944] 1979) argued that the rise of 'mass culture' and the 'culture industry' was having a corrupting effect on society.

They argued that the aesthetic judgement demanded by highbrow culture was rendered irrelevant by the formulaic and repetitive nature of the popular music, film and television produced by the cultural industries, replacing critical thought with gratuitous amusement. In doing so, they argue, capitalist exploitation of labour is being extended beyond the workplace into everyday lives, as the "... man with leisure has to accept what the culture manufacturers offer him" (Adorno and Horkheimer [1944] 1979, 6).

Whilst this perspective has been criticised for its elitism and the lack of empirical foundation, the mass culture critique sets the scene for changes in our understanding of how class distinction is performed through taste and consumption (Wright 2015). The expansion of the creative industries in the latter half of the 20th century made it easier to access cultural goods spanning highbrow and lowbrow culture. For instance, the changing economies of scale in the creative industries made music more affordable as major record labels invested in large-scale production of both classical music and popular genres, such as rock and pop (Anderton et al 2013). In doing so, the mass production and circulation of both and highbrow and lowbrow forms of culture has undermined the processes of exclusion upon which the objectification of culture as capital rests (Peterson and Kern 1996). For Bourdieu (1984), the potential for cultural goods and ways of consuming them to function as cultural capital rests on restriction and exclusivity. Highbrow culture serves to distinguish the dominant classes because access to it is restricted to those with sufficient economic and cultural capital needed to acquire it and consume it in the 'right' way. Indeed, the influential works of Veblen ([1899], 1912) and Simmel (1904) demonstrated how the dominant groups in society are continually in the pursuit of new markers of distinction, as the fashions of the elite are acquired and appropriated by lower status groups in society.

2.6.2   The Cultural Omnivore

The resulting state of abundance has contributed to changes in how class distinction is performed through music taste and consumption. The concept of the 'cultural omnivore' has been used to describe a qualitative change in the tastes of the middle classes produced by structural shifts occurring in the latter half of the 20th century (Peterson and Kern 1996). Peterson and Kern

(1996) introduced the concept to describe how the tastes of the middle classes in the United States have transitioned from the exclusive consumption of highbrow culture to a more pluralistic engagement. Drawing on survey data, the authors noted how the middle classes expressed preferences for cultural goods spanning highbrow and lowbrow culture, thereby challenging Bourdieu's (1984) understanding of the homologous relationship between cultural hierarchy and class background (i.e. that the dominant classes consume highbrow culture, and the dominated classes consume popular culture). The rise of the omnivore is indicative of increasing liberalism and tolerance amongst the middle classes, underpinned by the changes in the availability and proliferation of forms of highbrow and lowbrow culture discussed in the previous section (Peterson and Kern 1996; Savage and Gayo 2011; Wright 2011). Indeed, Wright (2011, 368) argues that the expansion of the creative industries is central to understanding the emergence of omnivorousness. Wright argues that the figure of an 'open and more flexible cultural consumer' is less remarkable when considering how the creative industries have contributed to the widespread circulation and commercialisation of both highbrow and lowbrow cultural forms, as he puts it:

> Omnivorousness might be more mundane and ordinary than some studies suggest and that the increased volume and altered composition of cultural consumption in western societies, might simply reflect the increased range and available of things to consume (Wright 2011, 359).

These changes to the way cultural goods are produced and consumed suggest that the structuring effect of class has lost its efficacy in favour of a progressive process of individualisation (Giddens 1991; Beck 1992, 1994, 1997). Giddens (1991) argued that in the face increasing globalisation and the decline of traditional collective-based identities, such as the firm, family, neighbourhood and social class, individuals are required to reflexively negotiate and construct their own lifestyles. Social structures, such as those based on gender, class and ethnicity, still persist, yet the individual chooses what and how to act with respect to them. Similarly, Beck (1992, 1994, 1997) argued that western societies are entering a phase of 'reflexive' modernisation, where structures and relations such as class, employment, gender and the family are less significant as frames through which identity is constructed. As Beck (1997, 95) put it: "… the individual as actor, designer, juggler and stage director of his or her own biography, identity, social networks, commitments and convictions."

The shift to individualisation and reflexive modernity is reflected in what and how cultural goods are produced and consumed (Atkinson 2007). According to Beck (1992, 1994, 1997), we have seen a democratisation of formerly exclusive lifestyles and ways of consuming, such as private clubs and holiday travel. With the expansion of the creative industries and the widespread circulation of both highbrow and lowbrow forms of culture, Beck (ibid) argues that consumption has moved beyond class-based lifestyles to a 'standardising mass phenomenon,' where the types of cultural goods available to us to consume is becoming globally homogenised by the creative industries (Atkinson 2007). As the concept of the cultural omnivore suggests, we are seemingly moving away from clearly demarcated class-based tastes and consumption practices and entering a phase where exclusive snob cultures have lost their legitimacy.

Whilst Peterson and Kern's (1996) findings suggest that what culture people consume is seemingly becoming less divided in class terms, this does not necessarily signal the 'death of class' (Savage 2000; Savage et al 2001; Savage et al 1992; Devine and Savage 1999). Rather, qualitative studies have helped to demonstrate how omnivorousness should also be understood as a change in *how* the dominant classes mobilise capital and consume culture, instead displaying class privilege through the confident handling of a diverse range of cultural forms, rather than a distanced appreciation of highbrow culture, as Bourdieu (1984) understood it (Warde et al 2008; Bellavance 2008; Atkinson 2011; Rimmer 2012; Bennett et al 2009; Warde and Gayo-Cal 2009; Ollivier 2008).

Omnivores are not indiscriminate and there are limits to their pluralism, often displaying cautious engagement with popular culture (Warde et al 2008; Warde and Gayo-Cal 2009; Ollivier 2008). For example, Warde et al (2008) document how members of the middle classes more extensively critique less 'elevated' cultural forms, such as pop music, whereas the legitimacy of highbrow culture, such as classical music, is taken for granted. Indeed, there is variation in omnivorousness. For example, Ollivier (2008) identifies four modes of openness: 'humanist' (engagement with highbrow culture, while critical of popular culture); 'populist' (emphasising fun and entertainment when engaging with highbrow culture, rather than aesthetic appreciation, and engagement with popular culture with an emphasis on discovery and self-improvement); 'practical' (openness

attached to technical and practical domains, rather than arts and culture); and 'indifferent' (those who like everything indiscriminately), which characterise the tastes of the middle classes. The author argues that omnivorousness has multiple meanings for people according to their location in social space and is not articulated uniformly across individuals and class groups.

These arguments about the classed nature of omnivorousness are situated within a broader critique of individualisation and Beck and Giddens' analysis of class (Savage 2000; Savage et al 2001; Savage et al 1992; Devine and Savage 1999; Atkinson 2007; Bottero 2005). Rather than suggesting that class no longer structures social life, how class manifests itself has changed and become more individualised (Savage 2000; Devine and Savage 1999). Collective class identities are less visible but this does not mean that class has disappeared. Drawing on the work of Bourdieu (1984), these sociologists invite us to look beyond the binary between collective and individual identities and assumed fixed position of 'producer' and 'consumer' in the marketplace and consider how "… class is encoded in how people carry themselves as individuals" (Savage 2000, 107). Indeed, the reflexive and globalised identities and lifestyles described by Giddens and Beck are, in fact, better understood as manifestations of class identity for privileged groups in society (Savage 2000; Atkinson 2007). It is way for individuals with access to capital to distinguish themselves as members of the dominant classes and take advantage of the social and economic opportunities opened up by globalisation.

In summary, the growth of the creative industries has contributed to a state of hysteresis in the fields of music production and consumption. The mass production and circulation of so-called forms of highbrow, middlebrow and lowbrow culture have challenged 'old' claims to class distinction (i.e. the exclusive consumption of highbrow culture) and set the stage for the cultivation of 'new' ways of performing distinction (i.e. omnivorousness). As I discuss later in this chapter and thesis, music streaming services have again changed the nature of the abundance experienced in the fields of music production and consumption by making access to it more immediate. This, I go on to argue, further undermines the processes of exclusion upon which the objectification of culture as capital rests, bringing into question current sociological thought about how the dominant classes mobilise capital.

Whilst the concept of the cultural omnivore has become widely accepted, the fields of music production and consumption have experienced sustained disruption which continues to challenge our understanding of the relationship between taste, consumption and class. In the following section, I discuss the state of hysteresis produced by the changes to the way music is produced and consumed associated with the Internet, Web and affordable digital production technologies. I demonstrate how the Internet, Web and digital technologies have challenged institutionalised claims to cultural authority and expertise in the field and created new opportunities for individuals to mobilise capital.

2.7   Hysteresis #2: The Web and New Forms of Musical Expertise and Authority

The Internet, Web and affordable digital production technologies have transformed how music is produced, distributed and consumed. They have lowered the barriers to entry into music production and created new distribution channels and forms of cultural commentary (Hracs 2012; Leyshon 2014; Verboord 2014, 2010). In doing so, these changes have produced a state of hysteresis in the fields of music production and consumption. This section discusses how these changes have challenged traditional claims to musical expertise and authority in the field, whilst creating opportunities to accumulate and deploy capital, especially for those individuals well-positioned in the field to exploit the potential of digital technologies and the Web.

2.7.1   The Production and Consumption of Music in the Digital Age

Affordable digital production technologies, such as home studio equipment and video recorders, have lowered the barriers to entry into the music marketplace and made it possible for more people to produce music (Hracs 2012; Choi and Burnes 2013; Young and Collins 2010; Powers 2015). Concepts such as the 'prosumer,' 'participatory culture' and 'DIY production' have been introduced to capture the blurring distinction between producers and consumers (Hracs 2015; Speers 2016; Burgess et al 2009). Production is no longer the realm of professionals and experts,

as almost anyone with a computer and Internet connection can become an artist, whilst others generate economic value through forms of 'fan labour,' such as running online fan clubs (Arriagada and Cruz 2014; Arriagada 2016; Leyshon et al 2016; Schäfer 2011). For example, studies have documented the rise of the 'digitally-driven independent music production,' describing how independent musicians combine affordable digital production technologies with a network of cultural intermediaries with specialised expertise, such as managers and graphic designers, to distribute risk and successfully compete in the music marketplace (Hracs et al 2013; Hracs 2015).

The Internet has also enabled the development of legal and illegal online distribution models. Peer to-peer file (P2P) sharing networks,[3] such as Napster and Gnutella, have enabled music piracy to occur at an unprecedented rate and scale (Leyshon 2014; Hracs 2012). Compressed formats for digitally-reproducing music, such as the MP3, significantly reduced the size of digital music files, making it easier to disseminate music via the Internet, whilst the development and spread of P2P networks provided a means through which music could be illegally shared at scale in a distributed manner across the Internet. Whilst online music piracy has had a detrimental effect on the health of the recorded music industry (Hracs 2012; Leyshon 2014), it has transformed the availability of music, making large volumes of music available anytime, anywhere at no cost to anyone with a computer and Internet connection.

In addition to large-scale music piracy, the Internet has also enabled the development of legal online distribution models in the form of digital download stores, such as Apple's iTunes store (Arditi 2014; Anderton et al 2013). These distribution channels legally allow consumers to download and store digital copies of recordings in exchange for a small fee. For example, iTunes

---

[3] Peer-to-Peer (P2P) file-sharing services use peer-to-peer distributed networking technology to distribute digital media files, such as MP3s. Services such as Napster facilitated access to a P2P network, which consisted of distributed network of computers which shared storage space, allowing people to search for a download media files stored on other computers connected to the network. P2P networks enable faster downloads as the bandwidth and storage costs are shared amongst the network, rather being handled by a centralised server (see Schollmeier 2001)

allows its customers to download a single track for £0.99, or an album for around £9.99. Digital download stores have had the effect of 'unbundling' the album, meaning music can be distributed and consumed on a track-by-track basis, rather than necessarily having to purchase and consume a whole album, or being confined to the tracks released as a single (Arditi 2014).

The Web has also created opportunities to disseminate independently-produced music (Hracs et al 2013; Hracs 2015; Choi and Burnes 2013; Young and Collins 2010). Social media sites, such as YouTube, Facebook and Soundcloud, enable individuals to freely distribute 'user-generated' content and engage with fans directly online. This has led some to suggest that we are experiencing a process of 'disintermediation,' as actors traditionally involved in the production and distribution of music, such as major record labels, distributors and the music press, are becoming redundant as the Web provides the means to independently bring music to market (Foster and Ocejo 2013; Faulkner and Melican 2007; Holt 2011). However, others have disputed these claims and argued that the opportunities opened up by digital technologies and the Web have enabled incumbents in the recorded music industry to consolidate their power (Arditi 2014; Choi and Burnes 2013; Young and Collins 2010). It has been argued that the profusion of independently-produced content has saturated the marketplace, making it harder to break free, and the need for the backing of major record labels and distributors, who invest in marketing and have privileged access to promotion channels, such as radio and the music press, has intensified (Young and Collins 2010).

2.7.2   New Claims to Cultural Authority in the Field

These changes to the way music is produced, distributed and consumed have produced a state of hysteresis in the fields of music production and consumption. They have challenged traditional claims to musical expertise and authority and created new opportunities to accumulate and deploy capital (Verboord 2014, 2010; Day Good 2013; Powers 2015). Because social media in principle allows any individual with the necessary equipment and skills to produce and disseminate cultural content, the Web has opened traditional 'cultural intermediary' roles to more diverse candidates and challenged the institutionalised basis of cultural intermediaries'

expertise (Ross 2011). For example, Fletcher & Lobato (2013) recognise how music bloggers accrue cultural and social capital without the need for professional credentials and institutional pathways. Instead, music bloggers derive knowledge about music and tastes through participation in a range of cultural activities and the night time economy, where they are able to network and build valuable relationships with cultural producers.

So-called 'crowd' and 'fan' labour (Schäfer 2011) in the form of practices such as crowdfunding, live concert recording, digital reproduction and archiving and peer criticism have created opportunities to accumulate and deploy capital (Verboord 2014, 2010, Lee 2012, Colburn 2015, Arriagada and Cruz 2014, Powers 2015; Liu 2008; Day Good 2013). For example, social network profiles on the Web have the potential to function as 'taste performances' (Liu 2008). Focussing on the Myspace social network, Liu demonstrates how online profiles are used to convey prestige, differentiation and authenticity through the types of music individuals articulate preferences for via their social network profiles. The social media and video sharing site, YouTube, has opened up opportunities to accumulate and deploy cultural capital (Colburn 2015). In particular discussing the practice of filming and sharing recordings of concerts on YouTube, Colburn demonstrates how the 'ordinary' people who engage in these practices are motivated by the pursuit of social recognition and cultural capital. They position themselves both as 'experts' who have the knowledge and tactics needed to produce high-quality bootleg recordings and as 'cultural bridges' who enabled dislocated fans (i.e. those who do not live in cities and countries where bands tour) to engage with live performances. Meanwhile, Verboord (2014) examines the impact of book-related social networking sites, such as goodreads.com, on the dispersal of cultural criticism and highlighting how the framing of cultural goods' symbolic value is performed by non-institutionalised actors and at a greater rate and scale. As Verboord (2014, 922) notes:

> More than just eroding the authority of traditional experts, this turn to participatory
> practices puts pressure on the underlying system in which institutionally embedded
> professionals decide what is artistically valuable or legitimate in our society.

However, literature on the so-called 'digital divide' reminds us that access to the opportunities created by the Web and digital technologies are not equally distributed (Ziellen and Hargittai 2006; North et al 2008; Selwyn 2004). Not only is access shaped by the possession of economic

capital (i.e. what an individual can afford), but also cultural capital (i.e. familiarity and expertise). The possession of cultural capital shapes who is best positioned to make use of the opportunities and potential gains opened up by the use of the Internet and Web (Selwyn 2004). For example, North et al (2008) demonstrate that whilst ICT access at home presents opportunities for furthering educational attainment, these technologies are not necessarily engaged with in this way. Rather, it is shaped in part by class background, specifically the value placed in education and the resources available to parents to support their children in this way. As Ziellen and Hargittai (2009, 288) put it: "People's incorporation of digital media into their everyday lives does not happen independent of the constraints and advantages of their existing surroundings."

These inequalities apply to the use of digital technologies and the Web in relation to taste and consumption. Leguina et al's (2017) study focusses specifically on class inequalities, technological engagement and music consumption. Based on a quantitative study of taste and technological engagement in Chile, they demonstrate that both taste and technological engagement is structured in similar ways along class lines. They found that economic capital played an important role in shaping how individuals access and engage with music, with those in lower social positions relying more on free media, such as pirated music, whilst those in higher social positions purchase music online and in store. Meanwhile, the recent Great British Class Survey (GBCS) highlighted how the use of digital technologies has the potential to represent emerging forms of capital for younger generations of the middle classes (Savage et al 2013). The authors note how the young and middle class are performing distinction through the consumption of popular culture for its own sake, including social media and video games. This stands in contrast to older generations of the middle classes who remain more invested in more traditional forms of highbrow culture, such as attending classical music concerts.

It is clear that affordable digital production technologies, social media, and legal and illegal online distribution channels have transformed how music is produced, distributed and consumed. These changes have lowered the barriers to entry into the music marketplace, making it possible for more people produce and mediate music with different claims to musical expertise and authority. P2P file-sharing networks have altered the availability of music, making vast amounts of music

readily available via the Internet – albeit illegally – at no cost. And the Internet and the Web have opened up other legal distribution channels, such as the iTunes digital download store, which have presented consumers with legal avenues for accessing digital music and served to 'unbundle' the album. These changes have presented new opportunities for the performance of class distinction and the accumulation of cultural capital, from using social media to perform taste to recording and sharing videos on YouTube to accrue symbolic capital.

However in recent years, the fields of music production and consumption have experienced further disruption. Music streaming services, such as Spotify, Apple Music and Deezer, have gone from a niche to the dominant mode of music distribution (Morris and Powers 2015; Marshall 2015; Watson 2015). Emerging out of the so-called 'MP3 crisis' (Hracs 2012), music streaming services have positioned themselves as a legal alternative to P2P file-sharing networks like Napster, enabling individuals to access vast catalogues of music at little or no cost, all streamable via the Internet using a PC or Internet-connected mobile device. Yet not only do these services make available a dizzying amount of music, but increasingly they are seeking to shape what and how people engage with it (Morris and Powers 2015; Bhaskar 2016; Jansson and Hracs 2018). Drawing on vast troves of user-generated data about tastes and consumption practices and combining this information with the latest advancements in music recommendation technologies, the experience of consuming music via music streaming services is becoming increasingly personalised. As I discuss in the following section, music streaming services have produced a state of hysteresis in the fields of music production and consumption, the effects of which remain uncertain and demand further empirical research.

2.8   Hysteresis #3: Platform Capitalism and the Computation of Taste

A third and final development is the rise of 'platform capitalism,' a trend within which I situate the rise of music streaming services. The growing dominance of platform-based businesses which rely on the extraction and manipulation of data about user identities and interactions has implications for the role that music taste and consumption play in the reproduction of class. In this section, I identify these implications and discuss how my thesis builds on current research.

2.8.1   Platform Capitalism in the 21st Century

Platform capitalism refers to a trend encountered in the 21st century where data has become central to the economic activities of firms and their relations with workers, customers and other capitalists (Srnicek 2017). Platforms have emerged as new business models valued for their ability to capture and control vast amounts of data. Platforms are digital infrastructures that bring together different users, such as customers, advertisers, producers, service providers and physical goods, and co-ordinate the interactions that occur between these parties (Srnicek 2017; Langley and Leyshon 2016). For example, Netflix is a platform that brings together audiences and film producers and provides the infrastructure through which audiences can access and stream films and television via the Internet and producers can reach global audiences. They monetise access to this infrastructure through subscription fees charged to individuals who wish to use the service to access and stream content (Wayne 2017). Product platforms like Netflix take traditional goods and transform them into a service (Srnicek 2017). They alleviate the need to purchase goods, instead enabling individuals to rent access to films and TV.

Platforms are 'extractive data apparatus,' uniquely positioned to collect large volumes of very granular data about the activities that occur on/through their infrastructure (Srnicek 2017). These companies have contributed to an extensive process of 'datafication,' where aspects of people's everyday lives have become subject to quantification and represented as data, from what and how much people eat to individualised profiles of our shopping, viewing and listening histories (Clough et al 2015; Beer 2013; Couldry and Van Dijck 2015; Van Dijck 2013; Prey 2016). This data is used by platform owners to shape how they algorithmically co-ordinate the interactions that occur between the different users of the platform in line with the company's strategic aims, from using data to test changes to the user interface to the use of recommendation technologies to personalise interactions (Srnicek 2017; Choudry 2015; Langley and Leyshon 2016). For example, Google collects data about the activities of its users, from what they search using Google Search to where they visit using Google Maps, to provide tools to advertisers to more effectively target audiences (Stalder and Meyer 2009). Indeed, Langley and Leyshon (2016, 12) argue that the users of platforms are understood by these companies not as 'customers' but "… creators of value and

generators of data," as van Dijck (2013, 4) puts it: "Companies often appear less interested in communities of users than in their data – a bi-product of making connections and staying connected online."

Music streaming services, such as Spotify, Apple Music and Deezer, are a type of product platform (Srnicek 2017). They facilitate and co-ordinate interactions between people who want to consume music, music rights holders (e.g. artists, major record labels, digital distributors) who want to monetise their intellectual property, and brands who want to advertise via the platform. In exchange for a monthly subscription fee of around £9.99 per month, or for free in exchange for exposure to third-party advertisements, music streaming services allow people to access and stream music and other content, such as videos, playlists and podcasts using an Internet-enabled device, such as a smartphone. Music streaming services provide a means for music rights holders to access audiences and monetise their intellectual property by agreeing to distribute their music via the platform in exchange for royalty payments. Meanwhile, these platforms provide a space for brands to advertise to audiences.

As I elaborate in the next section, platform-based businesses seek to co-ordinate various social interactions, from how people interact with their friends online to what music they consume, as part of their commercial activties. They are collecting immense volumes of data about people's identities and interactions and using this as a basis for shaping future encounters with and cultural goods and experiences. This has raised some important questions about new and automated ways in which social inequalities may be reproduced.

2.8.2   The Social Significance of Platform Capitalism

Social scientists have begun to consider the social significance of platforms and the computational techniques used by these companies to leverage big data (digital data of immense volume, variety and veracity). The algorithms (encoded sets of instructions acted on by a computer) designed and implemented by platform owners have the potential to represent new forms of power (Cheney-Lippold 2011; Beer 2009, 2017; Neyland and Möllers 2016). For example, Cheney-Lippold (2011) suggests that the digital construction of categories of identity is a new axis of power where algorithms dominate. As individuals engage with/on platforms they continually subject to

processes of classification as their behaviours are tracked and categorisations are produced in order to determine what advertisements to present or what TV recommendations to generate. These categorisations are significant because they shape subjects' encounters with the world, in terms of what information they see, or what goods and services they have access to. Similarly, Beer (2009, 995) argues that algorithms exercise power 'from within.' Drawing on Lash's (2007) notion of 'post-hegemonic power,' he argues that rather than having power over someone, algorithms exercise power from within by shaping cultural experiences and encounters through the determinations made about what films or TV programmes are presented to us by Netflix, or whose stories and pictures are made available to us via our Facebook (a social networking platform) or Twitter (a micro-blogging platform) news feeds.

The data collection and classification practices of platforms have the potential to cause 'cascading disadvantages' as inequalities embedded in data are acted on at an unprecedented rate and scale through automated and algorithmic processes (Fourcade and Healy 2017; Pasquale 2015; Ronas-Tas 2017; Skeggs and Yuill 2016). For example referring to the work of Bourdieu (1984, 1986), Fourcade and Healy (2017) discuss how our quantified selves have the potential to function as a new kind of capital co-created by individuals and algorithms, which in turn can enable or limit access to social and economic opportunities. They argue that with access to immense volumes of granular data about who we are and how we spend our money, the market 'sees us' in different ways and the goods and services we are exposed to online are increasingly being determined by the partial pictures of who we are constructed by the data collection and analysis methods of platforms.

The data collected by platforms, such as Google and Facebook, have the potential to turn into 'runaway data' that is used in 'off-label' (i.e. used by other companies in different ways to what was originally intended when the data was collected) ways to inform determinations such as access to credit or immigration and residency decisions (Pasquale 2015; Ronas-Tas 2017). Skeggs and Yuill (2016) discuss how Facebook's strategies to motivate its users to share information about themselves and engage with their friends online has the potential to reconfigure notions of property and personhood. Facebook seeks to encourage the performance of an 'enterprising self,'

as those individuals it considers to be of high value to its advertising business are those who are regular Facebook users with a dense and influential social network. The ways Facebook works to draw out and act on these features draws on distinctions between those who have symbolic, economic, cultural and social capital and those without and uses it as a basis for shaping who, what and how people interact online.

2.8.3   The Disruptive Potential of Music Streaming Services

There is a growing body of literature considering if and how platforms, algorithms and big data are disrupting the social dynamics of music consumption, paying particular attention to the relationship between music taste, consumption and class.

Music streaming services have the potential to function as new kinds of cultural intermediaries and challenge traditional claims to musical expertise and authority in the field (Morris 2015; Barna 2017; Verboord 2014; Lange 2016). For Bourdieu (1984) the authority of cultural intermediaries, such as cultural critics, is underpinned by embodied knowledge and familiarity with music acquired through immersion and education, combined with the valorisation by the institutions in which they are embedded. Music streaming services, such as Spotify, occupy a different position in the field. The mediation performed by music streaming services is the outcome of the labour of a complex network of human and technical actors, making it challenging to locate the basis of their cultural authority over questions of 'good' taste (Webster et al 2016).

Indeed, music streaming services' existence as a cultural intermediary may be less about their cultural authority and more about the technical capacity to aggregate large volumes of data and translate it into meaningful recommendations, bringing into question our understanding of what it means to be a cultural intermediary and how these actors shape taste formation (Webster et al 2011; Morris 2015; Morris and Powers 2015). For example introducing the concept of 'cultural infomediaries,' Morris (2015) suggests music streaming services' claims to expertise relies on the efficacy of algorithms and databases to know what is relevant to you, whilst Barna (2017) discusses how music streaming companies mobilise the cultural capital and expertise of cultural intermediaries, such as radio DJs and music journalists, by employing them to work as playlist curators.

This reliance on data about music preferences and computational systems for extracting patterns in music consumption practices has raised some important questions about the potential for music streaming services to contribute to the reproduction of class divisions in automated and pervasive ways (Wright 2015; Prey 2016; Prior 2018; Beer 2009, 2013; Morris 2015). These debates allude to Bourdieu's (1984) homology thesis, which recognises how individuals located in similar regions of social space, as defined by the volume and composition of capital they possess, typically have tastes for similar music due to the shared conditions of existence in which their habitus were cultivated. Referring to the personalised experience of consuming music via music streaming services, Beer (2013, 95-96) suggests that the cultivation of taste and accumulation of cultural capital, which Bourdieu (1984) describes in relation to the formation of habitus, has the potential to become divorced from "… socialisation processes that are more dependent on friendship groups and the consumption of the right type of broadcast media." This is because music now 'finds us' and the decisions made by the algorithms used to personalise are playing an increasingly influential role in shaping everyday encounters with music. This challenges our understanding of how taste is formed, inviting us to consider how the decisions of algorithms shape the conditions of existence in which habitus is formed, as Beer (2013, 91) puts it:

> This is not to say that social class and personal networks do not shape taste anymore, but that ultimately, we may find in new media infrastructures powerful forces that implicate the direction of cultural tastes.

Furthermore, music recommendation technologies have the potential to undermine the democratising potential of abundance and 'algorithmically' reproduce divisions in class taste. Eli Pariser (2012) introduced the notion of the 'filter bubble' to capture how personalisation on the Web has societal implications. Pariser suggests that we are being enclosed in 'filter bubbles,' whereby through the algorithmic mechanisms of personalisation we are being fed information, ideas and culture consistent with our own beliefs and tastes, rather than being challenged by alternative ideas, as is the foundation of a healthy democracy. Discussions about the sociological implications of the use of music recommendation technologies by music streaming services echo the ideas introduced by Pariser. The reliance on data about past user behaviour to generate

future recommendations is creating a 'data feedback loop' which has the potential to reproduce divisions in class taste (Prey 2016). This is because these systems are designed to give us more of what we are familiar with, rather than introduce music which is beyond the horizons of our taste. In doing so, Wright (2015, 170; see also Prior 2018) suggests that this has the potential to culminate in a 'technologically-managed form of homology,' meaning the structural similarities and differences in the taste of different individuals located in different parts of social space have the potential to be reinforced, rather than allowing change in terms of what constitutes class taste, or as Prey (2016, 44) puts it:

> Algorithms have structural implications because they stack into and amplify already existing differences. Thus, the categorisation of listeners' 'musical identity' not only reflects social divisions (between high value and low value listeners, for example), but reinforces and even produces new divisions.

2.9   Building on Current Research

There are three major limitations in existing research about music streaming services and the social dynamics of music consumption that I intend to address in this thesis. These limitations are significant because they limit our ability to make claims about why and how music streaming services are shaping the social dynamics of consumption.

First, whilst these accounts usefully set an agenda for further research, they are speculative in nature. Little is known about why and how music streaming services are seeking to shape music consumption practices from the point of view of these companies. The literature on cultural intermediaries reminds us that the strategic aims underpinning mediation, as well as the practices and devices employed to achieve influence, shape what and how cultural goods are mediated and have implications for the formation of taste and cultural hierarchy (Joosse and Hracs 2015; Maguire and Matthews 2014; Jansson and Hracs 2018; Maguire and Matthews 2012; Cronin 2004; Nixon and du Gay 2002). More empirical research is needed that engages with music streaming service as market actors and seeks to understand why they are seeking to shape what and how people consume music, alongside further interrogation of the actors and processes involved in the mediation it performs. In doing so, we can identify specific aspects of what, why and how

music streaming services are mediating music which have implications for the part that music taste and consumption play in the reproduction of class.

Secondly, there is a tendency to reduce what Spotify does to mediate music to the work of 'the algorithm' or the 'recommender system,' failing to consider what these actors are and why and how they act in the world in particular ways (Webster et al 2016; Kitchin 2017; Pasquale 2015). For example whilst usefully developing conceptual resources and setting an agenda for further research, Beer (2009, 997) writes about the music recommendations provided by the online music social network, Last FM, and suggests '… the music that people come across and listen to has become a consequence of algorithms.' Yet, algorithms do not act alone. Algorithms are embedded in the larger socio-technical system, consisting of designers, engineers, data, users, user interfaces and hardware, to name but a few, that comprises a music streaming service (Webster et al 2016). Reducing social change to the consequences of algorithms is methodologically problematic (Kitchin 2017; Bucher 2012; Schou and Farkas 2016). Algorithms are manifestations of the intentions of designers and engineers, shaped by the strategic aims of the company these actors work for and the material constraints imposed by technologies (e.g. programming languages, computational power), with more or less understood outcomes. And they work alongside other actors, such as the actors (e.g. users, sensors, code, engineers) who produced the data used to calibrate an algorithm, and the design of the user interface which presents the results of an algorithm's determination in highly-curated ways. As Schou and Farkas (2016, 45) argue in relation to the sociological study of social media platforms, such as Facebook:

> While we should algorithmise our study of social media, this should not lead to a complete reliance on algorithms as the sole mechanisms behind such media. Placing algorithms at the centre of our inquiry should, in other words, not make us reduce social media to algorithms.

Thirdly, this literature fails to engage with the classed practices and perspectives of the people who use music streaming services. Existing literature raises some important questions about if and how music streaming services have the potential to reproduce divisions in class taste, yet

little is known about the differentiated ways individuals from across class backgrounds engage with these platforms. Without considering how individuals appropriate and contest these services and their attempts to shape how we engage with music, we are at risk of falling into deterministic accounts about how music streaming services are disrupting the social dynamics of consumption. Indeed, Bourdieu' theories (1977, 1984, 1986, 1990) reminds us that change in practice is an outcome of the interplay between habitus, capital and field. It is not enough to examine factors such as technological change or market dynamics; rather, we need to consider how individual habituses adapt to new conditions in the field and examine what opportunities are created to accumulate and deploy capital and for whom. As Maton (2014, 52), referring to Bourdieu (1990), argues (2014, 52) argues:

> To understand practices, we need to understand *both* the evolving fields within which actors are situated *and* the evolving habituses which those actors bring to their social fields of practice (emphasis in original).

Recent empirical studies of class and consumption provide evidence that suggests music streaming services, such as Spotify, have the potential to become implicated in the performance of class distinction. The concept of emerging cultural capital has been introduced to acknowledge that the use of so-called forms of 'new media,' such as social media sites and video games, characterise the contemporary tastes of the middle classes and have the potential to represent emerging capital for younger members of the middle classes (Savage et al 2013; Friedman et al 2015). Similarly, Leguina et al's (2017) research about how technologies of music consumption are implicated in the reproduction of class divisions demonstrated that access to economic and cultural capital shapes the technologies used to access and engage with music.

Whilst usefully painting a picture of contemporary cultural tastes and practices, this research does not consider how the sociomateriality of these forms of new media have the potential to shape class practices. This thesis is driven by an understanding that music streaming services are not mere artefacts and symbolic projections of capital enrolled in games of class distinction. Rather, research should acknowledge that music streaming services are complex "… sociotechnical systems made up of people, technologies, knowledge, data, algorithms and other heterogeneous actors," which actively seek to manipulate what and how we consume music in order to serve

their strategic ends (Webster et al 2016, 138). Failing to do so underplays the agency of the technologies used to access and engage with music in the 21st century.

Drawing on mixed qualitative research methods and working through the case of Spotify, the market leading service in the UK, this thesis aims to build on existing research by considering, on the one hand, what, why and how Spotify is seeking to shape music consumption practices, and, in turn, explores if and how the mediation performed by Spotify is shaping the performance of class identities. This thesis engages with Spotify's ontological complexity to develop an account what Spotify is, and why and how seeks to intervene in how people consume music on its platform and uses this as a basis for identifying specific aspects of what Spotify does to mediate access to music that have implications for the reproduction of class. In turn, this thesis empirically explores the classed practices and perspectives of people who use Spotify to consider if and how the platform is implicated in the performance of class identities. This thesis integrates these two avenues of empirical enquiry to explore why and how Spotify is shaping the part that music taste and consumption play in the reproduction of class.

There is a growing body of literature seeking to reconcile the methodological challenges presented by platforms and the associated study of the social consequences of algorithms (Webster et al 2016; Kitchin 2017; Ananny and Crawford 2018; Marres 2017; Schou and Farkas 2016; Mackenzie 2018; Plantin et al 2018; Ziewitz 2015; Seaver 2013; Gillespie 2014; Neyland and Möllers 2016; Reider 2016; Langley and Leyshon 2016; van Dijck 2013). This literature emphasises the need to account for the performative, contingent and relational nature of platforms. It argues that platforms should be understood as 'intermediary infrastructures': they come into existence through the facilitation and co-ordination of interactions between different users or sides of a marketplace (e.g. consumers, advertisers, producers) (Langley and Leyshon 2016; Mackenzie 2018; van Dijck 2013). The facilitation of these interactions is the outcome of the labour of an assemblage of human and technical actors, from data and algorithms to designers and engineers. And they are perpetually in a state of change as the design and engineering of the infrastructure is continually tweaked in response to user behaviour, strategic aims and the tactics of competitors (van Dijck 2013). Indeed, Ananny and Crawford (2018, 983) argue that we need to go "… beyond

'algorithms as fetishised objects' (Crawford 2016, 14) to take better account of the human scenes where algorithms, code, and platforms intersect."

There is an opportunity then to connect these methodological perspectives with the sociological study of music taste, consumption and class identity. Incorporating a consideration for music streaming service's ontological complexity will allow us to better draw out specific aspects of what these platforms are, what they do to shape how music is made available, and why and how they mediate music in particular ways, which have implications for the role that music taste and consumption play in the reproduction of class divisions. In doing so, we can move beyond deterministic accounts about how music streaming services are shaping taste or explanations which reduce social change to the work of 'algorithms.'

Indeed, this methodological approach contributes to important debates in musicology and the sociology of music about the shifting 'ontology of contemporary music' (Born 2005; DeNora 2000; Prior 2008; Hennion 2001; Taylor 2013a, 2013b; Piekut 2014). Musicologists have championed a performative and relational understanding of what constitutes a musical work and the creative agency behind its creation (Born 2005; Prior 2008; Taylor 2013a, 2013b; Piekut 2014). The work of Born (2005) promotes an approach to the study of music that incorporates an understanding of the social, technological and temporal dimensions of music. This approach challenges the hierarchical ontological model and Romantic ideal of the master composer as primary creative agent behind the creation of a musical work. Rather, music can be seen as an outcome of the labour of a heterogeneous network of actors, it reflects existing social relations (e.g. structures of class, gender, ethnicity), and it is bound up with institutional structures (e.g. religious patronage, market exchange) that provide the basis for its production and circulation (Born 1995, 2005). Sociologists have adopted a similar approach for the study of music taste and everyday consumption (Hennion 2001, 2003; DeNora 2000). Hennion (2001, 2003) encourages us to see music taste as a performative and material practice. Rather than music taste being an actualisation of what is 'already there' (i.e. the operation of habitus, a product of classed conditions of existence, as Bourdieu (1984) understood it), Hennion (2001, 1) shifts are perspective to the "… gestures, objects, mediums, devices and relations" engaged in the act of listening to music, whereby these attachments and ways of acting form and enact subjectivities. My methodological approach brings online platforms, such as music streaming services, to the

heart of debates about what music is and how it is experienced in the 21st century. It encourages us to consider how everyday interactions with music are shaped by the digital infrastructures through which they are mediated. In other words, the piece of music that is presented to an individual when they launch a music streaming service app on their smartphone is a product of the labour of a complex network of human and technical actors which comprise the streaming platform, but also the commercial imperatives that ensure the platform's existence. As such, online platforms should be understood as an important part of the performance of taste and the ontology of music. As Taylor (2013a, 760) puts it:

> [The] experience of culture today is no longer between a listener and a work of music, a viewer and a painting; there is a whole host of people and technologies and networks that mediate between people and cultural forms that have rendered those forms as informationalized objects, no longer as transcendent works, and, I would argue, increasingly in competition for cultural significance with the machines and technologies of their distribution.

In the following chapter, I outline in detail my methodological approach to the study of music streaming services and how these platforms are shaping the social dynamics of consumption. I discuss how I combine theoretical perspectives from platform studies with Bourdieu's (1977, 1984, 1986, 1990) theoretical approach in order to incorporate a consideration for music streaming services' ontological complexity into the study of their impact on the relationship between music taste, consumption and class. Following this, I discuss my research design and the qualitative research I conducted to address the question of if and how music streaming services are shaping the role that music taste and consumption play in the reproduction of class.

Chapter 3   Methodology

The aim of this thesis is to empirically explore if and how music streaming services, such as Spotify, Apple Music and Deezer, are shaping the part that music taste and consumption play in the reproduction of class. More specifically, it poses the following questions:

- Why and how are music streaming services seeking shape how people access and engage with music?
- If and how are music streaming services used to access and engage with music by individuals from different class backgrounds?
- If and how are music streaming services shaping how class distinction is performed through the consumption of music?

The perspective advanced in this thesis is that in order to study if and how music streaming services are shaping the social dynamics of music consumption, we need to engage with both music streaming services' ontological complexity as well as the practices of the individuals who engage with these platforms. From a Bourdieusian (1977, 1984, 1986, 1990) perspective, an emphasis on practice is important because practice is the means through which class divisions are formed and maintained. Yet, I argue that it is insufficient for us to treat music streaming services as 'artefacts' or symbolic projections of capital enrolled in the games of distinction. Rather, music streaming services are commercial enterprises which actively seek to shape what and how individuals engage with music on their platforms. Consequently, we need to account for the ontological complexity of platforms and consider what, why and how music streaming services seek to shape what and how we engage with music in everyday life. As I go on to discuss, Bourdieu's theoretical and conceptual framework is limited in this regard, as he tends to reduce 'technologies' to objectifications of capital (Webster et al 2016). We need to combine other theoretical and conceptual resources to more adequately account for music streaming services' ontological complexity and how the classed practice of music consumption shapes and is shaped by the digital infrastructures through which it is now performed.

Chapter 3

In the first two sections of this chapter (3.1–3.2), I outline my methodological approach for incorporating a consideration for music streaming services' ontological complexity into the study of how music streaming services are shaping the role that music taste and consumption play in the reproduction of class divisions. I draw on platform studies and Science and Technology Studies (STS) more broadly to make sense of what music streaming services are (van Dijck 2013; Mackenzie 2017; Langley and Leyshon 2016), and I combine this with a Bourdieusian and culturalist approach to the study of class (Bottero 2004, 2005; Devine and Savage 2000; Crompton 1998; Savage 2000; Savage 1992). Platform studies invites us to conceptualise platforms as 'intermediary infrastructures' composed of a heterogenous assemblage of human and technical actors (van Dijck 2013; Mackenzie 2017; Langley and Leyshon 2016). Platforms are performative; they come into existence through the ways in which they facilitate interactions between two or more groups of users. How platforms facilitate these interactions is shaped by a myriad of factors, from the material constraints imposed by the technologies used, to the commercial imperatives and business models adopted by platform owners. This thesis is concerned with how music streaming platforms – as intermediary infrastructures – shape how music is mediated to the field of music consumption and what implications this has for the role that music taste and consumption play in the reproduction of class divisions.

In the third section (3.3) of this chapter, I elaborate on my research design. I used mixed qualitative research methods, including semi-structured interviews, app 'walk-alongs,' and document collection to collect data. I describe how I conducted over 40 semi-structured interviews with a combination of music streaming key informants, such as major record label executives and data scientists working at music streaming firms, and a sample of people who use Spotify in everyday life. I elaborate on the novel app walk-along-method I used with Spotify users, which consisted of inviting participants to 'walk through' how they access and engage with music via Spotify whilst I took observational notes (Light et al 2016; Jørgensen 2016). I describe the types of supplementary documents about Spotify I collected, such as music industry reports, media articles and press releases, and how this secondary data was used. Meanwhile, I outline how I analysed these three sources of data using a thematic approach. This chapter concludes by critically reflecting on the strengths and weakness of the completed fieldwork.

3.1   Approach to Class Analysis

In this thesis, I adopt what has been described as a 'culturalist approach' to class analysis (Bottero 2004, 2005; Devine and Savage 2000; Crompton 1998; Savage 2000; Savage 1992). This approach sees social stratification and class inequality to not only be reproduced in economic terms, but acknowledges how taste, culture and lifestyle are integral to how class organises social life. Rather than manifesting through the formation of coherent collective class identities, it sees class manifesting in implicit, routine and individualised ways through practices such as consumption. Alongside economic relations, it seeks to better understand how social groups are engaged in "… endless though reasonably genteel battles to assert their identities, social positions and worth" (Savage et al 1992, 100) using cultural resources such as education and cultural knowledge. As Devine and Savage (2000, 195) put it:

> What establishes the relationship between class and culture (i.e., what establishes the classed nature of cultural dispositions) is not the existence of class consciousness, or the coherence or uniformity of a distinct set of cultural dispositions. Rather, the relationship is to be found in the way in which cultural outlooks are implicated in modes of exclusion and/or domination.

This approach breaks with an emphasis on economic relations as the basis of class formation. Marxist analyses see class to be defined in terms of the relationship between labour and capital (Savage 2000). The proletariat (the working classes) are the individuals and groups who sell their labour, whilst the bourgeoisie are the owners of the means of production and profit from the labour of the proletariat. Defining economic relations as the basis of class has come to characterise many sociological approaches to class analysis, such as the Rational Action Theory approach of Goldthorpe (1996).

The culturalist approach is also a response to the claims about the 'death of class' (Bottero 2005; Savage 2000). As I discussed in the previous chapter, some sociologists have argued that class has lost its salience in the modern globalised world, instead replaced by more individualised and reflexive identities (Giddens 1991; Beck 1992, 1994, 1997). These scholars argue that class is not a dominant category through which individuals define themselves and lifestyle and consumer goods

are the new resources through which individuals reflexively piece together identities (Atkinson 2007). Culturalist approaches to class analysis counter these claims about the 'death of class' (Bottero 2005; Savage 2000; Atkinson 2007). Rather than suggesting that class no longer matters, culturalist approaches recognise the individualised and less visible ways class organises social life. Indeed, culturalist approaches emphasise the importance of lifestyle and consumption to identity work, but incorporate a consideration for how tastes and consumption practices are a product and producer of class divisions (Savage 2000).

Like many culturalist approaches, I draw on Bourdieu's (1984, 1990, 1977, 1986) theoretical and conceptual framework outlined in the previous chapter. Bourdieu provides us with a framework for studying processes of class reproduction which incorporates a consideration for both economic and cultural power. He sees class as being implicitly encoded in individual's practices, attitudes and self-worth, rather than through the formation of collective class identities. The concept of habitus is used as a link between class background and practice, whilst the concepts of capital and field help to explain how an individual's position is class structure is determined, changed and/or maintained.

I use the concept of habitus to relate how people engage with music on Spotify with class background, and I consider how the platform is creating new opportunities to accumulate and deploy capital in the field of music consumption. In the interviews I conducted with Spotify users, I incorporate a narrative component which explores the formation of individuals' habituses and considers how their practices have changed over time in the face of structural shifts in the way music is mediated (see Chapter 2). In turn, I consider how individual habituses have responded to the objective possibilities opened up in the field by Spotify and consider changes to the way individuals – led by habitus – accumulate and deploy capital.

However, Bourdieu's (1977, 1984, 1986, 1990) theories are limited when it comes to thinking about technology and little attention was given to the topic by Bourdieu himself (Webster et al 2016). Despite producing essays that discuss themes such as television and journalism (1998), photography (1996) and the 'science of science' (2004), Bourdieu's work tends to overlook

technology and focuses instead upon the institutional structures to which technology relates (Prior 2008). Bourdieu's critics suggest that one of the biggest limitations of his framework is the proposition that technology is an objectification of capital (Moore 2014). Whilst this helps Bourdieu explain how cultural consumption and taste is one of the drivers of social distinction and class domination (Bourdieu 1984, 1986), where our access to and grasp of technology reflects our accumulation of economic and cultural capital, it is problematic because it demotes technology to symbolic projections of capital, and fails to engage with the specific socio-materialities of technologies themselves. In other words, it gives us little room to consider how music streaming services, from the ways they are built to the ways they dynamically collect and act on data about user behaviour, shapes how their use is enrolled in claims to class distinction (Webster et al 2016). Consequently, we need to incorporate additional theoretical and conceptual resources to better account for what music streaming services are doing to shape how music is made available in the field.

In the following section, I outline my approach to the study of music streaming services. I draw on an approach which is inspired by platforms studies and Science and Technology Studies (STS) more broadly (Law 1987; Latour 1986; van Dijck 2013; Langley and Leyshon 2016). This approach emphasise the performative nature of platforms and conceptualises them as socio-technical assemblages in a constant state of formation. As I go on to discuss, I combine this approach to the study of platforms with a Bourdieusian and culturalist approach to class analysis to make sense of how music streaming service are shaping how music taste and consumption are implicated in the reproduction of class divisions.

3.2   Engaging with Music Streaming Services' Ontological Complexity

3.2.1   Why Platform Studies?

In recent years within the broadly defined field of Science and Technology Studies (STS), there has been a burgeoning interest in the study of online platforms, such as social media platforms (e.g. Facebook), and the platforms underpinning the so-called 'sharing economy' (e.g. Airbnb). I draw inspiration from a number of scholars who engage with a 'platform politics perspective' (Gillespie 2010; van Dijck 2013; Dijck and Poell 2013; Langley and Leyshon 2016; Srnicek 2017; Kenney and

Zysman 2016; Mackenzie 2017). These accounts critically engage with the platform concept (Gillespie 2010), platform's ontological complexity and the 'techno-cultural' and economic logics underpinning platforms (Langley and Leyshon 2015; Srnicek 2017; Kenney and Zysman 2016; Mackenzie 2017), and the role that platforms play in shaping 'networked sociality' (van Dijck 2012; Bucher 2017).

I arrived at a platform studies approach as a result of previous work I conducted exploring the overlaps between Bourdieu's theoretical framework and Actor-Network Theory (ANT)[4] (Webster et al 2016), as well as some methodological realisations that occurred to me during my data collection. In Webster et al (2016), I developed a theoretical approach for analysing music recommender systems as sociotechnical cultural intermediaries. This work adapted Bourdieu's concept of cultural intermediaries (that is the occupations situated between the fields of cultural production and consumption that shape what cultural goods and ways of consuming them are associated with class identities) to analyse sociotechnical systems, such as music recommender systems, in cultural intermediary terms. In order to achieve this, I synthesised Bourdieu's theoretical and conceptual framework with an approach derived from ANT, especially the work of Bruno Latour (1992, 2005). For example, it proposed that we can understand the accumulation of cultural authority of music recommender systems (i.e. the ability to *influence* taste – what Bourdieu (1984) would conceptualise as cultural capital) as the outcome of the labour of a network of human and technical actors. In doing so, the aim was to empower social scientists to

---

[4] Actor-Network Theory (ANT) proposes that society and technology are the effect – the outcomes – of networks of human and non-human actors which work together to make society form and function (Law 1992; Latour 2005). Actors are also actor-networks, meaning every actor within a given actor-network can also be broken down into its constituent group of actors. There is a commitment to viewing society as being made of heterogeneous networks, and no methodological distinction between human and non-human actors is made (Webster et al 2016).

consider if and how sociotechnical systems are implicated in the construction of cultural hierarchy and the shaping of taste.

I began this thesis with the view of building on my theoretical approach for the study of music recommender systems as sociotechnical cultural intermediaries. However, as my data collection unfolded, I realised that focussing on music recommender systems was methodologically problematic. Music recommender systems are just one part of what makes a music streaming service. They are embedded in the larger infrastructure that composes a music streaming service and being able to draw a boundary around what a recommender system is and the beginning and end of its 'influence' is a tricky endeavour. For example, when a person launches Spotify on their smartphone, the 'homepage' may include personalised recommendations, which would be generated by a recommender system, but these recommendations sit alongside and are inseparable from other aspects of the service, such as the layout of the user interface. Following this methodological realisation, I became uneasy separating music recommender systems from the wider music streaming service assemblage in which they are embedded.[5]

Meanwhile, the semi-structured interviews I conducted with key informants highlighted to me the importance of the commercial context in which music streaming services operate. Music streaming services are not neutral actors; what and how they mediate access to music is shaped by their strategic aims. Namely, the key informant interviews helped me to identify the need to attract and engage the attention of consumers – outcomes integral to the success of the ad-supported and subscription-based business models – as an overriding strategic aim. As I go on to

---

[5] I practiced what Latour (1996) would describe as 'punctuation.' One challenge with the ANT approach is that everything is understood as the outcome of the labour of networks of human and technical actors. This creates a methodological challenge as the researcher has to make decisions about where the network 'ends' (i.e. punctuate the network). Without punctuation, the researcher would be overwhelmed as the network of actors under consideration would never end. This makes punctuation necessary, even though it means we have to comprise our relational ontology. I wanted to consider the wider music streaming assemblage in which music recommender systems were embedded and I had to make decisions about where I thought this assemblage began and ended.

demonstrate in Chapter 4, strategic aims not only shape why music streaming services seek to shape music consumption practices, but also *how* this is achieved in material ways. This highlighted to me the importance of incorporating a consideration for commercial context into my conceptualisation of what music streaming services are and address this aspect as part of my analysis.

These methodological realisations resulted in me adopting a platform studies approach and 'zooming out' from the study of music recommender systems to music streaming services. First, I shifted the focus of my analysis away from music recommender systems towards better understand what music streaming services are and why and how they seek to shape music consumption practices, and in turn considering if and how these new forms of mediation are shaping the part that music taste and consumption play in the reproduction of class inequalities. This meant that music recommender systems became one part of my conceptualisation of the larger infrastructure that comprises a music streaming service. Second, I chose platform studies because it allowed me to explicitly incorporate a consideration for the commercial context into my conceptualisation of what music streaming services are. Platform studies not only understands platforms as the outcome of the labour of a complex sociotechnical assemblage, *a la* ANT, it also critically engages with the techno-cultural and economic logics underpinning platforms in equal measure. This was consistent with what I was learning by conducting key informant interviews.

3.2.2   Operationalising a Platform Studies Approach

In Chapter 4, I introduce a conceptualisation of Spotify as an 'intermediary infrastructures' (van Dijck 2013; Mackenzie 2017; Langley and Leyshon 2016). In this view, music streaming services are not artefacts or symbolic projections of capital but a set of relations that continually need to be performed. They exist as the product of the labour of an assemblage of human and technical actors which act together in order to facilitate interactions between the users of the platform (e.g. music producers and consumers; advertisers and consumers). This assemblage is composed of the content produced and/or circulated (e.g. music, video, photographs, playlists) and all the

human and technical actors which make the facilitation of interactions between users a reality (e.g. data, algorithms, designers, engineers, user interfaces, product managers, marketers).

Yet, music streaming services are not neutral conduits (van Dijck 2013; Morris 2015; Langley and Leyshon; Srnicek 2017). They are commercial enterprises which seek to manipulate how interactions occur on their platforms to satisfy their strategic aims. Platform studies argues that how platforms come to exist and act in the world is shaped the socio-economic structure in which they are embedded. This includes the ownership of the platform (e.g. private company, shareholders), business models, governance and the practices and perspectives of different users (e.g. consumers, advertisers, content producers) who act according to different interests (e.g. accumulation of economic capital, cultural capital, prestige, status) (van Dijck 2013). Meanwhile, how platforms facilitate interactions between users is also shaped by the material constraints imposed by the technologies (e.g. the design of an algorithm, the size of a smartphone screen, data collection techniques, computational power) which comprise these infrastructures (Webster et al 2016; Morris 2015).

The performative nature of platforms requires us to direct our attention to *what* platforms do to facilitate interactions between different users and *how* these interventions are shaped by the material constraints of technologies and the socio-economic structures in which they are embedded. In order to understand how platforms are shaping how music is made available in the field, we need to consider aspects such as what content these platforms produce and/or circulate; how it presents content to its users; what data it collects about user behaviour; how it uses this data; how its interventions are shaped by the business models adopted by these companies; how the ways in which platforms facilitate interactions is shaped by the practices and interests of different users; and how platform interventions are constrained by materiality of the technologies and computational techniques used to facilitate access to music. As I go on to discuss, my empirical research was dedicated, in part, to better understanding what Spotify does to shape what and how we engage with music.

I integrate this methodological approach with a Bourdieusian and culturalist approach to class analysis to help me account for the implications that platforms have for the relationship between music taste, consumption and class. Bourdieu (1977, 1984, 1986, 1990) helps me to unpack how

the ways in which individuals engage with music on Spotify is shaped by class background and is becoming incorporated into strategies for accumulating and deploying capital, whilst platform studies helps me to be more specific about which aspects of what Spotify does to shape how music is made available have implications for how music taste and consumption are enrolled in class reproduction. Platform studies invites us to see music streaming serves as more than mere artefacts and acknowledges that the ways in which these services make music available is shaped by a myriad of factors, from the material constraints of technologies, the competing needs of different users, and the business models and ownership structures of the company.

In the following section, I outline the research design I adopted to study how music streaming services are shaping the role that music taste and consumption play in the reproduction of class divisions. I adopted a mixed qualitative methods research design, involving semi-structured interviews, app walk-alongs and document collection. The following sections explain each data collection method in turn.

3.3   Research Design

My research questions were addressed through the study of a critical case and the data was collected using mixed qualitative research methods. My choice of critical case was the leading music streaming service, Spotify. Critical cases are those which are likely to yield the most information and make the greatest contribution to the development of knowledge (Patton 1990; Creswell 2007; Stake 1995). I chose a critical case research design because it complimented the exploratory aims of my research. This is because critical cases are typically cases which are most illustrative of the phenomenon under study, permitting analytical generalisation about the phenomenon as a whole (Creswell 2007).

Spotify was a justifiable choice of critical case due to the scale at which it operates and its place at the forefront of the use of music recommendation technologies. Founded in 2006, Spotify is one of the longest-running music streaming services and has a relatively established in the field of music production. It is the most widely-used music streaming service globally, with over 180

million active users and over 83 million paying subscribers (Sanchez 2018). The scale at which Spotify operates means that it is an important commercial partner and widely used by record labels and digital distributors as a distribution channel. Meanwhile, Spotify is leading the way in terms of personalisation and the use of music recommendation technologies. For example in 2014, Spotify acquired the music data analytics firm, the Echo Nest, and in 2017, it acquired the music artificial intelligence firm, Niland, to improve its recommendation capabilities (Hern 2014; McIntyre 2018).

My data was collected using a mixed qualitative methods research design. I conducted two rounds of semi-structured interviews, one with a sample of 22 music industry key informants and one with a sample of 20 people who use Spotify to consume music. I collected a sample of over 120 media articles, press releases and technical documentation about music streaming services, including but not limited to Spotify, and their use of music recommendation technologies. Thirdly as part of the interviews with Spotify users,[6] I collected data through an app 'walk-along' (Light et al 2016; Jørgensen 2016). This activity consisted of inviting participants to 'walk-through' how they engage with music online and discuss their perspectives of different aspects of the service they use.

I chose a mixed method design because it helped me to improve the rigour of my research through triangulation and helped to me to address some of the challenges I faced conducting interviews about commercially-sensitive topics when engaging with Spotify's ontological complexity (Robson 2002; Berg et al 2012; Hennink et al 2011; Valentine 2001). Triangulation is a way of improving the rigour of qualitative research through the combining of multiple forms of data, data type and data collection method (Robson 2002; Berg et al 2012; Hennink et al 2011; Valentine 2001). I combined interviews, documents and walk-alongs to help corroborate findings

---

[6] For the sake of brevity, I refer to the people who use Spotify to access and engage with music as 'Spotify users.' However, as Chapter 4 demonstrates, Spotify's 'users' are more than just people who use it to access and engage with music. Its user base also consists of music rights holders who use the platform to monetise their intellectual property, and brands who advertise via the platform.

and identify key themes. In particular, the collection and analysis of documents were used to help address some of the challenges I faced collecting data via the interview method. There were limits to how much my key informants were willing to discuss with me about sensitive topics, such as what and how data about consumer behaviour is used. I collected over 120 media articles and technical documentation, such as white papers and research articles written by music streaming employees, to access additional data about how music streaming services, including but not limited to Spotify, operate. Meanwhile, walk-alongs added a layer of richness to the data collected during interviews. It served as a valuable prompt and invited participants to share the everyday and routine experience of using Spotify, which might otherwise have been overlooked through interview questions.

My data collection was shaped by my positionality as an 'insider' (Dowling 2005). Alongside being a musician and music graduate who keeps abreast of changes in the music marketplace, I worked part-time at Universal Music, the largest major record label, as a Data Analyst for a part of the time I was collecting data (between August 2017 and January 2018). I worked in the Digital Partnerships team responsible for managing the label's relationships with music streaming services, such as Spotify and Apple Music. This role provided me with unique insights into the commercial relationship held between Universal Music and Spotify and it gave me unfettered access to the data collected by Spotify about user behaviour shared with the label. I was involved in the lobbying process behind securing song placement in Spotify's editorial playlists and I was employed to conduct research into trends in consumer behaviour on Spotify. Whilst I was unable to draw on my work experience as part of my data collection, as I did not have approval from my university's ethics board to collect data in this way, this experience shaped how I interpreted my data and offered invaluable contextual understanding, which shaped the development of this thesis as a whole.

In what follows, I explain my data collection methods in greater detail. I tackle each method (semi-structured interviews, walk-alongs, document collection) in turn, explaining the aims of the collection, how I conducted data collection using this method, and any ethical considerations associated with how I operationalised these methods. Following this, I discuss how I conducted a

thematic analysis of the data collected using these methods. The chapter concludes by critically reflecting on the strengths and weaknesses of my methodological approach.

3.4 Method 1: Semi-Structured Interviews

One part of my data collection consisted of 22 semi-structured qualitative interviews with a sample of music industry key informants with expert knowledge about music streaming services and the recorded music industry, and a sample of 20 people who use Spotify as one way in which they access and engage with music in everyday life. Interviews with music industry key informants were conducted between October 2016 and January 2017, whilst interviews with Spotify users were conducted between August and September 2017. The interviews with key informants were conducted first as the knowledge I gained about what, why and how Spotify seeks to shape how people access and engage music was used to inform the questions I asked Spotify users.

3.4.1 Aims

3.4.1.1 Key Informants Interviews

I interviewed music industry key informants (see Table 1) in order to better understand how Spotify is shaping how music is made available in the field and how the platform is positioned in relation to actors involved in bringing music to market, such as major record labels and digital distributors. Interviews were an appropriate choice of method because it was an effective way of inviting expert informants to construct accounts about change in the fields of music production and consumption and access their privileged interpretative ('know-why') and procedural knowledge ('know-how') of the issues at hand (Littig 2009). Semi-structured interviews were chosen, in particular, because they complimented the exploratory aims of my research, whilst maintaining a degree of comparability between interview transcripts.

Company Type	Role
Major Record Labels (1)	(1) Senior Director of Research and Senior VP Marketing (group interview)

Company Type	Role
Music Streaming Services (2)	(1) Data Scientist working on recommendation (1) UK Playlist Editor
Music Industry Bodies (2)	(1) Director of Research (1) Director of Communications
Independent Record Label (3)	(3) Founder/CEO
Digital Distributor (3)	(1) Founder and VP International (1) Head of Streaming Strategy (1) Senior Label Manager
Music Press (3)	(3) Journalists (broadsheet newspaper/music business press)
Computer Scientists (5)	(5) Computer scientists specialising in recommender systems
Other (3)	(1) Consultant who helped developed recommendation system for music streaming services/digital download store (1) Anthropologist specialising in music streaming and recommendation (1) Digital distribution consultant for independent record labels

Table 1: Breakdown of key informants

The interviews I conducted with informants working at music streaming firms created an opportunity to create an account of what, why and how music streaming companies, including but not limited to Spotify, seek to shape what and how music is made available. For example, I asked questions such as 'What are your company's strategic aims?' and 'If and how do the strategic objectives of your company shape how music recommender systems work?' (see Appendixes C and D).

Interviews with incumbents in the recorded music industry, such as major record label executives, enabled me to explore the implications of Spotify's attempts to shape how music is made

available for how recorded music is produced and brought to market. For example, I asked questions such as 'Can you tell me about your company's interactions with music streaming services – what are they about, what do they entail?' and 'What opportunities do music streaming services' music recommendation services present to you and your company?' (see Appendixes A and B).

Meanwhile, music recommendation technology experts were interviewed in order to learn more about how these technologies work and how the material constraints imposed by these technologies shapes how music is mediated. For example, I asked questions such as 'What technical constraints does one face when building and implementing a recommender system?' and 'What types of consumption practices do you think music recommender systems encourage or enable? (see Appendix D).

3.4.1.2   Spotify User Interviews

The 20 interviews I conducted with people who use Spotify were used to examine how Spotify is shaping how class identity and distinction are performed through the consumption of music (see Table 2). Interviews were advantageous for exploring the individualised and often implicit ways class manifests through music taste and consumption. Interviews are a way to generate data about how individuals view the world and ascribe meaning to different objects, practices, people and ideas (Dunn 2005; Hennink et al 2011; Guba and Lincoln 1994; Valentine 2001). Indeed, the use of qualitative methods has been instrumental in the development of the culturalist approach to class analysis, as they are better equipped for generating data about how people assert their identities and social worth through practice compared to the quantitative methods traditionally used in class analysis (Warde et al 2008; Savage et al 2001; Harrits and Helboe Pederson 2018). Rather than being comprehensive or representative, the aim of the interviews was to explore the individualised yet classed ways people engage with Spotify. Semi-structured interviews were chosen because they enabled me to achieve a balance between exploratory data collection whilst ensuring some comparability between interviews. This enabled me to systematically observe similarities and differences in class practices.

Pseudonym	Gender	Age	Occupation	Education
Elizabeth	Female	Mid 20s	Administrator	Bachelor's (Performing Arts)
Jamie	Male	Mid 20s	Social Media and Marketing	Bachelor's (Philosophy)
Claire	Female	Mid 20s	Employer Relations Adviser	Bachelor's (Sociology)
Marie	Female	Early 30s	Development Manager	Master's (Social Policy and Social Research)
Michelle	Female	Late 30s	Events Manager	High school
Tracy	Female	Late 40s	Educational Outreach	College; online degree
Joel	Male	Mid 20s	Administrator	College
Christian	Male	Mid 20s	Arts Co-ordinator	Bachelor's (Politics)
Rebecca	Female	Mid 40s	Administrator	High school
Andrew	Male	Early 30s	Student Support Practitioner	Bachelor's (Psychology)
Greg	Male	Late 20s	Customer Service Adviser	Bachelor's (Popular Music Studies)
Sian	Female	Early 20s	Customer Service Adviser	High school
Catherine	Female	Early 30s	Outreach Manager	PhD (Social Statistics)
Steve	Male	Early 40s	Senior IT Engineer	Bachelor's (Computer Science)
Josephine	Female	Late 30s	Service Manager/Analysts	Bachelor's (Geology and PGCE)
Phil	Male	Early 30s	Administrator	High school

Pseudonym	Gender	Age	Occupation	Education
Elizabeth	Female	Mid 20s	Administrator	Bachelor's (Performing Arts)
Deborah	Female	Early 40s	Librarian	Master's (Information Management)
Johanne	Female	Late 30s	Project Manager	Master's (Agricultural Science)
Sarah	Female	Early 30s	Regional Director	Bachelor's (Law); Master's (Law)
Ben	Male	Early 30s	Equality Officer	Bachelor's (Electrical Engineering)

Table 2: Breakdown of Spotify users

Interview questions incorporated a narrative component. They explored the 'musical biographies' of my participants, tracing the development of their tastes and consumption practices over the life-course. This enabled me to consider how individual habituses have adapted to the states of hysteresis encountered in the field of music consumption, such as the impact of the Internet and Web on the accessibility of music (see Chapter 2). Interview guides included a consideration for how individuals use Spotify in everyday life and how it compares to the other formats and cultural intermediaries they engage with. In addition, interviews elaborated on the impact that using Spotify has had on what and how my participants engage with music. For example, I asked 'How have your musical tastes and interests changed over the years?,' 'Does it feel like the service that Spotify provides is personalised to you?' and 'Do you think that using Spotify has changed how you listen to music?' (see Appendix E).

3.4.2   Sampling and Recruitment

3.4.2.1   Key Informants Interviews

Key informants were selected for participation purposefully using a snowball sampling technique. This approach involved asking participants to recommend or introduce me to other informants who might be valuable to my study (Patton 1990). Snowball sampling is particularly effective for accessing difficult to reach populations, such as expert informants. I recognise that the sample of participants I produced was not representative, especially as participants were from the same

social network (Hennink et al 2011, Berg and Lune 2012). I compensated for this by including a mixture of informants recruited through personal networks and prospective contacting.

An initial set of informants was recruited using my personal network of individuals working in the music industry and academic contexts. This was possible due to my 'insider' status. I have formed a number of connections of as an active musician and through my time studying music at university. Moreover, through the activities I have been engaged in as a PhD researcher in the field of Web Science, such as participating in Web-related conferences, I have formed a number of connections with potential key informants.

I also recruited participants through prospective and targeted contacting using company profiles found online (Littig 2009); through formal networks, such as university industry partners; and through approaching individuals and companies at professional events, such as digital music related industry and academic conferences. In turn, I asked my initial set of participants to recommend or put me in contact with other individuals who might be relevant to my study.

Table 1 outlines whom I recruited. Based on my knowledge of the recorded music industry, I focussed recruitment on informants who were likely to have knowledge and experience with Spotify and their playlist and recommendation strategies (Morse 1994). For example, the people I interviewed working at major record labels, independent record labels and digital distributors were senior members of staff who dealt with representatives from Spotify in their day-to-day work. Meanwhile, the people I interviewed who worked at or for music streaming services were involved in the creation of editorially-curated and personalised playlists and recommendations.

I had mixed success accessing key informants in the recorded music industry. I anticipated access to be an issue and recruited widely using a variety of strategies to increase the likelihood of participation. As my project and the types of questions I asked were relevant to the work of my participants, I hoped that potential participants would see value in my project due to personal interest and potential knowledge gains (Obelené 2009). I was more successful accessing incumbents in the recorded music industry, such as record labels, digital distributors and industry

bodies, compared to individuals working at music streaming services. The former group of actors were similarly trying to reconcile the impact that music streaming services are having on the recorded music industry and they seemed more willing to engage in conversation. In contrast, the key protagonists, music streaming services, were less responsive. My requests for interviews were often declined by referring to company policy about interacting with third parties.

My access to the knowledge of my key informants was also shaped by corporate confidentiality. Although my intention was never to uncover corporate secrets and sources of competitive advantage, which I made clear to participants during the recruitment process, there were limits to what people were willing to tell me about their company and their commercial relationship with Spotify. For example, some participants were unable to reveal in detail the types of data they receive from Spotify and how they use this information to inform commercial strategy. Fortunately, my participants were comfortable speaking in general terms about these kinds of issues, which made an important contribution to the development of this thesis.

These issues of access had implications for the claims that I could make using my empirical data. As I acknowledge from the outset, my description of the commercial strategies and practices of Spotify is empirically informed but remains speculative in nature. The interviews I conducted with key informants helped me to better understand the strategic aims of Spotify and, in particular, how the companies were situated in relation to actors traditionally involved in the commercial production of music, such as major record labels. This was advantageous as it helped me to develop my conceptualisation of Spotify as an intermediary infrastructure and elaborate on how the company mediates the interests of different users. As I discuss later in this chapter, I sought to overcome some of the limitations in my data through the collection and analysis of documents.

3.4.2.2   Spotify User Interviews

In line with my choice of critical case, the initial criteria for selection into my sample of music streaming users was whether a person used Spotify as one service through which they access music. Alongside being a user of Spotify, class background was the other criterion around which my participants were sampled and recruited. As is widely done in social science research on class, occupation, education and parental occupation and education were used as a proxy for class

background (Bennett et al 2009). In line with my approach to class analysis, I recruited a manageable sample of participants who would help me to explore the individualised yet classed ways people engage with music on Spotify.

I used a university (hence forth known as 'The University') as a recruitment site. The University was an effective recruitment site because it is a meeting point of individuals from different class backgrounds. I targeted specific departments at The University (e.g. maintenance and finance) in an attempt to access a diverse pool of participants. For instance, the job roles which might be encompassed under the umbrella of 'maintenance' includes many manual labourers, such as gardeners and cleaners, which are typically understood as working-class occupations, whilst the finance department has a range of occupations, from accredited accountants to administrators, spanning the middle classes. A series of questions were asked at the beginning of the interview concerning my participants' occupation, education and parental occupation and education to generate a clearer picture of their class background. As the data collection progressed, I focussed my recruitment efforts on different areas of The University to ensure I was obtaining a sample of participants from mixed class backgrounds.

My participants were recruited using gatekeepers and snowball sampling techniques. A gatekeeper refers to an intermediary who can facilitate access to participants through their social connections (Hennink et al 2011; Emmel et al 2007; Valentine 2005). In my case, I contacted senior members of staff in different departments and sought their co-operation in spreading the word about my study amongst their colleagues, which was done via email and word-of-mouth. Using gatekeepers in this way was an effective strategy because their advocation added to the legitimacy of my research, which encouraged people to participate (Hennink et al 2011).

Following the completion of an interview, I used a snowballing sampling approach by asking my participants to pass on details of my study to any of their colleagues who they thought might be interested in taking part. This approach was advantageous for when I wanted to access people from a similar class background to the person I interviewed (e.g. a member of the working classes).

My sample is weighted towards middle-class occupations and females, and my sample is predominately white (there is one participant, Michelle, who is of a non-white ethnic background). These imbalances are likely to have emerged because the majority of my participants and the potential participants I was more easily able to access were office-based employees at The University who had access to email. My gatekeepers passed on information about my study to their colleagues using email and the exchanges I had with participants to arrange interviews took place over email. Many of the occupations typically associated with the working classes, such as electricians and gardeners, do not use University email. I relied on their managers passing the word on about my study, which was less reliable as a recruitment strategy.

The social makeup of my sample had implications for the claims I could make using my empirical data. As my sample is largely made up of middle class occupations, I was able to generate rich insights into music taste and the performance of middle class identities, which I successfully built on in Chapters 5 and 6. The age range of my sample includes people ranging from their early 20s to 50s, which also allowed me to explore generational differences in music taste (see Chapter 6). However, I was limited in my ability to make claims about working class identities, which is a limitation of this research and a point I elaborate on in Chapter 7 as an area for further research. In addition, the gender and ethnic make-up of my sample limits my ability to make claims about the intersectional nature of social inequalities. Whilst my thesis is primarily concerned with the reproduction of class inequalities, it is important to recognise that class does not operate in isolation of other forms of inequality related to gender, ethnicity and other social dimensions (Hill Collins and Bilge 2016). My sample is overwhelmingly white in composition, which limits my ability to discuss the ethnic dimensions of music consumption beyond the performance of 'whiteness.' Despite these limitations in my sample, I was sensitive to the intersectionality of inequalities in my analysis and in the presentation of my findings I identify related areas for further research.

3.4.3   Doing the Interviews

3.4.3.1   Key Informant Interviews

Interviews with key informants lasted 45 minutes to an hour. Interview guides were used to conduct interviews (see Appendixes A, B, C and D). The use of interview guides helped me to maintain consistency and comparability across the interview data (Flick 2009). Interviews guides were tailored to the specific expertise of the key informants. For example, interviews with data scientists working for music streaming services had a greater emphasis on the technical issues, whilst interviews with music industry bodies were focussed on market-level changes to the ways music is produced and consumed. Before commencing data collection, I solicited feedback from several university colleagues in order to pilot-test the appropriateness of the structure and questions included in each of the interview guides. I also evaluated the appropriateness of the interview guides as the data collection unfolded. After the interview, the recording was transferred to my password-protected university laptop, and additional reflective notes were made. All interview data is backed up on my university's server.

Four key informant interviews were conducted face-to-face, three interviews were conducted via the telephone, and the remaining 15 interviews were conducted virtually using the video-calling software, Skype. Whilst face-to-face (F2F) interactions are often privileged as the 'best' way to conduct interviews, video-calling is a viable alternative (Seitz 2016; Deakin and Wakefield 2014; Lo Iacono et al 2016). F2F interviews are seen as advantageous for developing trust and rapport between interviewer and interviewee and reading subtle non-verbal cues that may accompany a person's response to a question (Seitz 2016). However, Skype offers a number of advantages to researchers, including locational flexibility, cost, convenience and safety, whilst preserving some of the nuances of F2F interaction, such as facial expressions (Seitz 2016; Deakin and Wakefield 2014; Lo Iacono et al 2016). Skype enabled me to access geographically dispersed participants. The recorded music industry and music streaming services are global in their reach. My key informants were located around the world in music and technology clusters such as New York, Berlin, Stockholm and London. Using Skype enabled me to easily and affordably access people

located in these different hubs. The use of Skype and telephone interviews was also necessary due to my personal circumstances. I had a major operation on my knee in October 2016 and I was unable to walk for 12 weeks. Rather than halt the progress of the research project, I decided to continue with data collection, working from home using virtual forms of communication.

3.4.3.2 Spotify User Interviews

The interviews I conducted with Spotify users lasted between 45 minutes to an hour. Interview guides were used to direct the interviews (see Appendix E). The same interview guide was used for all participants to help maintain consistency and comparability. Indicative of the semi-structured approach, the order that interview questions were asked changed in accordance with the responses generated by interviewees. I tested my interview guides on several university colleagues before beginning data collection to help improve the quality and flow of the interview guides.

Interviews were conducted face-to-face at either The University's campus cafeteria, the participant's office, conference rooms, or a nearby coffee shop in the case of staff members who worked for The University off-campus. Interviews typically took place during my participants' lunch breaks, which created some practical difficulties as the cafeteria and coffee shops were busiest at these times, but I reserved a table in a quiet corner to overcome this challenge. Interviews were audio-recorded and handwritten notes were also taken during the interview. The interview recordings were stored on my university's server and password-protected.

3.4.4 Ethical Considerations

My approach to conducting semi-structured interviews with key informants and Spotify users generated some ethical considerations related to power dynamics, informed consent and anonymity and confidentiality.

3.4.4.1   Power Dynamics

There was an asymmetry of power between myself and my key informants, who were in a greater position of power because they were in possession of the expert knowledge I was hoping to access (Valentine 2005, Flick 2009). Because of this, my key informants had the potential shape the direction of the data collection because they might not have accepted my interpretations and perspectives (Obelené 2009), or they might have redirected the conversation toward internal conflicts or issues that interest them, thereby restricting access to knowledge (Valentine 2005, Flick 2009). However, the use of an interview guide helped me to maintain the focus of the interview around the aims of my thesis and I attempted to manage the motivations of key informants by ensuring the aims of this thesis were made transparent during the recruitment process.

Meanwhile, my position as a member of the middle classes and a music expert shaped how I engaged with the Spotify users I recruited. I refrained from revealing information about my musical education and training (I am a performing jazz musician and have a Bachelor's in Music) in case it made my participants feel uncomfortable talking about music taste, or influenced them to 'play-up' their relationship to music. By the same token whilst my occupation as a PhD researcher at a Russel Group university speaks to my status as a member of the middle classes, I similarly refrained from discussing my class position to exacerbate any imbalance of power between myself and my participants.

3.4.4.2   Informed Consent

To ensure that I gained informed consent from all of my participants, I provided them with an information sheet ahead of the interview explaining the study and I verbally explained, before any interviews commenced, the nature of my research (see Appendix G and I). This information sheet contained details relating to the duration of the study, methods used, possible risks and the purpose and aim of my research. At no point in the research were the participants taking part

without their knowledge and consent as no covert data collection methods were used. I secured written consent from all participants before commencing interviews (see Appendix H and J).

3.4.4.3   Anonymity and Confidentiality

Interviews with key informants were affected by issues of corporate confidentiality. In order to avoid conflict, the interview questions were designed to not probe into the specifics of technologies used by Spotify and other music streaming services, or specific business practices of incumbents in the recorded music industry.

Interview transcripts and the use of this data in this thesis and elsewhere have been anonymised in order to protect the identities of participants. Key informants are referred to in terms of the type of company they work for and the type of job role they occupy (for example, 'executive, major record label'). With the use of snowballing sampling, it was more difficult to guarantee the anonymity of participants because referrals were made. However, I sought permission before using the name of a participant in every correspondence with prospective participants.

Transcripts were anonymised by removing names, locations and specific information that might reveal the identity of participants. Removed words were replaced with bracketed explanations of what the contents would have been (for example, 'workplace name'). Data was stored electronically on a password-protected computer, and the interview transcript file names were anonymised. Data was stored in compliance with my university's 'Research Data Management Policy.'[7]

The university site I used for my recruitment has been anonymised and the individuals in my sample of Spotify users have been assigned pseudonyms. My description of their job title has

---

[7] http://www.calendar.soton.ac.uk/sectionIV/research-data-management.html

been generalised to the level of occupation (e.g. accountant, lawyer, administrator) to avoid identifying any individual through their specific role at The University.

3.5   Method 2: Walk-Alongs

The second method I used was an app 'walk-along' (Light et al 2016; Jørgensen 2016). During the interview alongside collecting data through semi-structured questions, I invited all of my Spotify users to 'walk-through' how they access and engage with Spotify, whilst I took observational notes.

3.5.1   Aims

In recent years, social scientists have developed new methods for accessing intimate, mobile and highly-individualised digital practices, which are difficult to grapple using traditional participant observation techniques (Light et al 2016). Like other schools of sociological thought, such as live sociology methods (Back 2012), these approaches incorporate a consideration for mobility and "… contemplate the use of the Internet as an imaginative and sensory experience as much as a practical exchange of information" (Hine 2016, 64). One proposed method I build on is the app 'walk-along' (Light et al 2016). In its original formulation, this refers to walkthroughs conducted by the researcher, acting as a potential user, to explore what an app does to shape how its users act (Light et al 2016). In doing so, it seeks to unpack the material intentions of the designers and cultural values embedded in design. As Light et al (2016, 2) explain:

> The walkthrough method is a way of engaging directly with an app's interface to examine its technological mechanisms and embedded cultural references to understand how it guides users and shapes their experiences. The core of this method involves the step-by-step observation and documentation of an app's screens, features and flows of activity – slowing down the mundane actions and interactions that form part of normal app use in order to make them salient and therefore available for critical analysis.

Rather than conducting the walk-along myself, I invited my participants to walk me through how they engage with music on Spotify in everyday life. This was advantageous because it enabled me to explore how my participants perceive and experience Spotify and the ways in which it seeks to shape what and how they consume music. The walk-along helped to triangulate the data I was collecting through semi-structured interview questions. I was able to compare what my participants said about their experiences using Spotify with what I observed about how they access and engage with music on the service. Indeed, by inviting people to use their own device, I was able to observe how Spotify is personalising the user experience, and how these people were personalising the user experience on their own terms. All of my 20 Spotify user participants agreed to take part in a walk-along.

3.5.2   Doing the Walk-Along

Walk-alongs were conducted during the same session as the interview. The activity lasted up to 30 minutes. The walk-along was guided by a pre-defined list of open-ended prompts (see Appendix F). The exercise began with me asking participants to open Spotify's main navigation page (see Figure 1) and describe the different features they regularly engage with and why they choose to do so. As the walk-along unfolded, I directed participants towards aspects of Spotify's service which were of empirical interest, such as its editorially-curated and personalised playlists and recommendations. The open-ended nature of the exercise complimented the exploratory aims of my research and empowered my participants to take the lead in showing me what are the most meaningful aspects of Spotify's service are.
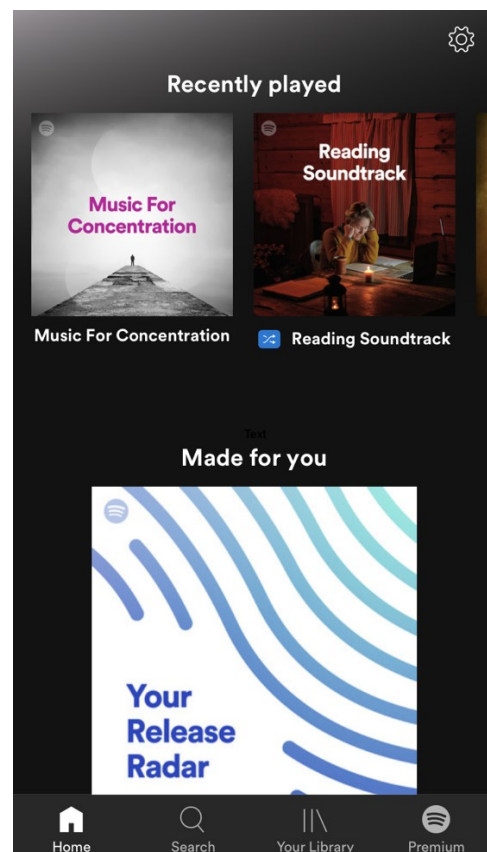
Figure 1 Spotify's navigation page on mobile (free, ad-supported version)

The use of the app 'walk-along' introduced some challenges in terms of how to capture the interactions taking place. I chose to collect data about the walk-along using hand-written observational notes, describing what the participant was doing, whilst a Dictaphone was used to capture what was being said. Alternative techniques for capturing data could have been used, such as video recording, but I chose to take notes because it was practically the most feasible (in terms of access to equipment and in relation to the spaces where interviews were conducted); it helped to maintain a more relaxed interview environment (e.g. compared to having the interview video-recorded); and it helped to mitigate some confidentiality issues (see below).

3.5.3   Ethical Considerations

An important ethical consideration I faced related to how much personal information I was asking my participants to reveal by using their personal device for the purposes of the walk-along, as well as information about their Spotify followers who would have been unaware of the research and unable to give informed consent.[8] One solution to this problem proposed in existing literature is to use a 'dummy account' for the purpose of this kind of exercise (Light et al 2016). However, it was important for the aims of my research to have my participants use their own device to conduct the walk along, as their Spotify profile was personalised to them, and the use of a dummy account would have made the exercise redundant. In order to address this ethical concern, I ensured that I secured informed consent from my participants. I explained the nature of the exercise and what we would do and discuss as part of the walk-along. My participants were free to choose whether or not they wished to participate and allow me to see their Spotify account. In addition, choosing to collect data through participation observation notes, rather than video recording, meant that I did not inadvertently capture sensitive information and I was able to anonymise my observation notes.

3.6   Method 3: Document Collection

Semi-structured interviews and walk-alongs were supplemented with the collection and analysis of 120 documents found on the Web. I collected a range of documents about Spotify and other music streaming services, including advertisements and marketing material, industry body annual reports, newspaper articles, technical documentation and manuals and press releases (see Table 3).

---

[8] Spotify enables people to 'follow' each other. Once following, a person receives updates about the activity of the person they followed, such as information about what songs they recently played, or the playlists they have created.

3.6.1   Aim

Documents were used alongside semi-structured interviews and walk-alongs to add supplementary data about the activities and intentions of music streaming firms, such as Spotify, to aid triangulation. Documents were a cost and time-efficient way of gathering supplementary data, as these documents were readily accessible on the Web. These documents offered background information about music streaming firms and the market more broadly, helping to contextualise my research in relation to broader changes in the marketplace. Documents enabled me to examine the historical development of music streaming firms, such as Spotify, and their transition from a niche to the dominant mode of music distribution.

These documents helped me to overcome some of the corporate confidentiality issues I faced conducting key informant interviews. There were limits to what some of my key informants were willing to share about the strategic aims of music streaming services and what and how data about consumer behaviour is collected and used. Some of the documents I collected, such as interviews with music streaming executives in the music press, provided information about the strategic aims of these companies, whilst technical documentation (e.g. white papers, technical documentation) provided some examples of what and how data is collected and used.

3.6.2   Doing Document Collection

Documents were sampled purposively and collected from the Web using the search engine, Google. Combinations of key terms, such as 'music streaming services,' 'Spotify,' 'curation,' and 'consumption,' were used to seek out relevant documents. I collected 10 annual reports about the state of the digital music market created by the International Federation of Phonographic Industries (IFPI), dating back to their first publication in 2008, which provided valuable insights into growth and change in the music streaming marketplace. Meanwhile, I acquired a subscription to the music industry trade magazine, *Music Week*, which opened up access to interviews conducted with executives from music streaming services and incumbents in the recorded music

industry, such as major record labels, about changes in the recorded music industry associated with streaming.

Document Type	No. of Docs.	Sources
Media articles	80	Music Week, The Guardian, The Economist, The New York Times, BBC News, Forbes, Digital Music News, Pitchfork, The Verge, NME, The Conversation, Wired, Los Angeles Times, Quartz, Financial post, Music Ally, Bloomberg Business, The Huffington Post
Press releases	16	Spotify, Universal Music
White papers	3	The Echo Nest, Spotify, Spotify and Groupm
Technical documentation	1	Spotify API Reference (https://developer.spotify.com/documentation/web-api/reference/)
Industry reports	10	International Federation of Phonographic Industries (IFPI), British Phonographic Industries (BPI)
Patent application	10	Spotify, Apple, The Echo Nest
Blog Posts	6	Spotify, The Echo Nest

Table 3: Breakdown of documents collected

3.6.3 Ethical Considerations

There were no issues of anonymity and confidentiality as all documents were in the public domain. During the selection process, documents were scrutinised for their credibility. Media articles were acquired from reputable sources (e.g. *The Guardian*, *The New York Times*, *Music Week*); press releases and marketing material were acquired from the publisher (e.g. Spotify); and technical documentation and white papers were acquired from a relevant firm (e.g. Spotify), or individuals affiliated with the firm (e.g. employees of Spotify).

3.7   Data Analysis

The data collected through semi-structured interviews, walk-alongs (i.e. my participant observation notes) and document collection were analysed using a thematic analysis approach (Riessman 1993, Braun and Clarke 2006, Hennink et al 2011). The data collected through mixed methods were analysed using the same analytical strategy to help integrate these data sources.

The audio recordings of semi-structured interviews and walk-alongs were transcribed verbatim. Transcriptions include everything that was said and they identify who said it. I performed the transcription, as this process was a valuable way of familiarising myself with the data (Riessman 1993, Braun and Clarke 2006, Hennink et al 2011). I decided during the transcription process whether additional detail, such as emotions of the speaker, were relevant (Hennink et al 2011). This was particularly important for interviews with Spotify users, as it invited me to consider the implicit ways class manifests, such as through how confidently people speak about music taste (Savage 2000; Savage et al 1992).

The analysis proceeded with a process of familiarising myself with the data. This involved repeatedly reading the data, searching for patterns and taking notes around potential themes and codes which can be reused later on. This first-pass aimed to generate an initial list of what is in the data and what is interesting about these things (Braun and Clarke 2006). For example after each interview was transcribed, I wrote a one-page summary describing the key issues raised in the interviews and my ideas about emerging themes. After each week of transcribing, further reflective notes were made about emerging themes. I consulted these notes throughout the analysis process and this activity was a valuable way of familiarising myself with the data.

Data familiarisation was followed by the generation of initial codes. Some codes were created deductively using my theoretical and conceptual approach, secondary literature, interview guides and tacit knowledge (Hennink et al 2011). For example, I drew on concepts from my Bourdieusian conceptual framework (e.g. cultural capital) to relate the data to my theoretical framework and my understanding of how class manifests. Other codes were constructed inductively from reading

the data. These codes were a combination of 'descriptive' (relating to themes and patterns obvious on the surface) and 'analytical' (relating to a theme relevant to my research questions, or appears to have become important) codes (Cope 2005). It was advantageous to combine deductive and inductive codes in order to avoid imposing meaning that was not grounded in the data (Hennink et al 2011).

Once an initial set of codes had been developed, I re-focussed my analysis at the broader level of themes, sorting codes and the data extracts they are attributed to into categories or themes (Braun and Clarke 2006). With regards to the interviews with key informants and document analysis, I identified themes which spoke to my interest in what, why and how Spotify is shaping how music is made available and what opportunities this present to mobilise capital. Meanwhile my analysis of Spotify user interview transcripts and walk-alongs was concerned with identifying themes that spoke to the questions of how using Spotify is shaping how class identity is performed through the consumption of music and how the service is shaping the mobilisation of capital.

The candidate set of themes were reviewed as some themes did not seem relevant, whilst others needed breaking apart or subsuming. The aim of thematic coding was to produce themes which cohere internally, but are distinguishable from other themes, thereby achieving 'internal homogeneity and external heterogeneity' (Braun and Clarke 2006, 91). I considered whether the data extracts coded corresponded with the candidate themes in order to ensure themes are valid and grounded in the data. At this stage, I re-read the entire data set of interview transcripts and documents in order to observe whether the themes were meaningful and appropriate, whilst also coding additional data which were missed previously.

With a tentative thematic map of the data constructed, I defined and further refined the themes that I aimed to present in my thesis. This involved further analysis of the data extracts contained within the theme, focussing on what the theme is about and what aspects of the data it captures (Braun and Clarke 2006). I returned to the data extracts throughout this process to ensure the account and narrative I was constructing using these themes was consistent with the data.

Rather than using any qualitative data analysis software, the analysis was conducted using pen and paper and a word-processor. Conducting analysis in this way complimented my working style and the exploratory aims of my research. My analysis was largely inductive in nature and I found it helpful to immerse myself in the data through close reading, rather than relying on techniques such as keyword searches or topic analysis available using data analysis software. My handwritten coding was transferred to the word processor, Scrivener. I used this software to group passages of interview transcript, participant observation notes and documents under the codes and themes I was defining. This helped me to review the candidate set of themes, as I could easily examine what data I was associating with a theme, whilst also making it easier to find key quotes reflective of the theme for the purposes of presenting my findings.

3.8   Summary

This chapter outlined the research design adopted in this thesis and my underlying methodological approach. In section 3.1, I described my culturalist and Bourdieusian approach to class analysis, identifying how I see class manifesting in implicit and routine ways through practices such as music consumption. Following a reflection on the strengths and weaknesses of this approach, section 3.2 discussed how I draw on the methodological approach of platform studies to help me to engage with Spotify's ontological complexity. Whilst Bourdieu's (1984) theoretical and conceptual framework is fine-tuned for thinking about the cultural dimensions of class, it is less adept at accounting for technical agency. Instead, platform studies offers ways of thinking about what Spotify is which helps us to begin to make sense of why and how the platform is shaping consumption practices. In section 3.3, I outlined my research design. I adopted a mixed qualitative methods research design, incorporating semi-structured interviews and document collection. I elaborated on my operationalisation of these methods, in turn discussing what, why and how I conducted data using these methods, alongside the ethical considerations that were raised. I then explained how I analysed my data using a thematic analysis approach.

My methodological approach and research design had strengths and weaknesses. This thesis insists upon the importance of engaging with Spotify's ontological complexity. It seeks to better

understand what, why and how Spotify seeks to shape what and how people engage with music. It uses this account as a foundation for examining if and how Spotify is shaping how class identity and distinction are performed through music taste and consumption. However, engaging with Spotify's ontological complexity presented some methodological challenges. There were limits to the types of knowledge I could access using the interview method due to issues such as corporate confidentiality and access to participants with relevant knowledge. I drew on mixed methods to try and overcome these challenges and corroborate findings.

The use of the walk-along as a data collection method added a layer of richness to the interview data I collected with Spotify users. On the whole, the activity was enthusiastically received by my participants, who seemed to enjoy showing me what and how they listen to music on Spotify. The activity relaxed the dynamics of interaction between myself and my participants, which improved the experience of conducting interviews. For example, we rearranged the seating so my participants and I were side-by-side, rather than face-to-face, and we had a shared object to look at and discuss, rather being confined to a more rigid face-to-face, question-and-answer format.

However whilst I was reluctant to video record the walk-alongs, it would have been advantageous to have access to visual data for the purposes of presenting my findings. The findings I present in Chapter 5 would have been enhanced by being able to present examples of what my participants were referring to when they were talking about how they use Spotify. Taking a picture or screenshot would have been one way collect this data without being as intrusive as video-recording the interaction.

My choice of recruitment site had strengths and weaknesses. The range of occupations found at The University, from accountants to cleaners, opened up the possibility of accessing people from different class backgrounds. I found that my calls for participation were warmly received by members of the staff at The University. My participants, who were all non-research staff at The University, found it refreshing that they were invited to participate in research, and they considered my research topic to be accessible and engaging. Indeed, many remarked about how they were sat at their desks listening to music on Spotify when they first read about my study.

Having said that, accessing people who did have an email account was more challenging, as I relied on word-of-mouth to reach these individuals. This meant my study attracted more computer-based, clerical workers, which may explain why my sample of participants is weighted towards females and the middle classes. Using a more creative strategy for reaching 'offline' employees would have helped me sample and recruit more working-class Spotify users. Indeed, this might have helped me to assemble a more ethnically-diverse sample.

If I had the opportunity to repeat my fieldwork, I would have taken greater advantage of my positionality as an 'insider.' My experience working at Universal Music provided me with privileged insights into the strategic aims of Spotify and put me in a position where I was able to gleam into the types of data Spotify collects about the identities and interactions of the people who use its platform to access and engage with music. I attended presentations led by Spotify where they laid out to their commercial partners, such as Universal Music, their long-term strategies for creating editorial and personalised playlists and recommendations. And I learnt more about the nature of the license agreements struck between music streaming services and major record labels, gaining a newfound appreciation for the power dynamics of the recorded music industry and how commercial imperatives pervade decision making. This opportunity arrived at the wrong time in the progress of my fieldwork, which meant it was impractical for me to embark on additional data collection through this relationship. However, this knowledge did not go to waste; it informed how I analysed and interpreted my data, which was beneficial to the production of this thesis. I reflect on these experiences further in the concluding chapter of this thesis.

In the following three chapters, I present my empirical findings. In Chapter 4, I provide an account of what, why and how Spotify seeks to shape how people access and engage with music. Building on this account, Chapters 5 and 6 examine how the ways in which Spotify mediates access to music is shaping how class identity and distinction are performed through music taste and consumption.

Chapter 4 The Curated Experience of Consuming Music on Spotify

In this chapter, I develop an account of what, why and how Spotify is seeking to shape music tastes and consumption practices and consider the implications for the part that music taste and consumption play in the reproduction of class. Drawing on a platform studies perspective, I argue that Spotify can be understood as an 'intermediary infrastructure' and business arrangement that facilitates and co-ordinates interactions between music rights holders, advertisers and consumers (Langley and Leyshon 2016; Van Dijck 2013). I use the concept of 'intermediary infrastructure' to capture how Spotify provides the infrastructure – the socio-technical means – for rights holders, brands and consumers to interact, whilst at the same time seeking to shape how music, economic capital, data and other cultural goods circulate between them. User engagement is integral to Spotify's existence and operation as an intermediary infrastructure. I demonstrate how the need to drive user engagement motivates Spotify to intervene in how people access and engage with music through the performance of curation (the strategic selection, presentation, arrangement and ascription of value(s) to music). I demonstrate how digital data is a product and producer of user engagement and is used by Spotify to stabilise its position as an intermediary infrastructure. Data is used to drive user engagement by enabling the platform to achieve mass personalisation and optimise design and delivery of its service to sure it is having a measurable impact on user engagement.

The findings presented in this chapter draw on the data collected thought semi-structured interviews with 22 music industry key informants and the analysis of 120 documents about Spotify and the music streaming marketplace, more broadly, including media articles, industry reports and white papers. The interviews I conducted with informants working at music streaming firms explored what, why and how these types of companies seek to shape how music is accessed and engaged with. Interviews with incumbents in the recorded music industry, such as major record label executives, explored the implications of Spotify's attempts to shape how music is made available for how recorded music is produced and brought to market. Meanwhile, music recommendation technology experts were interviewed in order to learn more about how these technologies work and how the material constraints imposed by these technologies shapes how

music is mediated. Documents were used alongside semi-structured interviews to add supplementary data about activities and intentions of music streaming firms, such as Spotify, to aid triangulation.

My empirical material is used as a basis for making informed speculations about what, why and how Spotify is seeking to shape music consumption practices. Exploring the expert knowledge of my informants helped me to identify key strategic aims, practices and actors involved in shaping how music is mediated on Spotify, as well as the significance of these for the social dynamics of music consumption. I include interview quotes to illustrate the importance of particular practices and processes.

There were limits to what data I was able to collect about how Spotify seeks to shape what and how we consume music due to corporate confidentially. Specifically, there were limits to what information my participants were willing to share with me about the types of data Spotify collects and how it is used. By bringing together multiple data sources alongside the computer science literature, I make informed speculations about what data Spotify collects and how the platform and other actors, such as major record labels, make use of this information. In addition, the development of this account was shaped by my 'insider' status. Working at a major record label in the team responsible for managing the company's commercial relationships with leading music streaming firms gave me privileged insights into the strategic aims of Spotify and the different actors and processes involved in the curation it performs. Whilst I am unable to directly refer to these experiences, these insights were valuable and informed the analysis of data and the construction of the narrative presented in this chapter.

This chapter proceeds as follows. First, I offer a brief of account of the key actors involved in the commercial production of music and situate music streaming services in relation to the work of these actors. Second, I identify the importance of maintaining and driving engagement between Spotify's users (i.e. music rights holders, consumers, brands) as central to Spotify's commercial success and its position as an intermediary infrastructure. I then examine what Spotify does to ensure that it is driving user engagement on its platform. I demonstrate that curation, which

manifests in the form of editorially-curated and personalised playlists and recommendations, combined with the adaptive presentation of music, is a key strategy used by Spotify to attract and engage users. Fourthly, I discuss how user engagement is not only important for revenue generation, but also data creation. I illustrate how data creation is a product and producer of user engagement and serves to shore up Spotify's position as an intermediary infrastructure. I examine three ways in which data is used to drive user engagement: (1) mass personalisation; (2) optimising the design of its infrastructure; (3) the exchange of data between Spotify and music rights holders. I conclude by discussing the implications of the ways in which Spotify is shaping what and how music is made available in the field of music consumption, which I return to in Chapters 5 and 6 of this thesis.

4.1   The Commercial Production of Recorded Music

The commercial production of recorded music is dominated by a group of record labels known as the 'majors' (Scott 1999; Leyshon et al 2005; Anderson et al 2013; Hesmondhalgh and Meier 2017). Following successive rounds of consolidation throughout the 1980s and 1990s, in which dominant labels purchased or merged with smaller labels, the recorded music industry is now dominated by three major record labels: Universal Music, Warner Music and Sony Music (Resnikoff 2016; Hesmondhalgh and Meier 2017). The major record labels are multi-national conglomerates that own a large number of subsidiary labels which operate semi-autonomously (for example, Virgin EMI and Polydor are both owned by Universal Music, each with their own roster of artists) (Anderson et al 2013). These companies have also achieved vertical integration (Scott 1999; Hracs 2012; Anderton et al 2013). Majors control every aspect of the production process, such as legal services, music publishing, marketing and promotion, manufacturing and distribution, and digital distribution. These companies also sell services, such as physical and digital distribution, to smaller record labels. The majors are responsible for the release of vast amounts of recorded music. In 2017, the three major record labels (Universal, Warner, Sony) accounted for 70% of global recorded music sales, with the remainder made up by revenues generated by independent record labels and artists (i.e. record labels and artists not owned by the majors) (Ingham 2018).

In the early 2000s, the democratising potential of the Internet and the so-called MP3 crisis radically unsettled the dynamics of power in the recorded music industry (Leyshon et al 2005; Hracs 2012; Arditi 2014). As I discussed in Chapter 2, the establishment of peer-to-peer (P2P) file sharing networks, such as Napster, and compressed formats for digitally reproducing music, such as the MP3, enabled music piracy to occur at a greater scale than previously encountered. Online music piracy had a detrimental effect on the health of the recorded music industry. By 2001, global music sales fell by 5% with losses falling by a further 9% in 2002 (Leyshon et al 2005; Hracs 2012). This decline in sales had consequences for the major record labels who dominate music production. For example in 2002, the world's largest record label, Universal Music (then Seagram-Universal) recorded losses of over $12 billion in the first nine months of that year (Leyshon et al 2005). In some countries, such as Canada, consumer spending on music declined from $1.4 billion in 1998 to $850 million by 2004 (Carniol 2005).

Despite significant losses, the recorded music industry adapted and in collaboration with IT companies, most notably Apple, established a viable means for monetising digital music (Arditi 2014; Hracs 2012; Hesmondhalgh and Meier 2017). In 2003, Apple launched its iTunes store, which transformed how digital music was purchased and consumed. The store allowed people to legally purchase digital music files in exchange for a small fee of £0.99 per track. The iTunes store enabled people to purchase individual tracks, rather than a whole album, and allowed songs to be played on up to five computers, burned to a CD, and downloaded to Apple's portable music device, the iPod, without violating any copyright laws. Between 2003 and 2010, Apple had sold over 10 billion songs worldwide through its iTunes store (Luttrell 2010). By August 2009, Apple's download services accounted for 25% of the overall recorded music marketplace (physical and digital) and 69% of the digital music market (Whitney 2009). Through the monetisation of digital music, Arditi (2014) argues that major record labels have been able to re-entrench their position of dominance in the recorded music marketplace.

Digital technologies and the Web have also contributed to a profusion of independently produced music, which has increased competition for major record labels (Hracs 2012, 2015; Hracs et al 2013; Choi and Burnes 2013). Home studio equipment has made it more affordable to produce

high quality recordings, without having to hire expensive studio time, and off-the-shelf editing software has made it easier for non professionals to edit, mix and master digitally recorded music (Hracs 2012; Leyshon 2007; Watson 2016). Meanwhile, online distribution channels, such as the iTunes store as well social media platforms, such as Myspace and Facebook, have opened up avenues for selling and promoting independently produced music (Hracs 2012; Choi and Burnets 2013). In principle, musicians are no longer reliant on signing a record deal to make a living as a musician. However as I discuss later in this chapter, music streaming services have created further opportunities for major record labels to consolidate their position of dominance, perpetuating inequalities of access in the recorded music industry.

Like the digital download stores that came before them, music streaming services, such as Spotify, Apple Music and Amazon, have created opportunities to monetise digital music for both majors and independent labels and artists. For free or in exchange for a monthly subscription fee of around £9.99 per month, consumers can legally access the history of recorded music at the touch of a button using an Internet-enabled device, such as a smartphone. These platforms provide a means for artists and labels to monetise their intellectual property. Artists can agree to license their music to these platforms in exchange for royalty payments, paid according to the total volume of streams generated. Over time, music streaming services have transitioned from a niche to one of the dominant modes of music distribution around the globe. For example since its launch in 2008, the leading music streaming service, Spotify, has gone on to acquire over 180 million monthly active users, over 80 million paying subscriber and operating in over 70 countries worldwide (Sanchez 2018).

As I elaborate on in this chapter, music streaming services do more than just make music available for people to legally access and stream via the Internet. Rather, these platforms have engineered compelling user experiences through curation, the strategic selection, presentation and arrangement of music (Joosse and Hracs 2015; Jansson and Hracs 2018; Morris and Powers 2015). By engaging in the creation and presentation of playlists organised around different themes, from studying to the best in new music, combined with the use of music recommendations technologies to personalise the experience of consuming music, music streaming services are seeking to make it easier to find and engage with relevant music and alleviate the burdens of choice introduced by abundance (Morris and Powers 2015; Bhaskar 2016). In doing so, these

services seek to drive user engagement on their platforms, an outcome integral to the success of their ad-supported and subscription-based business models.

Other digital distribution channels, such as Apple's iTunes store, curate music (Morris 2015). For example, the iTunes homepage has collections of promoted albums and artists and iTunes software incorporates an automated music recommendation system, Genius. However, this chapter demonstrates that music streaming services' attempts to shape what and how music is consumed are more extensive and pervasive that what has been previously encountered and operate at an unprecedented rate and scale. These platforms are continually capturing data about user behaviour to ensure that music included in playlists and recommendations are having a measurable impact on user engagement, which has implications for the part that music taste and consumption play in the pursuit of class distinction.

In this chapter, I introduce the concept of 'intermediary infrastructure' to conceptualise the distinctive position music streaming services occupy in the field of music production. I describe how music streaming services have to mediate between the interests of consumers, on the one hand, who want affordable and convenient access to music, and artists and record labels, on the other, who want to monetise their intellectual property and increase the exposure of their artist brands and recordings. I identify how Spotify balances the interests of these different user groups through the practice of curation. Curation seeks to ensure that consumers are findings and engaging with relevant, and artists and labels are reaching relevant audiences in a targeted fashion. Successfully balancing these interests is integral to Spotify's commercial success and existence as an intermediary infrastructure. However, as I go on to discuss, how Spotify intervenes in these interactions has implications for the part that music taste and consumption play in the pursuit of class distinction, as well as the political economy of the music industry more broadly.

4.2   Spotify as an Intermediary Infrastructure

Spotify is an intermediary infrastructure and business arrangement (Langley and Leyshon 2016; van Dijck 2013; Scrnicek 2017) that facilitates and co-ordinates interactions between music rights holders (i.e. those actors who have stakes in the intellectual property and therefore profit from its distribution via Spotify, including record labels, digital distributors, recording artists, publishers and songwriters); brands who advertise on the platform; and consumers (people who want to listen to music). Spotify provides the socio-technical means – the infrastructure – for people to legally access and engage with music; for rights holders to monetise their intellectual property; and for brands to increase awareness amongst potential customers. As an intermediary infrastructure, Spotify's existence and operation is performative in nature (van Dijck 2013). It exists and acts in the world because it facilitates interactions between rights holders, brands and consumers. More specifically, its existence is the outcome of the labour of a network of human and technical actors which make the facilitation of interactions between music rights holders, consumers and brands a reality, including but not limited to databases, servers, internet protocols, algorithms, license agreements, designers and engineers.

Yet, Spotify is not a mere conduit. As a company, Spotify has its own commercial interests which it seeks to advance whilst continuing to satisfy the demands of its users. Spotify has adopted two business models, an ad-supported and subscription-based business model, which are the basis of revenue generation. Spotify generates revenue by charging brands to advertise on its platform and charging people a monthly or yearly subscription fee to access music via the platform. Indeed, Spotify has yet to turn a profit and demonstrating its commercial sustainability and profit-earning potential is a key concern for the company (Sisario 2017).

As I go on to discuss more fully later in this chapter, user engagement is also important because it generates data. Spotify's position as an intermediary infrastructure means it is uniquely positioned to collect vast amounts of data about the interactions occurring on its platform. Spotify's capacity to collect and use data is a product and producer of user engagement, serving to stabilise its position as an intermediary infrastructure and contributes to its commercial success. This is because the more users and interactions that occur on its platform, the more data it is able to collect about these users and interactions. The more data is it able to collect, the more

information Spotify has to help it to co-ordinate the interactions that occur between its users and ensure that it is attracting and engaging them. The need to drive user engagement underpins both *why* and *how* Spotify shapes how music is made available in the field of music consumption, which, as I go on to discuss, has implications for the role that music taste and consumption play in the reproduction of class.

In order to illustrate the importance of user engagement, the following section examines how Spotify is positioned in relation to its three key users (consumers, rights holders, brands). The interviews I conducted with music industry key informants, combined with the analysis of documents, are used to examine the interrelationships between Spotify's users and consider what Spotify does to facilitate these interactions. In doing so, I demonstrate how maintaining the engagement of all users is integral to the success of Spotify's business models and position it occupies as an intermediary infrastructure.

4.3   The Importance of User Engagement

Using Spotify is a way for people to access and engage with music. Spotify offers anytime, anywhere access to vast catalogues of licensed music in exchange for a monthly or yearly subscription fee or for free in exchange to third-party advertisements. Ad-supported users can access the service for free but are unable access certain features such as offline listening and are forced to shuffle music,[9] rather than being able to play music in the order they desire. People also have the option of paying for a Spotify subscription, which provides them with an ad-free experience and access to the complete functionality of the service. In the UK, Spotify offers a

---

[9] Spotify randomly rearranges the order of the songs when a person selects a playlist to listen to, rather than allowing someone to listen to it in its original order.

monthly subscription to its service for £9.99, and a yearly subscription for £79.99.[10] Spotify's service can be accessed on a range of Internet-enabled devices, including PCs and laptops, smartphones, tablets, and smart home devices, such as smart speakers (e.g. Amazon's Alexa) and smart TVs.

Using Spotify is a way for music rights holders (e.g. artists, labels, publishers, songwriters) to generate revenue from intellectual property. Spotify invites rights holders to license their music to its service in exchange for royalty payments. Spotify pays out a share of its revenue to rights holders every time their song is streamed. In other words, Spotify rewards rights holders for driving engagement on its platform by sharing a portion of its revenue, a portion which varies according to their contribution to overall engagement on the platform. The exact terms of these agreements are subject to corporate confidentiality and the terms vary between different stakeholders. For instance, major record labels are able to leverage better terms as they own the rights to major recording artists, such as Justin Bieber, Taylor Swift and Eminem, who are likely to drive significant engagement on the platform.

---

[10] These are its baseline prices. Spotify has discounted rates for students, and it regularly runs promotional campaigns with discounted subscription rates (e.g. three months for 99p).
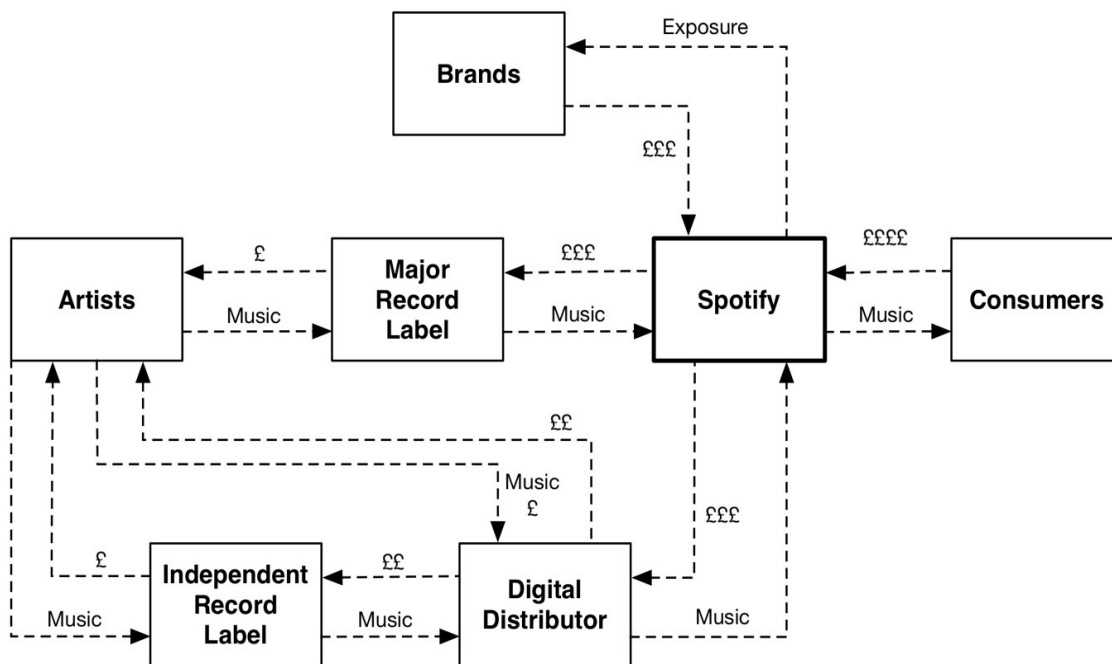
Figure 2: Spotify's commercial relationships

Major record labels then pay a share of revenue to songwriters and recording artists, according to the terms of their recording and/or publishing contracts (Figure 2). Meanwhile, independent record labels' access to Spotify is brokered via digital distributors. These intermediaries take a share of the royalties that would be paid by Spotify to the independent label, then what remains of the revenue is paid out to artists and songwriters in line with their recording and/or publishing contracts. There has been much controversy surrounding the amount of money Spotify is reported to pay artists who license their music to the platform (Ellis-Petersen 2014; Krukowski 2012). The press has reported that Spotify on average pays between $0.006 and $0.0084 per stream (Ellis-Petersen 2014). It has been argued that small and medium-sized artists are unable to make a sustainable living from licensing their music to platforms, such as Spotify (Krukowski 2012). Consequently, it is only the artists who drive the most engagement on the platform who receive sizeable royalty payments from Spotify.

Meanwhile, using Spotify is a way for brands to increase exposure amongst potential customers. Spotify offers targeted advertisements to third parties, with the option to segment audiences based on not only demographics but also tastes and consumption practices. Spotify's recent acquisition of The Echo Nest, a music data analytics platform, expanded its targeted ad capabilities (Spotify 2014). Using data about music consumption behaviour combined with demographic information, The Echo Nest segments and characterises its listener base according to psychographics such as personality, values, opinions, attitudes, interests and lifestyles for the purposes of targeted ads (Prey 2016; The Echo Nest 2014). Some of the categories it uses to describe its listeners include: adventurousness (how open a listener is to going beyond their comfort zone); diversity (how varied a listener's preferences are); freshness (relative preference for new and recent artists); locality (the relative geographical spread of listeners' favourite artists); mainstreamness (a listener's affinity for well-known versus obscure artists) (The Echo Nest 2013, 4). These types of characterisations enable Spotify to construct and sell ad-segments according to music listening activity.

Maintaining and increasing the engagement of ad-supported users is important because it helps to attract brands and secure advertising revenue for Spotify, as it means Spotify has more audience segments to sell to brands considering advertising via the platform, whilst ensuring that there are audiences for the music licensed by rights holders. Attracting and engaging paying subscribers is lucrative for Spotify and the music rights holders who partner with the platform, as subscription fees generate greater revenue for both Spotify and rights holders, as the total revenue from which rights holders receive a share is greater if there are more paying subscribers generating greater revenue. This puts Spotify in a precarious position, as it has to balance its and its rights holders' interest in attracting more paying subscribers, which would generate greater revenue for both parties, with the interests of brands, who are incentivised by Spotify having a large and engaged ad-supported user base. Securing the buy-in of rights holders is important for Spotify because without their support the platform would not have any music to make available, which would disincentivise consumers from using the platform, which in turn would reduce revenue for Spotify and discourage brands from advertising via the platform, as there will be limited numbers of people to advertise to. Meanwhile, Spotify must attract and engage brands because it is a source of revenue for the platform, which subsidises its free, ad-supported tier. By offering a free, ad-supported tier Spotify creates a pool of consumers whom it can try to incentive

to convert into paying subscribers, which would increase its revenue and the dividends received by rights holders, further encouraging them to license music to the platform.

These interrelationships highlight network effects at work (that is, the additional value added to other by the addition of other users). They demonstrate how user engagement is integral to Spotify's commercial success and position as an intermediary infrastructure. The performative nature of Spotify means that it must continue to facilitate these interactions in order to exist as an intermediary infrastructure, whilst the business models it adopts to generate revenue and satisfy the interests of its shareholders are reliant on attracting and engaging users in these ways.

In the following section, I discuss how the importance of user engagement motivates Spotify to do more than merely facilitate interactions; rather, Spotify seeks to actively shape and co-ordinate how interactions occur on its platform. I demonstrate that Spotify has adopted and adapted the practice of curation to help it drive user engagement on the platform, thereby satisfying its commercials aims and shoring up its position as an intermediary infrastructure. I demonstrate how curation, the strategic selection, presentation and arrangement of music (Joosse and Hracs 2015), is used to ensure that people are accessing and engaging with relevant music in line with their tastes and the situations in which they are engaging with music, whilst ensuring that artists are reaching relevant audiences, maximising the opportunities for rights holders to generate revenue from their intellectual property.

From this point on, I give limited attention to Spotify's relationship with brands and the targeted advertisements it offers. It is beyond the scope of this thesis to examine Spotify's advertising business and consider what it does to provide targeted advertisements. This thesis is concerned with how Spotify is shaping how music is mediated to people in the field of music consumption and with what implications for the relationship between music taste, consumption and class. Indeed, the key informants I interviewed have expertise in the recorded music industry and Spotify's role as a music distribution channel, rather than advertising platform, which limits my ability to make claims about the sociological significance of Spotify's targeted advertisements. For

a discussion of Spotify's targeted advertisements and their significance for the social dynamics of consumption, see Prey (2016).

4.4   Curating Connections Between Artists and Audiences

Curation, the strategic practice of sorting, organising, evaluating and ascribing value(s) to specific products (Joosse and Hracs 2015), is a function widely performed by cultural intermediaries (Hracs and Jansson 2017; Shultz 2015; Leslie et al. 2015; Maguire 2015; Jansson and Hracs 2018). In the music marketplace, actors such as record label personnel, music journalists, radio DJs and record store clerks, find, evaluate, promote and sell the oversupply of musical talent and music-related goods and services (Negus 2002; Hracs 2015; Hracs and Jansson 2017; Anderton et al 2013). For example, the talent scouts and A&R managers working at major record labels make assessments about the commercial viability of emerging recording artists (Negus 2002), whilst record store clerks make recommendations and strategically arrange products around the space of their stores to help consumers find relevant music (Hracs and Jansson 2017; Kjus 2015). Indeed, as more recorded music is produced and made available than ever before through online distribution channels, such as music streaming services and digital download stores, combined with the profusion of independently-produced content enabled by affordable digital production technologies, the importance of curation is intensifying (Bhaskar 2016; Jansson and Hracs 2018; Luck 2016; Morris and Powers 2015). As Bhaskar (2016, 202) puts it: "The problem for connected listeners isn't scarcity. The problem is knowing what to listen to."

In this section, I discuss how the practice of curation has been adopted and adapted by Spotify. I explore what Spotify does to curate connections and ensure that its users are having a satisfying user experience. In particular, I demonstrate that curation seeks to ensure that people are finding and engaging with relevant music, thereby maximising opportunities for rights holders to generate revenue.

4.4.1   Driving User Engagement through Curation

Curation helps Spotify to facilitate interactions by making it more efficient for consumers to access relevant music and rights holders to access relevant audiences. Spotify offers access to vast

catalogues of licensed music spanning the history of recorded music combined with a plethora of playlists, video content and podcasts. According to some commentators, the dizzying amount of music made available by Spotify and similar subscription-based streaming services has introduced a 'paradox of choice' (Schwartz 2004; Wright 2015; Bhaskar 2016; Luck 2016). As choice increases, it paradoxically introduces anxieties around making the 'wrong' choice, such as risking wasting money or time on the 'wrong' thing, rather than 'liberating' the consumer (Schwartz 2004). The curation performed by Spotify seeks to make it more efficient to access and engage with the music it makes available, alleviating the burdens of choice introduced by abundance, as one respondent working at a music streaming service put it:

> We have over 30 million tracks, and we have about two and a half billion to three billion playlists at this point, so amongst all of this, what would be most relevant to the given user so that we can make it one hop less for the user […] We want to give you your best picks, what could be your best picks. (Interview, Data Scientist, Music Streaming Service)

Curation has not always been an important part of what Spotify does to facilitate interactions between its users (Morris and Powers 2015; Marshall 2015). Spotify's product offering was initially predicated on providing anytime, anywhere access to vast catalogues of licensed music at little or no cost. Its selling point was that it provided cheap and easy access to large catalogues of music legally via the Internet. Spotify was founded against the backdrop of the so-called 'MP3 crisis' and the rampant music piracy enabled by peer-to-peer file sharing networks, such as Napster (Hracs 2012; Leyshon 2014). Spotify represented a legal and convenient alternative to music piracy and it has been heralded by many as the recorded music industry's 'saviour' from the detrimental effects of piracy (Ellis-Peterson 2016; IFPI 2015, 2016; Hogan 2016).

Over time in the face of intense and global competition, Spotify's service offering has shifted from access to curation (Morris and Powers 2015). New and established firms, such as Deezer, Tidal, Apple Music and Google, have entered the music streaming marketplace intensifying competition. There is also a range of companies providing more specialist services, such as Bandcamp and Soundcloud who specialise in independent music, whilst YouTube, a video streaming service, is a

popular way in which consumers stream music online (IFPI 2018). Music streaming also stands in competition with the consumption of physical recordings, such as vinyl records, CDs and cassettes. Indeed, the consumption of vinyl has seen a resurgence in recent years as some consumers are expressing a demand for physical goods and value the experience associated with buying and consuming music in this way (Magaudda 2011, Bartmanski and Woodward 2015; Bennett and Rogers 2016; Hracs and Jansson 2017) (see Chapter 6).

Moreover, competition has been intensified by the similarities in the product offerings of rival streaming services. All of the leading services in the UK provide access to a similar catalogue of music, both in terms of size and content, at a similar price point. For example, Spotify, Apple Music, Deezer, Tidal and Amazon Prime Music's standard subscription plan costs £9.99 per month, whilst Spotify and Deezer offer free ad-supported versions, and these services all provide similar functionality, such as the ability to listen on mobile devices and create playlists. Many of the leading services, such as Spotify and Apple Music, provide discounted rates for students and families, whilst Amazon discount its subscription fee for people who are members of its loyalty scheme, Amazon Prime. As one of my key informants put it, in the face of intense and global competition, the service offering of Spotify has shifted to curation and the quality of the user experience:

> In the main, whatever you're looking for is on every single service so they can't really differentiate in the sense of we have stuff that you don't have, it's got to be we're a better user experience, or we know we can provide you with the better recommendations that are going to make sure that you stay with us. (Interview, Executive, Music Industry Body 1)

4.4.2   The Curated Experience of Consuming Music on Spotify

The curation performed by Spotify culminates in the creation of editorially-curated playlists, personalised recommendations and playlists and the adaptive presentation of content.

4.4.2.1   Editorial Playlists

Spotify has created editorial teams, composed of individuals who used to work in radio and the music press, to produce and manage a suite of branded playlists organised around different themes, from genres to moods. A recent high-profile hire was the former head of BBC Radio 1, George Ergatoudis, to lead Spotify's curation efforts in the UK. Alongside genre-based playlists, these editors create and manage mood-based playlists, such as its 'Chilled Pop Hits' and '#Throwback Thursday' playlists, which seek to facilitate particular moods, such as relaxation, happiness and nostalgia, through music. In addition, Spotify creates playlists organised around particular activities and situations, such as studying, dinner parties and working out (Figure 3). Examples include its 'Productive Morning,' 'Rap Workout' and 'Dinner with Friends' playlists.

Editorially-curated playlists seek to drive user engagement by helping consumers to access relevant music and rights holders to access new and engaged audiences. For instance, Spotify's 'New Music Friday' playlist is a way for rights holders to gain exposure upon the release of new music, whilst creating a curated channel for consumers who want to access the latest releases. Spotify's mood and activity-based playlists make it easier for people to find and engage with music that might be relevant to a given situation, whilst creating opportunities for rights holders to monetise their intellectual property through more incidental, 'lean back' forms of engagement.
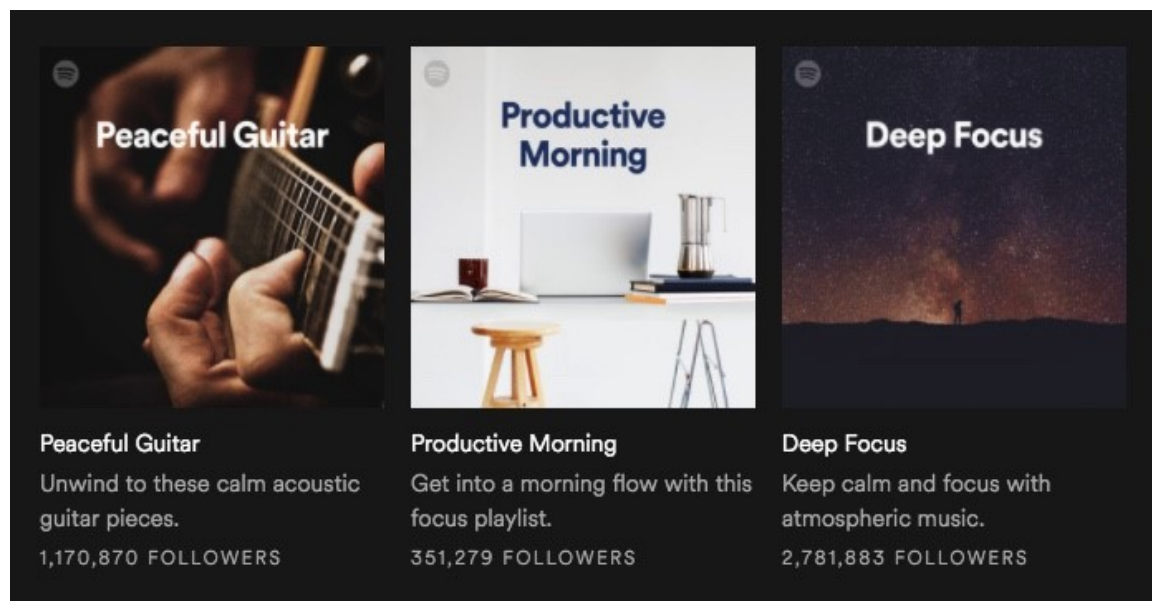
Figure 3: Screenshot of Spotify's 'Focus' playlists

4.4.2.2   Personalised Playlists & Recommendations

Spotify has invested in its music recommendation technologies to enable it to improve the quality of interactions that occur on its platform through personalisation. In 2014, it acquired the aforementioned music data analytics firm, The Echo Nest, which was one of the leading companies specialising in music information retrieval, music recommendation, as well as music-based targeted advertising. Similarly in 2017, it acquired the data analytics firm, Niland, which specialises in the use of artificial intelligence techniques for music search and recommendation. The comments from Spotify's CEO, Daniel EK, highlights the importance of its technical capabilities to its product offering:

> At Spotify, we want to get people to listen to more music. We are hyper focused on creating the best user experience and it starts with building the best music intelligence platform on the planet (quoted in Spotify 2014).

Exploiting its 'music intelligence platform,' Spotify provides personalised recommendations and playlists. People receive personalised album and recommendations based on the music they have listened to in the past, as well as personalised playlists organised around different themes. At the

time of writing, Spotify has created five different types of personalised playlists, its Discover Weekly, Release Radar, Daily Mix, Summer Rewind and Time Capsule playlists (see Table 4). Spotify's personalised playlists and recommendations make it easier for consumers to find and engage with music relevant to their interests, whilst providing a highly-targeted means for rights holders to access relevant audiences.

Title	Launched	Description
Discover Weekly	20th July 2015	Personalised playlist of 30 unheard tracks (i.e. new to a given user), updated every Monday.
Release Radar	5th August 2016	Personalised playlist of 30 new (i.e. newly-released) tracks, updated every Friday.
Daily Mix	27th September 2016	Personalised playlists organised around styles of music (e.g. hip-hop, rock). Each user receives one or more Daily Mix playlist(s) which combine regularly-listened to tracks and unheard music.
Summer Rewind	8th June 2017	Personalised playlist of music which compiles tracks that someone has listened to during past summers. Available to people who have been using Spotify for at least a year.
Time Capsule	28th September 2017	Personalised playlist of music based on the types of music that Spotify predicts a person would have listened to as a teenager (based on age and current musical interests). Available to people over the age of 16.

Table 4: Spotify's personalised playlists

4.4.2.3   The Strategic Arrangement of Music

Not only does the curation performed by Spotify concern the creation of playlists and recommendation, but also the strategic arrangement of content. Extending the practices documented within record shops and fashion boutiques where clerks perform curation by physically arranging items and displays to virtual spaces (Leslie et al 2015; Hracs and Jansson

2017), Spotify manipulates the micro-spatialities of its platform to curate music. For example, Spotify's editorially-curated playlists are organised and presented around the different themes, genres and activities to which they relate, such as 'study,' 'romance,' and 'workout.' The content presented to a user when they log onto the service changes according to a user's location and time of day, such as presenting 'party' playlists on a Friday evening or 'sleep' playlists late at night. Meanwhile, Spotify's Discover Weekly, a personalised playlist of new music, is presented using a person's Facebook profile picture to emphasise the personalised nature of the playlist.[11] The adaptive presentation of content creates an opportunity for consumers to find music relevant to given situations in which they might find themselves across the course of a day.
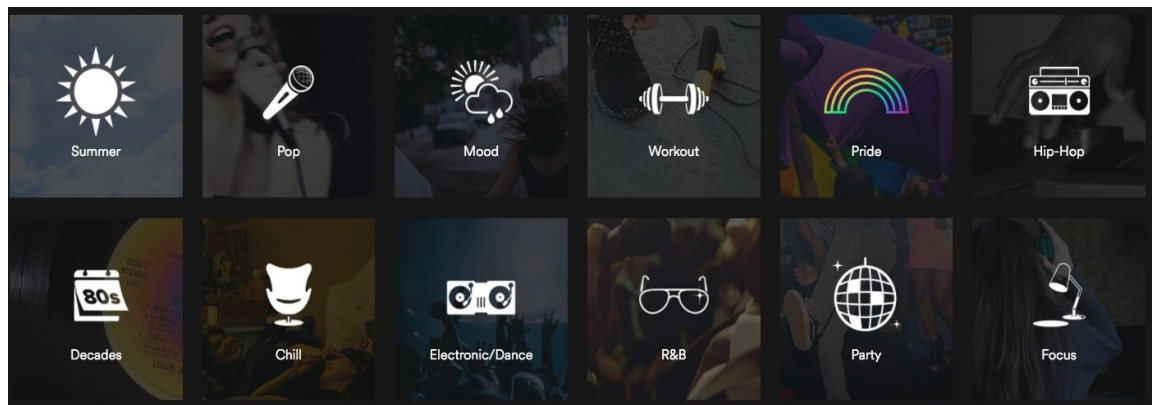
Figure 4: Spotify's typology of playlist types

The strategic arrangement of music also helps to overcome the micro-spatial constraints imposed by the devices used to access the service, such as smartphones, which afford limited display space. When a person returns to Spotify throughout the course of a day, different content is presented to them, increasing the opportunities encounter something new. As one key informant explained:

---

[11] In order to streamline the process of signing up for a Spotify account, people can use their Facebook accounts to sign up for Spotify. In addition, people can link their Spotify accounts with Facebook to automatically share on Facebook about what they are listening, and find fellow Facebook users on Spotify. This gives Spotify access to an individual's Facebook profile picture.

It's not like you can walk into the Virgin Mega Store and browse the racks or something

like that. The consumption experience is very, very different. The real estate, particularly

if you are on mobile, is minuscule so that issue of serendipity of just walking around the

store doesn't exist, so recommendation, discovery, algorithms, and playlists all part of

that. (Interview, Music Journalist 1)

These examples demonstrate how curation is an important part of how Spotify co-ordinates

interactions between the different users of its platform and seeks to drive user engagement.

Curation seeks to ensure that audiences are finding relevant music for any given moment from

Spotify's catalogue of over 30 million songs, and artists, labels and distributors are more

effectively able to reach relevant audiences amongst Spotify's 180 million monthly active users.

Driving user engagement in this way increases revenue and shores up its position as an

intermediary infrastructure.

In the following section, I argue that user engagement is not only fundamental to Spotify's

existence as an intermediary infrastructure because it generates revenue, but also because it

produces data. Spotify collects vast amounts of data about who its subscribers and ad-supported

users are and how they interact on its platform. I demonstrate that this data is a product and

producer of user engagement, further cementing Spotify's position as an intermediary

infrastructure.

4.5   User Engagement as Data Creation

Spotify's position as an intermediary infrastructure means it is uniquely positioned to collect

immense amounts of data about the interactions occurring on its platform. Attracting and

engagers users increases the opportunities to gather data about user behaviour, which helps

Spotify to satisfy its own interests and the interests of users with whom it shares some of its data

with. The more people that use its service, the more people Spotify is able to collect data about,

and the more people engage with music on its platform, the richer picture the service can

produce about the tastes and preferences of its individual users. In turn, this enhances the

opportunities to extract value from this data, such as improving how Spotify targets individuals with adverts, or improving the techniques it employs to personalise the experience of consuming music. As one Spotify and Echo Nest employee explained in a blog post:

> Every time a listener adjusts the volume […] every time they skip a song, every time they search for an artist, or whenever they abandon a listening session, they are telling us a little bit about their music taste (Lamere 2014).

Spotify's privacy policy suggests that the platform is collecting detailed data about who its users are and what and how they engage with music on its platform.[12] Spotify may collect data concerning people's name, age, gender, location, as well as friend names and networks collected through Facebook integration. In addition, they collect usage data about interactions with songs, playlists, audio-visual content, other Spotify users, third-party application, advertisements, and other products and services made available through Spotify, as well information relating to the device a person uses to access the service.

Meanwhile, Spotify's Application Protocol Interface (API) (the technical interface that lets third party application communicate with Spotify and access the features and data Spotify makes available) evidences that the platform is also collecting extensive metadata describing and classifying the music it makes available on its platform.[13] A request made to Spotify's API for track information returns basic discographic information (e.g. artist, album, genre, available markets) alongside a popularity metric, which Spotify defines as being based on how often a track is being streamed, with an emphasis placed on recent streams.

---

[12] https://www.spotify.com/uk/legal/privacy-policy/

[13] https://developer.spotify.com/console/

This information is supplemented by metadata derived from some form of audio analysis, most likely using some form of signal processing (see Figure 5).[14] Spotify's API illustrates how Spotify is accumulating data describing features of the musical content it makes available, from the danceability of a track to how positive a song sounds (see Table 5).

Metric	Explanation
Danceability	a value of 0.0 is least danceable, 1.0 is most danceable.
Energy	a measure from 0.0 to 1.0, where 1.0 is most energetic.
Key signature	Key signatures are represented by a pitch class notation system (e.g. 0 = C, 1= C#).
Loudness	The overall loudness of a track, measured in decibels (DB). Value is an average of the track.
Mode	Whether it is in a major or minor key.
Speechiness	The amount of spoken word in a recording.
Acousticness	a confidence measure of whether a song is acoustic, where 1.0 represents high confidence.
Liveness	a confidence measure of whether a song is a live recording, where 1.0 represents high confidence.

---

[14] Signal processing works by directing software to analyse an audio signal of a recording to extract features that describe features of the musical content, such as tempo, loudness, energy. Using these objective measures, inferences about the semantic meaning of the music can be made (e.g. whether or not the music is upbeat or downbeat).

Metric	Explanation
Valence	music positiveness measure (e.g. happy, cheerful), from 0.0 to 1.0, where 1.0 is most positive.
Tempo	Tempo measured in beats per minute (BPM).

Table 5: Audio features created by Spotify to describe a track

Spotify also produces metadata describing artists, including associated genres and a popularity metric (aggregated from tracks recorded by the artist), and albums, including artist, genres, release date and popularity (aggregated from popularity of tracks in the album).[15] Figure 5 is an example of the information Spotify has collected about the song 'Hey Jude' by the Beatles.

---

[15] https://developer.spotify.com/documentation/web-api/reference/tracks/get-audio-features/

```
{
    "danceability": 0.386,
    "energy": 0.607,
    "key": 10,
    "loudness": -7.7,
    "mode": 1,
    "speechiness": 0.0261,
    "acousticness": 0.0112,
    "instrumentalness": 0.0000138,
    "liveness": 0.088,
    "valence": 0.532,
    "tempo": 147.207,
    "type": "audio_features",
    "id": "0aym2LBJBk9DAYuHHutrIl",
    "uri": "spotify:track:0aym2LBJBk9DAYuHHutrIl",
    "track_href":
"https://api.spotify.com/v1/tracks/0aym2LBJBk9DAYuHHut
rIl",
    "analysis_url": "https://api.spotify.com/v1/audio-
analysis/0aym2LBJBk9DAYuHHutrIl",
    "duration_ms": 425653,
    "time_signature": 4
}
```

Figure 5: Audio features for 'Hey Jude' by the Beatles

In this section, I examine how Spotify uses this type of data to drive further user engagement on its platform. In particular, I discuss how the generation of different forms of data enables Spotify to drive user engagement by (1) helping it to achieve mass personalisation; by (2) enabling Spotify to optimise the design and delivery of its service to have a measurable impact on user engagement; and by (3) enabling the sharing of data and data analytics with rights holders to help them to maximise revenue-generating opportunities. I begin by discussing how data is used to achieve mass personalisation, introducing two computational techniques, collaborative and content-based filtering, which are widely used to generate personalised playlists and recommendations.

4.5.1   Mass Personalisation

The data collected by Spotify enables it to achieve 'mass personalisation,' which plays an important part in its strategy to drive user engagement. As I discussed in the previous section (4.3), Spotify provides each of its 180 million monthly users personalised playlists and recommendations, such as its personalised 'Discover Weekly' playlist. Mass personalisation helps to drive user engagement by making it easier for people to navigate abundance and find and engage with relevant music, whilst maximising opportunities for rights holders to generate revenue by connecting music with audiences in highly-targeted ways.

The collection of data about who users are and what and how they listen to music, combined with extensive metadata describing the musical content, opens up opportunities to generate personalised playlists and recommendations using techniques known as collaborative filtering and content-based filtering – or a combination of the two.

The computational techniques used for generating personalised playlists and recommendations start with the creation of a kind of 'profile' describing an individual's music tastes (Jannach et al 2010; Ekstrand et al 2011; Celma 2010). At their most basic level, these profiles typically consist of a record of what an individual user has or has not listened to, or are based on some kind of rating system (e.g. 5-star ratings) where users are invited to explicitly rate what they have consumed (Ekstrand et al 2011). In the former case, this record can be depicted as a matrix, with the list of tracks on the X axis and the list of users on the Y axis, with a 1 denoting whether an individual has listened to a track, and a 0 denoting they have not. In the latter case, the 1s and 0s in this matrix could be replaced by the rating a track received (e.g. 3 for 3 a star rating).

	Track 1	Track 2	Track 3	Track 4	Track 5
User 1	1	0	1	1	1
User 2	0	0	0	1	0
User 3	1	1	1	0	1
User 4	1	0	0	1	1
User 5	0	1	0	0	0

Figure 6: Simple user-item matrix (1 = play, 0 = no play)

Spotify's privacy policy suggests that these taste profiles consist of a more detailed measure of what and how an individual engages with music, such as weighting preferences according to how often a user has listened to a track, or whether they have listened to it from their 'collection,' rather than a 'playlist,' whilst combining these taste profiles with demographic information (e.g. age and gender) describing the identities of each user.

4.5.1.1 Collaborative Filtering

Collaborative filtering is an approach commonly associated with e-commerce and it is an approach most famously adopted by Amazon (Schafer et al. 1999, Linden et al. 2003). After the construction of taste profiles, collaborative filtering works by identifying groups of similar users (where similarity is defined by similarities in listening behaviour) and using the tastes of similar users to identify relevant music to recommend. In other words, the rows of the user-item matrix (Figure 6) are compared, where the greater the overlap in values the more similar pairs of users are deemed to be. This approach is commonly used for generating single-item recommendations (e.g. people who listened to X also listened to Y), such as track, album, artist and playlist recommendations, and can also be used for playlist generation (Barrington et al 2009; Schedl et al 2015). Recent media articles discussing Spotify's personalised 'Discover Weekly' playlist with one of its creators, Matt Ogle, identified and discussed collaborative filtering as the general approach used by the company to create this playlist (Pasick 2015). Indeed, the interviews I conducted with individuals working on personalisation and recommendation at a major streaming service identified collaborative filtering as the most commonly used approach, as one informant put it: "…

if you were to break this down by fractions, I would say the majority, the main core, is collaborative filtering" (*Interview, Data Scientist, Music Streaming Service*).

There are two kinds of collaborative filtering, user-to-user and item-to-item. User-to-user collaborative filtering was one of the first recommendation techniques to be developed (Goldberg et al. 1992, Resnick et al. 1994, Hill et al. 1995, Shardanand and Maes 1995). This approach identifies tracks to recommend or include in a playlist by looking at the taste profiles of users who have a similar taste profile (where similarity is computed in terms of similarities in what a user has listened and/or demographics) to the target user, then using the tastes of similar users to predict what tracks the target user might like to listen to.

Although user-to-user collaborative filtering is a popular method, it is computationally expensive because it has to systematically calculate the similarity between all pairs of users (Linden et al 2003). This affects its scalability when applying it to large-scale situations, such as music streaming services with millions of users and millions of tracks (Sarwar et al. 2000). In response to this challenge, Amazon developed an alternative approach to collaborative filtering known as item-to-item collaborative filtering, which has proven to be influential (Sarwar et al. 2001, Linden et al 2003).

Item-to-item collaborative filtering works by matching the pieces of music a user has listened to in the past with similar items in the catalogue, where similarity is based upon how commonly pairs of songs are listened to by users. In other words, the columns of the user-item matrix (Figure 6) are compared, where the greater the overlap in values the more similar pairs of tracks are deemed to be. In order to reduce the computational cost (calculating similarity for every pair is demanding and the majority of pairs will never have been listened to together), an algorithm can create a set of 'relevant items' made up of the pairs of songs which have been listened by at least one user (in other words, filtering out the majority of song combinations which never occur together). Then the algorithm goes about finding the most similar items from the set of relevant items.

One strength of the collaborative filtering approach is that it does not necessarily need to understand the content being recommended because it utilises music preference data (Shardanand and Maes 1995). This is advantageous because processes such as producing acoustic metadata are highly sophisticated and it takes time to generate metadata for large music catalogues (Schedl et al. 2011). In addition by disregarding content-based information, collaborative filtering is not as significantly affected by the overfitting problem (in other words, only producing recommendations for objectively similar (e.g. acoustically similar) items) associated with other approaches to recommendation (see below) and it could potentially produce more diverse and serendipitous recommendations (Burke 2002).

The weaknesses of the collaborative filtering approach are that it suffers from data sparsity and cold-start problems (Konstan et al. 1997, Schafer et al. 2007, Mobasher 2007). Data sparsity refers to a shortage of listening behaviour data across the whole catalogue of millions of music items (in other words because digital music catalogues are so vast, there are likely to be many items which have never been listened to it), whilst cold start problems refers to the problem of generating recommendations for new users or new pieces of music which enter the system. This is due to the shortage of interaction data upon which to make similarity calculations. In addition, so-called 'atypical' users will suffer because there are unlikely to be many similar users with which the system can generate recommendations (Celma 2010).

4.5.1.2   Content-Based Filtering

Spotify's collection of metadata describing musical content combined with the construction of taste profiles opens up the possibility of creating personalised playlists and recommendations using a technique known as content-based filtering. This approach works by taking the taste profiles of individual users and identifying music to recommend or include in a playlist by looking for music which shares similar musical characteristics or associations (e.g. in terms of genre, tempo, user-generated tags).

This technique can be used for single-item recommendations, such as album, artist and playlist recommendations (i.e. because you listened to X, you may like Y), and it is also commonly used for automated and dynamic playlist generation (e.g. virtual radio stations). Virtual radio stations

are streams of tracks, one following another, which can be configured to respond to user feedback, such as playing less songs similar to the songs that a user skips or explicitly 'down votes,' if a voting mechanism is included. Spotify provides a range of virtual radio stations, organised around genre, and it also enables its users to generate radio stations based on a seed artist, track, album or playlist (Figure 7). These seeded radio stations take the seed item and generate a playlist based on music similar to the seed item.
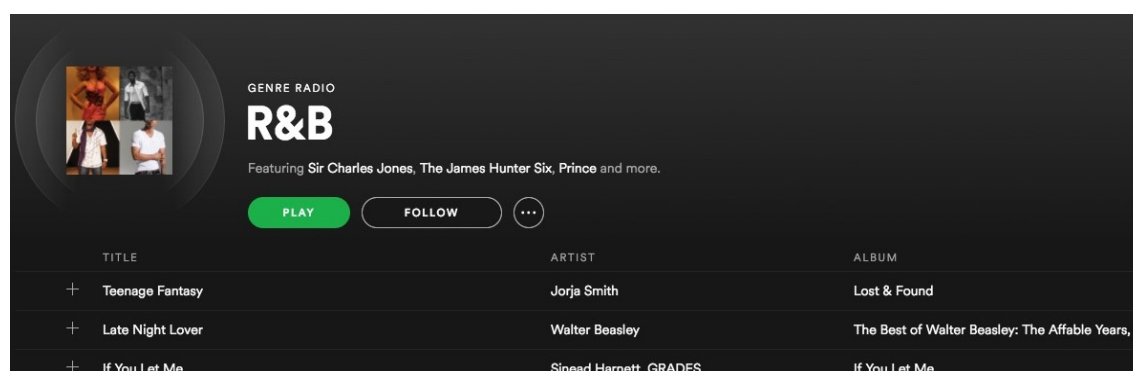
Figure 7: Screenshot of Spotify's R&B genre radio station

There are two common approaches for generating music recommendations using content-based filtering: either by calculating similarity between music which a user has listened to and other items in the catalogue (Billsus and Pazzani 1999, Billsus et al 2000), or generating a model of individual user tastes based upon listening behaviour and classifying unheard music as either statistically likely to like or dislike (Pazzani and Billsus 1997, Kim et al. 2001).

The first approach is similar to collaborative filtering in that is has to predict what pieces of music a user might like, but prediction in this approach is based upon item similarity, not user similarity. Similarity is calculated by looking at the overlap of item features between two pieces of music, such as the overlap in tempo, timbre, harmony, genre, instrumentation and keyword descriptors. The system then predicts whether a user will like an unheard piece of music by examining whether a user has listened to a significant number of pieces of music which are similar to the unheard piece of music (Allan et al. 1998).

Meanwhile the latter approach to content-based recommendation draws on machine learning techniques (Jannach et al 2010). In general terms, the machine learning approach to content-based recommendation involves using a training data set of pre-rated items in order to construct a predictive model of a person's tastes so the system can calculate the probability of an unheard item belonging to either the like or dislike class of items (Grimaldi and Cunningham 2004). Relevance feedback can be combined which means the user can rate the music suggested by the recommender system and this feedback can be used to train the machine learning algorithm and refine results (Salton 1971).

The advantage of content-based approaches is that they can avoid popularity biases and reach music located in the long tail[16] because recommendations are based upon item similarity not listening behaviour (Celma 2010). Popularity biases emerge in other recommendations methods because recommender systems often have a lot of ratings for a few popular items, and very few ratings for the less popular items. Furthermore, there is greater transparency because the system can provide explanations as to why a recommendation was generated (e.g. 'you were recommended X because it is similar to Y').

However, the disadvantage of this approach is that it has novelty issues because recommendations will be – by design – objectively similar to things listened to in the past (Shardanand and Maes 1995). There are also cold-start problems because this approach relies on having rating data and a listening history against which to identify similar items.

The use of these kinds of computational techniques enables Spotify to achieve mass personalisation by automating the generation of recommendations and playlists. The data created by engagement enables Spotify to create taste profiles characterising the preferences of

---

[16] The long tail refers to a shift away from a cultural economy organised around the production of cultural goods targeted at the mainstream to large-scale niche production. The Internet and Web make it possible to reach relatively large niche audiences which are geographically dispersed. This makes niche production more sustainable as the Web increases the potential consumer base (see Anderson 2006).

the people who use Spotify to access and engage with music, whilst Spotify's audio analysis techniques enables it create data about the music made available by rights holders. These forms of data are combined through the use of content-based and collaborative-filtering to make it easier for audiences to access music, and rights holders to access audiences in targeted ways, through the generation of personalised recommendations and playlists.

In the final section of this chapter, I explore the implications of these computational techniques for processes of class reproduction. I discuss how the reliance on computing similarity between people or between the music people listen to has the potential to reproduce divisions in class taste. In the next section, I introduce a second example of how the data created by past user engagement on Spotify is used to drive future engagement through a process of known as 'optimisation.'

4.5.2   Optimisation

The data created by user engagement is used by the human and technical actors involved in creation of editorially-curated and personalised recommendations to optimise what and how music is selected to ensure curation is having a positive impact on user engagement.

Being able to collect data about what and how individuals engage with music on Spotify opens up the possibility of being able to empirically measure what effect changes to the way interactions are curated, such as the contents of playlists, or the arrangement of recommendations, are having on user engagement. At Spotify, the creation and management of editorially-curated playlists is underpinned by the measurement of user behaviour, whilst the approaches to recommendation discussed in the previous section (4.4.1) are evaluated and optimised against user engagement metrics to ensure they are recommending items that will most likely contribute to engagement. This demonstrates how Spotify's commercial imperatives not only shape why the platform curates, but also how. The comments of one key informant working at a major streaming service highlights the importance of engagement to the labour of the human and technical actors involved in curation:

The goal that we are working towards here is to enhance the users' experience on

[name of company] and optimise, we are obviously optimising for user engagement,

right, so we want to provide them with content which we would actually guarantee us

or would increase the probability of users staying on [name of company] for so much

longer. So in the process, if it's a unique experience on [name of company], that's what

we are aiming for. If it's something like, if your session goes on longer for let's say 30

minutes that's what we're aiming for. (Interview, Data Scientist, Music Streaming

Service)

The editors employed by Spotify to create and manage its suite of branded playlists have access

to data about user behaviour which enables them to assess the performance of their playlists and

the contents within them. They are able to determine what songs are performing well, using

metrics such as play rates and skip rates, or whether a track has been added to a user's library

after hearing it on a playlist, and add, promote or remove tracks accordingly. This enables editors

to interpret the expectations of their audiences and ensure that content being selected for

inclusion is in-tune with what has worked well in the past. This helps to ensure that playlists are

driving user engagement and retaining the interests of audiences, outcomes integral to success of

Spotify's business models and its existence as an intermediary infrastructure. Indeed, the

contents of many of Spotify's frontline playlists, such as its 'New Music Friday UK' and 'Hot Hits

UK' playlists, are continually evaluated in these terms and tracks can be moved or dropped from a

playlist within the space of a few days. George Ergatoudis, the head of UK editorial at Spotify,

discusses the importance of data in this way:

The analogy I would use is, you're DJ-ing in the booth, you've got the floor in front of

you and every time you put a track on there's a reaction. It could be that you completely

kill your audience, or it could be an empty dance floor and you bring the audience on.

You're watching what happens on that dance floor incredibly closely. Just extrapolate

that up. That is data and that is what we've got at Spotify, at unbelievable scale (quoted

in Sutherland 2016, 12).

Meanwhile, the design of the music recommendation systems used to achieve mass

personalisation are evaluated against engagement metrics to ensure their output is having a

positive impact on user engagement. Algorithms are continually tweaked to ensure that they are producing the 'optimal' output in accordance with the engagement metrics being used to evaluate their performance, such as 'time spent listening.'

In academic contexts, recommender systems are typically evaluated and optimised in terms of prediction accuracy (Herlocker et al 2004; Konstan and Reidl 2012; Jannach et al 2016; Ge et al 2010). This approach assumes that the more accurate the prediction, the more credible and effective the recommendation algorithm is. Accuracy measurement is typically carried out using 'training' and 'testing' datasets extracted from historical or simulated user data. A portion of data is designated as training data and it is used to fine-tune and train algorithms, whilst a testing portion is used to test the performance of an algorithm. This allows the predictions generated by an algorithm to be compared against the actual value of the testing dataset. The most accurate algorithm is the one that gets closest to the known values.

However, in commercial contexts the stakes are different. Predictive accuracy is only valuable in so far as it is a contributor to increasing user engagement. Instead, the design of a recommendation algorithm is typically evaluated and optimised against other metrics related to user engagement (Jannach et al 2016), as one key informant puts it:

> What they optimise for is re-subscription – that's their business objective. So the question is, how do you design algorithms that translate into renewals of subscriptions? (Interview, Computer Scientist 1)

Due to the scale at which they operate, platforms such as Spotify have the opportunity to conduct 'online' testing at scale with users 'in the wild.' This typically comes in the form of A/B testing. This approach presents a sample of users with a new recommendation algorithm, or a new way of presenting or organising recommendations, and changes in user behaviour are measured through metrics such as 'time spent listening.' Online testing helps to ensure that the system is generating recommendations which are most likely, based on empirical testing, to generate further user engagement. As one computer scientist explained:

You have the user involved in the loop, so you have a system that is performing some output, there are users that are evaluating the output, you measure a metric, and then you have parameters that are in the system that you can optimise in order to improve this metric. So if the metric is let's say the amount of time that you spend listening to the service, you can learn, in some sense learn, by I don't know raising this slider in your control system you get, let's say, statistically more time spent listening, and then modify this slider. (Interview, Computer Scientist 2)

These examples demonstrate how the data produced by past user engagement is used to evaluate and tweak what and how music is selected and presented to users in the form of editorially-curated and personalised playlists and recommendations to ensure that curation is having a positive impact on future engagement. The scale at which Spotify operates and the vast amounts of data it has access to affords it the ability to dynamically change how it curates in response to changing user needs.

4.5.3   Artist Services and Data Sharing

A third example of how data is a product and producer of user engagement and serves to shore up Spotify's position as an intermediary infrastructure concerns how data and data analytics are shared by Spotify with music rights holders.
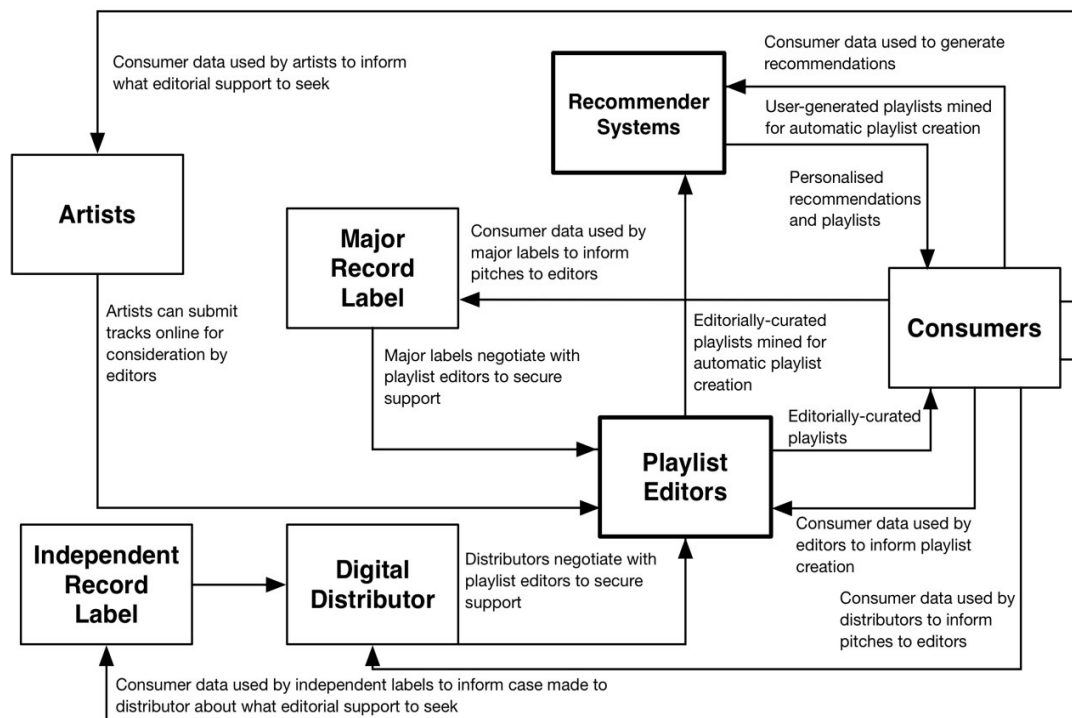
Figure 8: Actors, data and relationships involved in the curation of music on Spotify

Data sharing has become an important part of the license agreements struck between Spotify and music rights holders. In addition to sharing a portion of its advertising and subscription revenue, Spotify agrees to share some of the data it collects about consumer behaviour with major record labels and digital distributors (Figure 8). For example, media articles and press releases discussing the recent long-term license agreements struck between major record labels and Spotify highlight the importance of data access to the terms of these agreements. As Universal Music Group's (UMG) press release announcing its deal with Spotify illustrates (Universal Music 2017):

> The new agreement will also provide UMG with unprecedented access to data, creating the foundation for new tools for artists and labels to expand, engage and build deeper connections with their fans.

Digital data has the potential to become an important source of competitive advantage for major record labels, contributing to the reproduction of inequalities of access in the recorded music industry (Hesmondhalgh and Meier 2017). This example highlights that data sharing has become an important part of the license agreements struck between majors and streaming services. This suggests that major record labels are leveraging their ownership over the rights to high priority recording artists to secure favourable access to data. This creates an unequal advantage for majors over smaller record labels, as these companies are in a position to negotiate more extensive data access. In turn, access to this data enables majors to improve their business intelligence and analytical capabilities, creating an opportunity for them to 'out-smart' the competition.

The data generated by user engagement is shared by Spotify with right holders to enable these actors to improve how they bring music to market and make the most of the opportunities presented by Spotify to promote their records. These companies have assembled data science divisions which are used to analyse this data and create tools to augment traditional A&R and music marketing practices (Fisher 2012; Moon 2017). By sharing the data generated by past engagement, Spotify are able to drive future engagement by equipping rights holders with information about the performance of their music on its platform. One executive at a major record label explained the importance of data and how they make use of the information they receive from Spotify in this way:

> It is up to us to create systems that smartly track that data over time and that's a kind of mediated level of data analysis where we can go, okay, what's the life-cycle of a track over six months on Spotify and that enables us to understand, for example, the role of the playlist as that evolves or devolves over time. So we can study the anatomy of a Spotify hit, so to speak, and you can see the relative roles of different sources of stream and different users over time. (Interview, Executive 1, Major Record Label)

Meanwhile, Spotify provides data analytics and tutorials for making use of this information as part of its 'Spotify for Artists' services. Any recording artist, or those managing an artist's repertoire, who distribute music via Spotify can register for its Spotify for Artists service. Registered artists are provided with aggregated data about the performance of their songs, such as data about

monthly listeners, who their fans are (Spotify has an aggregated measure of fans, distinct from listeners), where their listeners are located, how their fans are listening to music, and the level of 'passion and engagement' of fans (Spotify 2015). Spotify provides artists with video tutorials and other forms of advice to help them to make the most out of the data analytics provided by the platform, alongside tutorials on topics such as 'engaging your audience,' 'promoting your work' and 'building your team.'
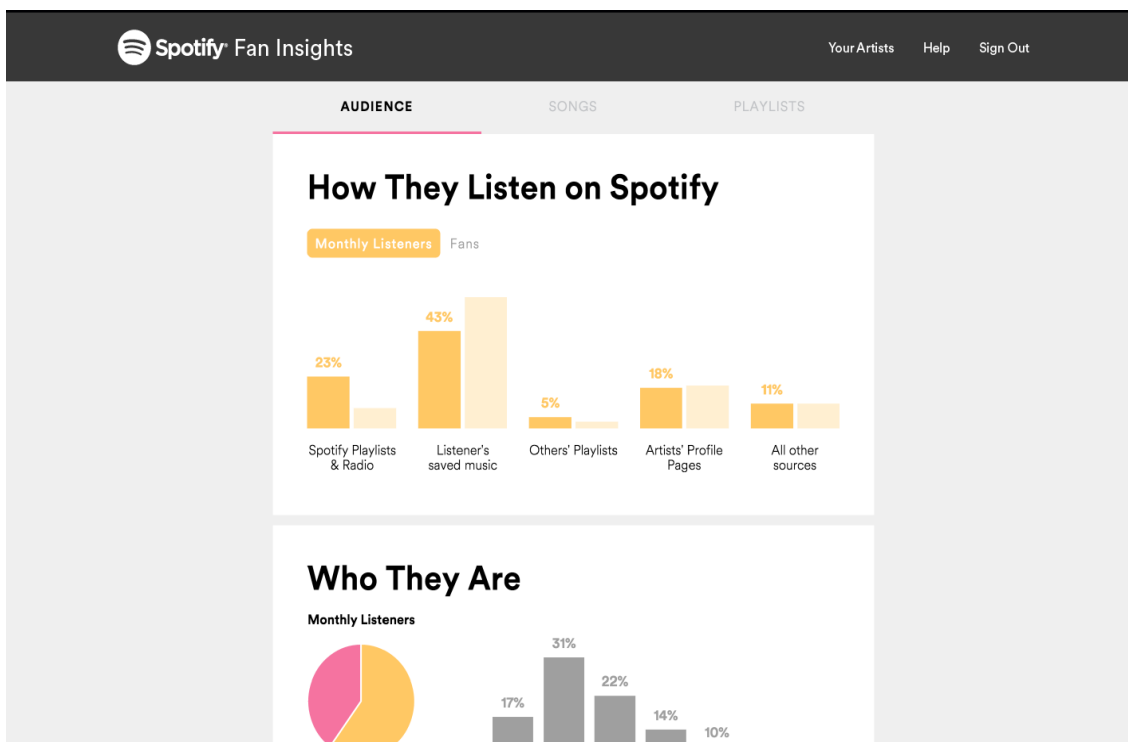
Figure 9: Screenshot of Spotify Fan Insights dashboard

Again by sharing data with artists in this way, Spotify is able to equip its users with tools to enable them to drive engagement for the benefit of both Spotify and its users. Spotify are providing access to this information to help artists and rights holders maximise opportunities to generate revenue from their intellectual property and grow their audience base on the platform. This offers further evidence of how Spotify is using the data created by user engagement to drive further user engagement, thereby strengthening its position as an intermediary infrastructure.

In the following and final section, I synthesise the findings I presented so far in this chapter and consider the implications of what, why and how Spotify seeks to shape how music is mediated for the role that music taste and consumption play in the reproduction of class.

4.6   Implications

This chapter has advanced a conceptualisation of Spotify as an intermediary infrastructure. It has demonstrated how the platform facilitates and co-ordinates interactions between music rights holders, advertisers and consumers. Spotify provides the socio-technical means for consumers to legally access and engage with music and rights holders and advertisers to reach relevant audiences. Yet, Spotify is not a mere conduit; the platform actively curates how its users connect in order to drive user engagement. The service creates editorially-curated and personalised playlists and recommendations combined with the adaptive presentation of content to make the experience of consuming music more efficient, maximising the opportunities for people to engage with music and rights holders to monetise their intellectual property. Central to why and how Spotify curates the interactions occurring on its platform is the need to attract and engage users. This not only increases opportunities to increase revenue but also contributes to the generation of data about user identities and interactions. As this chapter has discussed, data is integral to how Spotify curates music, enabling it to achieve mass personalisation and ensure that curation is having a measurable impact on engagement. In doing so, data becomes both a product and producer of user engagement and ensures Spotify's existence as an intermediary infrastructure.

In this final section, I return to Bourdieu's (1977, 1984, 1986, 1990) theoretical and conceptual framework. I reconcile Bourdieu's theories of taste with this chapter's examination of what, why and how Spotify is seeking to shape music consumption practices. In particular, I draw out and consider three changes to the way music is made which have implications for music taste's role in processes of class reproduction, namely: (1) changes to who and what is performing as a 'taste-maker' in the fields of music production and consumption; (2) the changing rate at which music is made available in the field of music consumption, driven by Spotify's need to increase user engagement; and (3) the changing scale(s) at which music is made available in the field, brought on by the computational techniques used by Spotify to achieve mass personalisation. In doing so, I

demonstrate the value of engaging with Spotify's ontological complexity for better understanding Spotify's potential to disrupt the social dynamics of music consumption.

4.6.1   Taste Makers

Through the curation it performs, Spotify has become both a vital distribution channel and a highly-influential platform for promoting and marketing artists, albums and songs. Not only does it enable artists and labels to access a large volume of potential listeners, but its playlists and recommendations provide the means for targeting relevant groups, individuals and niches. Securing placement in one of Spotify's popular editorially-curated playlists, such as 'Rap Caviar' (9 million followers[17]) and 'Hot Hits UK' (2 million followers), can amplify the commercial success of an artist and song, as one respondent put it "… it's now true that a Spotify playlist […] can make a career with one choice, with one song choice." (Interview, Music Journalist 2)

Spotify's growing influence is significant because it brings into question our understanding of what music is made legitimate and who contributes to its legitimation. According to Bourdieu (1984) the work of cultural intermediaries, such as cultural critics, contribute to the consecration of culture and ways of consuming it as capital (Bourdieu 1984; Maguire 2014). They shape the symbolic value of cultural goods and what comes to be relationally understood as 'good' taste (e.g. the high arts and classical music consumed by the dominant classes) and seek to legitimate particular ways of consuming it (e.g. the aesthetic disposition and distanced appreciation performed by the dominant classes). They perform a pedagogic function, educating others about what and how to consume culture in the 'right' way. However, the position Spotify occupies as an

---

[17] Spotify allows people to 'follow' playlists. This means a playlist is added to a person's personal collection and the contents of the playlist will automatically be updated when Spotify's editors make changes. The total number of followers is displayed alongside the playlist when browsing through Spotify.

intermediary infrastructure is bringing into question the cultural authority of other intermediaries. The scale at which it operates and the reach of its branded playlists are challenging the authority of other intermediaries, such as music critics and radio DJs, who are unable to offer artists the same level of exposure. In doing so, Spotify and other streaming services have the potential to replace traditional intermediaries and become the obligatory point of passage for actors involved in bringing music to market (Callon 1986). As one owner of a record label put it:

> The taste makers these days are Spotify and Apple Music themselves because they're the ones that are in control of the editorial decisions in creating these playlists. For example, the guy in Apple, there's one guy in California who is in charge of jazz on Apple Music, so he decides what track goes into the A-lists, the B-lists and all these different playlists on Apple Music so he is one of the biggest taste makers because his decisions can make a massive difference to a campaign. (Interview, Founder/CEO, Independent Record Label)

Indeed in recent years, the reader and listenerships of leading music magazines and radio stations in the UK have shrunk. For example, the music magazine, NME, announced it would stop producing physical copies of its magazine after 66 years of being in production (Sweney 2018). Meanwhile, industry reports suggest that BBC Radio 1 is experiencing a 7.4% year-on-year decline, losing one million listeners between 2015 and 2016 (Gumble 2017). Many of my key informants cited the rise of music streaming services and their investment in curation as a key driver behind the decline in the cultural authority of other intermediaries, instead arguing that Spotify's playlists are the new 'king':

> Whereas in the past, you might have had certain types of other media, you know radio DJs, or journalists, or music critics, there would have been other ones, and then in more recent years the likes of Pitchfork and a few online sites. But clearly the playlist is sort of king now, and has both a form of distribution of music as well as a kind of built-in promotional package. (Interview, Executive, Industry Body 2)

Spotify's capacity to govern how interactions occur on its platform enables it to consolidate its control over how music is made available on the platform. For example, what is included and excluded from Spotify's playlists is governed by an editorial process. Incumbents in the recorded music industry, such as major record labels and digital distributors, are required to competitively 'pitch' to Spotify about what music they would like to be included in playlists and have to present a case as to why a song should be added, including references to the amount of money being invested in an artist's marketing campaign and the success of previous releases on the platform. In turn, the editors employed by Spotify analyse the performance of tracks to assess their impact on user engagement and decide whether it should receive further editorial support. One executive at a digital distribution company explained the process in this way:

> You have to show the plot, like what is our plan, what are we going to do with all of this, oh, well, the artist is going on tour, they're signed to this, they're doing this, we have radio plays – you have to have some plot and then they'll give it a shot. If you don't have a plot and you just put it on there, nothing is going to happen anyway […] then if you do that, they add it, but then it's what were the save rates, skip rates, what happened, you know, which is then 100% data-driven. (Interview, Executive, Digital Distribution Company)

Meanwhile, Spotify uses its ownership over software and code to control what is presented to consumers through what one of my participants calls 'playlist SEO' (see below). Referring to search engine optimisation (SEO), the process by which a company seeks to maximise the number of visitors it receives to its website by ensuring it has the best placement in a search engine's results (see Davis 2006), Spotify ensures that its branded playlists are situated at the forefront of its interface. It uses its control of the infrastructure to minimise the voices of others, whilst establishing the dominance of its playlists. This is significant because it further undermining the authority of other cultural intermediaries operating within the space of the platform and enables Spotify to consolidate its influence over what and how music is made available to people on its platform. As one senior executive at a major record label put it:

Spotify as a mediator of taste seem to have taken steps to place their own playlists more and more front and centre. So defining that as almost, I call it playlist SEO, so in Spotify terms, the user experience, that comes down to the browse function, so you go on to browse and what's that there? So when you put a query into Spotify, what's it willing to serve you back? Any user will tell you in the last six months, we've all noticed, the stuff it is bringing back to you is increasingly 'Spotified.' (Interview, Executive 1, Major Record Label)

Alongside access to data, privileged access to the promotional channels offered by Spotify has the potential to perpetuate inequalities of access in the recorded music industry. For some time, major record labels have exploited their privileged access to promotional channels, such as radio and music television, to gain exposure for their artists (Arditi 2014; Anderton et al 2013; Marshall 2015). These relationships are often associated with controversial practices, such as payola, which refers to 'buying' the goodwill of key gatekeepers in radio, television and the music press (Anderton et al 2013). My findings suggest that this inequality of access has been extended to music streaming services. Major record labels have direct access to the editorial teams at Spotify and leading streaming services. Majors hold regular talks with playlists editors and use these opportunities to influence playlist strategy. In contrast, independent record labels and artists' access to these editorial teams are brokered via digital distribution companies. Leading digital distribution companies, such as The Orchard, have the opportunity to promote artists of their choosing to Spotify, but not all independently-produced music licensed via digital distributors receives the same support from their digital distributor (Herstand 2017). Through these relationships, major record labels are able to further consolidate their position of dominance, as they have privileged access to these increasingly valuable promotional channels.

4.6.2   The Changing Rate of Music's Mediation

The need to drive user engagement, which underpins Spotify's commercial success and position as an intermediary infrastructure, accelerates the rate at which music is mediated. The editors employed to create and manage Spotify's suite of branded playlists are continually checking the performance of tracks and making decisions about what to include, exclude, demote or promote using user engagement metrics, such as how often a track is skipped or added to a library. For

example, Spotify's 'New Music Friday' playlist is updated every Friday and on Monday the contents are re-arranged according to the performance of songs over the weekend. The playlists and recommendations presented on a user's homepage changes across the course of a single day according to contextual factors such as the time or the weather. Meanwhile, the machine learning models used to generate personalised recommendations are continually updated to adapt to changes in user behaviour and ensure that these changes are reflected in future recommendations and playlists. As one informant puts it: "… you collect the data continuously and you continuously learn" (Interview, Computer Scientist 1).

The accelerated rate at which is mediated by Spotify is significant because it challenges our understanding of what qualifies as embodied cultural capital and how it is mobilised. At Bourdieu's (1984) time of writing, the embodied cultural capital possessed by the dominant classes was characterised by an 'aesthetic' disposition and a distanced appreciation of culture. It is a way of engaging with cultural goods which demands time and sustained engagement, thereby restricting access to the cultivation of this mode of consumption from the dominated classes. Indeed, Veblen ([1899] 1912) argues that conspicuous leisure – the capacity to spend time unproductively through pursuing the arts and other leisure activities – is a source of distinction for the dominant classes in urban societies. Yet the rate at which music is mediated by Spotify has the potential to limit the time and space available to appreciate music in this way. Consumers are engaged in an 'unending cycle of consumption' where new music is continually delivered in an attempt to drive user engagement on the platform (Arditi 2017). Music is continually selected, presented and refreshed to service the moods, activities and situations in which individuals consume it throughout the course of a day. Music is not presented as something to be appreciated as an end in of itself, as demanded by the embodied cultural capital possessed by the dominant classes (Bourdieu 1984). Rather, the presentation of music is means to an end – the end being user engagement.

4.6.3   The Changing Scale of Music's Mediation

The incorporation of music recommendation technologies not only changes the rate at which curation is performed but also its scale, enabling Spotify to achieve 'mass personalisation.' Whereas the cultural intermediaries working in radio or the music press reach large audiences through their listener and readerships, they are limited to a 'one-to-many' form of engagement indicative of mass media (Taylor 2003; Razlogova 2013), whereas record store clerks provide one-to-one recommendations or display curated lists to the customers in the store (Hracs and Jansson 2017). In contrast, the personalised playlists and recommendation generated by Spotify represents a 'one-to-many-ones' form of engagement, where each of Spotify's 180 million active users seemingly have a unique user experience (Ogle and Page 2016). As one respondent explained:

> There's only really one possibility when you send your record to BBC 6 Music, they are either going to play it or they are not. Whereas with the recommender system, you could potentially have a track placed with lots and lots of different people in lots and lots of different contexts. (Interview, Digital Distribution Consultant)

However, the computational techniques used to achieve mass personalisation have the potential to reproduce structural divisions in class taste (Beer 2013; Wright 2015; Prey 2016; Prior 2018). As I discussed in Chapter 2 (section 2.2), individuals located in similar parts of social space tend to consume similar things in similar ways (Bourdieu 1984). These similarities occur through the formation of what Bourdieu (1990) describes as 'class habitus.' Groups have similar tastes and practices because their habitus' are cultivated in similar conditions of existence. Individuals who occupy a similar class background (e.g. their parents have similar occupations, they went so similar schools, grew up in similar neighbourhoods) are exposed to similar ideas, experiences and values and these similarities – through habitus – produce similar tastes. This results in individuals favouring cultural goods and experiences which are consistent with their habitus (i.e. the kinds of experiences, values and goods they have been exposed to growing up).

Whilst it is not discussed in the computer science literature in these terms, collaborative filtering and content-based filtering exploit the structuring effect of habitus. For example, collaborative

filtering assumes that "… taste classifies, and it classifies the classifier," meaning what we consume serves associate us with 'similar' individuals, and separate us from individuals who are 'unlike' us (Bourdieu 1984, xxix). In doing so, collaborative filtering favours the familiar and recommends music which is consist with what an individual and similar individuals tend to consume, rather than introducing the unfamiliar, as one informants puts it: "… they are enclosing you in a bubble, you are getting more and more similar things." (Interview, Computer Scientist 2)

Similar claims can be made about content-based filtering. This approach to recommendation rests on the assumption that people like things that are similar to things they have listened to in the past. In Chapter 2 (section 2.3), I discussed how Bourdieu (1984, 1993) argues that there is objective orchestration – a relationship of homology – between the fields of cultural production and consumption. As the field of cultural production is a classed space, cultural producers produce cultural goods that are consistent with the demands of consumers who occupy a structurally similar position in the field of cultural consumption. This objective orchestration means that there is 'something for everyone' in terms of what cultural goods are available to consume (Bourdieu 1984). Content-based filtering exploits this objective orchestration and uses the objective characteristics of music (e.g. tempo, instrumentation, speechiness) to seek out music which is consistent with an individual's position in the field of music consumption. In doing so, this computational technique has the potential to reproduce class divisions in what people consume, as it exploits these divisions to identify relevant music to recommend.

4.7   Summary

This chapter engaged with Spotify's ontological complexity. It demonstrated that Spotify is not a neutral conduit; rather, it actively seeks to shape what and how people engage with music on its platform. Not only does the platform provide anytime, anywhere access to vast catalogues of music, this chapter elaborated on why and how Spotify is curating the experience of consuming music. I discussed how Spotify's commercial success and existence as an intermediary infrastructure is predicated upon increasing user engagement between music rights holders, consumers and brands. This imperative underpins both why and how Spotify shapes how music is

made available in the field. Spotify has adopted and adapted the practice of curation to drive user engagement. Through the creation of editorially-curated and personalised recommendation and playlists, I examined how curation seeks to make it easier for consumers to access and engage with relevant music, and for rights holders to access relevant audiences and monetise their intellectual property. User engagement also creates data. Spotify's position as an intermediary infrastructure means it is uniquely positioned to collect data about the interactions that occur on its platform. I demonstrated how data creation is a product and producer of user engagement. Through mass personalisation, optimisation and data sharing, Spotify uses the data created by past user engagement to drive future engagement on its platform.

Engaging with Spotify's ontological complexity in this way enabled me to identify specific aspects of what, why and how the platform mediates access to music that have implications for the part that music taste and consumption in the reproduction of class. I discussed how the curation performed by Spotify is undermining the authority of other cultural intermediaries in the field. The scale at which Spotify operates and the control it has over its infrastructure enables it govern what music is made available to consumers at any point in time. I identified how the need to drive user engagement is accelerating the rate at which music is made available, which raises questions about how cultural capital is mobilised through music taste and consumption. Finally, I examined how the computational techniques used to achieve mass personalisation have the potential to reproduce structural divisions in class taste. Due to the ways in which these techniques exploit the homologous relationship between music taste and class position, they have the potential to maintain the cultural differences which divide class groups.

In order to address the significance of the changes to the way music is mediated discussed in this chapter, we now need to engage with the practices and perspectives of the people who use Spotify to access and engage with music in everyday life. As Bourdieu's (1977, 1990) concept of hysteresis reminds us, we need to turn our attention to the displacement between habitus and field and consider if and how opportunities to mobilise capital have changed. The following two chapters take up this task. In the next chapter, I examine how the changes to the way music is made available in the field of music consumption, discussed in this chapter, are shaping how class identity and distinction are performed through the consumption of music.

Chapter 5   Spotify and Existing Class Practices

Drawing on the interviews and app walk-alongs I conducted with a sample of 20 Spotify users, this chapter considers if and how the changes to the way music is made available in the field of music consumption, documented in Chapter 4, are shaping how class identity and distinction are performed through the everyday consumption of music.

Firstly, I demonstrate that using Spotify is further undermining the relationship between cultural hierarchy and class position described by Bourdieu (1984). The emergence of the cultural omnivore highlights how highbrow culture is no longer the preserve of the dominant classes and what culture people consume appears to be less divided in class terms (Peterson and Kern 1996; Bennett et al 2009; Savage and Gayo 2011; Savage 2006). I argue that Spotify appears to be further 'democratising' access to music. I argue that the affordability of music on Spotify, the anytime, anywhere access afforded by the platform, and opportunities to engage with new music opened up by curation, are making it easier to access and engage with music that people might otherwise have been excluded from due to insufficient economic, social and/or cultural capital. In doing so, in contrast to Bourdieu's (1984) theoretical perspective, it is undermining the potential for differences in what people consume to reproduce class divisions and function as a source of distinction.

Second, I argue that for members of the middle classes for whom musical expertise is an important part of their claims to class distinction, using Spotify is undermining opportunities to mobilise cultural capital. Omnivorousness captures how the dominant classes mobilise their cultural capital through cultural expertise and the confident manoeuvring between diverse cultural forms (Warde et al 2008; Bennett et al 2009; Warde and Gayo-Cal 2009; Savage and Gayo 2011). I argue that the rate and scale at which music is made available by Spotify, combined with its attempts to personalise the experience of consuming music are closing down opportunities to display the type of cultural confidence associated with omnivorousness. In contrast for members of the middle classes for whom musical expertise is not an important part of their identity, as well for some members of the working classes, the stakes are different. As their claims to class distinction are not under threat in the same way, these individuals engage with Spotify differently,

embracing its potential to augment the experience of consuming music and help them to navigate choice.

The findings presented in this chapter contribute to debates about the cultural dimensions of class in the 21st century (Savage et al 2013; Friedman et al 2015; Savage and Prieur 2013; Rimmer 2012; Bennett et al 2009). It incorporates a much-needed consideration for how changes to the way music is made available associated with music streaming services, and platform capitalism more broadly, are shaping how class identity and distinction are performed through cultural practices such as music consumption. The concept of the cultural omnivore makes clear that cultural abundance has had implications for how class identities are performed, yet limited empirical attention has been given to more recent changes associated with music streaming services. Both the abundance of music they make available, and their attempts to shape what and how we consume it, have the potential to shape the relationship between music taste, consumption and class in ways not previously encountered (Webster et al 2016; Beer 2013; Wright 2015; Prey 2016; Prior 2018; Morris 2015).

I do not make any claims to statistical representativeness with the findings I present here. In line with my approach to class analysis, I explore the individualised nature of class. I closely examine the practices and perspectives of a small sample of people from different class backgrounds. My findings speak to the potential for Spotify to shape how music taste and consumption are implicated in the reproduction of class. In doing so, my findings set an agenda for further research.

This chapter proceeds as follows. I begin by exploring how the ways in which Spotify is shaping how music is made available in the field, discussed in the previous chapter, are experienced by people in the field of music consumption. Using the subjective histories of my participants, I identify and discuss some of the objective possibilities opened up in the field by Spotify. I identify three changes to the way music is made available which have had implications for what and how my participants from across class backgrounds access and engage with music. These changes concern: (1) the affordability of music on Spotify; (2) the anytime, anywhere access to music

afforded by Spotify; (3) and the opportunities to engage with abundance created by the curation performed by Spotify.

In sections 5.2 and 5.3, I consider the significance of the ways in which music is made available by Spotify, discussed in Chapter 4, and the objective possibilities opened up in the field by Spotify, discussed in section 5.2, for how class identity and distinction are performed through the consumption of music. In section 5.2, I introduce additional empirical material and examine how Spotify is shaping how class identity and distinction are performed through *what* music people consume. In section 5.3 drawing on the analysis of four individual narratives, I examine how Spotify is shaping how class identity and distinction are performed through *how* people consume music.

5.1   New Objective Possibilities in the Field of Music Consumption

5.1.1   The Musical Tastes of my Participants

Almost all of my participants display omnivorous musical tastes. They engage with a wide range of genres, including pop, rock, classical music, jazz, electronic, heavy metal and hip-hop. All of my participants who engage with classical music (Elizabeth, Ben, Catherine, Rebecca, Steve) engage with it as a form of 'easy listening,' challenging its associations with elite culture (Savage 2006; Savage and Gayo 2011). Many of my participants are self-proclaimed omnivores; they declare an openness towards different styles of music and pride themselves on being 'eclectic' and 'open'. Only one of my participants, Tracy (late 40s, Educational Outreach Manager), consumes univorously, as she almost exclusively listens to hard rock and metal music. Rebecca's (mid 40s, Administrator) comments offers an example of how my participants declare their openness to different musical styles: "I've definitely got quite an eclectic taste, I don't go for one particular thing. I love classical, I love pop, I love dance music, always have done."

The overarching narrative presented by my participants is that their musical tastes have become more self-assured and open as they have aged. My participants discussed how they were more susceptible to external influences when they were younger. They identified influences as being family, such as parents or older siblings; friends and peer networks at school; and mass media,

such as what music was in the charts or played on the radio. Yet as they have aged, my participants describe how their tastes have become more self-assured. Josephine's (late 30s, IT Project Manager) comments illustrate the types of influences at work in my participants' formative years and how this placed constraints on taste:

> I think in your formative years, particularly secondary school, there's a lot of pressure on you to like what everyone else likes. There's a lot of pressure on you to, you know, know all the current songs, listen to the most fashionable radio stations, everybody at school listened to Radio 1, or, you know, Power FM as it was, and if you didn't like the same songs everyone in your peer group liked, you were marginalised. So I think during your formative years, you don't get an opportunity, as such, to explore what you actually like, you're more exploring what you think you should like.

The self-assurance that has come with age has translated into my participants crossing musical boundaries that they previously would have avoided for fear of being seen to be 'uncool' or out of place, socially and spatially. This transition is illustrated well by the story of Phil (early 30s Administrator). When Phil was younger, he was an avid hardcore punk fan, which he consumed almost exclusively. Phil is a musician and was an integrated member of the punk scene in his hometown. Now that Phil is older, he professes more diverse interests, including hip-hop, soul, pop music, dance and Disney soundtracks. Phil's comments illustrate how his willingness to cross previously established boundaries is shaped by getting older:

> I mean, as a kid, like when I was predominantly into rock music, I'd be scared to death if there was a pop song I heard that I liked, I would never admit it. Now I'm older I don't care; caution to the wind, if there's a Taylor Swift song I like, I'll listen to a Taylor Swift song, I don't care.

However, dislikes still persist and some boundaries are rarely crossed (Bryson 1996; Savage 2006; Warde and Gayo-Cal 2009; Bennett et al 2009). Heavy metal and rap music were predominantly identified as genres of music that my participants would never listen to (Bryson 1996), with the

exception of Tracy, who avidly consumes rock and metal, and Phil and Joel, who are hip-hip enthusiasts. A common explanation given for these two dislikes is the extreme nature of heavy metal and rap music, specifically that it is not very melodic, as Elizabeth puts it: "It's just noise. It's just people screaming into a microphone." Other participants, such as Michelle, Catherine and Ben, invoke social class as part of their explanation for their musical dislikes. For example, Michelle (late 30s, Events Manager) identifies heavy metal and classical music as musical dislikes. When probed further about why she dislikes classical music, she discusses that this was not music she was exposed to growing up in a household that was not 'well-to-do,' implying that classical music belongs to people from privileged backgrounds:

> Classical (music) has just never interested me. Maybe it's the way I grew up with the sorts of inspiration around me, so I didn't have a, so I wasn't from what I would call a well-to-do family who might listen to and enjoy classical music, you know. And rock, it's just, it's too heavy.

In the following section, I demonstrate that this willingness to cross musical boundaries is not only shape by my participants' life-stage, but it is also underpinned by several objective possibilities opened up in the field of music consumption by Spotify. Later in this chapter (section 5.2), I go on to consider the significance of these objective possibilities for the part that music taste and consumption play in the pursuit of class distinction.

5.1.2   Access at Little or No Cost

One objective possibility opened up for my participants by the use of Spotify relates to the affordability of music. Whilst it may seem unsurprising that streaming services have made music more affordable, given that some companies, such as Spotify, make their service available for free, the shift from purchasing to renting access to music marks an important transition in the way music is distributed and is worthy of elaboration (Marshall 2015; Watson 2015; Prior 2018).

My participants' experiences of consuming music growing up were defined by scarcity. Their taste in music was cultivated in a context of limited availability because music had to be purchased. The music they owned was restricted to physical formats, such as vinyl, cassette and CDs, bought from

bricks-and-mortar retailers, such as high-street record stores and supermarkets. As my participants had limited disposable income to spend on music, it meant they purchased music less frequently and had to be more careful about what they chose to buy, for fear of wasting the money they had. This often meant that they fell back on what they were familiar with, as Josephine (Late 30s, IT Project Manager) explains:

> I grew up pre-Internet, pre-streaming, so the first CD I bought was a soundtrack to a movie and I went into Our Price, I'm really showing my age now, I went into Our Price up the street and I bought this CD, and I listened to this CD on repeat and you had to either buy the albums or the singles to get the tracks, so I had very limited money to do that, so in a sense, my consumption of music was very limited because I couldn't afford to engage in or buying lots of different things.

As I discussed in Chapter 2 (section 2.7), the development of formats for digitally reproducing music, such as the MP3, had a profound impact on the availability of music, as these technologies enabled music piracy to occur at a rate and scale not previously encountered (Hracs 2012; Leyshon 2014). Peer-to-peer file-sharing (P2P) sites, such as Napster, enabled people to illegally share digital music files at scale via the Internet. MP3s also created new opportunities for legally distributing music (Arditi 2014). Digital reproduction technologies enabled firms to create *a la carte* digital download stores, such as Apple's iTunes store, which enabled customers to legally download individual tracks in exchange for a small fee of around £0.99 per track.

However, digital downloads, whether illegally or legally sought out, still presented barriers to entry for my participants. Even though the affordances of digital download stores meant that they no longer have to purchase whole albums, they were still expected to make one-off purchases when they wanted to own new music. This meant that access to music was still constrained by economic capital. Meanwhile, illegally downloading music presented risks, inconvenience and moral concerns about compensating artists for their work, which deterred many of my participants from accessing music in this way. Indeed, piracy not only brought the risk of legal

action, but also viruses and malware which brought financial costs to those without the necessary technical capital to be able to manage these threats.

In contrast, music streaming services have alleviated the need to purchase music. Spotify make available its catalogue of over 30 million songs to users for free in exchange for exposure to third-party advertisements or in exchange for a monthly fee of £9.99, equivalent to an album per month. For all of my participants, overcoming these economic constraints is a defining feature of the experience of consuming music on Spotify and has had implications on what and how much music they consume. As Claire (Mid 20s, Employability Advisor) puts it:

> To have a service where I pay a set amount every month and I can have access to everything means that my taste has grown, whereas if I didn't have access to something like this, and I could only pay £10 for one album every month, which I probably wouldn't do, then my tastes would be very limited. I still would be listening to the same artists that I was listening to when I was 15.

The subscription-based and ad-supported business models used by Spotify have changed the availability of music for individuals from across class backgrounds. Whereas my participants had to spend limited disposable income when they wanted to access music, or accept the risks associated with music piracy, they now have access to an abundance of music at little or no cost.

5.1.3 Anytime, Anywhere Access

A second objective possibility opened up by the use of Spotify relates to the anytime, anywhere access to the vast catalogues of music made available by the platform.

The introduction of portable music devices, such as the Sony Walkman in the 1970s, and the portable CD player in the 1980s, made it possible to listen music on the move (Bull 2005; du Gay et al 1996). However, the amount of music that could be carried at any time was limited by the material constraints of these technologies. Cassettes and CDs were limited in the number of songs they could store and people could practically carry only so many CDs or cassettes at any one time.

Whilst the development of digital audio formats, such as the MP3, and portable music devices for playing them, such as the iPod, made it possible to take more music on the move, these playback devices were still constrained by what people owned (whether acquired legally or illegally) and the storage space of devices. Indeed, on newer devices such as smartphones, music is in competition with other content, such as pictures, videos and apps, for prized storage space, as one respondent put it: "… do I really want to delete some pictures to download an album and listen to it now?" (Joel, Mid 20s, Administrator).

However, Spotify and other music streaming services have transformed what and how music can be accessed on the move. Rather than being confined to what a person owns, Spotify facilitates anytime, anywhere access to its complete catalogue of over 30 million songs, in addition to other content, such as podcasts, playlists and videos. The music it makes available can be accessed on a growing range of Internet-enabled devices, such as smartphones, PCs, televisions, automobiles and voice-activated speakers and 'assistants,' such as Amazon's Alexa. With the proliferation of smartphones and increasingly reliable mobile Internet connections in countries such as the UK, accessing all that Spotify has to offer is near ubiquitous. Joel's experiences highlight the ease at which music can be accessed and carried and what that means for him:

> I could only get my music at home at my computer, and then have to put it on my iPod, which didn't have any Internet connection, and what I had on there was what I had and I had to find it, plug it in, pick what I wanted, that made me listen to similar stuff because I was too lazy to change it, or maybe not have my music I want on there because I couldn't be bothered to sort it out. Now you can do that anywhere with the touch of a button, yeah, it's made me listen to more of what I want, less of what I don't.

As a result of the ways in Spotify facilities anytime, anywhere access to vast catalogues of music, discovery has become spatially-dislocated. My participants previously associated music discovery with bounded spaces, such as the space of the record store, or the space of a nightclub. These are spaces where music is experienced visually and aurally, as Greg (Late 20s, Customer Service Advisor) explains:

Before you had to go and seek it out, especially if we go back to kind of the 70s or 80s where you had to go to record stores, or you'd have to go to certain venues to listen to bands live and things.

However, discovering music in this way is spatially and temporally constrained (Hracs and Jansson 2017; Kjus 2015). For example, bricks and mortar record stores are limited in how much they can arrange and display on the shop floor. Meanwhile, hearing music in a nightclub or a record store is limited by how much time people spend in these spaces and places and by the fact that only one stream of music can be heard in any room at any one time.

Spotify overcomes these spatial and temporal constraints because it enables music discovery to occur on the move. Individuals can not only use Spotify to access their own music collections, but Spotify's searchable catalogue of music combined with its curatorial services, such as playlists and recommendations, can be accessed anywhere. Deborah's (Early 40s, Librarian) experience of hearing Nirvana for the first time highlights this shift:

The great thing is that it's just a case of clicking it, it's not the case of, you know, I can remember, the first time I heard Nirvana, I was in HMV in Oxford Street and it was a bit like, wow, what's that and trying to find out what it was. You had to remember what it was and then try and, when you heard it again, try and, you know, it was quite hard to track down what things you heard were. Whereas now it's really easy.

However, this is not to suggest that music consumption has become divorced from physical spaces and places. Attending live performances and festivals remain an important part of how my participants engage with new music. Rather, the point being made here is that using Spotify is opening up other possibilities for discovering music which are not spatially or temporally located.

5.1.4   Managing Abundance

A third objective possibility opened up by the use of Spotify concerns the ability to make use of the abundance made available through the curation performed by Spotify.

As I discussed in Chapter 4 (section 4.3), some commentators have suggested that the curation performed by music streaming services and similar product platforms is a solution to the so-called 'paradox of choice' generated by cultural abundance (Schwartz 2004; Bhaskar 2016; Luck 2016). This perspective suggests that abundance is overwhelming and as choice increases it paradoxically becomes harder to choose due to anxieties around making the 'wrong' choice (e.g. financial and social risks). With regards to music consumption, Bhaskar (2016, 202) argues that the proliferation of music, alongside other content, such as podcasts and videos, has created a problem of "... knowing what to listen to." Indeed, the key informants I interviewed cited choice overload as an important driver behind why music streaming services curate. As one respondent explained: "... when you have unlimited access that means you've got unlimited choice and with that you need guidance" (Interview, Music Journalist 1).

However, these accounts speculate about the intentions of the people who use music streaming services and afford them little agency. All of my participants celebrated the abundance of music made available to them by Spotify and the curation performed by the platform is a means through which they are able to better make use of the 'endless' amount of music made available to them. As Andrew's (Early 30s, Student Support Practitioner) comments illustrate:

> I don't see why I would want to go back to a stage where what I'm listening is limited to
> what I own, in terms of if I only have five records, my options are those five records, and
> those five records only. Whereas on Spotify, that library is just endless, I won't ever run
> out of music.

Yet how my participant use curation to make use of the access to abundance afforded to them by Spotify varies. For the individuals for whom discovering new music and broadening their horizons is an important part of how they engage with music, the curation performed by Spotify is used to satisfy their appetite for new music. The platform increases the rate and scale at which music can discovered and it makes it easier to access music in the long-tail. For example, Christian (Mid 20s, Arts Co-Ordinator) discusses how using Spotify's 'Discover Weekly,' a personalised playlist of new

music, has enabled him to discover music which might otherwise have been overlooked by other cultural intermediaries and distribution channels:

> I discover more music than I used to and I think it's really good because I'm discovering music that I think, it's always easy to catch wind of what big bands are doing, but having 'Discover Weekly,' I'm discovering artists that are actually quite small so it's really nice to be able discover new bands, up and coming music, whose gigs might actually be affordable to go to, or they might be touring the UK more extensively, so they're more likely to play venues that are near you.

For others who engage with music in more incidental ways, such as having it on in the background whilst doing other activities, the curation performed by Spotify offers other affordances. For example, Marie has a young a child and a full-time job. She feels limited in her ability to dedicate time to curating her music collection. Therefore, she chooses to outsource choice to Spotify, which is able to find music which is familiar and relevant to her interests, as she explains:

> Sometimes it's nice, like when I've got work to do, for somebody else to make that decision for me, but it still kind of knows my preferences, but I'm not having to individually go and find a song. I'm not somebody who necessarily enjoys listening to albums, it's nice sometimes nice to hear that song that you really like, then move onto a different one. So that's what I like about it, that it almost makes that choice for me, so it's one less thing I have to worry about. I have so many decisions to make in my day, with my children, and my job, juggling twenty different things, that actually it's quite nice that something else makes that decision on my behalf.

Both of these examples demonstrate how the curation performed by Spotify creates opportunities to engage with abundance and access music which individuals might otherwise not be familiar with. For Christian using Spotify creates opportunities to engage with niche artists which might otherwise go undetected, whilst for Marie curation is a convenient way of introducing variation into the musical backdrops of her everyday life.

5.1.5 Summary

The subjective histories of my participants highlight some of the ways Spotify is opening up new objective possibilities in the field of music consumption. Spotify has made it possible to access vast catalogues of license music at little or no cost, alleviating the need to part with scarce disposable income or confront the risks of piracy when accessing music. The platform has made access to abundance more spatially diffuse, untethering music discovery from fixed spaces and places. Meanwhile, the curation performed by the Spotify creates new opportunities to make use of the abundance made available by the platform.

It is clear from this account that Spotify has shaped how abundance is experienced in the field of music consumption, but what does this mean for the relationship between music taste, consumption and class? Now that we can access vast catalogues of music anytime, anywhere at a little or no cost, is what we consume still important to the reproduction of class divisions, and, if so, how? Meanwhile in a context where choice is outsourced to the human and technical actors involved in the creation of playlists and recommendations, what does this mean for our understanding of how embodied cultural capital is accumulated and deployed through the consumption of music? As Bourdieu's (1977, 1990) concept of hysteresis points out, we need to draw our attention to the 'structural lag' between habitus and field and consider how practices are responding to the creation of new objective possibilities in the field (Stewart 2013; Lizardo 2014; Gartman 2002). In turn, we can think about what these changes to practice mean for our understanding of the role that music taste and consumption play in the reproduction of class divisions.

In the following two sections, I consider the question of if and how using Spotify is shaping how class identity and distinction are performed through music taste and consumption. Firstly, I consider how using Spotify is shaping *what* music my participants consume, and, secondly, I consider how using Spotify is shaping *how* my participants consume it. This attention to 'what' and 'how' is consistent with Bourdieu's theoretical framework. As I discussed in Chapter 2 (section 2.2), Bourdieu (1984) identifies how the composition of taste (what people consume) is related to

class position (the volume and composition of capital), and he also discusses how an individual's 'mode of acquisition' (how people engage with cultural goods) is a product of class background. By addressing these aspects of consumption, we can begin to unpack how using Spotify is shaping the role that music taste and consumption play in the reproduction of class divisions. I begin with the question of 'what.'

5.2 Democratised Access to Music and Cultural Hierarchy

Cultural omnivorousness marks a change in the symbolic value of highbrow culture and its potential to function as objectified cultural capital (Prieur and Savage 2013) (see Chapter 2, section 2.6). The concept captures how, in an age of cultural abundance and the mass circulation of forms of highbrow and lowbrow culture, the exclusive consumption of highbrow culture no longer defines the tastes of the dominant classes or functions as a source of distinction in the same way (Wright 2011, 2015; Prieur and Savage 2013; Warde et al 2008). This challenges Bourdieu's vision of the homologous relationship between class position and cultural hierarchy and brings into question the processes of exclusion upon which the objectification of highbrow culture as capital rests. As Friedman (2011, 351) puts it:

> If 'high' cultural objects have lost their signifying power, it would follow that it is now increasingly difficult for the culturally privileged to 'cash in' their cultural capital resources.

The subjective histories of my participants suggest that the objective possibilities opened in the field of music consumption by Spotify are further democratising access to music. In this section, I elaborate on how the affordability of music on Spotify, the anytime, anywhere access to music the platform affords and the ways in which it curates music is making is easier for individuals from class backgrounds to engage with music which they might otherwise have been excluded due to insufficient access to capital. In doing so, I argue that Spotify is undermining the potential for differences in what music people consume to function as source of distinction and construct and maintain class divisions.

5.2.1 Making Music More Inclusive

As I discussed earlier in this chapter (section 5.1.1), the affordability of consuming music on Spotify means that access to large volumes of music is not determined by access to high levels of disposable income. Whereas music consumption was once defined by one-off purchases of albums or singles, music streaming services rent access to vast catalogues of music at little or no cost. The alleviation of these economic constraints has opened up the possibility for my participants from across class backgrounds to be more experimental with what music that they consume. The economic 'risk' of wasting money on the 'wrong' thing has been overcome. For example, Joel, a white, college-educated administrator at The University, is a hip-hop aficionado and he has been listening to the genre almost exclusively since he was a teenager. Using Spotify has not only enabled him to extend his interest in hip-hop, but it has also enabled with to experiment with jazz, a genre of music he is less familiar with. Joel's music tastes possess an aspirational quality, reflected in his desire to engage with more legitimate forms of culture, such as jazz, and his admission that he is not very confident with this type of music. These are traits identified by Bourdieu (1984) as being indicative of middlebrow taste (that is, taste performed by individuals located in the intermediate region of social space, with neither relatively high or low levels of economic, social and/or cultural capital) (Savage 2006; Stewart 2013). Crucially, Joel's comments illustrate how Spotify has alleviated the economic risks of engaging with the unfamiliar and enabled him to act on his middlebrow aspirations:

> If I had to go and buy a CD, I wouldn't think I'm going to spend £12 on a double disc jazz CD of various artists that I've never heard of and risk it – that's risking a tenner for nothing. Whereas now, I've started to dip in and out of it and then realised some of my friends liked it as well, and now I kind of put it on my laptop and just try new playlists, some I haven't listened to yet – it's back to accessibility, really.

The anytime, anywhere access to music afforded by Spotify means that access is not bound to socially-regulated spaces. This makes it possible to access music which might otherwise be out of reach to those who do not possess sufficient levels of cultural capital or do not conform to

gendered, ethnic or generational norms associated with particular genres, scenes and subcultures and the spaces in which this music is consumed. According to Bourdieu (1990), individuals favour situations, activities and relations which their habitus' are most attuned to, otherwise they move (socially and spatially) to a position of comfort (Lizardo 2014; Savage et al 2005). For instance, even though participation in the arts is encouraged by state actors, such as subsidised tickets to classical musical concerts, some may still be put off from attending because they feel 'out of place' in spaces of classical music consumption (O'Hagan 1996). Similarly, Thornton (1995) demonstrates how access to subcultural spaces, such as nightclubs and raves, is regulated by access to 'subcultural capital' and conformity to the norms and values of the dance music subculture.[18] However by dislocating access and discovery from fixed spaces, using Spotify has opened up the possibility of consuming which might otherwise be inaccessible to people without the right 'credentials,' undermining the potential for particular music to generate distinction (Savage et al. 2005), as Steve (early 40s, IT Engineer) puts it:

> Nobody's judging you for your music tastes here (on Spotify); you don't have to go and justify yourself to the guy at the counter why you're buying a Katy Perry album at 40, you know, that's quite a serious thing, it does help you, I think, because you can just listen to anything on here.

Steve suggests that Spotify has enabled him to be more daring with what he chooses to consume. He suggests that under different circumstances it would be inappropriate for him, as a forty-year-old man, to listen to music by Katy Perry because she is a hugely-successful female pop singer with albums, such as *Teenage Dream* (2010), addressing themes such as teenage love (Sheffield 2010). Alongside class, this highlights the potential for Spotify to challenge generational and gendered divides in what music people consume.

---

[18] The concept of sub-cultural capital can be thought of as a variation of Bourdieu's notion of cultural capital. It refers to the cultural assets which circulate in a sub-culture (e.g. taste, know-how, social connections) which can be converted by members of a sub-culture into other forms of social advantage and prestige (see Thornton 1995)

Thirdly, music is made more inclusive by the ways in which Spotify encourages its users to engage with more music through curation. The playlists and recommendations produced by Spotify function as an entry point into other styles of music that individuals might not typically consume, whilst the affordable and mobile nature of music consumption overcomes the risks of engaging with the music selected and presented by the platform. This appears to be encouraging a more 'open' engagement with different styles of music amongst my participants from across class backgrounds, which stands in contrast to the exclusive snob cultures described by Bourdieu (1984). Indeed, as the previous chapter (section 4.3) discussed, it is within the commercial interests of the company to encourage its users to engage with more music and facilitating the discovery of new music is a strategy it relies on to achieve this end. For example, Christian describes how the ways in which Spotify mediates access to music has made him "more inquisitive" and "thirsty to discover more music," as he explains:

> If that service wasn't there, or if it was literally just a search box, or whatever, you wouldn't be as inquisitive. You'd maybe search for stuff you like, but you wouldn't go out as far to discover new music.

Tracy (Late 40s, Education Outreach Manager) describes how Spotify's recommendation system takes her down musical 'rabbit holes,' introducing her to bands beyond her core interests, and her comments highlight how this underpinned by the alleviation of financial risks:

> [Spotify] works out if you've listened to these bands, you might like these as well, sometimes you can go off down that rabbit hole, find some stuff. But sometimes it's just what's new, that cover looks interesting, let's try that, oh, no, I don't like that, let's try something else, and of course there's basically zero cost to doing that, which is absolutely brilliant.

Meanwhile, Joel's entry point into the jazz sound-world is through Spotify's 'Evening Jazz' playlist, which is the primary way he engages with jazz, rather than seeking out albums or artists he knows, as he does when listening to hip-hop. Joel's story of how his interest in jazz developed

highlights his lack of confidence with the genre, made most evident by how hesitant he and his friends are when playing jazz for the first time together. Instead, Spotify's playlist is used a crutch to help him engage with music beyond what he is familiar with. This allows Joel address the insecurities that are embedded in the performance of middlebrow taste. For Bourdieu (1984), middlebrow taste, which is often associated with jazz, is characterised by a tension between what people like and what people aspire to like (Stewart 2013). There is a desire to engage with so-called legitimate culture, but middlebrows do not have the knowledge and dispositions to successfully do so. Instead, they approach legitimate culture in an overzealous way and tend to engage with popularised forms of legitimate culture, such as classical music popularised through TV, thereby exposing their lack of cultural capital. For Joel, Spotify's editorially curated playlists allow him to compensate for his lack of familiarity and bridge the gap between what he likes and he aspires to like. As the following passage illustrates:

> There's a playlist on Spotify called 'Evening Jazz' […] I just listen to that and I listened to
> it last year in the evening in the winter. And then when I was on holiday with a few
> friends last year, we were in this Airbnb and it was like a quite cosy environment, they
> had a really decent sound system, I put it on, and they were like, 'I didn't know you liked
> this?', I said, 'I do, do you?' and they said, 'well, kind of, I kind of do as well,' so we kind
> of listened to it together whilst chatting or playing cards, or whatever. We all enjoyed it
> and now we all just kind of dip in and out of it, but it's only something I listen to, I
> associate it with the evening, not sure if that's just because of the title, the genre.

The ways in which Spotify makes music more inclusive undermines the potential for differences in what people consume to reproduce class divisions and function as a source of distinction. The widespread circulation of forms of highbrow, middlebrow and lowbrow culture which accompanied the expansion of the creative industries in the latter half of the 20th century (see Chapter 2, section 2.6) challenged the processes of exclusion upon which the objectification of highbrow culture rests (Peterson and Kern 1996). By the same token, using Spotify has made access to music more inclusive by making it economically and socially less risky to engage with the unfamiliar, whilst Spotify's techniques for curating the experience of consuming music encourages people to engage with more music and test the boundaries of what is familiar. These conditions of

existence in the field of music consumption have the potential to make class divisions in what people consume harder to sustain.

However, the development of the concept of the cultural omnivore reminds us that the weakening hold of objectified cultural capital in the field of music consumption does not necessarily signal the 'death of class.' Rather, the concept of the cultural omnivore has evolved, and it has been argued that rather than merely being used to describe changes in what people consume, *how* people engage with diverse cultural forms remains a source of class distinction (Warde et al 2008; Savage and Gay 2011; Atkinson 2011; Prieur and Savage 2013). By extension, whilst the objective possibilities opened up by the use of Spotify are further undermining the potential for what music people to consume to construct and maintain class divisions, it does not necessarily mean that we have finally arrived at the 'death of class.' Rather, we need to turn our attention to the question of how using Spotify is shaping *how* people consume music traversing forms of highbrow and lowbrow culture to develop a fuller account of Spotify's disruptive potential. As Prieur and Savage (2013, 258) put it: "… the mode of relating to culture may be more important in the games of distinction than the precise choice of cultural objects in themselves."

5.3   Spotify and the Mobilisation of Embodied Cultural Capital

More recent studies of class and consumption have demonstrated that the emergence omnivorousness also incorporates a qualitative change in the mode of acquisition and embodied cultural capital performed and possessed by the dominant classes (Prieur and Savage 2013; Savage and Gayo 2011; Warde and Gayo-Cal 2009; Bennett et al 2009). Omnivorousness encapsulates a move away from exclusive snob cultures to a more open, mobile and 'cosmopolitan' mode of acquisition (Savage and Gay 2011; Prieur and Savage 2013). The dominant classes mobilise their cultural capital through their capacity to pass judgement on different styles and genres. Indeed, the dominant classes remain discriminate; their 'open' engagement with music is characterised by the deployment of reflective preferences and avoidances, rather than a 'anything-goes' attitude towards consumption (Bennett et al 2009; Warde et al 2008). Even though it appears that cultural consumption is less divided in class terms,

as people readily move between highbrow and lowbrow culture, class still matters. This attention to how people from different class backgrounds consume culture has demonstrated that the structuring effect of class has not lost its efficacy.

Whilst these accounts make an important contribution to our understanding of the changing relationship between taste, consumption and class, they pre-date music streaming services' transition from a niche to the dominant mode of music distribution. The previous chapter discussed how the ways in which Spotify makes music available in the field of music consumption has the potential to shape not only what people consume but also *how* people engage with it. For instance, I discussed how the rate at which music is made available by Spotify has the potential to close down opportunities for individuals to demonstrate their capacity to appreciate music as an end in of itself, which is understood by Bourdieu (1984) as a source of distinction for the dominant classes. Meanwhile, Spotify's attempts to achieve mass personalisation and anticipate the needs of its users to ensure they continually engage with music on its platform means that music now 'find us' (Beer 2013), potentially undermining opportunities to display musical expertise and an ability to confidently manoeuvre between diverse musical forms. Existing literature is yet to reconcile our understanding of how these changes to the way music is made available are shaping how class identity and distinction are performed through how people consume music.

The following begins to plug this gap in existing research. It presents additional empirical material to explore if and how the objective possibilities opened up in the field of music consumption by the use of Spotify are shaping how class identity and distinction are performed through how people consume music. I argue that for members of the middle classes for whom musical expertise is an important part of their claims to class distinction, the ways in which Spotify is shaping how music is made available in the field are undermining opportunities to mobilise cultural capital. The rate and scale at which music is made available by the platform, combined with its attempts to achieve mass personalisation, are closing down opportunities for these people to take their time in appreciating music as an end in of itself and display their expertise and cultivated dispositions. In contrast for members of the middle classes for whom musical expertise is not an important part of their claims to class distinction, as well as for some members of the working classes, the stakes are different. As their claims to class distinction do not rely on

the performance of musical expertise, the ways in which Spotify makes music available are less contentious. Instead, these people embrace Spotify's potential to augment the experience of consuming music.

In order to illustrate how using Spotify is shaping how my participants consume music, I present four vignettes discussing the practices of Jamie, Ben, Catherine and Rebecca. These narratives demonstrate the individualised yet classed ways that using Spotify is shaping how my participants consume music. I consider how individual habitus is shaped by aspects related to individuals' biographies, such as the place of music in the home, and consider how these past experiences shape Spotify usage (Rimmer 2012). My analysis draws out how there is variation in the habituses possessed by members of the middle classes, with different people placing greater or lesser importance of musical expertise as a way to mobilise cultural capital. As Bennett et al (2009) argue, not all cultural goods carry the same 'symbolic baggage' for everyone.

Vignettes were chosen as a presentational device because they enable me to present my empirical material in a way that allows me to illustrate the subtle and often implicit ways class identity intersects with everyday life (Savage 2000; Devine and Savage 2000). Moreover, vignettes afford me the space to provide the necessary biographical information which enables me to relate my participants' classed conditions of existence to the formation of their habituses (Rimmer 2012).

These four participants were chosen for their contrasting habituses and modes of acquisition. Jamie and Ben embody a mode of acquisition which places emphasis on the consumption of music as an end in of itself and is supported by a confident handling of music. In contrast whilst music is still an important part of Catherine and Rebecca's everyday life, their engagement is less of an intellectual exercise; music is valued for the emotional satisfaction it brings them and how it services social situations.

5.3.1   Jamie

Jamie is one of my middle-class participants and his occupation, university education and cosmopolitan upbringing are indicative of his relatively high levels capital. He is in his early twenties and works in social media and marketing at The University. He studied Philosophy at university. He grew up living in a number of countries around the world because of his father's high-ranking occupation in the oil industry. Jamie is relatively new to Spotify, having used it for just under a year. Prior to using the service, Jamie consumed music using Soundcloud, an online streaming service more focussed on independent music production, as well as YouTube, an online video streaming platform. He also consumes music on vinyl and attends many live performances. Jamie's story illustrates how for members of the middle classes for whom musical expertise is an important part of their claims to class distinction, using Spotify is undermining opportunities to mobilise embodied cultural capital.

Jamie's habitus is characterised by an omnivorous and 'expert' engagement with music, where his embodied cultural capital is performed through his appreciation for music as an end in of itself (Savage and Gayo 2011; Jarness 2015). Jamie displays an assured handling of a range of musical styles, citing specific stylistic features and sub-genres when describing the composition of his taste. Yet, omnivores are discriminate and there are limits to their pluralism, often displaying 'restricted' or 'cautious' engagement with popular items (Warde and Gayo-Cal 2008). For instance, Jamie defines his tastes in opposition to the 'bland' and 'predictable' nature of mainstream pop music, instead stressing the need to be intellectually stimulated by music, as he puts it:

> The knowledge that [pop music] is by design intended for the lowest common denominator, like it's got to appeal to as many people as possible and as a result it doesn't have a lot of kind of character to it. It's very predictable, hearing the exact same themes appear in dozens and dozens of songs, hearing them back to back, I think is a bit depressing.

Jamie's expert and omnivorous orientation extends to how he engages with music on Spotify. For example, creating playlists on Spotify is a way for Jamie to perform his embodied cultural capital

and affirm his status as an expert. Spotify affords its users the ability to create their own playlists, or take pre-existing playlists available on the platform and edit them by adding, removing, or re-arranging tracks. Individuals are able to make their playlists public, allowing other users to add a playlist created by another user to their library and 'follow' that users profile to be updated about the user's activity. Jamie's comments from our walk-along highlight how playlist creation is a way for him to display and valorise his musical expertise:

> I get an immense amount of pleasure out of [creating playlists]. I think as well building it with people and situations in mind is what I really like. I take a lot of pride in finding the right situation for a playlist and then putting it on and seeing how people react to it.

Jamie's habitus is a product of his immersion in a musically-confident middle-class family. In particular, Jamie's appreciation for music was shaped by his relationship with his father. Their attitudes towards music are indicative of the capacity and sense of entitlement to pass judgement on different musical styles identified by Bourdieu (1984) as being characteristic of middle-class habitus. When comparing how his orientation to music compares to his father's, Jamie explains that they share similar ideas about what constitutes 'good' taste, with artistic merit, which is described by Jamie as music which explores new ideas and has a creative purpose, being central to that. Jamie's discussion of his father highlights the seriousness of musical appreciation to his identity:

> Jamie: My dad has got a very particular idea of what constitutes good music and I agree with him on certain points, but I would argue that he has kind of a narrower range of tastes than I do, but maybe that's because he just doesn't take it seriously as I do.

> Interviewer: So, what are the points that you agree on?

> Jamie: So, I guess you can say like music has to be interesting and you can explore new ideas, that comes back to my dislike of pop music – it's not exploring new ideas, it's just re-treading well-trodden ground already. So, you know, music has to be interesting and

it has to have some kind of soul behind it, a creative purpose behind it. How that

manifests itself is another question, or you could argue that whether a particular song

has that behind it might vary, so we'll disagree on whether a song has artistic merit, but

we agree on the point that a song has to have artistic merit.

A dominant theme that emerged in the interview I conducted with Jamie was that using Spotify is undermining his ability to display his musical expertise and appreciation for music as an end in of itself, which are important to his claims to class distinction. On the one hand, Spotify is valued by Jamie because it augments the experience of discovering music, notably through the use of Spotify's personalised playlists and recommendations. Whilst he is dismissive of much of the editorially-curated playlists, on the basis of them being 'bland' and targeted at the 'pop mainstream,' he makes use of Spotify's personalised playlists and recommendations. For example, he speaks highly of Spotify's 'Discover Weekly' playlist because it opens up the possibility of broadening his musical horizons, which is consistent with his omnivorous orientation to music:

Frankly, the discover algorithm is probably the most I felt like a system like that, be it on

a social network, Google, or whatever, has actually really understood me and my tastes

and being able to feed me stuff that I actually like – it just seems to get better and better

and that's something I really like about.

However, at the same time, the rate and scale at which music is made available to by Spotify is closing down opportunities for Jamie to appreciate music as an end in of itself because his interactions with music are becoming more fleeting.

As I discussed in Chapter 4 (section 4.5.2), the need to drive user engagement is shaping the rate at which music is made available by Spotify. The contents of editorially-curated and personalised playlists are updated routinely. For example, Spotify's 'New Music Friday' playlist, a curated playlist of new releases, is updated with new music every Friday and its contents is re-arranged every Monday. Meanwhile, the contents of Spotify's homepage is adapted according to contextual factors, such as a person's time of day or day of the week (e.g. 'motivation' playlists presented in the morning, 'relaxation' playlists presented in the evening).

Whilst for Spotify regularly updating content has a strategic function, for Jamie the imperative to increase engagement means that he is spending less time appreciating the music made available to him by Spotify. Veblen ([1899] 1912) demonstrated that the luxury of time to engage in unproductive leisure pursuits is one way in which the dominated classes in society achieve social distinction. It is a way for individuals and groups to display to others they can afford to not work and do not have to attend to the immediate needs of the body. Echoing these claims, taking the time to appreciate music as an end in of itself is an important part of Jamie's claims to distinction, demonstrating to others that he has the luxury of time to engage in this leisure pursuit. Yet the high turnover of music made available to Jamie by Spotify is compressing the time available to engage with music in a 'leisurely' way, and encourages a way of engaging music which privileges breadth at the expense of depth. This is in contention with Jamie's habitus, as his comments illustrate:

> I could hum you, you know, the top ten tunes I am listening to at the moment, but I
> can't tell you the names of the tracks, who they're by, what album they appear on,
> because there's so much new stuff I will very rarely really take the time to listen to a
> whole album and really get into it and explore it to the same level – it's like, no, there's
> always something new I can go and jump to. I think it's affected the degree to which I
> will slow down and repeat listen to things […] I'm not taking as much time to get to
> know a lot of the music I am listening to because there's always something good a swipe
> or a tap away.

Meanwhile, Spotify's attempts to personalise the experience of consuming music are undermining opportunities for Jamie to display musical expertise. In Chapter 4 (section 4.4.1), I discussed how Spotify has invested in music recommendation technologies to personalise the experience of consuming music. The platform collects data about what and how people consume music and uses this information to create personalised playlists, such as its 'Discovery Weekly' playlist, as well as personalised album, artist and playlist recommendations. Personalisation is a way for the company to drive user engagement by making it easier to find relevant music and for artists and music rights holders to reach relevant audiences in highly-targeted ways.

Yet for Jamie, personalisation means that the act of discovery has been "consigned to the scrapheap" because it is now automated by Spotify's music recommendation systems. Whilst this is advantageous because the rate and scale at which Jamie can discover music has increased, it also generates a concern that the opportunities to deploy his musical expertise are waning and his tastes are becoming 'pigeonholed' by Spotify's data-collection apparatus. Consequently, Jamie is pushing back against the temptation to rely on Spotify's recommendation systems to make choices for him and preserve his agency. He ensures that he continues to broaden his musical horizons and engage with music omnivorously, rather than allowing himself to be enclosed in a so-called 'filter bubble' (Pariser 2012). As his comments illustrate:

> Sometimes feel I am almost pigeonholing myself in that […] I get really into one particular style or whatever, or a particular tone or theme in music, and then I will just hear more of that, and that's all I'm listening to, so then I'll hear more of that. I do feel a certain amount of pressure to keep my listening habits wide enough that I am not getting six months down the line and realising that, oh, all I'm ever listening to is this now because this is all I ever discover.

Jamie's narrative highlights how the rate and scale which Spotify mediates music, combined with the platform's attempt to personalise the experience of consuming music, are compressing the time available to display musical expertise and an appreciation for music as an end in of itself. For Bourdieu (1984), cultural competence is an asset possessed by the cultural capital-rich middle classes used maintain their position of privilege and passed on between generations through immersion and access to education. Yet Spotify and its strategies for driving engagement are challenging Jamie's claims to class distinction and limit the opportunities for him to mobilise his embodied cultural capital.

5.3.2   Ben

Ben is another of my middle-class participants with his occupation, education and parental occupation indicative of his relatively high levels of capital. He is in his early thirties and works as a Policy Advisor at The University. He grew up in South East London, where his father was an engineer, and his mother was a college lecturer. He studied Chemical Engineering at university.

Ben has been using Spotify for around five years. It is one of the main ways he accesses music alongside listening to BBC 6 Music, a specialist radio station in the UK. Ben's story offers further evidence of how for individuals whose claims to class distinction rest on their musical expertise and appreciation for music as an end in of itself, using Spotify is undermining opportunities to mobilise embodied cultural capital.

Similar to Jamie, Ben's taste in music is omnivorous, characterised by a confident handling of a diverse range of musical styles, ranging from trip-hop to classical music. Ben's expert orientation to music is reflected in his articulate way of defining what music he likes and why (Savage and Gayo 2011). He talks in detail about how the sonic qualities of the music are important to him, in contrast to other people who he believes might listen to the lyrical content and the meaning of a song. The passage below demonstrates Ben's command of his musical interests:

> I'm very much focussed on the sound production and the kind of the aural experience, rather than what necessarily the meaning of the song may be […] that's what attracts me to music in the first place, the styles, influences, from a musical perspective, rather than a lyrical perspective. […] On a completely different end of the spectrum, I really like bands like Arcade Fire, Elbow, I like Guy Garvey's solo stuff, things like Sigor Ros. I really like instrumental music, which I think comes from liking prog music, and classical music to a degree as well. I don't listen to as much now, but I really enjoy symphonic music, so that idea of having movement in a piece, that really comes through.

However, there are limits to Ben's omnivorousness and some music is incompatible with his tastes (Warde and Gayo-Cal 2008). He is dismissive of what he calls 'manufactured' pop music on the grounds that it lacks musicianship and artistry, as he puts it: "I'm kind of motivated to listen to music where the artist has written the music themselves." Ben also dismisses what he describes as 'urban' music because it lacks the sonic qualities he looks for in music, but Ben's comments also suggest differences in class background being a factor shaping his dislike for urban music, as he was not exposed to this music growing up in a middle-class family:

Anything which gets categorised as urban I tend not to enjoy […] I think it's again about
the sound thing. I don't like the sound of it […] there could be a class thing involved in it
as well, I don't know, it's not something I've really explored. I'm not generally a fan of,
it's really difficult to categorise it, but traditional pop music. I think there are, you know,
like boy groups and girl groups, that kind of thing. The sort of manufactured stuff, I'm
not really interested in that. I'm kind of motivated to listen to music where the artist has
written the music themselves.

Ben's habitus is a product of the conditions of existence in which his habitus was cultivated
(Rimmer 2012). Ben was immersed in music from an early age, as his parents recognised the value
of a musical education and he was encouraged to take up the piano at school. In recent years, Ben
has renewed his interest in musical performance, participating in a choir with fellow staff
members at The University. Indeed, Bourdieu (1984) argues that this kind of early 'immersion' in
the world of legitimate culture serves to distinguish the practices of the cultural capital-rich
middle classes, as Bourdieu puts it:

When the child is introduced at an early age to a 'noble' instrument – especially the
piano – the effect is to at least produce a more familiar relationship to music, which
differs from the always somewhat distinct, contemplative and often verbose relation of
those who have come to music through concerts or even only records (Bourdieu 1984,
68)

A similar dichotomy manifests in the relationship between Ben and Jamie's middle-class habitus
and the ways in which Spotify mediates music. On the one hand, the platform is valued for its
ability to introduce Ben to new styles of music, complimenting his omnivorous orientation to
music. For example, Ben regularly engages with the editorially-curated and personalised content
created by Spotify, which are valued as a convenient way to discover new music. For example, he
describes Spotify's Daily Mix playlists (personalised playlists grouped around stylistic similarities)
as his 'go-to' feature when he first logs onto Spotify.

Yet whilst these playlists are valued for their ability to augment the experience of discovering
music, Ben harbours some resentment about the ways in which Spotify's personalised playlists,

such as 'Release Radar' and 'Discover Weekly,' stay too close to his interests and do not challenge him intellectually. He describes these playlists as being too 'simplistic,' serving him songs that he already knows. This stands in contention with Ben's habitus, which is characterised by an intellectualised engagement with music and an appreciation for it as an end in of itself. The skepticism Ben holds for Spotify's personalised playlists and recommendations becomes clear when he is invited to discuss the relative merits of human versus computationally-driven forms of curation:

> There will be a role for radio DJs for a long time to come because they're able to identify the influences and the similarities and the difference which are a bit more subtle or obscure, but an algorithm may not be able to pick up on and be able to introduce spontaneity that keeps things interesting. Whereas certainly the way Spotify is going at the moment, it seems to be kind of gradually moving towards, I can't think of the right word for it, but it's like its being honed down to be the same.

As was the case with Jamie, the rate and scale at which music is made available by Spotify further undermines opportunities for Ben to mobilise his embodied cultural capital. Ben is reflexive about how he is not paying 'enough' attention to the music is he is listening to on Spotify. Ben is continuously being served relevant music by Spotify, but he is increasingly unaware of the artists behind the music. Consequently, Spotify's drive to increase user engagement is making it harder for Ben to appreciate music as an end in of itself, which is contention with his habitus. This is a source of resentment for Ben and he finds himself over-compensating to ensure he is engaging with music in the 'right' way. As he explains:

> I might pay attention to a track that I like, if it's good, I might start wondering who it is, but often it'll pass you by and without looking at the screen you won't know who it is. And just because you've looked at the screen once, doesn't mean you'll remember their name. This is why I'm trying to get better at 'liking' tracks (adding songs to his personal library) when I hear them, but then I'm not sure I'm doing much of going back to look at the library and see which tracks I've 'liked' and listening to more of those artists. I don't

know, it's one of those things where I like to think I am discovering new music, but I

don't know much it is actually influencing my tastes.

Meanwhile, Ben feels that the notion of a music 'collection' has lost its purchase in his life now that he primarily engages with music on Spotify. In recent years, social scientists have argued that the immateriality of digital music is undermining traditional notions of 'cultural ownership' (Morris 2012; Maguadda 2011; Bennett and Rogers 2015; Bartmanski and Woodward 2015). The ontological status of music has shifted from an artefact, such as vinyl record, cassette or CD, that an individual can see, feel and display to lines of code intangibly stored in the 'cloud,' accessible via the Internet (Morris 2012; Maguadda 2011). Consumers no longer need to purchase and own music, as music streaming services rent access vast catalogues of licensed music at little or no cost.

Yet for Ben, the loss of cultural ownership is not only related to music's immateriality, but also its newfound ephemerality. Arditi (2017) argues the social and cultural aspects of owning music are being curtailed by the ways in which music streaming services seek to engage consumers in an 'unending' cycle of consumption. The subscription-based business models change the experience of purchasing music from a one-time event (e.g. purchasing a CD) to a continual process that requires further consumption. In addition to this, as discussed in Jamie's narrative, there is a high turnover of music included in Spotify's editorially-curated and personalised playlists, with the content of Spotify's frontline playlists being updated on a regular basis. The ephemeral nature of music Spotify is compressing the time made available for Ben to appreciate music as an end in of itself and is promoting a more fleeting relationship with music. Consequently, using Spotify is further closing down the opportunities for Ben to perform his appreciation for music as an end in of itself, which is an important part of his claims to class distinction. As his comments suggest:

I think because I feel like Spotify should be this opportunity to discover more music, I'm more compelled to use it that way […] So if I wanted to listen to music before Spotify was around, I would go and look at my music collection, scan through a list of artists, and think, I fancy that, let's listen to that artist. Whereas I don't do that now, I don't really have a list of artists on Spotify, I mean there is one, but it's probably so broad now because it's based on everything I listen to, including stuff from radio and curated

playlists, which means it's not something I like, I do wonder what the value of the library really is on Spotify.

Reflecting similarities in Jamie's story, the ways in which Spotify mediates music comes into contention with Ben's habitus. The rate and scale at which music is made available by Spotify is compressing the time available for Ben to appreciate music an end in of itself, thereby limiting the opportunities for him to mobilise his embodied cultural capital.

5.3.3   Catherine

Catherine is in her early thirties and is another of my middle-class participants, as reflected by her occupation, education and parental occupation. She works in recruitment and outreach at The University. Her father was an air-traffic controller and her mother was a bank manager. She is well-educated, obtaining a PhD in Social Statistics. Catherine has been using Spotify for over four years and she now almost exclusively listens to music using the platform. Catherine's story offers a contrasting account of how using Spotify is implicated in middle-class claims to distinction. Her story demonstrates how for members of the middle classes for whom musical expertise is not an important part of their identity, the stakes are different. The ways in Spotify seeks to shape how individuals engage with music on its platform are less contentious.

Even though Jamie, Ben and Catherine can all be described as middle class, Catherine's possesses a qualitatively different habitus to that of Ben and Jamie. This demonstrates how individual habituses behave differently in different cultural fields, rather than assume that all cultural goods are implicated in the performance of class distinction and in the same way for everyone, despite objective similarities in class position (Rimmer 2012; Bennett et al 2009).

One the one hand, Catherine's musical taste is similar to Jamie and Ben's because she displays omnivorous traits. Catherine displays an appreciation for a diverse range of musical styles, from indie rock to classical music, and she characterises her musical taste in terms of its eclecticism and fluidity, as she puts it: "I oscillate between different styles of music quite regularly."

Yet unlike Jamie and Ben, the performance of musical expertise is not an important part of Catherine's claim to class distinction. Music is valued by Catherine based on its ability to create and facilitate particular moods, such as happiness, nostalgia and relaxation. This stands in contrast to Jamie and Ben's habitus, which emphasises intellectualisation and an appreciation of music as an end in of itself. Indeed, rather than being guided by questions of 'artistic merit,' as Jamie is, what music Catherine chooses to consume is guided by her state of her mind and the contexts she is in. In doing so, Catherine readily moves between different styles of music, such as classical music and hard rock, which at Bourdieu's time of writing would have had an antagonistic relationship. This is further evidence to suggest that middle class tastes have become omnivorous and stylistically more diverse (Peterson and Kern 1996; Bennett et al 2009; Savage and Gayo 2011). As Catherine's comments illustrate:

It depends what kind of mood I'm in; it very much depends on, I don't know, if I'm feeling slightly nostalgic, if I want to concentrate, so I might put a bit of classical stuff on, but then I'm quite happy listening to some cheese, some harder rock stuff, it all depends on how I'm feeling. It is usually guided by my mood.

These differences are reflected in the different conditions of existence in which Jamie, Ben and Catherine's habituses were cultivated. Jamie and Ben's stories emphasised how their dispositions towards music were acquired through immersion in an environment where emphasis was placed on the appreciation of music and through education and extra-curricular activities, whereas Catherine's description of the place of music in the family highlights how the consumption of music was not such a serious endeavour. Music does not carry the same 'symbolic baggage' for Catherine's family, as it does for Ben and Jamie's, and in turn this is reflected in the cultivation of their respective habituses (Bennett et al 2009; Rimmer 2012). These differences are visible in the way Catherine talks about her taste. Unlike the seriousness of Jamie's account, Catherine fondly discusses the 'crap' that her parents listened to and how music was a soundtrack to journeys in the car, rather than something consumed as an end in of itself. As she puts it:

I still listen to all the 'crap' that my parents played as I grew up as well. We always listened to music, always in the car, it depended on which parent I was with as to what stuff we listened to, with my mum it would have been more Michael Bolton and Julio

Iglesias, my dad it would be maybe more definitely Tina Turner, Texas, a lot of like 90's

dance, I would say my dad's taste definitely influenced mine a little bit more.

Yet by describing this music as 'crap,' Catherine is also acknowledging the existence of cultural

hierarchies and is reflexive about how what her family consumes is positioned in relation to them

(i.e. Catherine acknowledges that some music is 'crap,' distinct from 'good' music). Catherine is

performing a knowing appropriation of culture, which has been identified as being indicative of

the tastes of individuals with higher levels of cultural capital (Bennett et al 2009).

The differences between Jamie, Ben and Catherine's habituses highlights the individualised nature

of class identity (Savage 2000; Savage et al 2001; Savage et al 1992; Devine and Savage 1999). It

illustrates how individuals who occupy objectively similar positions in social structure possess

qualitatively different forms of cultural capital and value and engage with different cultural goods

in subtly different ways. Catherine's cultural capital and claims to distinction rest on in her

educational achievements, whereas for Jamie and Ben musical expertise is an important part of

the cultural assets they and their family possess. In turn, this is reflected in their qualitatively

different habituses. Whilst Ben and Jamie consume music as an end in of itself as a part of their

claims to distinction, Catherine's relationship to music is more care-free.

The similarities and differences in the habituses of Jamie, Ben and Catherine are evident in the

contrasting ways these individuals engage with music on Spotify. As Catherine's middle-class

identity is defined less in terms of musical expertise, the ways in which music is mediated by

Spotify do not come into contention with her habitus in the same way that it does for Jamie and

Ben. Catherine regularly engages with Spotify's editorially-curated and mood and activity-based

playlist. As I discussed in Chapter 4 (section 4.3.2.1), Spotify has an extensive suite of mood and

activity-based playlists. For example, it has collections of 'Focus' (e.g. 'Music for Concentration),

'Romance' (e.g. 'Timeless Love Songs), and 'Workout' (e.g. 'Motivation Mix') playlists. Whereas

Jamie was dismissive of Spotify's branded playlists on the basis that they are not intellectually

stimulating enough, targeted at the pop mainstream, Catherine values this curated content for its

ability to facilitate moods with music. This is consistent with her habitus and orientation to music, as she explains:

> If it's more work based, maybe I'm looking for something that's quite chilled. I don't know, 'Focussed,' I know they've got those playlists as well, you know, like, 'Focus,' 'Monday Motivation,' as well. If I want to go to the gym, it'll be stuff that will have me quite focussed, and quite motivated, in quite an upbeat way.

The ways in which Catherine uses music to 'facilitate' moods extends to how she creates playlists on Spotify. Unlike for Jamie who used playlist creation as a means for displaying his 'good' taste and affirming his status as a music expert, Catherine uses playlist creation to organise music around the activities and moods in which she consumes it. For example during our walk-along, she walked me through the different types of playlists she has created, including 'Catherine's Chilled Tunes' and a playlist Catherine describes as the 'motivational one,' including songs such as 'Searching for the Hero' and 'Eye of the Tiger,' which she describes as 'feisty.' This further illustrates how individuals engage with music on Spotify in ways which are consistent with their habitus. For those for whom music taste and consumption are important to the performance of class distinction, the creation of playlists presents a new opportunity to mobilise cultural capital (see Chapter 6), whereas as for others who invest less in the consumption of music as an end in of itself, this activity is imbued with different symbolic meaning.

Again unlike Jamie and Ben, Catherine is not resentful about the rate and scale at which music is mediated by Spotify. Whilst Jamie and Ben's musical expertise and ability to appreciate music as an end in of itself is threatened by the high turn-over of music in Spotify's playlists and recommendations and frequent updating of content presented on the homepage, Catherine enjoys the variation and novelty this brings. This is consistent with her more care-free and casual relationship with music and is a way of introducing serendipity into the experience of consuming music. This is reflected in how she talked about the randomness and variation in Spotify's playlists during our walk-along:

> I love the random playlists that they have each day, and that opens up a few more doors. So, like, 'Sweet Soul Sunday' one, I often listen to, and the fact that they update

them as well is kind of nice. And yeah, kind of, maybe, highlights a particular artist to me

that I might want to listen to some more, songs where I think, I love this, who is this

artist.

Catherine's story offers a contrasting account of how using Spotify is shaping the performance of middle-class identity. In particular, the narrative presented here highlights how there are differences in the habituses possessed by members of the same class. In turn, these differences in habitus have implications for how using Spotify is shaping how class identity is performed through the consumption of music. As Catherine does not rely on music consumption as a way of mobilising her embodied cultural capital, the changing rate and scale at which music is made available is less of a threat to her claims to class distinction.

5.3.4   Rebecca

The fourth and final vignette summarises the experiences of Rebecca, who is in her mid-forties and is one of my working-class participants, as represented by her occupation, education and parental occupation. She works as an administrator at The University. Rebecca left school at 17 and went straight into the workforce. Her father was a plumber and mother was also an administrator. She is married and has three children. Rebecca has been using Spotify for several years. The initial draw was the affordability of the service, as she could access vast catalogues of music at little cost.

Rebecca is similar to Ben, Jamie and Catherine in that she displays omnivorous taste in terms of volume and breadth of what she consumes, with interests ranging from pop to classical music. Yet, as studies of the cultural omnivore demonstrate, what music individuals consume may be becoming more diverse across the class spectrum, but how individuals appropriate diverse cultural forms remains an important mechanism through which class distinction is achieved (Prieur and Savage 2013; Bellavance 2008). Unlike Ben and Jamie, Rebecca's engagement with music is underpinned by an appreciation for music as 'a means to an end' (Jarness 2015). In a similar fashion to Catherine, the consumption of music is less about displaying expertise and more

about the immediate emotional satisfaction it brings her and how music services particular situations, activities and moods. For example, dance music is valued because it is upbeat, serving as a 'mood booster' and a reminder of her youth, whilst classical music is a source of relaxation:

> Different types of music make you feel different things. To me, dance music takes me back to when I used go clubbing a lot, now, I associate it with the gym because I go to the gym a few times a week and that's what I listen to at the gym because it helps me work out. Classical music is, if I'm feeling like I want a bit of piece, quiet, you know, I might listen to classical music at home, especially when the kids aren't there, but it also, it just, like dance music, it makes you want to move, it makes you want to move quicker, it makes me happy, upbeat, but classical music can, especially as I like classical music that's got a lot of strings in it, and that can make you, I don't know, it just brings a different emotion out in you, you know.

Rebecca's interest in classical music highlights how highbrow culture is no longer the preserve of the dominant classes in society (Peterson and Kern 1996; Savage 2006; Wright 2011; Friedman 2011). The availability of music in her everyday life, through services such as Spotify, means that Rebecca is able to readily switch between different styles of music, such as dance and classical, according to the mood or situation in which she is in. However, there remains limits to Rebecca's engagement with classical music. She engages with classical as a form of 'easy-listening' and her engagement with it is indicative of her habitus and appreciation for music as a 'means to an end' (Jarness 2015).

The objective possibilities opened up by the use of Spotify have enabled changes in Rebecca's mode of acquisition in accordance with changes in her life-stage (Reeves 2014). Music was an important part of Rebecca's identity as a teenager. She curated what she listened to and how she dressed according to what was 'cool' at the time, which for her and her friends was dance music, and this type of social pressure constrained what she listened to. However, as Rebecca's life-stage has changed, the meaning of music in her everyday life has evolved. Now that she is older and the pressures to conform have changed, she feels that she can be more *laissez faire* about what she chooses to consume and she has incorporated a 'care-free' relationship to music into her identity. For example in the following passage, Rebecca discusses her 'love' of Miley Cyrus whilst

mentioning that in the past it would have been inappropriate for a 46-year-old woman to declare such an interest. This tension is rooted in Miley Cyrus' identity as a former teen idol (known as Hannah Montana) associated with the Disney empire, and her more recent identification as 'pop's wildest child' (Eells 2013). Crucially, Rebecca's comments illustrate how this newfound confidence to challenge generational divides in music taste is underpinned by the objective possibilities opened up by the use of Spotify:

> I think when you're quite young, you tend to stick to one genre of music because that's what's cool at the time, you daren't say you like something else when you're a teenager. As you get older, you're not afraid to say, well, actually, I love Hannah Montana, Miley Cyrus, I like Miley Cyrus, I'm 46 years old, but I like Miley Cyrus, and I'm not afraid to say it now. I think it's just, yeah, and I think with the whole, you know, being able to stream music, it allows you to have that wider taste.

Rebecca engages with music on Spotify in ways which are consistent with her habitus. For instance, whereas for Jamie the creation of playlists was an opportunity to affirm his status as a music expert, Rebecca uses this feature of Spotify to organise music around the situations and activities in which she consume music, as she explains during out walk-along:

> I've got a classical playlist. I've got my gym tracks. I've got a gym tracks folder and in there are different playlists and different sorts of gym songs. Oh, I've got an easy listening or something, and then that's got (opens the playlist on Spotify) it's got things like Roberta Flack, and Gladys Knight, and stuff, which is really chilled out, easy-listening, you know

Similar to Catherine, rather than undermining her orientation to music, the curated content produced by Spotify is used by Rebecca to extend her ability to match music with the situations and activities in which she consumes it, whilst enabling her to incorporate music which she is less familiar with, as she explains:

> I think it's great that they do this playlist stuff, putting it into genres, if you want it, if it's called, I think I found one some time ago called, I don't know what it was listed under 'Happy Music,' or something like that, and I thought, oh, I'll try that, you know, because I quite like uplifting music as well, and some of the tracks on it were brilliant, but I didn't like every one of them, but I might not have found those tracks if they hadn't been put into that category

However just because Rebecca chooses to delegate selection to Spotify, does not mean that she is a cultural dupe. There is still an expectation that the content being served to Rebecca is consistent with her habitus. Rebecca does not take Spotify's curated content at face value; rather, she critically engages with it to determine whether the content is 'right' for her before choosing to listen to something. Indeed, Rebecca will often pull apart a Spotify curated playlist and extract the songs she likes or thinks she will like and combine them with other music to form what she deems to be a more coherent whole. Rebecca explains the process of playlist selection during our 'walk-along' session:

> I'll play the first track and I can easily tell within like twenty seconds whether I'm going to like something. It's like a book, you can read a few pages, can't you, and think, oh, I'm not going to get on with this, some people can push it further than that, but me, I tend to give up quite quick. I might listen to it and think, oh, I like the sound of that and I'll chuck it into a playlist, and then I might listen to another one, oh, I don't like that, skip to the next one.

Rebecca's story further demonstrates how Spotify is shaping how class identity and distinction are performed through the consumption of music in individualised ways. Rebecca's habitus is characterised by an appreciation for music as a means to an end and this orientation underpins how she engages with music on Spotify. As Rebecca's consumption of music is not embroiled in the mobilisation of embodied cultural capital in the same way that it is for Ben and Jamie, the stakes are different. The ways in which Spotify mediates access to music presents opportunities for Rebecca use the platform to organise music around the situations and activities in which she consumes it.

These four vignettes illustrate the individualised yet classed ways my participants access and engage with music on Spotify. Jamie and Ben are two individuals whose middle-class identity is defined by their musical expertise. The ways in which Spotify mediates access to music comes into contention with their habitus as the platform is undermining opportunities to mobilise their cultural capital through musical expertise and an appreciation for music as an end in of itself. In contrast, Catherine and Rebecca access and engage with music on different terms. Their habituses are defined less by the performance of expertise and they display an appreciation for music as a means to an end. In turn, Spotify's attempts to shape what and how they consume music is experienced differently.

The contrasting stores of Jamie, Ben, Catherina and Rebecca speak to the potential existence of gendered divisions in how people engage with music on Spotify and in turn how the platform is shaping the part that music taste and consumption play in the reproduction of class. Although Catherine and Rebecca come from different class backgrounds, as defined by their relative volume and composition of capital, they share a similar mode of acquisition. They both evaluate music and Spotify's attempts to curate it in terms of its relevance to emotions, situations and activities, unlike Jamie and Ben, who emphasise the seriousness of their musical appreciation. Given that these two individuals come from different class backgrounds, it invites us to question whether these similarities relate to the performance of gender and femininity, rather than class. However, Catherine and Rebecca represent two cases and further research is needed to unpack if and how there are gendered divisions in music consumption on Spotify.

5.4   Summary

This chapter demonstrated that Spotify is undermining the cultural assets underpinning middle-class privilege. Studies of the cultural omnivore have demonstrated that the composition of class tastes is less firmly organised around cultural hierarchies of highbrow and lowbrow culture (Peterson and Kern 1996; Wright 2011; Bennett et al 2009; Savage 2006; Savage and Gayo 2011). The objective possibilities opened up in the field of music consumption by Spotify are further undermining the potential for differences in what music people consume to construct and

maintain class divisions, as exclusivity and restriction are harder to maintain. The affordability of music, anytime, anywhere access to music and the opportunities to engage with abundance opened up by the curation performed by Spotify are making it easier to access music which would otherwise have been out of reach to my participants due to insufficient economic, social and/or cultural capital. This undermines the potential for particular forms of music to function as objectified cultural capital, as it becomes harder to police who is able to acquire a taste for particular musical forms.

The omnivore debate also highlights how the dominant classes mobilise their cultural capital through cultural confidence and a grasp of diverse cultural forms (Savage 2006; Savage and Gayo 2011; Bennett et al 2009). This chapter demonstrated how Spotify is undermining the performance of the type cultural expertise associated with cultural omnivorousness. The rate and scale at which music is made available by Spotify, combined with its attempts to achieve mass personalisation, are closing down opportunities to display music expertise and an appreciation for music as an end in of itself. In contrast for members of the middle classes for whom musical expertise is not an important part of their claims to distinction, as well as for members of the working classes with lower levels of cultural capital, the stakes are different. These people embrace the curation performed by Spotify and use it to augment the experience of consuming music because their claims to distinction are unthreatened.

Whilst it may appear that Spotify is undermining existing processes of class reproduction, the concept of hysteresis reminds us that structural changes to field also create new opportunities to reproduce dominance (Bourdieu 1977; Stewart 2013; Lizardo 2014). In the following chapter, I consider if and how the ways in which Spotify mediates music are creating new opportunities for the performance of class distinction and the mobilisation of capital. I identify and discuss how the consumption of music in physical formats, such as vinyl LPs, as well as the use of Spotify itself have created opportunities to mobilise capital. In particular, I argue that these practices privilege younger members of the middle classes who have the time and inkling to engage with music in these ways.

Chapter 6   Spotify, Emerging Capital and New Forms of Distinction

The findings presented in the previous chapter demonstrate how the state of hysteresis produced by Spotify is undermining the cultural assets underpinning middle-class privilege. However, Bourdieu's (1977, 1990) concept of hysteresis reminds that us that structural changes to a field not only challenge existing class practices and processes of reproduction, but also create new opportunities for individuals to secure or maintain a position of dominance in a field. Bourdieu argues that it is often the already-successful – those with high levels of capital – who are best positioned to capitalise on new opportunities in the field, thereby reproducing class privilege. For example in Bourdieu's (1988) study of the French academic field, he demonstrates how different actors capitalised on the opportunities created by the state-led modernisation and democratisation of higher education occurring in the 1960s, with the 'old-guard' of established lecturers, whose habituses were attuned to different conditions, losing out to a new breed of academics. The case of the academic field highlights to us how change not only undermines the existing order, but also creates opportunities to accumulate and convert capital.

The findings presented in this chapter contribute to debates about emerging forms of capital and new forms of distinction (Savage et al 2013; Friedman et al 2015; Prieur and Savage 2013). In recent years, sociological debates about class and consumption have identified and explored how the composition of cultural capital and middle-class tastes differs between generations (Savage et al 2013; Friedman et al 2015; Savage 2015). Savage and his colleagues introduce the concept of 'emerging' forms of capital to describe the cultural tastes and practices that serve to distinguish younger members of the middle classes both from other class groups but also older generations of the same class. This concept is used to capture the distinctive cultural tastes and practices of younger generations, with younger members of the middle classes eschewing highbrow culture, instead engaging in practices which celebrate contemporary and popular cultural forms (e.g. popular music, sport, digital technologies, social media) for their own sake. The concept foregrounds a move away from the Kantian aesthetic (the distanced appreciation of culture) defining the mode of acquisition possessed by the dominant classes, to a more open and

'knowing' expression of cultural aptitude. In doing so, we are seeing the content of elite culture being remade by younger generations.

However, it has also been acknowledged that the concept of emerging capital is loose and needs more analytical specification (Friedman et al 2015; Prieur and Savage 2013). The concept has been used to describe the cultural tastes and practices of the young and well-educated, but if and how these practices function as capital, in a Bourdieusian sense, and serve to reproduce divisions between different class groups remains unclear. Whilst this research demonstrates through quantitative measures how these emerging forms of capital are a product of class background, there is limited qualitative insight into how these distinctive tastes and practices are cultivated. Attention needs to be given to the habituses of younger members of the middle classes and how they are a shaped by their conditions of existence, such as the family environment, educational contexts and workplaces. This helps us to better understand how these tastes and practices come to be understood and accepted as legitimate and valued ways of engaging with culture, which in turn contributes to our understanding of if and how they have the potential to function as capital in a Bourdieusian sense. Indeed, attention to contexts such as the family environment may help us to draw out the generational differences in habitus and capital of the middle classes, as it is possible to unpack how young people distinguish themselves from their parents or grandparents' generation.

This chapter contributes to this debate on emerging capital by identifying how Spotify is creating opportunities for younger members of the middle classes to perform class distinction and mobilise capital. Drawing together the interviews I conducted with 22 music industry key informants and 20 Spotify users, I identify and discuss several strategies for class distinction opened up by the use of Spotify. I argue that consuming music in physical formats, such as vinyl LPs, has the potential to become implicated in the performance of class distinction in ways which in stand opposition to the immaterial and ephemeral nature of consuming music on Spotify. I introduce the concept of 'slow music' to describe how owning and consuming vinyl is a resistant and classed practice. Making comparisons to the slow food and slow fashion movements, I demonstrate how purchasing high-quality vinyl is a way to resist the immaterial nature of

consuming music on Spotify and a more 'ethical' alternative to streaming, as vinyl translates into greater royalty payments to artists. Moreover, I illustrate how consuming vinyl in a slow and deliberate manner is a way to resist the accelerated rate at which music is mediated by Spotify and (re)create the conditions to appreciate music as an end in if of itself.

Secondly, I argue that the use of Spotify itself has become implicated in the performance of class distinction. I argue that command over the use of platform combined with the creation of promotion of playlists presents opportunities to mobilise cultural capital. In particular, I demonstrate how these practice privilege younger members of the middle classes who have greater amounts of disposable time to dedicate to the consumption of music as an end in of itself. In doing so, I demonstrate how Spotify is creating opportunities for members of the middle classes to (re)deploy their cultural assets.

The arguments made in this chapter are empirically-inspired by my own research. Rather than making definitive claims about new forms of middle-class distinction, my intention is to use the data I collected in my fieldwork to point to potential ways in which Spotify is opening up opportunities to accumulate and convert capital. In doing so, my aim is to set an agenda for future research, identifying practices related to the use of Spotify which require further empirical consideration.

The chapter is structured as follows. In the first section, I discuss how owning and consuming music in physical formats, most notably vinyl, has the potential to represent emerging capital and has become a part of some of my participants' claims to class distinction. In the second section, I discuss how use of Spotify itself, in the form reverse engineering and 'gaming the algorithms,' as well playlist curation, are opening up opportunities to mobilise cultural capital and accumulate symbolic and economic capital.

6.1 Owning and Consuming Music in Physical Formats

At the same time that music streaming services have become one of the dominant modes of music distribution and consumption, contributing to changing fortunes in the recorded music industry (Watson 2015), the consumption of music in physical formats, most notably vinyl LPs, has

seen a resurgence in recent years (Maguadda 2011; Hracs and Jansson 2017; Bartmanski and Woodward 2015). In the UK between 2014 and 2015, vinyl sales grew by over 50% and by 2017 this resurgence contributed to the first rise in physical music sales in over a decade (IFPI 2015; Ellis-Petersen 2017). This growth has been complimented by popular events, such as the worldwide 'Record Store Day,'[19] as well as renewed support from large retailers, such as supermarkets (ibid). Indeed, newspaper reports and industry experts have acknowledged how the recent resurgence in the consumption of music in physical formats is being led by younger consumers (Moore 2017; Britton 2015; Ellis-Petersen 2017). As one record store owner put it:

> People think 'millennials' just stream and are just digital but actually I think we are going
> to see increasingly over this coming year that young people still want something
> tangible and real and that's where vinyl is taking on the role that the CD used to have
> (quoted in Ellis-Peterson 2017).

At first glance it may seem unusual that in an age of ubiquitous access to digital music, physical formats have renewed value. Music streaming services, such as Spotify, have made vast catalogues of music available anytime, anywhere at little or no cost and created compelling user experiences through curation, yet some consumers still wish purchase and own music in physical formats. Social scientists have begun to question why, in an age of on-demand access to music, vinyl and other physical formats have renewed importance (Maguadda 2011; Bennett and Rogers 2016; Hracs and Jansson 2017; Kjus 2015; Morris 2012). For example, existing research has identified and discussed how the production and distribution of music in physical formats is a way for artists, labels and retailers to generate additional value through exclusivity-based strategies, such as exclusive vinyl releases, whilst for consumers physical formats are re-instating a sense of

---

[19] https://recordstoreday.com

ownership in a context where music is pre-dominantly immaterial in form (Maguadda 2011; Bennett and Rogers 2016; Morris 2012).

I build on and extend this existing literature by exploring the classed dimensions of the so-called 'vinyl revival.' I argue that the renewed interest in music in physical formats is implicated in the performance of class identity and distinction for younger members of the middle classes. As the previous two chapters discussed, not only do consumers not own the music they consume on Spotify, but the platform is continually serving music to individuals in order to motivate them to continue engaging with the service. I suggest that the renewed interest in vinyl records is a response to this immateriality and ephemerality and represents an opportunity for individuals to mobilise capital in opposition to the ways Spotify mediates access to music.

The following discussion draws parallels between the consumption of music in physical formats and the 'slow food' and 'slow fashion' movements. Emerging from Italy in the 1980s, 'slow food' is a political movement that seeks to resist the domination of fast-food companies, such as McDonalds, and the fast-paced, quantity-orientated ways of engaging food which they promote (Ritzer 1993; Hsu 2015; Pietrykowski 2004). Instead, it calls for a return for the consumption of locally-produced and seasonal produce and more communal and considered ways of consuming food. The concept of 'slow fashion' is similarly used to refer to a growing backlash against the unsustainable production systems of the global fashion industry (Fletcher 2010; Clark 2008; Crewe 2013). Acknowledging the damaging effects of high levels of waste and poor working conditions for both society and the environment, proponents of 'slow fashion' call for a return to high-quality craft production which promotes both stylistic and physical durability.

These movements are useful points of comparison because they help me to emphasise the resistant and classed nature of consuming music in physical formats. Both the slow food and fashion movements resist the mass-produced and globalised systems of food and fashion production, which are seen to be both unsustainable and inauthentic (Hsu 2015; Fletcher 2010; Clark 2008). Yet these movements demand ways of engaging with cultural goods that require high levels of cultural and economic capital, due to the cost of high-quality food and fashion items and the knowledge required to seek out the 'right' goods (Crewe 2013; Pietrykowski 2004).

Consequently, they present opportunities for dominant groups to distinguish themselves through consumption.

I make similar arguments about how both owning and consuming music in physical formats – what I describe as 'slow music' – privileges individual with high levels of economic and cultural capital and can be interpreted as a form of middle-class distinction. In what follows, I introduce three aspects of 'slow music,' related to the materiality, temporality and the ethics of consumption, which have the potential to implicate this practice in the performance of class distinction for younger members of the middle classes.

6.1.1   Materiality

Whilst they are not concerned with the impact of digitalisation per se, the slow food and slow fashion movements are a reaction to changing nature of the goods produced by the food and fashion industries. They represent critiques of the global proliferation of mass-produced foods and garments and call for a return to high quality, local goods. The renewed interest in consuming music in physical formats can similarly be seen as response to the changing nature of music as a material good. Some commentators have suggested that digitalisation has contributed to a loss of 'cultural ownership.' This is because the ways in which people derive value from their music collections, such as the look and feel of an album, is difficult to replicate using digital formats. In response to this, Maguadda (2011) and Bennett and Rogers (2016) argue that materiality is 'biting back' and consumers are turning to physical artefacts, such as physical records and playback devices, to re-instate a sense of cultural ownership, as physical artefacts can be held, felt and displayed. As Bennett and Rogers (2016, 33) put it: "The medium of analogue recording takes on an aura and status in the present as a 'purer' form of sound creation and reproduction than its digital counterparts."

However, owning and consuming music in physical formats comes at a cost. Whilst Spotify has alleviated the economic constraints associated with accessing and engaging with recorded music online, owning music requires a more substantial investment of economic capital. For example in

the UK, a new vinyl can cost upwards of £25 which is equivalent to two months of a premium Spotify subscription. Consequently, for those who can afford to consume music in this way, purchasing music in physical formats is a more discriminatory act. Ownership is reserved for music which is deemed to be the best and worthy of investment, which stands in contrast to the *laissez-fare* approach adopted by my participants when consuming music on Spotify. For example for Greg (Late 20s, Administrator), consuming music on Spotify is an opportunity to 'sample' music before deciding to make the commitment to purchase it, as he puts it:

> If I really like the band, I go out and buy their new record. If it's a band I hadn't heard of before, I would go onto Spotify and listen to it, see if I like it, and then go and buy it afterwards.

The ways in which vinyl records are produced and distributed vilifies their value as an 'authentic' alternative to digital music, but in doing so further restricts access. Physical records are often sold as limited edition releases that feature hand-painted artwork, photographs, poetry, individual numbering and hand-written thank-you cards, which are produced and sold at a premium to loyal fans (Hracs et al 2013). The production of these types of exclusive products is used by firms to create value by exploiting the desires of consumers to signal their status and identity through the consumption of unique products (Shipman 2004). This is because the exclusive nature of these goods reintroduces scarcity. Anyone with a subscription can access music on Spotify, but the ownership of limited-edition physical recordings is restricted to those 'in the know' and those who are able and willing to a pay premium to be in a select group of co-consumers, as one key informant's comments illustrate:

> Compare to say 20 years ago, when vinyl releases were fairly cheap and shoddy looking, now, you know, they are incredibly well packaged, premium quality vinyl, and card, and inserts, images, and sleeves, it's really become almost like collecting art, it's one reason why people buy it, I think they are investing more in the original expression of that music as an art form, rather than just a utility. (Interview, Executive, Music Industry Body 2)

Whereas in Chapter 5 (section 5.2) I argued that Spotify is undermining the potential for differences in what people consume to construct and maintain class divisions, within the realm of vinyl music consumption what people consume has renewed importance. The higher cost of consuming music in this way means that my participants are more careful about what they choose to buy. Ownership is reserved for the 'best' and what people choose to own is a reflection – or objectification – of their judgements about what constitutes 'good' taste. Consequently, this has the potential to re-instate the importance of what people consume - or more specifically own – to the performance of class distinction.

Yet amongst my sample of participants, the renewed interest in vinyl is characteristic of the habituses of my younger participants. For example, for Tracy (Late 40s, Education Outreach Manager), who is in her late forties grew up listening to music on vinyl, the format holds little symbolic value. Tracy is more interested in the novelty of having access to vast catalogues of music on Spotify, rather than returning to the impracticalities of consuming music on vinyl, as she puts it:

> (On Spotify) you can listen to music anywhere, we never had that before, I don't miss, there is nothing good about vinyl, my son loves vinyl, it's heavy, they break, they wear out, they crackle.

On the other hand, Christian (Mid 20s, Arts Co-Ordinator) places greater emphasis on the ownership of music in physical formats. Vinyl is upheld as being superior to consuming music on Spotify because it invokes a greater sense of ownership, as his comments illustrate:

> Owning the vinyl, it's a lot more special and you do have a lot more pride in owning it almost – people do still say, oh, I've got that on vinyl, you don't say, oh, I've got that on Spotify. Actually, saying that, I've got that on vinyl, is quite special.

The differing perspectives of Tracy and Christian speak to the potential for physical formats to distinguish different generations of consumers. Indeed, it represents an inversion of the types of

cultural goods valued by different generations. For Tracy who grew up with vinyl, greater value is placed in Spotify and the immediate access to abundance it affords, whereas for Christian who grew up in an age of digital music consumption, physical formats are an 'opt-in' proposition and have renewed value.

6.1.2   Ethics

Purchasing music is also bound up with ethical considerations which have the potential to implicate it in the performance of middle-class distinction. The 'slow food' and 'slow fashion' movements emphasise the use of sustainable production techniques and the practice of ethical consumption. For example, the slow fashion movement has recognised how the production systems of the global fashion industry, characterised by poor working conditions, ecological degradation and high levels of waste, are unsustainable and call for a move towards small-scale, localised and craft production techniques (Crewe 2013).

The systems of production in the music marketplace have faced similar critique. In particular, music streaming firms, such as Spotify, have come under fierce criticism for how little compensation artists receive when their recordings are streamed on a platform (Ellis-Petersen 2014; Krukowski 2012). In 2015, Spotify was reported to pay to labels and publishers on average between $0.006 and $0.0084 per stream, and this figure is diluted further for artists because of the share taken by record labels and publishers (Ellis-Petersen 2014; see Chapter 4). This has resulted in backlash from rights holders, with high-profile figures, such as Radiohead's Thom Yorke, refusing to license their music to these platforms (ibid). Concerns about royalty payments are particularly acute amongst independent musicians for whom a sustainable career making music is unlikely because they do not have the luxury of advanced payments or marketing support from major record labels to achieve high volumes of streams (Krukowski 2014).

Yet, the slow food and fashion movements, as well as other forms of ethical consumption, such as Fair Trade (Adams and Raisborough 2010), privilege individuals with high levels of economic and cultural capital. For instance, slow fashion is described as 'considered consumption' (Crewe 2013) where emphasis is placed on luxury goods and an appreciation for the origins and techniques employed in the creation of garments. Similarly, the slow food movement calls for consumers to

make decisions based on quality, not quantity, and promotes material pleasure through sustainable consumption (Pietrykowski 2004). Whilst these changes to consumer behaviour may represent positive change from an environmental sustainability point of view, they also demand an investment time and money, resources not available to all consumers. As such, engaging in these forms of ethical consumption practices are products and producers of class divisions because they often privilege individuals with high levels of economic and cultural capital. As Goodman (2004, 13) puts it, these types of alternative food practices represent a "… narrow 'class diet' of a privileged income group."

Purchasing music in physical formats extends the opportunities for members of middle classes to distinguish themselves through ethical consumption. Purchasing music in physical formats has become positioned as a way for consumers to more fairly and sustainably support artists, as physical formats translate into larger up-front royalty payments (Anderton et al 2013). For example for Ben, discussed in the previous chapter, purchasing music is an opportunity to mobilise his economic capital to display to others the value he places in music as artistic endeavour:

> I've always had a thing for if I like music, buying it, so even now I will always still make an effort to buy CDs of things I really like, so I've got a physical copy to keep, and also that is more supportive of artists because they get far more money from physical record sales than they do from streaming.

6.1.3   Temporality

In the same way that the slow food and fashion movement define themselves in part by how they seek to challenge the speed at which mass-produced food and clothes are produced and consumed, the revival of music in physical formats is also a response the ephemeral ways music is made available by Spotify. In Chapter 4 (section 4.5.2), I discussed how Spotify's need to drive user engagement is accelerating the rate at which music is mediated to people in the field of music consumption. The platform continually refreshes the content of its playlists and

recommendations to ensure they are contributing to user engagement, whilst everyone's Spotify 'homepage' is refreshed across the course of day to help ensure people are findings and engaging with relevant music. In Chapter 5 (sections 5.3.1–5.3.2), the stories of Jamie and Ben demonstrated how the rate at which music is made available is closing down opportunities for some members of the middle classes to display their musical expertise and appreciation for music as an end in of itself.

Yet, the act of listening to music in physical formats is a slower and more deliberate practice. Like the 'convivial' eating experiences promoted by the slow-food movement (Pietrykowski 2004), consuming music in physical formats can be a ritualistic experience, involving finding, feeling, listening and displaying music (Bennett and Rogers 2016; Bartmanski and Woodward 2015). It is a way of consuming which emphasises the importance of taking the time to appreciate music as an end in of itself. As Veblen ([1899] 1912) identified, conspicuous use of time is a way for the dominant classes to communicate their status and position of privilege. Having access to disposable time to spend on leisure pursuits which have no immediate material gain is a way for the dominant classes to display their wealth and privilege by conveying to others that they can afford to be unproductive. The convivial eating experience associated with 'slow food' is a way of demonstrating to others that those engaged in these practices have the time available to experience food in this leisurely way. In a similar fashion, the 'slow' consumption of music is a way for people to demonstrate to others that they have the time to engage with music as a leisurely pursuit and consume it as an end in of itself. Jamie's comments highlight the importance of taking time to appreciate music in a deliberate and ritualistic manner:

> With vinyl it's, I bought this album because I specifically wanted to own this album and that's less of a, I think with all of the others there's a kind of playlist mentality, I've just got this particular type of music on and all the songs will be distinct from each other, blah, blah blah, whereas vinyl is kind of a, I'm going to sit down and listen to this one album and focus on one single thing for a little while, which is to me a totally different experience.

Similarly for Greg, the consumption of music on vinyl is a dedicated activity, where time is taken to appreciate music as an end in of itself, as he explains:

> When I'm at home I will still kind of go and put my favourite record on […] I have the vinyl at home for nice listening, sitting on a Saturday afternoon, chilling listening to music.

How Jamie and Greg consume music in physical formats is a way to mobilise cultural capital. As I discussed in the previous chapter, Jamie's habitus is characterised by an expert and omnivorous orientation to music. He mobilises his embodied cultural capital through his knowledge and appreciation of different styles of music and this mode of acquisition underpins how he engages with music on Spotify. Consuming music on vinyl is opportunity for Jamie to resist the rate and scale at which music is mediated by Spotify and mobilise his embodied cultural capital through the 'slow consumption' of music. Similarly for Greg, whose habitus is also characterised by an expert orientation to music, cultivated by attending university to study music and growing up in an environment where musical engagement was encouraged, consuming music on vinyl is an opportunity to resist the ephemeral nature of consuming music on Spotify and, as he puts it: "… enjoy music for music's sake."

The time that my participants have to dedicate to the 'slow' consumption of music is not only shaped by economic and cultural capital, but also life-course. As individuals get older and assume 'adult' responsibilities, such as having a full-time job and children, they have less time to dedicate to cultural activities, such as listening to music (Reeves 2014). Whilst my older middle-class participants may value music as an end in of itself, the responsibilities in their everyday lives prevent them for engaging with music in this way. For example, Johanne (Late 30s, IT Project Manager) describes to me how changes in her personal life, such as having a child, have impacted on her relationship with music. Rather than finding the time to listen to music as a dedicated activity, as she did when she was younger, music is delegated to a background entity, fit in-between the busyness of her everyday life. As her response to my question illustrates:

> Interviewer: So how often do you listen to music?

Johanne: Definitely not enough. Not as much as I would like to. But I will do it

systematically when I'm driving. I don't drive often, though. A little bit when I work,

when I get the chance, but I rarely get the chance to sit at my desk for a long time. If I do

and I want to isolate myself a little bit, I will put my headphones on and listen to music.

It helps me to concentrate. At home, when I get the chance, it's not easy because I've

got family so, you know, sometimes it doesn't help to have musical background when

you have so many things going on. So, I would say when I get the chance, as soon as I'm

on my own, and there's no one there to stop the music, that's the first thing I'm going to

do, put the music on. I used to listen more when I was, when I didn't have a family, I

would get more opportunity.

Johanne's life-stage – namely having a full-time job and a child – places constraints on the amount of time she has to dedicate to music, despite expressing a desire to engage with it in more meaningful ways. Her explanation also points to the potential for gendered divisions in the performance of slow music. One of the reasons why Johanne does not feel that she has enough time to listen to music is because of the demands of motherhood. Whilst this does not exclude life-stage as an explanation as to why slow privileges younger generations of the middle classes, it suggests that the story is more complex. Johanne's account invites us to question whether the time available to dedicate to slow music is unevenly distributed along gendered lines.

These findings demonstrate how the renewed interest in consuming music in physical formats amongst the younger members of the middle classes has the potential to represent an emerging capital. The ways in which vinyl records are produced, distributed and consumed creates opportunities to accumulate and deploy capital, in turn contributing to objectification of these material goods as capital.

In the following section, I discuss how use of Spotify itself has the potential to mobilise an emerging form of cultural capital for younger generations of the middle classes. I argue that command of the service, both in terms of an individual's ability to manipulate the platform to improve the experience of consuming music as well the curation of playlists, have the potential to become implicated in the performance of middle-class distinction.

6.2   Spotify and the Performance of Class Distinction

Sociological research about 'digital inequality' has acknowledged how access to and use of ICTs are implicated in the reproduction of class inequalities (Selwyn 2004; North and Bulfin 2008; Emmison and Frow 1998). This research emphasises how material access to digital technologies is not only important (i.e. access to economic capital), but also how individuals are positioned to make use of these technologies (i.e. access to cultural capital). Indeed for Bourdieu (1984), cultural capital is both characterised by knowledge of the arts and humanities (e.g. familiarity with highbrow culture, such as classical music or fine art) but also skills and knowledge related to the use of technologies, as he explains (Bourdieu 1986, 50):

> To possess the machines, he [sic] only needs economic capital; to appropriate them and use them in accordance with their specific purpose he must have access to embodied cultural capital.

Technological skills and know-how are valuable resources in the digital age and can be converted into social advantage. For younger generations, North and Bulfin (2008) demonstrate how the accumulation and conversion of this cultural capital is a product of habitus and the family environments within which habitus is cultivated, and in turn these resources and dispositions can be converted into success in the educational field. As Emmison and Frow (1998, 44) suggest:

> A familiarity with, and a positive disposition toward the use of, the burgeoning technologies of the information age can be seen as an additional form of cultural capital bestowing advantage on those families which possess then and the means of appropriating them to their full potential.

6.2.1   Command over the use of Spotify

Command over the use of Spotify and the ability to manipulate the service to enhance the experience of consuming music has the potential to represent emerging cultural capital. In Chapter 4 (section 4.4.2), I discussed how Spotify is continually collecting data about user behaviour in order to ensure what and how it is curating music is having a positive impact on user engagement. The editors working on the creation of playlists are using this data to inform their decisions about what to include and exclude in playlists, whilst the algorithms used to generate personalised recommendations are optimised against user-engagement metrics. However, one of my participants, Elizabeth (Mid 20s, Administrator), uses her knowledge and command of the platform to optimise the quality of the user experience in her own terms. For example upon receiving her latest 'Discover Weekly' playlist, Elizabeth creates an archive of the best songs which appear in these playlists. Elizabeth is aware that the platform is tracking her behaviour and she has realised that what she adds to her archive playlist shapes what recommendations she receives in the future. By manipulating the platform in this way, she is able to improve the quality of the recommendations in her own terms, as she put it during our walk-along:

> The algorithms tell you what you like and the more you listen – I'm sure you know how this work – but the more you listen, it ends up showing you more. What I do is, at work, every Monday, I put on the 'Discover' playlist and then if something comes on that I really like, I put it into a month, so I make a separate playlist and go, this is 'Discover July 17,' this is 'Discover August 17,' so then I have each month with the best. So then each week, the next 'Discover' playlist comes out, it's even better, it keeps getting better and better.

Elizabeth's command over Spotify is a product and producer of the high levels of cultural capital she possesses, and it also serves to distinguish the relationship she has with music to that of her parents. Elizabeth is in her early twenties and grew up in a middle-class family where value was placed in the arts and humanities. Her father is a bluegrass musician, her mother is a classically-trained singer and her older brother is an academic working in the field of musicology. Elizabeth was introduced to the cello at a young age and she went on to study Drama at university in London. Elizabeth enjoys 'hunting around' for new music and giving recommendations to her

friends. She has a confident handling of music and makes clear distinctions between what she defines as 'good' and 'bad' taste. For example, Elizabeth distances herself from the music of Ed Sheeran, who was named by the International Federation of Phonographic Industries (IFPI) as the world's best-selling recording artist of 2017 (Aswad 2018). Elizabeth seeks to define her tastes in opposition to the mainstream, whilst confidently asserting what she likes, as her comments illustrate:

> I guess this is quite judgmental, but I think the layperson's taste in music is quite bad (laughs). So, if I was to listen to Radio 1 or the top 40, like at one point Ed Sheeran's entire album was the top 40, I don't like Ed Sheeran, but everyone else seems to. I don't really pay much heed to what everyone else likes. I'm more interested in what I like.

Elizabeth's manipulation of Spotify enables her to extend her knowledge and appreciation for music. She is able to leverage her familiarity with the technology to extend her knowledge of different artists and bands and affirm her status as a music expert, as she puts it: "… it's opened up a door to finding more music and finding things that I didn't know existed."

The integration of Spotify into Elizabeth's relationship with music stands in contrast to her parent's consumption practices. Whist both Elizabeth and her parents possess musical expertise, she describes her parents as 'technologically inept,' more comfortable using physical mediums, such as CDs, and engaging with styles of music they know, such as bluegrass and classical music. An important distinction needs to be made here between how Elizabeth's parents engage with music in physical formats compared to younger members of the middle classes I discussed in the previous section. Elizabeth's parents are consuming music in this way because it is what they are familiar with, whereas for the younger participants I discussed, Greg and Jamie, the act of consumption has different meaning. They consume music in physical formats in addition to using Spotify and it is a way for them to display their appreciation for music as an end in of itself. For Elizabeth, her command of Spotify is not only a product and producer of her musical expertise, but also serves to distinguish her habitus from her parents, highlighting generational differences in habitus and cultural capital.

6.2.2   Playlist creation and the mobilisation of capital

Spotify also creates opportunities for individuals to establish themselves as cultural intermediaries and accumulate and convert capital by enabling users to acquire a reputation as a playlist curator. The participatory aspects of the Web, specifically the ability for non-professionals to create and disseminate content, such as album reviews, via social media platforms, have enabled actors with non-institutionalised forms of cultural capital to emerge as influential cultural intermediaries (Verboord 2014, 2010; Arriagada and Cruz 2014; Fletcher and Lobato 2013; Duffy 2015). For example, bloggers writing on topics such as food, music and fashion have been identified as actors shape how cultural goods are mediated. Unlike the cultural critics working for well-known publications, such as the *New York Times*, these individuals rely on different claims to cultural authority, such as the size of their online 'followerships' and subcultural forms of capital (Thornton 1995; Fletcher and Lobato 2013; Duffy 2015).

The ability for users to curate and promote playlists on Spotify extends the possibility for actors with non-institutionalised forms of cultural capital to emerge as cultural intermediaries. In the previous chapter, I discussed how the ways in which Spotify facilities access to music through the creation of personalised playlists and recommendations (see Chapter 4, section 4.4.1) are closing down opportunities for some of my participants to exercise their musical expertise and competence. However, at the same time as Spotify curates music, it also provides its users with the means to curate their own playlists. Spotify enables its users to create and name their own playlists from scratch, or take pre-existing playlists created by the platform and add, edit or remove tracks. The creation of playlists presents an opportunity for individuals to display their taste and familiarity with music. For example, Jamie's narrative presented in the previous chapter highlighted how the curation of playlists has become an intellectual exercise and a way for him to display his cultural capital, as he puts it: "I take a lot of pride in finding the right situation for a playlist and then putting it on and seeing how people react to it."

Similarly for Elizabeth, the creation of playlists is an intellectual exercise and a way for her to share her familiarity with music. For example, she shares her passion for stop animation films by creating and publicly sharing a playlist which compiles film soundtracks, as she explains during our walk-along:

> And there's another one that is really good, it's called, I've called it 'Happy Camper.'
> There's a series of stop animation films, I really like films and film soundtracks as well,
> and they've done loads of really cute little short films and the music is all done by the
> same band, so I went through and found every short film they did as a soundtrack on
> Spotify and made it into one big playlist.

Spotify creates opportunities for individuals to use playlist creation to convert their cultural capital into symbolic capital (i.e. prestige, status, celebrity) and economic capital. Crucially, this is because Spotify makes it possible to publicly share playlists and create an online following. This allows other users to search for and follow a given user's playlists, enabling a reputation and followership to be built. Spotify encourages public sharing and provides advice to its user about how they can improve the exposure of their playlists, including advice on the size of a playlist and how regularly one should be updating its content (Spotify 2015). The service has also created a 'Playlist Exchange' forum, where users can share their latest playlist creations and increase their followership.[20] Indeed, curation is not only enabled by Spotify but also rewarded by the platform. Spotify has introduced a 'superfan' loyalty programme to reward highly-engaged users, such as those who create playlists (Spotify 2016). Spotify use the data it collects about user behaviour to identify 'superfans' of particular artists and rewards these individuals with personalised messages, exclusive access to content, and pre-sale tickets. This data about fans and superfans is made available to artists, via the platform's artists services, which enables artists to directly reward fans and highly-engaged users.

Increasingly, curation is opening up economic opportunities for successful playlist creators. The role of 'playlist curator' or 'playlist editor' has become a profession in its own right and has become a way for individuals to capitalise on their high levels of cultural capital. As discussed in

---

[20] https://community.spotify.com/t5/Playlist-Exchange/bd-p/moodplaylists

Chapter 4 (section 4.3.2.1), Spotify has assembled teams of playlist curators to create and manage their suites of branded playlists. These individuals have established themselves as influential actors in the music marketplace, identified in the music press as important gatekeepers between major record labels and audiences on music streaming services (Dredge 2017). Recent newspaper articles have explored the working lives of these individuals, highlighting how they mobilise their high levels of cultural capital and convert them into economic opportunities. For example, these individuals typically come from a background working as music journalists, bloggers and student radio, hired for their knowledge and appreciation for music and whether they are embedded in live music scenes (Ugwu 2016; Dredge 2016; Shah 2017; Tiffany 2017). As the comments of one of my key informants working as a playlist editor at a leading music streaming service illustrates:

> There is no better grime playlist in the world than 'Grime Shutdown' because the guy who does it lives and loves grime and UK hip-hop and works, basically spends every day of his life, perfecting it, working it, moving the tracks around, checking whose listening, when people are tuning out, when they are burning out tracks and stuff like that.

Whilst Spotify's investment in its editorial expertise has created opportunities for already-established cultural intermediaries, such as music journalists, playlist curation and management companies have emerged, such as musicto,[21] Playlist Pump,[22] and Listd Music,[23] which seek to collaborate with 'everyday' Spotify users who have developed a following on the platform. These firms create opportunities for individuals to use playlist creation to accumulate economic and symbolic capital. For example, the company, musicto.com, invites people to curate playlists on their behalf in exchange for enhanced promotional opportunities and access to streaming and advertising revenue. These examples demonstrate how the playlist, an activity enabled and encouraged by Spotify, creates opportunities for individuals to accumulate and convert capital.

---

[21] https://www.musicto.com

[22] http://playlistpump.com

[23] http://listdmusic.com

Moreover, playlist creation on Spotify is blurring the boundaries between 'producers' and 'consumers.' The participatory aspects of the Web and digital technologies are challenging the notion that there are clearly defined roles in the fields of cultural production and consumption (Ross 2011; Hracs et al 2013; Kitchin and Dodge 2011; Choi and Burnes 2013; Verboord 2010; Burgess and Green 2009; Ritzer and Jurgenson 2010). Affordable digital production technologies combined with the platforms for the dissemination of user-generated content, such as YouTube, a video sharing site, and Soundcloud, an audio-sharing site, have lowered the barriers to entry into the field of cultural production (Burgess and Green 2009; Hracs et a 2013; Verboord 2010). This has led to de-professionalisation and created opportunities for consumers to engage in 'prosumption' and value co-creation (Choi and Burnes 2013; Ritzer and Jurgenson 2010). For example, fans contribute to the promotion of independent musicians through social media activity, such as sharing the details of upcoming gigs (Hracs et al 2013). Playlist creation on Spotify further blurs the boundaries between producers and consumers. These playlist promotion companies have created opportunities for 'everyday' consumers to profit from their playlist creation and widely disseminate their creations beyond their immediate friendship networks.

My participants' interest in playlist creation is shaped by the life-course, with older participants having less time and displaying less interest in the creation of playlists, instead opting to delegate curation to Spotify. For example, Marie (Early 30s, International Development Manager), discussed in Chapter 5, is in her early thirties and has a child and full-time job at The University. She was an avid listener of rock and roll growing up, influenced by her mother working as a tour guide at The Beatles museum in Liverpool. However, with her commitment to her job and child, Marie has less time to dedicate to music. Her musical choices are often based on convenience and familiarity and this influences how she engages with music on Spotify. Instead of creating her own playlists, she prefers to outsource choice to Spotify and the playlists and recommendations it creates, as they save time and energy:

> It's just another thing to think about, and in a life like mine, which is pretty, it's not that hectic, but it's pretty hectic, I just don't want to have to think about it. Put together a playlist that is long enough, I think I had a playlist that had about 105 songs, that took

me about 6 months of trawling through and remembering songs. I just don't have the

energy or the time.

Displaying musical knowledge through the creation of playlists is not a priority for Marie, who has

other demands on her time, such as having a child, whilst for Jamie and Elizabeth, who are

younger and at a different stage in their lives, playlist creation extends their interest in music and

is an opportunity created by Spotify to mobilise cultural capital. This speaks to how practices, such

as playlist creation, have the potential to represent an emerging form of cultural capital for

younger generations of the middle classes. Yet similar to Johanne's account, the explanations

presented by Marie about why she does not have the time or interest to practice playlist curation

suggests that it is not life-stage alone that is responsible. Rather, motherhood and the gendered

division of labour in Marie's home has placed constraints on the time and energy she has available

to spend on music consumption.

This section has demonstrated how playlist curation has the potential to become implicated in the

performance of class distinction for younger generations of the middle classes. The ways in which

the curation of playlists can be converted into symbolic status and material rewards means that

individuals with high levels of embodied cultural capital are able reproduce their dominance in

the field. Playlist curation is an outlet for individuals with familiarity and a confident handling of

different styles of music to display their judgments of taste and convert their knowledge into

other assets. The convertibility of this cultural capital is both enabled and encouraged by Spotify

and the architecture of its platform, as well as the economy emerging around the creation of

playlists.

6.3   Summary

Whilst in Chapter 5 I argued that the ways in which Spotify mediates music are closing down

opportunities to mobilise cultural capital, this chapter demonstrated the adaptability of the

middle classes and the resilience of the cultural assets underpinning their position of privilege

(Friedman et al 2015; Prieur and Savage 2013. Even in the face of change, some members of the

middle classes have found opportunities to (re)deploy their cultural assets. For example, I

demonstrated how Spotify itself has become implicated into claims to distinction and emerging

forms of cultural capital. Extending the participatory aspects of the Web and digital technologies, playlist creation opens up the possibility for 'everyday' consumers contribute to the production and circulation of music. Yet, these practices privilege individuals already well-endowed with cultural capital to access economic opportunities and achieve prestige. For instance, the types of individuals employed by Spotify to work as playlist curators are individuals with high levels of cultural capital already working in the music press and radio. This demonstrates how the state of hysteresis has made it possible for the already-privileged to consolidate their position of dominance in the fields of music production and consumption.

As Spotify has become more popular, those whose claims to distinction rest on their musical expertise have also sought 'new' ground in the form of vinyl music consumption. They have used this format to convert embodied cultural capital into its objectified state and (re)create the conditions for appreciating music as an end in of itself. Through the manipulation of time, the valorisation of music's material form and ethical considerations, 'slow music' has the potential to represent a source of distinction for members of the middle classes.

Finally, I demonstrated how these practices privilege younger members of the middle classes who have the disposable time and technical forms of cultural capital to engage with Spotify and physical formats in these ways. This suggests that these practices have the potential to enable younger members of the middle classes to achieve both 'horizontal' and 'vertical' forms of distinction, differentiating themselves from other located in different spaces of the field, and differentiating themselves from their parents' and grandparents' generations. Whilst I do not make definitive claims about new forms of capital, my findings identify practices that are worthy further empirical consideration.

Chapter 7   Conclusion

This thesis has explored if and how music streaming services are shaping how class identities are performed through music taste and consumption. Drawing on mixed qualitative research methods and working through the case of Spotify, the leading music streaming service in the UK, I have shown that the platform is shaping the role that music taste and consumption play in the reproduction of class. In doing so, this thesis makes a range of contributions which I elaborate on thematically below.

7.1   Key Contributions

7.1.1   Methodology

The methodological approach adopted in this thesis demonstrated the value of engaging with Spotify's ontological complexity. Specifically, it is vital to understand why and how Spotify seeks to shape engagement with music, and the multiple actors involved in these processes, in order to make claims about how the platform is shaping the part that music taste and consumption play in the reproduction of class. In Chapters 5 and 6, the account of what, why and how Spotify is seeking to shape music consumption practices, presented in Chapter 4, was used as a basis for identifying the implications of these new forms of data-driven mediation for music taste, consumption and class. By following this approach, I was able to integrate the study of Spotify as a new kind of cultural intermediary with the impact it is having on the part that music taste and consumption play in the reproduction of class. Because I looked beyond the classed practices and perspectives of the people who use Spotify and engaged with its ontological complexity, I was able to more specific about what aspects of what, why and how Spotify seeks to shape how music is consumed that have implications for the performance of class identity and distinction. In doing so, I was able to make explanatory links between the account I presented in Chapter 4 and the empirical findings I presented in Chapters 5 and 6 about consumption practices 'on' and 'off' platform.

This also contributes to attempts within the disciplines of musicology and the sociology of music to take advantage of theoretical and methodological perspectives from Science and Technology Studies (STS) (Hennion 2001, 2003; DeNora 2000; Born 1995, 2005; Prior 2008; Taylor 2013a, 2013b; Piekut 2014). Musicologists and sociologists alike have championed a performative and relational understanding of what a musical work is, the creative process behind its production, and experience of consuming music. This view challenges the hierarchical view of a master composer as the primary creative agent, and recognises that expressive act of consuming music is not merely an articulation of social position (as understood by Bourdieu (1984)) but a sociomaterial practice (Born 2005; Hennion 2001, 2003). My methodological approach positions online platforms at the heart of these debates. I demonstrated that what music is made available for people to consume and how people consume it is shaped by the interventions of the complex assemblage of human and technical actors that makes up a music streaming services, as well as the commercial imperatives of these companies. Whilst I recognise that people's music tastes are a product and producer of class background, *a la* Bourdieu, my approach also considers how the performance of taste and class identities is mediated by the online platforms through which people now access music in everyday life.

Meanwhile, my research design contributed to the use of qualitative research methods in digitally-mediated settings (Light et al 2017; Jørgensen 2016). The incorporation of app 'walk-alongs' into the interview situation was a creative way of collecting data about the intimate and personalised experience of consuming music on Spotify. It empowered my participants to elaborate on the aspects of Spotify's service they deemed to be significant and enriched the data I collected by allowing my participants to *show* me how they engaged with music on Spotify. The walk-along created an opportunity for me to explore if and how Spotify is personalising each individual user experience and how people from across class backgrounds experience personalisation.

7.1.2   New Kinds of Cultural Intermediaries

This thesis contributes to the study of music streaming services as new kinds of cultural intermediaries (Webster et al 2016; Morris 2015; Beer 2013; Lange 2016; Wright 2015). In Chapter 4, this thesis shed light on the motivations underpinning why Spotify seeks to shape how people consume music, identifying the need to drive user engagement between music rights holders, brands and consumers as being integral to both Spotify's commercial success and existence as an intermediary infrastructure.

I elaborated on how Spotify is adopting and adapting the practice of curation, a function widely performed by cultural intermediaries in the music marketplace. Through the collection of data combined with the use of music recommendation technologies, Spotify is changing the rate and scale at which curation can be performed. Moreover, the ability to monitor changes in user behaviour means that the actors involved in curation can measure the impact their interventions are having on user engagement and adapt how curation is performed accordingly. In doing so, Spotify's strategic aims not only shape why Spotify curates, but also how.

Spotify not only relies on computation to achieve curation; it is also cultivating its editorial authority. Chapter 4 (section 4.3.2) discussed how Spotify has assembled teams of music curators, composed of individuals who used to work in the music press and radio. The platform is appropriating the cultural capital and influence of these individuals to curate music in relation to the activities, situations and moods in which people consume, as well as filter the over-supply of new music to be featured in Spotify's frontline playlists.

I demonstrated in Chapter 4 (section 4.5.1) how Spotify also mediates access to music through control. Spotify exploits its control over the infrastructure through which rights holders distribute music and consumers engage with it to shape consumption practices. Through its teams of playlist editors, the firm exercises control over what music makes it into its highly-influential branded playlists, such as 'Rap Caviar,' whilst its control over software and code means that it is able to control what content is surfaced to consumers when they search for music. I demonstrated how this control is undermining the influence of traditional taste makers and incumbents in the

recorded music industry, such as major record labels, who used to have privileged access to promotional channels, such as radio and music television.

Spotify challenges our understanding of the nature of the cultural authority underpinning cultural intermediaries' influence over taste (Maguire and Matthews 2010, 2012, 2014; McFall 2014; Baker 2012; Wright 2005; Ocejo 2010). Bourdieu (1984) originally introduced the concept of cultural intermediaries to refer to middle-class occupations, such as cultural critics, with high levels of cultural capital who shape how the symbolic value of cultural goods is framed. Yet, the curation performed by Spotify mobilises the labour of heterogenous assemblage of actors and different forms of knowledge and expertise (Webster et al 2016; Morris 2015). The company relies on the expert judgements of music curators it has hired from the music press and radio; it exploits the tastes and judgement of its user base through the use of collaborative filtering recommendation techniques; and it mobilises the technical forms of cultural capital possessed by the teams of data scientists, knowledge engineers and software developers it employs to build recommender systems. These 'human' forms of expertise are encoded in and acted on by computational actors, such as the machine learning models which are designed to extract patterns in listening behaviour to make predictions about future music preferences. The ontological complexity of music streaming services invites us to consider who or what contribute to the expertise and authority underpinning music streaming services' positioning as a new kind of cultural intermediary. As humans with embodied forms of knowledge, are the designers and engineers of music recommender system the only sources of expertise and authority, or are there ways in which technological actors contribute to and constrain music streaming services' influence over the mediation of culture and the shaping of taste (Webster et al 2016, 138)?

Indeed, the control Spotify exerts over what and how music is selected and presented on its platform invites to question whether cultural authority is a pre-requisite for achieving influence over music taste (Moor 2012). Spotify's control over the technical infrastructure through which people access and engage with music and rights holders monetise intellectual property puts it in a privileged position to shape what and how music is mediated. It is able to control what music is presented to people when they log into Spotify and what content is surfaced when people search

for music. It governs the rules of interactions and seeks to design them in such a way that contributes to further engagement on its platform. Spotify filters choice on its terms whether its users want it to or not. This is an important part of how Spotify uses curation to drive user engagement, yet also brings into question what it means to be a cultural intermediary. In other words, does it matter whether Spotify is seen to be fashionable, tasteful or culturally authoritative when it can manipulate what and how music is made available through its control over the technical infrastructure?

7.1.3   Social Dynamics of Music Consumption

By elaborating on how Spotify is shaping the everyday practice of music consumption, this thesis contributes to debates about contemporary music consumption practices. Whilst music streaming services are becoming of increasing scholarly interest, as yet little empirical attention has been given to the practices and perspective of the consumers who use these services to access and engage with music. Existing literature has largely focussed on the potential for music streaming services to alter the political economy of the recorded music industry, dynamics of competition in the music streaming marketplace, as well as how other retailers and distributors, such as independent record stores, are responding to the opportunities and challenges presented by the rise of these firms (Hracs and Jansson 2017; Jansson and Hracs 2018; Kjus 2015; Marshall 2015). Hagen (2015, 2016) provides one of the few empirical accounts about how people engage with music on Spotify, elaborating on the metaphors people use to conceptualise music streaming services (Hagen 2015), as well as how playlist creation has become a part of individuals' identity work (Hagen 2016)

I build on and extend this literature by discussing, from the point of view of consumers, how Spotify is positioned in relation to other cultural intermediaries, such as radio DJs, and sources of music recommendations, such as personal networks, who influence consumption practices. I elaborate on some of the reasons why people engage with the curation Spotify performs. Some are motivated by a desire to broaden their musical horizons and valorise their expertise, whilst for others, especially those with demands on their time, such as having children, curation is a convenient way to outsource choice. I also highlighted how there is a tension between human and computational-driven forms of curation. Whilst the use of music recommendation technologies

increases the rate and scale at which music can be discovered, it also generates a concern that they are creating 'filter bubbles' (Pariser 2012), giving people more of what they know. In contrast, human curators, such as radio DJs, record store clerks, as well as friendships networks, are seen by some as being more authentic, trusted and able to introduce serendipity.

My thesis contributes empirical insights into how the use of Spotify relates to existing music consumption practices and music formats, such as the consumption of vinyl records. In recent years, the resurgence in vinyl consumption has become subject to scholarly attention (Maguadda 2011; Bennett and Rogers 2016; Bartmanski and Woodward 2015; Hracs and Jansson 2017; Kjus 2015). Scholars have related these practices to notions of cultural ownership and authenticity (Maguadda 2011; Bennett and Rogers 2016; Bartmanski and Woodward 2015), and others have sought to better understand how retailers are taking advantage of this renewed demand for vinyl (Hracs and Jansson 2017; Kjus 2015). I contribute to these debates by demonstrating how some people are engaging with vinyl records as a way to resist the immaterial and ephemeral nature of consuming music on Spotify, whilst others are more concerned with the novelty of having abundant access to music on Spotify. Drawing parallels between the slow food and fashion movements, I introduce the concept of 'slow music' to describe how music consumption is being used in resistant ways.

Furthermore, I demonstrated how Spotify is contributing to the blurring of boundaries between producers and consumers (Ross 2011; Powers 2015; Hracs et al 2013; Kitchin and Dodge 2011; Choi and Burnes 2013; Verboord 2010; Burgess and Green 2009; Ritzer and Jurgenson 2010). It has been widely discussed that the Web and digital technologies have 'democratised' cultural production and commentary (Verboord 2010; Burgess and Green 2009; Ritzer and Jurgenson 2010; Kitchin and Dodge 2011). Affordable digital production technologies, such as home studio equipment, and channels for the dissemination of user-generated media, such as YouTube, Facebook and Soundcloud, have lowered the barriers to entry into cultural marketplaces (Burgess and Green 2009; Hracs et al 2013; Hracs 2015). The participatory aspects of the Web, such as social media platforms and customer review sites, have opened up cultural commentary to more people (Verboord 2010; Fletcher and Lobato 2013; Powers 2015; Jansson and Hracs 2018). This

has contributed to the blurring of distinctions between producers and consumers, as the people who consume cultural goods are simultaneously able to engage in its production and circulation. My research demonstrates how playlist creation on Spotify is further blurring these distinctions. External playlist promotion companies are creating opportunities for 'everyday' people to profit from playlist creation. Alongside Spotify's professionalised playlist curators, everyday people have the potential to shape what and how people engage with music on the platform.

7.1.4   Culture and Class in the 21st Century

This thesis contributes to debates about cultural power and class privilege. It elaborated on contemporary manifestations of cultural omnivorousness and the changing part that music taste and consumption play in the accumulation and conversion of cultural capital.

On the one hand, this thesis demonstrated that Spotify is undermining the cultural assets underpinning middle-class privilege. In Chapter 5, I explored how Spotify is shaping how class identity and distinction are performed through both what and how people consume music. Firstly, I demonstrated that the objective possibilities opened up in the field of music consumption by Spotify are making it easier for people from across class backgrounds to access and engage with music that might otherwise have been restricted due to insufficient levels of economic, social and/or cultural capital. In doing so, Spotify is undermining the potential for differences in what people consume to function as a source of class distinction.

Secondly, I argued that for members of the middles classes for whom musical expertise is an important part of their claims to distinction, the ways in which Spotify mediates access to music is undermining opportunities to mobilise cultural capital. The rate at which music is mediated by Spotify, combined with its attempts to personalise the experience of consuming music, are closing down opportunities for some members of the middle classes to display their musical expertise and capacity to appreciate music as an end in of itself. In contrast for members of the middle classes for whom musical expertise is not as important to claims to distinction, as well as for some members of the working classes, the stakes are different. As their claims to distinction are unthreatened, they are more receptive to Spotify's attempts to shape what and how they engage with music.

On the other hand, I exemplified how Spotify is creating opportunities for some members of the middle classes to re(deploy) cultural capital. In Chapter 6, I discussed how the ways in which Spotify mediates access to music, discussed in Chapter 4, may be contributing to new ways of accumulating and converting economic, symbolic and cultural capital. Chapter 6 (section 6.1) identified how the renewed interest in consuming in physical formats has the potential to represent emerging capital (Savage et al 2013; Prieur and Savage 2013; Friedman et al 2015). Commentators have noted how digitalisation and cloud-based streaming services, such as Spotify, are contributing to a loss of 'cultural ownership,' as music has lost its material presence (Morris 2012; Maguadda 2011; Bennett and Rogers 2016). Not only this, as I discussed Chapter 4, music on Spotify is something people access rather than own. Spotify sells access to vast catalogues of licensed music in exchange for a monthly subscription fee or exposure to third party advertisements, engaging people in what Arditi (2017) describes as an 'unending cycle' of consumption. In Chapter 6 (section 6.1), I demonstrated how purchasing expensive vinyl records is a way for some people to mobilise higher levels of disposable income and resist the immaterial nature of consuming music on Spotify, and I identified how the 'slow' consumption of music is a way to mobilise cultural capital and demonstrate one's capacity to appreciate music as an end in of itself and resist the ephemeral nature of consuming music on Spotify.

Furthermore, I demonstrated how use of Spotify itself has the potential to open up new opportunities to achieve class distinction. The practice of playlist creation is opening up economic opportunities for those who are well-positioned with high levels of cultural capital. As I discussed in Chapter 4 (section 4.3.2.1), Spotify has invested in its editorial authority and the role of playlist curator has become an occupation in its own right and its influence as a taste-makers is growing as the popularity of music streaming services' playlist brands grow. Playlist curation is also an opportunity to convert cultural capital into symbolic status and prestige in more ordinary ways. In Chapter 6 (section 6.2.2), I demonstrated how it is used by some as a way of valorise their musical expertise amongst peers.

7.2 Considerations for Future Research

7.2.1 The Political Economy of the Recorded Music Industry

The position that Spotify and other music streaming services occupy as an intermediary infrastructure has the potential to disrupt the dynamics of power in the recorded music marketplace. This is because music streaming services not only provide the sociotechnical means for audiences to access music and rights holders to monetise intellectual property, they actively seek to curate these connections. Through its mechanism for driving user engagement (namely, the creation of editorially-curated and personalised recommendations and playlists), Spotify operates as both a valuable distribution *and* promotion platform. The increasing influence of Spotify's branded playlists and the control Spotify exerts over what and how original and third-party content is selected, presented and arranged to listeners has the potential to disrupt the dynamics of power in the field of music production. Not only this, Spotify has privileged access to data about the identities and interactions of people who use its platform to access and engage with music, and it has the socio-technical capabilities to make use of this data in innovative ways. Whereas once major record labels exercised influence over radio promotion through radio pluggers and techniques such as payola (Anderton et al 2013), incumbents in the recorded music industry are expected to competitively pitch to Spotify in order to secure editorial support from the platform. Spotify are setting the criteria for selection and placing increasing emphasis on the importance of being able to evidence the positive impact that a track, album or artist is having on user engagement.

The control music streaming services exert over how music is mediated via its infrastructure is further unsettling major record labels' market power, whilst creating new opportunities for individuals and firms to achieve a position of dominance in the field. Major record labels are having to play by music streaming services' rules in terms of trying to secure editorial support from these platforms, which, as I highlighted in Chapter 4 (section 4.5.1), is becoming increasingly important to the success of a record's campaign. Chapter 4 (section 4.4.2) also discussed how incumbents are having to invest in their technical capabilities to improve their ability to make use of the data they have access to about streaming behaviour in order to restore market power. For example, my hiring by Universal Music was part of a broader initiative to improve the record

label's analytical capabilities. The company is sitting on vast amounts of data shared with them by Spotify and other music streaming services, yet the ability for the company to make use of this data was not widespread. Rather than relying on people with high levels of cultural capital embedded in local, regional and national music scenes, as is traditional of A&R managers (Frenette 2016; Anderton et al 2013; Negus 2002), these companies need more personnel with the computer programming skills to manipulate large data sets and the analytical skills to rigorously interpret this data. Indeed, many of the senior managers I worked with 'came-up' during a pre-streaming age and were under increasing pressure to make use of the vast amounts of granular data now made available to then, even though many did not have the skills to do this.

There is an opportunity for individuals and firms who are well-positioned to make use of the new forms of data available to major record labels and distributors to achieve dominance in the field of music production. Alongside the playlist curators I discussed in Chapter 6 (section 6.2.2), there are economic opportunities for individuals with high levels of cultural capital, both in terms of both musical know-how, but also technical forms of cultural capital in the form of computer programming skills and familiarity with quantitative research methods, and for more agile record labels and digital distributors with specialist expertise in data analysis to compete with larger and more cumbersome major record labels.

Indeed, music streaming services create new opportunities and risks for individual musicians in the recorded music industry. The ways in which Spotify shares data with artists to help them drive engagement with their music raises important questions about what skills and knowledge are needed to successfully compere in the field of music production. Literature on 'digitally-driven' independent musicians explores the strategies used by these producers to compete in a highly-saturated marketplace with low barriers to entry (Hracs et al 2013; Hracs 2015, 2016; Choi and Burnes 2013). Research has examined how independent musicians manage the competing demands on their time and skills, such as the need to compose music, book gigs and manage social media, by outsourcing more specialist tasks to intermediaries, such as music managers (Hracs 2015). The access to data and data analytics offered to musicians when they license music to Spotify has the potential shape the demands placed on the time and skills of independent

musicians. Being able to effectively use data to improve how music is produced and distributed has the potential to become an important source of competitive advantage, but requires a different set of analytical skills to what is traditionally associated with music production. How independent musicians are adapting to the opportunities and challenges of datafication represents an important avenue for further research.

Music streaming services' disruptive potential extends beyond the field of music consumption to the field of music production. There is a need for more macro-level research examining the changing political economy of the recorded music industry (for example, see Hesmondhalgh and Meier 2017), but also micro-level ethnographic research, examining the working lives of record label personnel (for example, see Frenette 2016). This would contribute to our understanding of if and how music streaming services are shaping the power dynamics in the field of music production, and how these risks and opportunities are experienced and negotiated by workers in the creatives industries.

7.2.2   Streaming 'Natives' and the Formation of Taste

Chapter 6's discussion of emerging capital and new forms of distinction highlighted generational differences in how people consume music on and off Spotify. I identified how the consumption of music in physical formats as well as playlist creation on Spotify has the potential to represent emerging capital for younger members of the middle classes because these groups have more disposable time and money to engage with music in this way. I noted how there appears to be an inversion in the symbolic value imbued in physical formats versus Spotify, with older generations, who grew up with vinyl records celebrating the objective possibilities opened up by the use of Spotify, whereas younger generations ascribed value to the materiality and sense of ownership that accompanies buying music on vinyl.

This raises some interesting questions about the practices and perspectives of younger generations who have grown up with access to streaming services. All of my participants 'lived through' the rise of music streaming services. They grew up in a pre-streaming age, where music had to be purchased, often from bricks-and-mortar retailers. They lived through changes to the way music is produced, distributed and consumed, including the effects of digitalisation and the

Web, and more recently music streaming services. This was advantageous for my research because it enabled me to use the subjective histories of my participants to explore how the conditions of existence in the field of music consumption have changed over time. During the interviews I conducted with music streaming users, my participants reflected a lot about how things were in the past, compared to how things are now in an age of ubiquitous access to music.

Engaging with younger people who have grown up with music streaming services would serve as a revealing point of comparison and would help to explore the emergence of new forms of cultural capital and claims to distinction, as well as adolescent identity formation more broadly. As Rebecca's story illustrates (see Chapter 5, section 5.3.4) my participants cited their teenage years being the most hostile in terms of the consequences of making the 'right' or 'wrong' musical choices, and the most instrumental in the formation of their tastes as they are now.

Yet little is known about how claims to distinction amongst adolescents are being shaped by the use of music streaming services. In an environment where on-demand access to vast catalogues of music is the norm, what music and ways of consuming it possess symbolic value? Are differences in what people consume as divisive for teenagers now when all music can be accessed in equal measure as they were for my participants when access to music was restricted? Do teenagers who are growing up in an age of streaming see value in owning music in physical formats, such as vinyl, artefacts which originate from an increasingly-distant past? As the experience of consuming music online becomes increasingly personalised, how is the formation of taste changing? Rimmer (2012) discusses how forms of primary socialisation (e.g. family, friends) and secondly socialisation (e.g. broadcast media) shape the formation of taste, yet now there are new forms of data-driven mediation shaping young people's early experiences with music. At a time when people are finding their 'musical feet' and discovering where their interests lie, music streaming services are making projections about what music is 'right' for them.

7.2.3   The Levelling of Social Divisions in Music Taste

One of the claims made in this thesis is that music streaming services are democratising access to music, undermining the potential for differences in what music people consume to reinforce class divisions. Using the subjective histories of my participants, I identified several objective possibilities opened up by the use of Spotify, including the affordability of music on Spotify, the anytime, anywhere access to music the platform affords, and the curation it performs, which have made it easier for people from across class backgrounds to access and engage with music. This accessibility is significant because it has opened up the possibility for my participants to engage with music that they might otherwise have been excluded from due to insufficient access to economic, social and/or cultural capital. In doing so, I argued that the abundance of music made available by Spotify and the ways it mediates access to it means that differences in what music people consume is a less viable strategy for achieving class distinction, as exclusivity and exclusion are harder to maintain.

The democratising potential of music streaming services has far-reaching implications and demands further research. Music taste is intersectional in nature; what music people consume and how people consume it is not only shaped by class, but other social dimensions, such as gender, age and race. For example, existing research has demonstrated that there are stubborn generational divides within class groups, with older members of the dominant classes maintaining the legitimacy of so-called forms of highbrow culture, such as classical music, whilst younger generations tend to display more omnivorous tendencies (Warde and Gayo-cal 2009; Bennett et al 2009; Savage et al 2013). There is also extensive musicological research documenting how music consumption practices are divided along gendered lines (Whiteley 1997; Dibben 1999, 2002; Straw 1997; Shuker 2004). For example, record collecting is identified and discussed as being an exclusionary male practice (Straw 1997; Shuker 2004). This invites us to question whether the democratising potential of music streaming services has the potential to level other social divisions in music taste. By making access to music more affordable, divorcing access to music from social regulated (whether in terms of class, gender, race etc.) spaces, and encouraging engagement through curation, are music streaming services empowering people to engage with music they might have otherwise felt excluded on the basis of class, gender, race or any other social division?

In order to address this question, more attention needs to be given to the practices and perspectives of the people who use music streaming services. Just because an immense amount of music is now available does not necessarily mean that people choose to engage with it. Individuals' consumption practices are guided by habitus, and habitus privileges older experiences over newer ones – this results in what Bourdieu (1984) describes as 'favouring the familiar.' Indeed, sociologists have demonstrated that there are cultural boundaries that people rarely cross (Bryson 1996; Savage 2006; Warde and Gayo-Cal 2008; Bennett et al 2009). Whilst omnivorousness is widespread, there are limits to how omnivorous people's tastes are. For example, Bryson (1996) identifies heavy metal as a boundary that is rarely crossed and this claim has been reinforced by subsequent research into social structuring of music tastes (Savage 2006; Warde and Gayo-cal 2008; Bennett et al 2009). In the case of my research, Jamie and Ben's stories demonstrated how dislikes persist, as these individuals eschew what they describe as 'manufactured' pop music, whilst Rebecca's story demonstrated that she critically evaluates Spotify's curated content to identify music that is consistent with her musical tastes and mode of acquisition. Whilst music streaming services may have the potential to dismantle social divisions in music taste, whether this materialises in and through practice is an important area for further empirical research.

It also important to problematise claims to 'democratisation' and consider for whom and on what terms music has become more accessible. The history of 'world music' draws our attention to issues of cultural appropriation and imperialism that are a product and producer of increased access to cultural goods in the globalised age (Feld 1991, 2000; Taylor 1997; Connell and Gibson 2004; Stokes 2004; Born and Hesmondhalgh 2000). The success of Paul Simon's *Graceland* (1986), which featured black South African musicians and the vocal group, Ladysmith Black Mambazo, paved the way for non-western musicians, largely from developing countries, to achieve commercial success in the West (Hayward 1998). Other western musicians, such as Peter Gabriel and Ry Cooder, also created opportunties for new musicians, sounds and techniques from different parts of the world to enter western soundscapes. The music of those non-western performers who became successful in the west eventually became known as 'world music.' In effect, a new genre or marketing category had been created (Connell and Gibson 2004).

Whilst world music may in some way signal improved access to music and greater cultural participation from outside the west, it has served to reproduce racial and geographical inequalities of access in terms of music's production, marketing and consumption (Connell and Gibson 2004; Taylor 1997; Hesmondhalgh 1998; Feld 1991, 2000; Stokes 2004). The marketing of world music has been premised on the othering and essentialisation of music and musicians (Taylor 1997; Connell and Gibson 2004). World music marketing campaigns have promoted the pursuit of authenticity, where authenticity is understood in terms of whether a recording artist is truly from the Brazilian *favela* or Indian slum; whether an artist possesses unfettered emotions as opposed to the overproduced and commercial orientation of western popular music; and the expectation that non-western musicians are 'closer to nature' (Taylor 1997; Feld 1999, 2000). Meanwhile, the consumption of world music is led by privileged white, male consumers. According to Taylor (2013b), world music has experienced a kind of 'classicalisation,' replacing classical music as highbrow culture. World music has taken over the space previously occupied by classical music in high street music stores, various music publications have emerged dedicated to appreciation of world music, and in the UK world music has gained increasing presence in BBC Radio 3's (traditionally a classical music station) programming. Yet in doing so, this cultural appropriation serves to restrict access and implicate world music into games of class distinction.

Reflecting on the history of world music, it is important to consider if and how the diverse music made available by music streaming services is appropriated and by whom. For example, we might consider how the actors involved in the creation of playlists and recommendations categorise different forms of music and if and how this curation serves to perpetuate the othering and essentialisation of non-western musical styles. Meanwhile, Spotify operates in over 70 countries worldwide and we might consider whether its curatorial strategies are localised, or whether the platform adopts a global approach. To put it another way: Is Spotify's strategy for promoting music and driving user engagement orientated towards the tastes of North America and Western Europe, where Spotify's users are most prevalent, or does it adapt what it presents on the homepage or in people's recommendations according to where people are geographically and culturally located? If the former is the case, we are at risk of experiencing cultural homogenisation at a rate and scale not previously encountered. As such, there is a need to re-engage with debates about world music and cultural appropriation in the age of streaming.

7.3   Closing Remarks

It is clear that music streaming services, such as Spotify, are disruptive to the social dynamics of music consumption. This thesis has demonstrated how the ways in which Spotify mediate access to music are shaping the performance of class identity and distinction in complex ways. Spotify is both undermining existing class practices, whilst at the same time creating new opportunities to achieve class distinction. The multiple and overlapping actors, processes and practices involved in the curation performed by Spotify is challenging our understanding of what it means to be a cultural intermediary. And Spotify's intervention into what and how music is made available to consumers has the potential to disrupt the dynamics of power in the recorded music industry.

However, the fields of music production and consumption are highly dynamic and in a constant state of change. As the amounts of data music streaming services have access to increases and the computational techniques for manipulating this data increase in sophistication, how these platforms mediate access to music is likely to change. Their ability to model individuals' music tastes may be become more refined and the experience of consuming music may become more personalised in more pervasive ways. Indeed, changes in the amount and types of 'contextual data,' such as spatial data gathered through smart devices (e.g. smart watches and smart home devices), may open up the possibility for more contextually-aware personalisation, with music adapting to the situations and contexts in which people are in (Schedl 2018).

Ongoing research is needed to better understand how music streaming services are disrupting the social dynamics of music consumption. The research presented here has demonstrated that the ways in which these platforms mediate access to music has significance for the part that music taste and consumption play in the reproduction of class, yet what effect further technological change will have on music tastes and consumption practices remains to be seen. As the experience of consuming music becomes ever-more personalised, the opportunities to mobilise cultural capital in the form of musical expertise may continue to diminish, or these new ways of engaging with music may create new opportunities to achieve distinction. Further research is

needed to continue to make sense of changing nature of the cultural assets underpinning class privilege in the 21st century.

Appendix A   Interview Guide (Industry Body)

Bigger Picture

Can you tell me a bit about yourself and the organisation that you work for?

Streaming

How has the rise of music streaming shaped the music industry?

Some people have said that there has been a power shift in the music industry, with music streaming services, which are essentially tech companies, having increasing influence over music distribution and access to audiences?

What are Spotify's assets, its value offering?

How do you think music streaming services, such as Spotify, are shaping consumption practices?

What about taste?

Recommendation

What problems do you think algorithmic music recommender systems are designed to solve?

Do you think there are any strategic objectives behind the provision of recommendations for companies such as Spotify?

What added value do you think music consumers get out of these music recommendations?

Do they present any opportunities or challenges for other actors in the marketplace?

If and how do you think these recommendation services are shaping consumption practices?

What about taste?

Positioning

In your view, who are the actors performing as taste makers out there in the music marketplace?

Appendix A

What is the relative importance of these different actors in the current marketplace?

How has this changed over time?

How do you think the work of Spotify's recommendation systems compares to the work of these other actors?

- Consumer perspective
- Industry perspective
- Quality
- Trust
- Legitimacy
- Expertise

How would you characterise the role that Spotify's recommendation services are performing?

Consumption

I'm going to be speaking to some music streaming users about how they consume music and use recommendation services, I was wondering…

How do you listen to music?

Do you buy music?

What type of music do you buy?

What information sources do you use to inform your consumption choices?

Closing

What's the future for recommendation in the music industry?

Is there anything else that you think is relevant?

Recruitment

Do you know of anybody of who would be really interesting for me to speak to, and would it be possible for me to get their contact details, or for you to put me in contact with them?

Appendix B   Interview Guide (Record Label/Digital Distributor)

Bigger Picture

Can you tell me a bit about yourself and the organisation that you work for?

Streaming

How has the rise of music streaming shaped the music industry?

Some people have said that there has been a power shift in the music industry, with music streaming services, which are essentially tech companies, having increasing influence over music distribution and access to audiences?

What are Spotify's assets, its value offering?

How do you think music streaming services, such as Spotify, are shaping consumption practices?

What about taste?

Practice

Can tell me about your company's interactions with Spotify – what are they about, what do they entail?

How does it relate to recommender systems?

What kind of information does Spotify give you about the performance of your music on its platform?

Does it pertain to recommender services?

Have you ever noticed the influence of recommender systems?

Is this something you think about or pay attention to?

Appendix B

Recommendation

As we know Spotify and other music streaming services invest heavily in music recommendation technologies, why do you think this is happening?

What are the strategic objectives?

What opportunities do Spotify's music recommendation services present to you and your company, if there are any?

What about challenges?

Have you noticed any influence?

Do you learn about the performance of songs?

What added value do you think music consumers get out of these music recommendations?

Do they present any opportunities or challenges for other actors in the marketplace?

If and how do you think these recommendation services are shaping consumption practices?

What about taste?

Positioning

In your view, who are the actors performing as taste makers out there in the music marketplace?

What is the relative importance of these different actors in the current marketplace?

How has this changed over time?

How do you think the work of Spotify's recommendation systems compares to the work of these other actors?

- Consumer perspective

- Industry perspective

- Quality

- Trust

- Legitimacy

- Expertise

How would you characterise the role(s) that Spotify's recommendation services are performing?

Consumption

I'm going to be speaking to some music streaming users about how they consume music and use recommendation services, I was wondering…

How do you listen to music?

Do you buy music?

What type of music do you buy?

What information sources do you use to inform your consumption choices?

Closing

What's the future for recommendation in the music industry?

Is there anything else that you think is relevant?

Recruitment

Do you know of anybody of who would be really interesting for me to speak to, and would it be possible for me to get their contact details, or for you to put me in contact with them?

Appendix C Interview Guide (Playlist Curator)

Background

I was wondering if you could tell me a bit about what you do at your company?

How does the work that you do relate to your company's recommendation services?

Industry

How has the rise of music streaming shaped the music industry?

Some people have said that there has been a power shift in the music industry, with music streaming services, which are essentially tech companies, having increasing control role over what music gets out there, what do you think?

How do you think music streaming services, such as Spotify, are shaping consumption practices?

What about taste?

Recommendation

As we know Spotify and other music streaming services invest heavily in music recommendation technologies, why do you think this is happening?

What are your company's strategic objectives?

If and how do the strategic objectives of your company shape how music recommender systems work?

What added value do you think music consumers get out of these music recommendations?

Do they present any opportunities or challenges for other actors in the marketplace?

If and how do you think these recommendation services are shaping consumption practices?

What about taste?

Appendix C

Positioning

In your view, who are the actors performing as taste makers out there in the music marketplace?

How do you think the work of Spotify's recommendation systems compares to the work of these other actors?

- Consumer perspective
- Industry perspective
- Quality
- Trust
- Legitimacy

Expertise

The core of my PhD is focussed on exploring if and how Spotify's music recommendations services are performing as taste makers in the marketplace, how would you characterise the role or function that recommendation services perform?

Do they serve different functions for different actors?

- e.g. company versus consumer

Closing

What's the future for recommendation in the music industry?

Is there anything else that you think is relevant?

Recruitment

Do you know of anybody of who would be really interesting for me to speak to, and would it be possible for me to get their contact details, or for you to put me in contact with them?

Appendix D   Interview Guide (Data/Computer Scientist)

Bigger Picture

Can you tell me about the history of music recommender systems?

- Research community
- Commercial application

What problems do you think music recommender systems are designed to solve?

What are the different kind of use cases for music recommender systems?

- Activity type: discovery, convenience etc.
- Service type: playlist generation, single-item etc.

When did music recommendation start to become a thing in the industry? When did it start getting taken seriously?

How has its importance changed over time?

Do you think there are any strategic objectives behind the provision of Spotify for companies such as Spotify?

If and how do the strategic objectives of the company shape how music recommender systems work?

Distribution of Labour

Please could you visualise or describe the make-up of a music recommender system?

- What does each part do?
- How do the different parts relate to each other?

What is the importance of different components to the recommendation process?

How would this visualisation differ between recommendation techniques?

How would this visualisation differ between use cases?

Where does the influence of designers and engineers come in?

Where does the influence of users come in?

What about any other actors?

What technical constraints does one face when building and implementing a recommender system?

- E.g. cold start, serendipity, novelty, accuracy, context, scale

How does this vary depending upon what recommendation technique is used?

How does this vary depending upon use case? (e.g. single song vs. playlist generation)

How do these technical constraints affect the work of music recommender systems?

What non-technical constraints does one face when building and implementing a recommender system?

- E.g. licensing/legal framework, organisational structure, decision-making processes, data

How is this affected by the type of recommendation approach adopted?

How does this vary depending upon use case? (e.g. single song vs. playlist generation)

How do these non-technical constraints affect the work of music recommender systems?

In what ways do designers and engineers influence how recommendations are computationally generated?

- How does this vary depending upon what recommendation technique is used?
- How does this vary depending upon use case? (e.g. single song vs. playlist generation)

In what ways do users influence how recommendations are computationally generated?

Are there any other actors that influence how recommendations are generated?

Impact

What types of consumption behaviours do you think music recommender systems promote or enable?

- Diversify taste
- Discovery
- Promote omnivorousness
- Broaden horizons, deepen
- Filter bubble effect

How does this vary depending upon what recommendation technique is used?

Positioning

In your view, who are the taste makers out there in the music marketplace?

How do you think the work of recommendation systems compares to the work of these other actors?

- Consumer perspective
- Industry perspective
- Quality (human vs. machine)

- Trust
- Legitimacy
- Expertise

How do you think Spotify are getting their recommendation services to stand out from the crowd?

- Other intermediaries/curators
- Other music recommender services

Closing

Is there anything else that you think is relevant?

For academics: In what directions do you see recommendation technology going in the future?

Recruitment

Do you know of anybody of who would be really interesting for me to speak to, and would it be possible for me to get their contact details, or for you to put me in contact with them?

Appendix E Interview Guide (Spotify Users)

Biography

Where did you grow up?

What did your parents do for a living?

Did you go to college/university?

Musical Biography

Where do you think our music taste derives from?

Do you think different types of music are associated with different types of people?

How have your musical tastes and interests changed over the years?

Have you got any music dislikes? What would you never listen to?

How do your music interests compare to the tastes of your friends? Why do you think that's the case?

What about your family? Why do you think that's the case?

When do you like to listen to music and why? Do these activities structure what you listen to?

Have you ever had a music collection?

How do you discover music? What kinds of sources do you use?

Thinking about what we have discussed, would you say that music is a big part of your life?

Music Streaming

How long have you been using Spotify?

What motivated you to start using music streaming?

What do you like about using Spotify?

Have you tried any other music streaming services?

Do you pay for a subscription?

Do you only listen to music through streaming, or do you listen to it in other ways? Why?

Do any of your friends use music streaming, how do they find it? Why do you think that's the case?

Do any of your family use music streaming, how do they find it? Why do you think that's the case?

Do you share your streaming account with anyone, how does that work out?

What do you think about all the different playlists that Spotify create and promote? Do you use them? Do you like them? Why? (examples: genre-based, mood-based, activity-based)

What about the personalised playlists and recommendations? Do you use them? Do you like them? Why?

Does it feel like the service that Spotify provides is personalised to you? How do you feel about this? Do you feel attached to your Spotify account?

Reflection

Reflecting back on what we have discussed so far, particularly the things in the first part of the interview, does it feel like using Spotify has shaped your relationship with music?

Do you think that using Spotify has changed how you listen to music?

What about how often you listen to music?

What about in terms of the types of music you listen to?

Has this changed since you started using the service?

What is it about using Spotify that has contributed to this change?

Closing

So we have been talking a lot about how you use Spotify, do you think you are going to continue to use the service into the future? Why?

Is there anything else that you think is relevant?

Do you know anyone who would be willing to chat about music streaming?

Appendix F Walk-Along Guide

Intro: This activity is a chance for you to show me how you use Spotify and point out different features which stand out for you. Let's begin by launching the Spotify app and exploring the 'homepage.'

Areas to explore:

<u>User-generated playlists</u>

Do they create playlists?

What playlists?

Why do they create them?

Do they share them?

<u>Editorially-created playlists</u>

Do they engage with them?

What do they engage with?

Why do they engage with them?

Have they got any playlist dislikes? Why?

<u>Personalised recommendations and playlists</u>

Do they engage with them?

What do they engage with?

Why do they engage with them?

Have they got any playlist/recommendation dislikes? Why?

Do they feel that the content is personalised to them?

Why do they think the service is generating these recommendations?

<u>The user interface</u>

Do they notice how content is strategically arranged?

Does the user interface influence their choices?

Do they like how the interface is arranged? Why? Why not?

<u>Library</u>

Do they add music to their personal library?

What music have they added?

Why do they add music?

Do they access music using their library? How regularly?

Appendix G   Participant Information Sheet (Key Informants)

UNIVERSITY OF
Southampton

Participant Information Sheet (Key Informants)

Study Title: Algorithmic Music Recommendation Systems as Cultural Intermediaries in the Digital Age

Researcher: Jack Webster   **Ethics number**: 23554

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to sign a consent form.

What is the research about?
The researcher is a PhD research student at the University of Southampton. This research is being conducted as part of a PhD in Web Science and it is supported by the Web Science Centre for Doctoral Training.

The aim of the study is to examine how the recommendation technologies used by music streaming services, such as Spotify, are performing as 'cultural intermediaries,' shaping how we consume music and cultivate musical taste. It aims to explore what value music consumers get out of using this technology, and the how the work of recommendation technologies relates to other intermediary actors, such as music critics and radio DJs. In addition, it aims to explore how the use of this technology shapes what music people consume and how they consume it.

Drawing upon your expert insights, the purpose of this interview is to help the researcher to explore what role recommendation technologies are performing in the music industry, why music streaming services and other actors are investing in this technology, and how recommendation technologies are shaping consumption practices.

Why have I been chosen?
You have been approached because of your expert knowledge and experience in the music industry, or in relation to recommendation technologies.

What will happen to me if I take part?
If you agree to participate, you will take part in a semi-structured interview with the researcher which will be audio-recorded and transcribed. The interview is expected to last approximately 1 hour. Depending upon your location, the interview may take place face-to-face at your place of work or at a nearby coffee shop, depending upon what it most appropriate and convenient for you, or via a video-calling service, such as Skype.

You will be asked whether you would like to take part in a follow-up interview in the near future. Follow-up interviews will be similar in form, but you will have an opportunity to discuss the researcher's findings from music streaming service users and provide your expert commentary.

Are there any benefits in my taking part?
By taking part, you will contribute to the development of knowledge about the work of music recommendation technologies and what effect they are having upon the cultivation of taste. It is hoped that participating in this research project will be an enjoyable experience as the subject matter is related to your field of expertise.

Are there any risks involved?
There are no particular risks associated with your participation. The interview questions are designed to not pry into any commercially sensitive information; rather they intend to explore the underlying principles and broader objectives of music recommendation technologies.

Will my participation be confidential?
All data collected will be anonymised in order to protect your identity in the subsequent use of this data. Your data will be held on a password-protected secure University personal laptop and on a password-protected secure PC owned by the researcher (subject to the same controls

27/08/2016 Version 1.0

Appendix H   Consent Form (Key Informants)

UNIVERSITY OF
Southampton

CONSENT FORM (Key Informants)

Study title: Algorithmic Music Recommendation Systems as Cultural Intermediaries in the Digital Age

Researcher name: Jack Webster

Ethics reference: 23554

Please initial the box(es) if you agree with the statement(s):

Data Protection

I understand that information collected about me during my participation in this study will be stored on a password protected computer and that this information will only be used for the purpose of this study.

Name of participant (print name)...

Signature of participant..

Date..

02/09/2016 Version 1.0

Appendix I Participant Information Sheet (Spotify Users)

UNIVERSITY OF
Southampton

Participant Information Sheet

Study Title: Algorithmic Music Recommendation Systems as Cultural Intermediaries in the Digital Age

Researcher: Jack Webster
ERGO number: 28339

Please read this information carefully before deciding to take part in this research. It is up to you to decide whether or not to take part. If you are happy to participate you will be asked to sign a consent form.

What is the research about?
The researcher is a PhD research student at the University of Southampton. This research is being conducted as part of a PhD in Web Science and it is supported by the Web Science Centre for Doctoral Training.

The aim of the study is to examine how the recommendation services provided by music streaming services, such as Spotify, are performing as 'cultural intermediaries,' shaping the relationship between taste, consumption and identity. It aims to explore people's experiences of using music streaming services, with a particular interest in people's use of the playlists and recommendations provided by music streaming services, and how the use of this technology shapes what music people consume and how they consume it.

Why have I been asked to participate?
You have been selected because the researcher wishes to explore your experiences and perspectives on using Spotify and the recommendation services they offer.

What will happen to me if I take part?
If you agree to participate, you will take part in a semi-structured interview with the researcher which will be audio-recorded and transcribed. The interview is expected to up to 1 hour. In this interview, we will talk about your background and musical tastes, how you use music streaming and what you like/dislike about it, and discuss if and how you think your use of music streaming and music recommendation has shaped your consumption of music.

During the interview, the researcher will ask you to walk them through how you use music streaming and discuss what you think about the different aspects of these services, such as the different playlists and recommendations provided by a service.

You will be invited to bring along a device through which you typically access and use Spotify, such as your smartphone, portable music device or laptop. This is in order for the researcher to conduct the 'walk-through' part of the interview. If you are unable or do not want to bring along your own device, but still want to participate in this part of the interview, the researcher will provide access to a laptop.

The interview will be conducted in a suitable third space, such as a quiet coffee shop, in your home, or in a pre-booked seminar or meeting room on the university campus. Location selection will be dependent upon what you feel most comfortable with and is most convenient.

Are there any benefits in my taking part?
By taking part, you will contribute to the development of knowledge about the work of music recommendation technologies and what effect they are having upon the cultivation of taste. It is hoped that participating in this research project will be an enjoyable experience due to the nature of the subject matter.

03/07/2017 Version 2.0   Ethics ID: 28339

Appendix J Consent Form (Spotify Users)

CONSENT FORM

Study title: Algorithmic Music Recommendation Systems as Cultural Intermediaries in the Digital Age

Researcher name: Jack Webster
ERGO number: 28339

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet (03/07/2017, version 2.0) and have had the opportunity to ask questions about the study.	
I agree to take part in this research project and agree for my data to be used for the purpose of this study only.	
I understand my participation is voluntary and I may withdraw at any time for any reason without my rights being affected.	
I understand that my interview will be audio recorded and all responses will be anonymised.	

Name of participant (print name)……………………………………………………………………………

Signature of participant……………………………………………………………………………………….

Date…………………………………………………………………………………………..…………………….

Name of researcher (print name)……………………………………………………………………………

Signature of researcher ……………………………………………………………………………………….

Date………..

--–--–-----------------------

Bibliography

Adams, Matthew, and Jayne Raisborough. 2008. 'What Can Sociology Say about FairTrade?' *Sociology* 42 (6): 1165–82.

Adams, Matthew, and Jayne Raisborough. 2010. 'Making a Difference: Ethical Consumption and the Everyday'. *The British Journal of Sociology* 61 (2): 256–74.

Adorno, Theodor, and Max Horkheimer. 1979. *Dialectic of Enlightenment*. Translated by John Cumming. London, UK: Verso.

Allan, James, Jaime Carbonell, George Doddington, Jonathan Yamron, and Yiming Yang. 1998. 'Topic Detection and Tracking Pilot Study Final Report'. In *Proceedings of the DARPA Broadcast News Transcription and Understanding Workshop*, February 8-11, 194–218. Burlington, MA: Morgan Kaufmann Publishers.

Ananny, Mike, and Kate Crawford. 2018. 'Seeing without Knowing: Limitations of the Transparency Ideal and Its Application to Algorithmic Accountability'. *New Media & Society* 20 (3): 973–989.

Anderson, Chris. 2006. *The Long Tail: How Endless Choice Is Creating Unlimited Demand*. London, UK: Random House.

Anderton, Chris, Andrew Dubber, and Martin James. 2013. *Understanding the Music Industries*. London, UK: SAGE Publications.

Andrejevic, Mark. 2007. 'Surveillance in the Digital Enclosure'. *The Communication Review* 10 (4): 295–317.

Arditi, David. 2014. 'iTunes: Breaking Barriers and Building Walls'. *Popular Music and Society* 37 (4): 408–24.

Bibliography

Arditi, David. 2017. 'Digital Subscriptions: The Unending Consumption of Music in the Digital Era'. *Popular Music and Society* 0 (0): 1–17 (Accessed 28 August 2018).

Arriagada, Arturo, and Victor Cruz. 2014. 'Music Fans as Mediators in the Age of Digital Reproduction'. In *The Ashgate Research Companion to Fan Cultures*, edited by Linda Duits, Koos Zwaan, and Stijn Reijnders, 149–62. Farnham, UK: Ashgate.

Aswad, Jem. 2018. "Ed Sheeran Named Best-Selling Global Recording Artist of 2017." *Variety*, February 26, 2018. https://variety.com/2018/music/news/ed-sheeran-named-best-selling-global-recording-artist-of-2017-1202710314/ (Accessed 28 December 2018).

Atkinson, Will. 2007. 'Beck, Individualization and the Death of Class: A Critique'. *The British Journal of Sociology* 58 (3): 349–66.

Atkinson, Will. 2011. 'The Context and Genesis of Musical Tastes: Omnivorousness Debunked, Bourdieu Buttressed'. *Poetics* 39 (3): 169–86.

Back, Les. 2012. 'Live Sociology: Social Research and Its Futures'. *The Sociological Review* 60 (S1): 18–39.

Baker, Sarah Elsie. 2012. 'Retailing Retro: Class, Cultural Capital and the Material Practices of the (Re)Valuation of Style'. *European Journal of Cultural Studies* 15 (5): 621–41.

Barna, Emilia. 2017. '"The Perfect Guide in a Crowded Musical Landscape:" Online Music Platforms and Curatorship'. *First Monday* 22 (4) (Accessed 28 August 2018).

Barrington, Luke, Reid Oda, and Gert Lanckriet. 2009. 'Smarter Than Genius? Human Evaluation of Music Recommender Systems'. In *Proceedings of the 10th International Conference on Music Information Retrieval (ISMIR '09)*, Kobe, Japan, October 26-30, 357–62.

Bartmanski, Dominik, and Ian Woodward. 2015. 'The Vinyl: The Analogue Medium in the Age of Digital Reproduction'. *Journal of Consumer Culture* 15 (1): 3–27.

Barton, Laura. 2015. 'Interview: Zane Lowe on Apple, the BBC and Why He'll Miss London'. *The Guardian*, 16 February 2015. https://www.theguardian.com/music/2015/feb/16/zane-lowe-apple-bbc-london-radio1-la (Accessed 20 August 2018).

Beck, Ulrich. 1994. 'The Reinvention of Politics: Towards a Theory of Reflexive Modernization'. In *Reflexive Modernization: Politics, Tradition and Aesthetics in the Modern Order*, edited by Ulrich Beck, Anthony Giddens, and Scott Lash, 1-55. Cambridge, UK: Polity Press.

Beck, Ulrich. 1992. *Risk Society: Toward a New Modernity*. London, UK: SAGE Publications.

Beck, Ulrich. 1997. *The Reinvention of Politics: Rethinking Modernity in the Global Social Order*. Cambridge, UK: Polity Press.

Beer, David. 2009. 'Power Through the Algorithm? Participatory Web Cultures and the Technological Unconscious'. *New Media & Society* 11 (6): 985–1002.

Beer, David. 2013. *Popular Culture and New Media*. Basingstoke, UK: Palgrave Macmillan.

Beer, David. 2017. 'The Social Power of Algorithms'. *Information, Communication & Society* 20 (1): 1–13.

Bellavance, Guy. 2008. 'Where's High? Who's Low? What's New? Classification and Stratification Inside Cultural "Repertoires"'. *Poetics* 36 (2–3): 189–216.

Bennett, Andy, and Ian Rogers. 2016. 'Popular Music and Materiality: Memorabilia and Memory Traces'. *Popular Music and Society* 39 (1): 28–42.

Bibliography

Bennett, Tony, Mike Savage, Elizabeth Silva, Alan Warde, Modesto Gayo-Cal, and David Wright. 2009. *Culture, Class, Distinction*. Oxon, UK: Routledge.

Berg, Bruce L., and Howard Lune. 2012. *Qualitative Research Methods for the Social Sciences*. New Jersey, USA: Pearson Education Inc.

Bhaskar, Michael. 2016. *Curation: The Power of Selection in a World of Excess*. London, UK: Piatkus.

Billsus, Daniel, and Michael J. Pazzani. 1999. 'A Personal News Agent That Talks, Learns and Explains'. In *Proceedings of the 3rd Annual Conference on Autonomous Agents*, Seattle, Washington, USA, May 1-5, 268–75. New York, USA: ACM.

Billsus, Daniel, Michael J. Pazzani, and James Chen. 2000. 'A Learning Agent for Wireless News Access'. In *Proceedings of the 5th International Conference on Intelligent User Interfaces*, New Orleans, Louisiana, USA, January 9-12, 33–36. New York, USA: ACM.

Blakley, Johanna. 2016. 'Technologies of Taste'. *IEEE Technology and Society Magazine* 35 (4): 39–43.

Born, Georgina. 2010. "For a Relational Musicology: Music and Interdisciplinarity, Beyond the Practice Turn." *Journal of the Royal Musical Association* 135 (2): 205–43.

Born, Georgina. 1995. *Rationalizing Culture: IRCAM, Boulez and the Institutionalization of the Musical Avant-Garde*. Berkeley, CA, USA: University of California Press.

Born, Georgina, and David Hesmondhalgh, eds. 2000. *Western Music and Its Others: Difference, Representation, and Appropriation in Music*. Berkeley, CA, USA: University of California Press.

Bottero, Wendy. 2004. 'Class Identities and the Identity of Class'. *Sociology* 38 (5): 985–1003.

Bottero, Wendy. 2005. *Stratification: Social Division and Inequality*. Oxon, UK: Routledge.

Bourdieu, Pierre. 1977. *Outline of a Theory of Practice*. Translated by Richard Nice. Cambridge, UK: Cambridge University Press.

Bourdieu, Pierre. 1984. *Distinction: A Social Critique of the Judgement of Taste*. Translated by Richard Nice. Oxford, UK: Routledge.

Bourdieu, Pierre. 1986. 'The Forms of Capital'. In *Handbook of Theory and Research for the Sociology of Education*, edited by John G. Richardson, 241–58. New York, USA: Greenwood.

Bourdieu, Pierre. 1990. *The Logic of Practice*. Cambridge, UK: Polity Press.

Bourdieu, Pierre. 1993. *The Field of Cultural Production*. Cambridge, UK: Polity Press.

Bourdieu, Pierre. 1994. *In Other Words: Essays Towards a Reflexive Sociology*. Translated by Matthew Adamson. Paris, FR: Seuil.

Bourdieu, Pierre. 1996. *Photography: A Middle-Brow Art*. Translated by Shaun Whiteside. Cambridge, UK: Polity Press.

Bourdieu, Pierre. 1996. *The Rules of Art: Genesis and Structure of the Literary Field*. Translated by Susan Emanuel. Cambridge, UK: Polity Press.

Bourdieu, Pierre. 1998. *On Television*. Translated by Priscilla Parkhurst Ferguson. New York, USA: The New Press.

Bourdieu, Pierre. 2004. *Science of Science and Reflexivity*. Translated by Richard Nice. Chicago, IL, USA: University of Chicago Press.

Braun, Virginia, and Victoria Clarke. 2006. 'Using Thematic Analysis in Psychology'. *Qualitative Research in Psychology* 3 (2): 77–101.

Britton, Luke Morgan. 2015. 'Millennials Push 2015 Vinyl Sales to 26-Year High in US'. *NME*, 10 November 2015. https://www.nme.com/news/music/various-artists-598-1200543 (Accessed 20 August 2018).

Bryson, Bethany. 1996. '"Anything But Heavy Metal": Symbolic Exclusion and Musical Dislikes'. *American Sociological Review* 61 (5): 884–99.

Bucher, Taina. 2017. 'The Algorithmic Imaginary: Exploring the Ordinary Affects of Facebook Algorithms'. *Information, Communication & Society* 20 (1): 30–44.

Bull, Michael. 2007. *Sound Moves: iPod Culture and Urban Experience*. Abingdon, UK: Routledge.

Burgess, Jean, Joshua Green, Henry Jenkins, and John Hartley. 2009. *YouTube: Online Video and Participatory Culture*. Cambridge, UK: Polity Press.

Burke, Robin. 2002. 'Hybrid Recommender Systems: Survey and Experiments'. *User Modeling and User-Adapted Interaction* 12 (4): 331–70.

Burrell, Jenna. 2016. 'How the Machine "Thinks": Understanding Opacity in Machine Learning Algorithms'. *Big Data & Society* 3 (1): 1-12.

Callon, Michel. 1986. 'Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fisherman of St Brieu Bay'. In *Power, Action and Belief: A New Sociology of Knowledge?*, edited by John Law, 196–233. London, UK: Routledge & Kegan Paul.

Carniol, Naomi. 2005. "Music Industry Sings the Blues." *Toronto Star*, October 27, 2005. https://www.pressreader.com/canada/toronto-star/20051027/282437049518453 (Accessed 28 December 2018).

Celma, Òscar. 2010. *Music Recommendation and Discovery: The Long Tail, Long Fail, and Long Play in the Digital Music Space.* Dordrecht, NL: Springer Heidelberg.

Cheney-Lippold, John. 2011. 'A New Algorithmic Identity: Soft Biopolitics and the Modulation of Control'. *Theory, Culture & Society* 28 (6): 164–81.

Choi, Hwanho, and Bernard Burnes. 2013. 'The Internet and Value Co-Creation: The Case of the Popular Music Industry'. *Prometheus: Critical Studies in Innovation* 31 (1): 35–53.

Christians, Clifford G. 1994. 'Ethics and Politics in Qualitative Research'. In *Handbook of Qualitative Research*, edited by Egon G. Guba and Yvonna S. Lincoln, 139–64. Thousand Oaks, CA, USA: SAGE Publications.

Clark, Hazel. 2008. 'SLOW + FASHION–an Oxymoron–or a Promise for the Future'. *Fashion Theory* 12 (4): 427–46.

Colburn, Steven. 2015. 'Filming Concerts for YouTube: Seeking Recognition in the Pursuit of Cultural Capital'. *Popular Music and Society* 38 (1): 59–72.

Connell, John, and Chris Gibson. 2004. "World Music: Deterritorializing Place and Identity." *Progress in Human Geography* 28 (3): 342–61.

Cope, Meghan. 2005. 'Coding Qualitative Data'. In *Qualitative Methods in Human Geography*, edited by Iain Hay, 223–33. Oxford, UK: Oxford University Press.

Bibliography

Corrigan, Peter. 1997. *The Sociology of Consumption*. London, UK: SAGE Publications.

Creswell, John W. 2007. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Thousand Oaks, CA, USA: SAGE Publications.

Crewe, Louise. 2013. 'Tailoring and Tweed: Mapping the Spaces of "Slow Fashion"'. In *Fashion Cultures Revisited*, edited by Stella Bruzzi and Pamela Church Gibson, 200–214. Abingdon, UK: Routledge.

Crompton, Rosemary. 1998. *Class and Stratification: An Introduction to Current Debates*. Second Edition. Cambridge, UK: Polity Press.

Cronin, Anne M. 2004. 'Regimes of Mediation: Advertising Practitioners as Cultural Intermediaries?' *Consumption Markets & Culture* 7 (4): 349–69.

Davis, Harold. 2006. *Search Engine Optimization: Building Traffic and Making Money with SEO*. Sebastopol, CA, USA: O'Reilly Media.

Deakin, Hannah, and Kelly Wakefield. 2013. 'Skype Interviewing: Reflections of Two PhD Researchers'. *Qualitative Research* 14 (5): 603–16.

Deezer. 2018. 'Flow – Your Personalised Soundtrack by Deezer'. 6 June 2018. https://support.deezer.com/hc/en-gb/articles/201331091-Flow-your-personal-soundtrack-by-Deezer (Accessed 20 August 2018).

Denegri-Knott, Janice, and Mike Molesworth. 2010. 'Concepts and Practices of Digital Virtual Consumption'. *Consumption Markets & Culture* 13 (2): 109–32.

DeNora, Tia. 2000. *Music in Everyday Life*. Cambridge, UK: Cambridge University Press.

Department of Media, Culture and Sport (DMCS). *Creative Industries Mapping Documents 2001*. London, UK, 2001. Published online at: https://www.gov.uk/government/publications/creative-industries-mapping-documents-2001 (Accessed 13 September 2018).

Devine, Fiona, and Mike Savage. 1999. 'Conclusion: Renewing Class Analysis'. *The Sociological Review* 47 (S2): 184–99.

Dibben, Nicola. 1999. "Representations of Femininity in Popular Music." *Popular Music* 18 (3): 331–55.

Dibben, Nicola. 2002. "Gender Identity and Music." In *Musical Identities*, edited by Rayond A.R. Macdonald, David J. Hargreaves, and Dorothy Miell, 117–33. Oxford, UK: Oxford University Press.

Dijck, José van, and Thomas Poell. 2013. 'Understanding Social Media Logic'. *Media and Communication* 1 (1): 2–14.

Dijck, José van. 2013. *The Culture of Connectivity: A Critical History of Social Media*. Oxford, UK: Oxford University Press.

Dowling, Robyn. 2005. 'Power, Subjectivity, and Ethics in Qualitative Research'. In *Qualitative Methods in Human Geography*, edited by Iain Hay. Oxford, UK: Oxford University Press.

Dredge, Stuart. 2016. 'The New Tastemakers: A Day in the Life of a Music-Streaming Playlister'. *The Guardian*, 23 May 2016. https://www.theguardian.com/technology/2016/may/23/music-streaming-services-playlister-sam-lee-deezer (Accessed 20 August 2018).

Du Gay, Paul, Stuart Hall, Linda James, Hugh Mackay, and Keith Negus. 1997. *Doing Cultural Studies: The Story of the Sony Walkman*, 83–109. London, UK: SAGE Publications.

Duffy, Brooke. 2015. 'Amateur, Autonomous, and Collaborative: Myths of Aspiring Female Cultural Producers in Web 2.0'. *Critical Studies in Media Communication* 32 (1): 48–64.

Bibliography

Dunn, Kevin. 2005. 'Interviewing'. In *Qualitative Research Methods in Human Geography*, edited by Iain Hay, 79–105. Oxford, UK: Oxford University Press.

Edwards, Lee. 2012. 'Exploring the Role of Public Relations as a Cultural Intermediary Occupation'. *Cultural Sociology* 6 (4): 438–54.

Eells, Josh. 2013. "Miley Cyrus on Why She Loves Weed, Went WIld at the VMAs and Much More." *Rolling Stone*, September 27, 2013. https://www.rollingstone.com/music/music-news/miley-cyrus-on-why-she-loves-weed-went-wild-at-the-vmas-and-much-more-99493/ (Accessed 28 December 2018).

Ellis-Peterson, Hannah. 2014. 'Taylor Swift Takes a Stand Over Spotify Music Royalties'. *The Guardian*, 5 November 2014. https://www.theguardian.com/music/2014/nov/04/taylor-swift-spotify-streaming-album-sales-snub (Accessed 20 August 2018).

Ellis-Peterson, Hannah. 2016. 'Music Streaming Hailed as Industry's Saviour as Labels Enjoy Profit Surge'. *The Guardian*, December 2016. https://www.theguardian.com/technology/2016/dec/29/music-streaming-industry-saviour-labels-spotify-apple-music (Accessed 20 August 2018).

Ellis-Peterson, Hannah. 2017. 'Record Sales: Vinyl Hits 25-Year High'. *The Guardian*, 3 January 2017. https://www.theguardian.com/music/2017/jan/03/record-sales-vinyl-hits-25-year-high-and-outstrips-streaming (Accessed 20 August 2018).

Emmel, Nick, Kahryn Hughes, Joanne Greenhalgh, and Adam Sales. 2007. 'Accessing Socially-Excluded People – Trust and the Gatekeeper in the Researcher-Participant Relationship'. *Sociological Research Online* 12 (2): 1–3.

Emmison, Michael, and John Frow. 1998. 'Information Technology as Cultural Capital'. *Australian Universities Review* 41 (1): 41–45.

Faulkner, Susan, and Jay Melican. 2007. 'Getting Noticed, Showing-Off, Being Overheard: Amateurs, Authors and Artists Inventing and Reinventing Themselves in Online Communities'. *Ethnographic Praxis in Industry Conference Proceedings* 2007: 51-65.

Featherstone, Mike. 1991. *Consumer Culture & Postmodernism*. London, UK: SAGE Publications.

Feld, Steven. 1991. "Voices of the Rainforest." *Public Culture*, 1991, 4 (1): 131–140.

Feld, Steven. 2000. "A Sweet Lullaby for World Music." *Public Culture* 12 (1): 145–171.

Fisher, Lucy. 2012. 'Can Data Geeks Save the Record Labels?' *The Guardian*, 6 December 2012. https://www.theguardian.com/media-network/media-network-blog/2012/dec/06/data-geeks-save-record-labels (Accessed 20 August 2018).

Fletcher, Kate. 2010. 'Slow Fashion: An Invitation for Systems Change'. *Fashion Practice* 2 (2): 259–65.

Fletcher, Lawson, and Ramon Lobato. 2013. 'Living and Labouring as a Music Writer'. *Cultural Studies Review* 19 (1): 155–76.

Flick, Uwe. 2009. *An Introduction to Qualitative Research*. Fourth Edition. London, UK: SAGE Publications.

Florida, Richard. 2002. *The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life*. New York, USA: Basic Books.

Foster, Pacey, and Richard Ocejo. 2013. 'Cultural Intermediaries in an Age of Disintermediation: Brokerage and the Production and Consumption of Culture'. In *Handbook of Creative Industries*,

edited by Candace Jones, Mark Lorenzen, and Jonathan Sapsed, 405–420. Oxford, UK: Oxford University Press.

Foster, Pacey, Stephen P. Borgatti, and Candace Jones. 2011. 'Gatekeeper Search and Selection Strategies: Relational and Network Governance in a Cultural Market'. *Poetics* 39 (4): 247–65.

Fourcade, Marion, and Kieran Healy. 2017. 'Seeing like a Market'. *Socio-Economic Review* 15 (1): 9–29.

Frenette, Alexandre. 2016. '"Working in the Candy Factory": The Limits of Nonmonetary Rewards in Record Industry Careers'. In *The Production and Consumption of Music in the Digital Age*, edited by Brian J. Hracs, Michael Seman, and Tarek E. Virani, 85–98. New York, USA: Routledge.

Friedman, Sam, Mike Savage, Laurie Hanquinet, and Andrew Miles. 2015. 'Cultural Sociology and New Forms of Distinction'. *Poetics* 53 (Dec.): 1–8.

Friedman, Sam. 2011. 'The Cultural Currency of a "Good" Sense of Humour: British Comedy and New Forms of Distinction'. *The British Journal of Sociology* 62 (2): 347–70.

Frith, Simon. 1983. *Sound Effects: Youth, Leisure and the Politics of Rock*. London, UK: Constable.

Fyfe, Gordon. 2004. 'Reproductions, Cultural Capital and Museums: Aspects of the Culture of Copies'. *Museum and Society* 2 (1): 47–67.

Gartman, David. 2002. 'Bourdieu's Theory of Cultural Change: Explication, Application, Critique'. *Sociological Theory* 20 (2): 255–77.

Ge, Mouzhi, Carla Delgado-Battenfeld, and Dietmar Jannach. 2010. 'Beyond Accuracy: Evaluating Recommender Systems by Coverage and Serendipity'. In *Proceedings of the 4th ACM Conference on Recommender Systems*, Barcelona, Spain, September 26-30, 257–60. New York, USA: ACM.

Giddens, Anthony. 1991. *Modernity and Self Identity: Self and Society in the Late Modern Age*. Cambridge, UK: Polity Press.

Gillespie, Tarleton. 2010. 'The Politics of "Platforms"'. *New Media & Society* 12 (3): 347–64.

Gillespie, Tarleton. 2014. 'The Relevance of Algorithms'. In *Media Technologies*, edited by Tarleton Gillespie, Pablo Boczkowski, and Kirsten Foot, 167-194. Cambridge, MA, USA: MIT Press

Goldberg, David, David Nichols, Brian M. Oki, and Douglas Terry. 1992. 'Using Collaborative Filtering to Weave an Information Tapestry'. *Communications of the ACM* 35 (12): 61–70.

Goldthorpe, John H. 1998. 'Rational Action Theory for Sociology'. *The British Journal of Sociology* 49 (2): 167–93.

Good, Katie Day. 2013. 'From Scrapbook to Facebook: A History of Personal Media Assemblage and Archives'. *New Media & Society* 15 (4): 557–73.

Goodman, Michael K. 2004. 'Reading Fair Trade: Political Ecological Imaginary and the Moral Economy of Fair Trade Foods'. *Political Geography* 23 (7): 891–915.

Grimaldi, Marco, and Padraig Cunningham. 2004. 'Experimenting with Music Taste Prediction by User Profiling'. In *Proceedings of the 6th ACM SIGMM International Workshop on Multimedia Information Retrieval*, New York, USA, October 10-16, 173–80. New York, USA: ACM.

Guba, Egon G., and Yvonna S. Lincoln. 1994. 'Competing Paradigms in Qualitative Research'. In *Handbook of Qualitative Research*, edited by Egon G. Guba and Yvonna S. Lincoln, 105–17. Thousand Oaks, CA, USA: SAGE Publications.

Bibliography

Gumble, Daniel. 2017. 'Radio 1 Boss "Bullish" After Q4 RAJAR Decline'. *Music Week*, 13 February 2017. http://www.musicweek.com/media/read/radio-1-boss-bullish-after-q4-rajar-decline/067479 (Accessed 20 July 2017).

Hagen, Anja Nylund. 2015. 'The Playlist Experience: Personal Playlists in Music Streaming Services'. *Popular Music and Society* 38 (5): 625–45.

Hagen, Anja Nylund. 2016. 'The Metaphors We Stream By: Making Sense of Music Streaming'. *First Monday* 21 (3) (Accessed 10 September 2018).

Halford, Susan, and Mike Savage. 2010. 'Reconceptualizing Digital Social Inequality'. *Information, Communication & Society* 13 (7): 937–55.

Harrits, Gitte Sommer, and Helene Helboe Pedersen. 2018. 'Class Categories and the Subjective Dimension of Class: The Case of Denmark'. *The British Journal of Sociology* 69 (1): 67–98.

Hennion, Antoine. 2001. "Music Lovers: Taste as Performance." *Theory, Culture & Society* 18 (5): 1–22.

Hennion, Antoine. 2003. "Music and Mediation: Towards a New Sociology of Music." In *The Cultural Study of Music: A Critical Introduction*, edited by Herbert T. Middleton R. Clayton M, 80–91. London, Routledge.

Hennink, Monique, Inge Hutter, and Ajay Bailey. 2011. *Qualitative Research Methods*. London, UK: SAGE Publications.

Herlocker, Jonathan L., Joseph A. Konstan, Loren G. Terveen, and John T. Riedl. 2004. 'Evaluating Collaborative Filtering Recommender Systems'. *ACM Transactions on Information Systems* 22 (1): 5–53.

Hern, Alex. 2014. 'Spotify Acquires Music Data Firm The Echo Nest'. *The Guardian*, 6 March 2014. https://www.theguardian.com/technology/2014/mar/06/spotify-echo-nest-streaming-music-deal (Accessed 20 July 2017).

Herstand, Ari. 2017. "How to Get Music in Spotify Playlists." *Digital Music News*, June 21, 2017. https://www.digitalmusicnews.com/2017/06/21/spotify-playlists/ (Accessed 28 December 2018).

Hesmondhalgh, David, and Leslie M. Meier. 2017. 'What the Digitalisation of Music Tells Us about Capitalism, Culture and the Power of the Information Technology Sector'. *Information, Communication & Society* 21 (11): 1555–1570.

Hesmondhalgh, David. 1998. "Globalisation and Cultural Imperialism: A Case Study of the Music Industry." In *Globalisation and the Third World*, edited by Ray Kiely and Phil Marfleet, 163–83. London, UK: Routledge.

Hesmondhalgh, David. 2013. *The Cultural Industries*. Third Edition. London, UK: SAGE Publications.

Hill Collins, Patricia, and Sirma Bilge, eds. 2016. *Intersectionality*. Cambridge UK: Polity Press.

Hill, Will, Larry Stead, Mark Rosenstein, and George Furnas. 1995. 'Recommending and Evaluating Choices in a Virtual Community of Use'. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, Denver Colorado, USA, May 7-11, 194–201. New York, USA: ACM Press/Addison-Wesley Publishing Co.

Hine, Christine. 2015. *Ethnographic Strategies for the Embedded, Embodied, Everyday Internet*. London, UK: Bloomsbury Academic.

Hodges, Caroline E.M., and Lee Edwards. 2014. 'Public Relations Practitioners'. In *The Cultural Intermediaries Reader*, edited by Juilian Matthews and Jennifer Smith Maguire, 89–99. London, UK: SAGE Publications.

Holt, Fabian. 2011. 'Is Music Becoming More Visual?: Online Video Content in the Music Industry'. *Visual Studies* 26 (1): 50–61.

Hracs, Brian J. 2012. 'A Creative Industry in Transition: The Rise of Digitally Driven Independent Music Production'. *Growth and Change* 43 (3): 442–61.

Hracs, Brian J. 2015. 'Cultural Intermediaries in the Digital Age: The Case of Independent Musicians and Managers in Toronto'. *Regional Studies* 49 (3): 461–75.

Hracs, Brian J. 2016. 'Working Harder and Working Smarter: The Survival Strategies of Contemporary Independent Musicians'. In *The Production and Consumption of Music in the Digital Age*, edited by Brian J. Hracs, Michael Seman, and Tarek E. Virani, 41–55. New York, USA: Routledge.

Hracs, Brian J., and Doreen Jakob. 2015. 'Selling the Stage: Exploring the Spatial and Temporal Dimensions of Interactive Cultural Experiences'. In *Spatial Dynamics in the Experience Economy*, edited by Anne Lorentzen, Lise Schrøder, and Karin Topsø Larsen, 71–87. New York, USA: Routledge.

Hracs, Brian J., and Johan Jansson. 2017. 'Death by Streaming or Vinyl Revival? Exploring the Spatial Dynamics and Value-Creating Strategies of Independent Record Shops in Stockholm'. *Journal of Consumer Culture* 0(0): 1–20 (Accessed 10 September 2018).

Hracs, Brian J., Doreen Jakob, and Atle Hauge. 2013. 'Standing out in the Crowd: The Rise of Exclusivity-Based Strategies to Compete in the Contemporary Marketplace for Music and Fashion'. *Environment and Planning A* 45 (5): 1144–61.

Ingham, Tim. 2018. "Independents Ruled Global Market Share in 2017 – But Universal Was King of Streaming." *Music Business Worldwide*, April 25, 2018.

https://www.musicbusinessworldwide.com/independents-ruled-global-market-share-in-2017-but-universal-was-king-of-streaming/ (Accessed 28 December 2018).

International Federation of the Phonographic Industry (IFPI). 2015. 'IFPI Digital Music Report 2015: Charting the Path to Sustainable Growth'. Published online at: http://www.ifpi.org/downloads/Digital-Music-Report-2015.pdf (Accessed 12 August 2018).

International Federation of the Phonographic Industry (IFPI). 2016. 'IFPI Global Music Report 2016: Music Consumption Exploding Worldwide'. Published online at: http://www.ifpi.org/downloads/GMR2016.pdf (Accessed 12 August 2018).

International Federation of the Phonographic Industry (IFPI). 2018. 'IFPI Global Music Report 2018: Annual State of the Industry'. Published online at: http://www.ifpi.org/downloads/GMR2018.pdf (Accessed 12 August 2018).

Jannach, Dietmar, Markus Zanker, and Alexander Felfernig. 2010. *Recommender Systems*. Cambridge, UK: Cambridge University Press.

Jansson, Johan, and Brian J. Hracs. 2018. 'Conceptualizing Curation in the Age of Abundance: The Case of Recorded Music'. *Environment and Planning A* 0 (0): 1–24 (Accessed 10 September 2018).

Jarness, Vegard. 2015. 'Modes of Consumption: From "What" to "How" in Cultural Stratification Research'. *Poetics* 53 (Dec.): 65–79.

Jenkins, Richard. 2002. *Pierre Bourdieu*. Revised Edition. London, UK: Routledge.

Joosse, Sophie, and Brian J. Hracs. 2015. 'Curating the Quest for "Good Food": The Practices, Spatial Dynamics and Influence of Food-Related Curation in Sweden'. *Geoforum* 64 (Aug.): 205–16.

Jørgensen, Kristian Møller. 2016. 'The Media Go-Along: Researching Mobilities with Media at Hand'. *Journal of Media and Communication Research* 32 (June): 32–49.

Kenney, Martin, and John Zysman. 2016. 'The Rise of the Platform Economy'. *Issues in Science and Engineering* 32 (3): 61–69.

Kim, Jong Woo, Byung Hun Lee, Michael J. Shaw, Hsin-Lu Chang, and Matthew Nelson. 2001. 'Application of Decision-Tree Induction Techniques to Personalized Advertisements on Internet Storefronts'. *International Journal of Electronic. Commerce* 5 (3): 45–62.

Kitchin, Rob, and Martin Dodge. 2011. *Code/Space: Software and Everyday Life*. Cambridge, MA, USA: MIT Press.

Kitchin, Rob. 2017. 'Thinking Critically about and Researching Algorithms'. *Information, Communication & Society* 20 (1): 14–29.

Kjus, Yngvar. 2015. 'Reclaiming the Music: The Power of Local and Physical Music Distribution in the Age of Global Online Services'. *New Media & Society* 18(9): 2116–2132.

Konstan, Joseph A., and John Riedl. 2012. 'Recommender Systems: From Algorithms to User Experience'. *User Modeling and User-Adapted Interaction* 22 (1): 101–23.

Konstan, Joseph A., Bradley N. Miller, David Maltz, Jonathan L. Herlocker, Lee R. Gordon, and John Riedl. 1997. 'GroupLens: Applying Collaborative Filtering to Usenet News'. *Communications of the ACM* 40 (3): 77–87.

Koreman, Rian. 2014. 'Legitimating Local Music: Volksmuziek, Hip-Hop/Rap and Dance Music in Dutch Elite Newspapers'. *Cultural Sociology* 8 (4): 501–19.

Krukowski, Damon. 2012. 'Making Cents'. *Pitchfork*, 14 November 2012.
https://pitchfork.com/features/article/8993-the-cloud/ (Accessed 12 July 2018).

Lamere, Paul. 2014. 'The Zero Button Music Player'. *Music Machinery* (blog). 14 January 2014.
http://musicmachinery.com/tag/zero-ui/ (Accessed 12 August 2018).

Lange, Bastian. 2016. 'The Evolution of Music Tastemakers in the Digital Age: The Rise of
Algorithms and the Response of Journalists'. In *The Production and Consumption of Music in the
Digital Age*, edited by Brian J. Hracs, Michael Seman, and Tarek E. Virani, 237–47. New York, USA:
Routledge.

Langley, Paul, and Andrew Leyshon. 2016. 'Platform Capitalism: The Intermediation and
Capitalisation of Digital Economic Circulation'. *Finance and Society* 3 (1): 11–31.

Larson, Christine. 2015. 'Live Publishing: The Onstage Redeployment of Journalistic Authority'.
Media, Culture & Society 37 (3): 440–59.

Lash, Scott. 2007. 'Power after Hegemony: Cultural Studies in Mutation?' *Theory, Culture &
Society* 24 (3): 55–78.

Latour, Bruno. 1986. 'The Powers of Association'. In *Power, Action and Belief: A New Sociology of
Knowledge?*, edited by John Law, 264–80. London, UK: Routledge & Kegan Paul.

Latour, Bruno. 1992. "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts."
In *Shaping Technology/Building Society: Studies in Sociotechnical Change*, edited by Wiebe E.
Bijker and John Law, 225–58. Cambridge, MA, USA: MIT Press.

Latour, Bruno. 1996. "On Actor-Network Theory. A Few Clarifications Plus More Than a Few
Complications." *Soziale Welt* 47: 369–81.

Latour, Bruno. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford, UK: Oxford University Press.

Law, John. 1987. 'Technology and Heterogeneous Engineering: The Case of Portuguese Expansion'. In *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, edited by Wiebe E. Bijker, Thomas P. Hughes, and Trevor Pinch, 111–34. Cambridge, MA: The MIT Press.

Lee, Hye-Kyung. 2012. 'Cultural Consumers as "New Cultural Intermediaries": Manga Scanlators'. *Arts Marketing: An International Journal* 2 (2): 131–43.

Leguina, Adrian, Sara Arancibia-Carvajal, and Paul Widdop. 2017. 'Musical Preferences and Technologies: Contemporary Material and Symbolic Distinctions Criticized'. *Journal of Consumer Culture* 17 (2): 242–264.

Leslie, Deborah, Taylor Brydges, and Shauna Brail. 2015. 'Qualifying Aesthetic Values in the Experience Economy: The Role of Independent Fashion Boutiques in Curating Slow Fashion'. In *Spatial Dynamics in the Experience Economy*, edited by Anne Lorentzen, Karin Topsø, and Lise Schrøder, 88–104. Oxford, UK: Routledge.

Leyshon, Andrew, Nigel Thrift, Louise Crewe, Shaun French, and Pete Webb. 2016. 'Leveraging Affect: Mobilizing Enthusiasm and the Co-Production of the Musical Economy'. In *The Production and Consumption of Music in the Digital Age*, edited by Brian J. Hracs, Michael Seman, and Tarek E. Virani, 248–62. New York, USA: Routledge.

Leyshon, Andrew, Peter Webb, Shaun French, Nigel Thrift, and Louise Crowe. 2005. "On the Reproduction of the Musical Economy After the Internet." *Media, Culture & Society* 27 (2): 177–209.

Leyshon, Andrew. 2014. *Reformatted: Code, Networks, and the Transformation of the Music Industry*. Oxford, UK: Oxford University Press.

Light, Ben, Jean Burgess, and Stefanie Duguay. 2016. 'The Walkthrough Method: An Approach to the Study of Apps'. *New Media & Society* 20 (3): 881–900.

Linden, Greg, Brent Smith, and Jeremy York. 2003. 'Amazon.com Recommendations: Item-to-Item Collaborative Filtering'. *IEEE Internet Computing* 7 (1): 76–80.

Littig, Beate. 2009. 'Interviewing the Elite – Interviewing Experts: Is There a Difference?' In *Interviewing Experts*, edited by Alexander Bogner, Beate Littig, and Wolfgang Menz, 98–113. Basingstoke, UK: Palgrave Macmillan.

Liu, Hugo. 2008. 'Social Network Profiles as Taste Performances'. *Journal of Computer-Mediated Communication* 13 (1): 252–75.

Lizardo, Omar. 2014. 'Taste and the Logic of Practice in Distinction'. *Czech Sociological Review* 50 (3): 1–30.

Lo Iacono, Valeria, Paul Symonds, and David H.K. Brown. 2016. 'Skype as a Tool for Qualitative Research Interviews'. *Sociological Research Online* 21 (2): 1–12.

Lowrey, Wilson. 2006. 'Mapping the Journalism–Blogging Relationship'. *Journalism* 7 (4): 477–500.

Luck, Geoff. 2016. 'The Psychology of Streaming: Exploring Music Listeners' Motivations to Favour Access over Ownership'. *International Journal of Music Business Research* 5 (2): 46–60.

Luttrell, Mike. 2010. "Never-Ending ITunes Sales Tally Hits 10 Billion." *TG Daily News*, February 25, 2010. https://www.tgdaily.com/consumer-electronics-brief/48578-never-ending-itunes-sales-tally-hits-10-billion (Accessed 28 December 2018)

Mackenzie, Adrian. 2015. 'The Production of Prediction: What Does Machine Learning Want?' *European Journal of Cultural Studies* 18 (4–5): 429–45.

Mackenzie, Adrian. 2018. '48 Million Configurations and Counting: Platform Numbers and Their Capitalization'. *Journal of Cultural Economy* 11 (1): 36–53.

Magaudda, Paolo. 2011. 'When Materiality "Bites Back": Digital Music Consumption Practices in the Age of Dematerialization'. *Journal of Consumer Culture* 11 (1): 15–36.

Maguire, Jennifer Smith, and Julian Matthews, eds. 2014. *The Cultural Intermediaries Reader*. London, UK: SAGE Publications.

Maguire, Jennifer Smith, and Julian Matthews. 2010. 'Cultural Intermediaries and the Media'. *Sociology Compass* 4 (7): 405–16.

Maguire, Jennifer Smith, and Julian Matthews. 2012. 'Are We All Cultural Intermediaries Now? An Introduction to Cultural Intermediaries in Context'. *European Journal of Cultural Studies* 15 (5): 551–62.

Marres, Noortje. 2017. *Digital Sociology*. Cambridge, UK: Polity Press.

Marshall, Lee. 2015. 'Let's Keep Music Special. F–Spotify': On-Demand Streaming and the Controversy over Artist Royalties'. *Creative Industries Journal* 8 (2): 177–89.

Maton, Karl. 2014. 'Habitus'. In *Pierre Bourdieu: Key Concepts*, edited by Michael Grenfell, 48–64. Oxon, UK: Routledge.

McConnell, Josh. 2016. 'Step Aside Algorithms, Meet the Tastemakers Who Curate the Major Streaming Music Services'. *Financial Post*, 2 September 2016.

http://business.financialpost.com/fp-tech-desk/step-aside-algorithms-meet-the-tastemakers-who-curate-the-major-streaming-music-services (Accessed 12 August 2018).

McFall, Liz. 2014. 'The Problem of Cultural Intermediaries in the Economy of Qualities'. In *The Cultural Intermediaries Reader*, edited by Jennifer Smith Maguire and Julian Matthews, 42–51. London, UK: SAGE Publications.

McIntyre, Hugh. 2017. 'Spotify Has Acquired Machine-Learning Startup Niland'. *Forbes*, 18 May 2017. https://www.forbes.com/sites/hughmcintyre/2017/05/18/spotify-has-acquired-machine-learning-startup-niland/#529e8c6d3792 (Accessed 12 August 2018).

Mobasher, Bamshad. 2007. 'Data Mining for Web Personalization'. In *The Adaptive Web*, edited by Peter Brusilovsky, Alfred Kobsa, and Wolfgang Nejdl, 90–135. Berlin & Heidelberg, DE: Springer-Verlag.

Moon, Brian. 2017. 'How Data Is Transforming the Music Industry'. *The Conversation*, 21 May 2017. http://theconversation.com/how-data-is-transforming-the-music-industry-70940 (Accessed 12 August 2018).

Moor, Liz. 2012. 'Beyond Cultural Intermediaries? A Socio-Technical Perspective on the Market for Social Interventions'. *European Journal of Cultural Studies* 15 (5): 563–80.

Moore, James. 2017. 'Back in the Groove: How Vinyl Role From Its Sickbed to Capture the Eyes and Ears of Millennials'. *Independent*, 21 September 2017. https://www.independent.co.uk/news/long_reads/vinyl-demand-lps-record-store-day-a7952911.html (Accessed 12 August 2018).

Moore, Rob. 2014. 'Capital'. In *Pierre Bourdieu: Key Concepts*, edited by Michael Grenfell, 98–113. Oxford, UK: Routledge.

Morris, Jeremy Wade, and Devon Powers. 2015. 'Control, Curation and Musical Experience in Streaming Music Services'. *Creative Industries Journal* 8 (2): 106–22.

Morris, Jeremy Wade. 2015. 'Curation by Code: Infomediaries and the Data Mining of Taste'. *European Journal of Cultural Studies* 18 (4–5): 446–63.

Morris, Jeremy Wade. 2015. *Selling Digital Music: Formatting Culture*. Oakland, CA, USA: University of California Press.

Negus, Keith. 2002. 'The Work of Cultural Intermediaries and the Enduring Distance between Production and Consumption'. *Cultural Studies* 16 (4): 501–15.

Neyland, Daniel, and Norma Möllers. 2016. 'Algorithmic IF … THEN Rules and the Conditions and Consequences of Power'. *Information, Communication & Society* 20 (1): 45–62.

Nixon, Sean, and Paul Du Gay. 2002. 'Who Needs Cultural Intermediaries?' *Cultural Studies* 16 (4): 495–500.

North, Sue, Ilana Snyder, and Scott Bulfin. 2008. 'Digital Tastes: Social Class and Young People's Technology Use'. *Information, Communication & Society* 11 (7): 895–911.

Obelené, Vaida. 2009. 'Expert versus Researcher: Ethical Considerations in the Process of Bargaining a Study'. In *Interviewing Experts*, edited by Alexander Bogner, Beate Littig, and Wolfgang Menz, 184–200. Basingstoke, UK: Palgrave Macmillan.

Ocejo, Richard E. 2010. 'What'll It Be? Cocktail Bartenders and the Redefinition of Service in the Creative Economy'. *City, Culture and Society* 1 (4): 179–84.

Ogle, Matt, and Will Page. 2016. 'Discovery by Data'. Lecture at Convergence Festival, March 18, 2016.

Ollivier, Michèle. 2008. 'Modes of Openness to Cultural Diversity: Humanist, Populist, Practical and Indifferent'. *Poetics* 36 (2–3): 120–47.

Pariser, Eli. 2012. *The Filter Bubble: What The Internet Is Hiding From You*. London, UK: Penguin.

Pasick, Adam. 2015. 'The Magic That Makes Spotify's Discover Weekly Playlists so Damn Good'. *Quartz*, 21 December 2015. http://qz.com/571007/the-magic-that-makes-spotifys-discover-weekly-playlists-so-damn-good/ (Accessed 27 May 2018).

Pasquale, Frank. 2015. *The Black Box Society: The Secret Algorithms That Control Money and Information*. Cambridge, MA, USA: Harvard University Press.

Patton, Michael. 1990. 'Designing Qualitative Studies'. In *Qualitative Evaluation and Research Methods*, 169–86. Beverly Hills, CA, USA: SAGE Publications.

Pazzani, Michael, and Daniel Billsus. 1997. 'Learning and Revising User Profiles: The Identification of Interesting Web Sites'. *Machine Learning* 27 (3): 313–31.

Peterson, Richard A., and Roger M. Kern. 1996. 'Changing Highbrow Taste: From Snob to Omnivore'. *American Sociological Review* 61 (5): 900–907.

Piekut, Benjamin. 2014. "Actor-Networks in Music History: Clarifications and Critiques." *Twentieth-Century Music* 11 (2): 191–215.

Pietrykowski, Bruce. 2004. 'You Are What You Eat: The Social Economy of the Slow Food Movement'. *Review of Social Economy* 62 (3): 307–21.

Piper, Nick. 2015. 'Jamie Oliver and Cultural Intermediation'. *Food, Culture & Society* 18 (2): 245–64.

Plantin, Jean-Christophe, Carl Lagoze, Paul N. Edwards, and Christian Sandvig. 2018. 'Infrastructure Studies Meet Platform Studies in the Age of Google and Facebook'. *New Media & Society* 20 (1): 293–310.

Powers, Devon. 2015. 'Intermediaries and Intermediation'. In *The SAGE Handbook of Popular Music*, edited by Andy Bennett and Steve Waksman, 120–35. London, UK: SAGE Publications.

Pratt, Andy C. 2008. 'Creative Cities: The Cultural Industries and the Creative Class'. *Geografiska Annaler: Series B, Human Geography* 90: 107–17.

Pratt, Andy C. 2016. 'Music Rights: Towards a Material Geography of Musical Practices in the "Digital Age"'. In *The Production and Consumption of Music in the Digital Age*, edited by Brian J. Hracs, Michael Seman, and Tarek E. Virani, 206–19. New York, USA: Routledge.

Prey, Robert. 2016. 'Musica Analytica: The Datafication of Listening'. In *Networked Music Cultures*, edited by Raphaël Nowak and Andrew Whelan, 31–48. Basingstoke, UK: Palgrave Macmillan.

Prieur, Annick, and Mike Savage. 2013. 'Emerging Forms of Cultural Capital'. *European Societies* 15 (2): 246–67.

Prior, Nick. 2008. 'Putting a Glitch in the Field: Bourdieu, Actor Network Theory and Contemporary Music'. *Cultural Sociology* 2 (3): 301–19.

Prior, Nick. 2018. *Popular Music, Digital Technology and Society*. London, UK: SAGE Publications.

Reeves, Aaron. 2014. 'Cultural Engagement Across the Life-Course: Examining Age-Period-Cohort Effects'. *Cultural Trends* 23 (4): 273–89.

Razlogova, Elena. 2013. 'The Past and Future of Music Listening: Between Freeform DJs and Recommendation Algorithms'. In *Radio's New Wave*, edited by Michele Hilmes and Jason Loviglio, 62–76. New York, USA: Routledge.

Resnick, Paul, Neophytos Iacovou, Mitesh Suchak, Peter Bergstrom, and John Riedl. 1994. 'GroupLens: An Open Architecture for Collaborative Filtering of Netnews'. In *Proceedings of the 1994 ACM Conference on Computer Supported Cooperative Work*, Chapel Hill, North Carolina, USA, October 22-26, 175–86. New York, USA: ACM.

Resnikoff, Paul. 2016. "Two-Thirds of All Music SOld Comes from Just 3 Companies." *Digital Music News*, August 3, 2016. https://www.digitalmusicnews.com/2016/08/03/two-thirds-music-sales-come-three-major-labels/ (Accessed 28 December 2018).

Rieder, Bernhard. 2016. 'Scrutinizing an Algorithmic Technique: The Bayes Classifier as Interested Reading of Reality'. *Information, Communication & Society* 20 (1): 100–117.

Riessman, Catherine Kohler. 1993. *Narrative Analysis*. Qualitative Research Methods Series. Newbury Park, CA, USA: SAGE Publications.

Rimmer, Mark. 2012. 'Beyond Omnivores and Univores: The Promise of a Concept of Musical Habitus'. *Cultural Sociology* 6 (3): 299–318.

Ritzer, George, and Nathan Jurgenson. 2010. 'Production, Consumption, Prosumption'. *Journal of Consumer Culture* 10 (1): 13–36.

Ritzer, George. 1993. *The McDonaldization of Society*. Newbury Park, CA, USA: SAGE Publications.

Robson, Colin. 2002. *Real World Research*. Second Edition. Oxford, UK: Blackwell Publishers.

Rona-Tas, Akos. 2017. 'The Off-Label Use of Consumer Credit Ratings'. *Historical Social Research* 42 (1): 52–76.

Ross, Philippe. 2011. 'Is There an Expertise of Production? The Case of New Media Producers'. *New Media & Society* 13 (6): 912–28.

Salton, Gerard. 1971. *The SMART Retrieval System: Experiments in Automatic Document Processing*. Upper Saddle River, NJ, USA: Prentice-Hall.

Sanchez, Daniel. 2018. 'Spotify's Q2 2018: The Good, The Bad, and the Ugly'. *Digital Music News*, 26 July 2018. https://www.digitalmusicnews.com/2018/07/26/spotify-q2-2018/ (Accessed 12 August 2018).

Sarwar, Badrul, George Karypis, Joseph Konstan, and John Riedl. 2000. 'Analysis of Recommendation Algorithms for E-Commerce'. In *Proceedings of the 2nd ACM Conference on Electronic Commerce*, Minneapolis, Minnesota, USA, October 17-20, 158–67. New York, USA: ACM.

Sarwar, Badrul, George Karypis, Joseph Konstan, and John Riedl. 2001. 'Item-Based Collaborative Filtering Recommendation Algorithms'. In *Proceedings of the 10th International Conference on World Wide Web*, Hong Kong, May 1-5, 285–95. New York, USA: ACM.

Savage, Mike, and Modesto Gayo. 2011. 'Unravelling the Omnivore: A Field Analysis of Contemporary Musical Taste in the United Kingdom'. *Poetics* 39 (5): 337–57.

Savage, Mike, Fiona Devine, Niall Cunningham, Mark Taylor, Yaojun Li, Johs Hjellbrekke, Brigitte Le Roux, Sam Friedman, and Andrew Miles. 2013. 'A New Model of Social Class? Findings from the BBC's Great British Class Survey Experiment'. *Sociology* 47 (2): 219–50.

Savage, Mike, Gaynor Bagnall, and Brian Longhurst. 2001. 'Ordinary, Ambivalent and Defensive: Class Identities in the Northwest of England'. *Sociology* 35 (4): 875–92.

Savage, Mike, Gaynor Bagnall, and Brian Longhurst. 2005. *Globalization and Belonging*. London, UK: SAGE Publications.

Savage, Mike, James Barlow, Peter Dickens, and Tony Fielding. 1992. *Property, Bureaucracy and Culture: Middle-Class Formation in Contemporary Britain*. London, UK: Routledge.

Savage, Mike. 2000. *Class Analysis and Social Transformation*. Buckingham, UK: Open University Press.

Savage, Mike. 2006. 'The Musical Field'. *Cultural Trends* 15 (2–3): 159–74.

Savage, Mike. 2015. *Social Class in the 21st Century*. London, UK: Pelican Random House.

Schafer, J. Ben, Dan Frankowski, Jon Herlocker, and Shilad Sen. 2007. 'Collaborative Filtering Recommender System'. In *The Adaptive Web*, edited by Peter Brusilovsky, Alfred Kobsa, and Wolfgang Nejdl, 291–324. Berlin & Heidelberg, DE: Springer-Verlag.

Schafer, J. Ben, Joseph Konstan, and John Riedl. 1999. 'Recommender Systems in E-Commerce'. In *Proceedings of the 1st ACM Conference on Electronic Commerce*, Denver, Colorado, USA, November 3-5, 158–66. New York, USA: ACM.

Schäfer, Mirko. 2011. *Bastard Culture!: How User Participation Transforms Cultural Production*. Amsterdam, NL: Amsterdam University Press.

Schedl, Markus, Hamed Zamani, Ching-Wei Chen, Yashar Deldjoo, and Mehdi Elahi. 2018. 'Current Challenges and Visions in Music Recommender Systems Research'. *International Journal of Multimedia Information Retrieval* 7(2): 95-116.

Bibliography

Schedl, Markus, Peter Knees, Brian McFee, Dmitry Bogdanov, and Marius Kaminskas. 2015. 'Music Recommender Systems'. In *Recommender Systems Handbook*, edited by Francesco Ricci, Lior Rokach, and Bracha Shapira, 453–92. Boston, MA, USA: Springer US.

Schedl, Markus, Tim Pohle, Peter Knees, and Gerhard Widmer. 2011. 'Exploring the Music Similarity Space on the Web'. *ACM Transactions on Information Systems.* 29 (3): 1–24.

Schollmeier, Rüdiger. 2001. 'A Definition of Peer-to-Peer Networking for Classification of Peer-to-Peer Architectures and Applications'. *Proceedings of the 1st International Conference on Peer-to-Peer Computing*, Linkoping, Sweden, August 27-29, 101–102. Los Alamitos, USA: IEEE.

Schou, Jannick, and Johan Farkas. 2016. 'Algorithms, Interfaces and the Circulation of Information: Interrogating the Epistemological Challenges of Facebook'. *KOME – An International Journal of Pure Communication Inquiry* 4 (1): 36–49.

Scott, A J. 1999. "The US Recorded Music Industry: On the Relations between Organization, Location, and Creativity in the Cultural Economy." *Environment and Planning A* 31: 1965–84.

Schwartz, Barry. 2004. *The Paradox of Choice: Why More Is Less*. New York, USA: Harper-Collins.

Seaver, Nick. 2013. 'Knowing Algorithms'. *Media in Transition* 8: 1–12.

Selwyn, Neil. 2004. 'Reconsidering Political and Popular Understandings of the Digital Divide'. *New Media & Society* 6 (3): 341–62.

Setiz, Sally. 2015. 'Pixilated Partnerships, Overcoming Obstacles in Qualitative Interviews via Skype: A Research Note'. *Qualitative Research* 16 (2): 229–35.

Shah, Neil. 2017. 'The Music Industry's New Gatekeepers'. *The Wall Street Journal*, 15 November 2017. https://www.wsj.com/articles/the-music-industrys-new-gatekeepers-1510761601 (Accessed 27 May 2018).

Shardanand, Upendra, and Pattie Maes. 1995. 'Social Information Filtering: Algorithms for Automating "Word of Mouth"'. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, *Denver, Colorado, USA, May 7-11,* 210–17. New York, USA: ACM Press/Addison-Wesley Publishing Co.

Sheffield, Rob. 2010. "Teenage Dream." *Rolling Stone*, August 23, 2010. https://www.rollingstone.com/music/music-album-reviews/teenage-dream-183041/ (Accessed 28 December 2018)

Shipman, Alan. 2004. 'Lauding the Leisure Class: Symbolic Content and Conspicuous Consumption'. *Review of Social Economy* 62 (3): 277–89.

Shultz, Benjamin. 2015. 'The Work Behind the Scenes: The New Intermediaries of the Indie Craft Business'. *Regional Studies* 49 (3): 451–60.

Shuker, Roy. 2004. "Beyond the 'High Fidelity' Stereotype: Defining the (Contemporary) Record Collector." *Popular Music* 23 (3): 311–30.

Simmel, Georg. 1904. 'Fashion'. *International Quarterly* 10 (1): 130–55.

Sisario, Ben. 2017. 'Spotify Is Growing, but so Are Its Losses'. *The New York Times*, 15 June 2017. https://www.nytimes.com/2017/06/15/business/media/streaming-radio-spotify-pandora.html (Accessed 2 August 2018).

Skeggs, Beverley, and Simon Yuill. 2016. 'Capital Experimentation with Person/a Formation: How Facebook's Monetization Refigures the Relationship between Property, Personhood and Protest'. *Information, Communication & Society* 19 (3): 380–96.

Speers, Laura. 2016. 'From Artist to Entrepreneur: The Working Lives of London-Based Rappers'. In *The Production and Consumption of Music in the Digital Age*, edited by Brian J. Hracs, Michael Seman, and Tarek E. Virani, 56–70. New York, USA: Routledge.

Spotify. 2014. 'Spotify Acquires The Echo Nest'. Press Release March 6th, 2014. https://press.spotify.com/uk/2014/03/06/spotify-acquires-the-echo-nest (Accessed 17 October 2016).

Spotify. 2015. 'Introducing Spotify Fan Insights'. *Spotify for Artists* (blog). 17 November 2015. https://artists.spotify.com/blog/introducing-spotify-fan-insights (Accessed 10 August 2018).

Spotify. 2018. 'How Spotify Puts Fans First'. *Spotify for Artists* (blog). 14 June 2018. https://artists.spotify.com/blog/how-spotify-puts-fans-first (Accessed 10 August 2018).

Srnicek, Nick. 2017. *Platform Capitalism*. Cambridge, UK: Polity Press.

Stake, Robert E. 1995. *The Art of Case Study Research*. Thousand Oaks, CA, USA: SAGE Publications.

Stewart, Simon. 2013. *A Sociology of Culture, Taste and Value*. Basingstoke, UK: Palgrave Macmillan.

Straw, Will. 1997. "Sizing up Record Collections: Gender and Connoisseurship in Rock Music Culture." In *Sexing the Groove: Popular Music and Gender*, edited by Sheila Whiteley, 3–16. Oxon, UK: Routledge.

Stokes, Martin. 2004. "Music and the Global Order." *Annual Review of Anthropology* 33: 47–72.

Sutherland, Mark. 2016. 'The Revolution Will Be Analysed'. *Music Week*, November 2016.

Sweney, Mark. 2015. 'BBC Radio 1 Head of Music to Join Spotify UK'. *The Guardian*, 15 December 2015. https://www.theguardian.com/media/2015/dec/15/bbc-radio-1-spotify-uk-george-ergatoudis (Accessed 14 May 2017).

Sweney, Mark. 2018. 'Out of Print: NME's Demise Shows Pressure on Consumer Magazines'. *The Guardian*, 12 March 2018. https://www.theguardian.com/media/2018/mar/12/nme-vogue-death-print-magazines (Accessed 23 July 2018).

Taylor, Steve. 2003. '"I Am What I Play": The Radio DJ as Cultural Arbiter and Negotiator'. In *Cultural Work: Understanding the Cultural Industries*, edited by Andrew Beck, 73–100. London, UK: Routledge.

Taylor, Timothy D. 1997. *Global Pop: World Music, World Markets*. New York City, NY, USA: Routledge.

Taylor, Timothy D. 2012. "World Music Today." In *Music and Globalization: Critical Encounters*, edited by Bob W. White, 172–88. Bloomington, IN: Indiana University Press.

Taylor, Timothy D. 2013a. "Globalized New Capitalism and the Commodification of Taste." In *The Cambridge History of World Music*, edited by Philip V. Bohlman, 744–64. Cambridge UK: Cambridge University Press.

Taylor, Timothy D. 2013b. "Music in the New Capitalism." In *The International Encyclopedia of Media Studies*, edited by Vicki Mayer, II:151–70. Boston, MA, USA: Wiley-Blackwell.

The Echo Nest. 2013. 'White Paper: "How Music Services Can Acquire, Engage, and Monetize High-Value Listeners"'. Published online at http://static.echonest.com/WhitePapers/The%20Echo%20Nest%20-%20Monetizing%20High%20Value%20Listeners.pdf (Accessed 17 October 2016).

Thomson, Patricia. 2014. 'Field'. In *Pierre Bourdieu: Key Concepts*, edited by Michael Grenfell, 65–82. Oxford, UK: Routledge.

Thornton, Sarah. 1995. *Club Cultures: Music, Media and Subcultural Capital*. Cambridge, UK: Polity Press.

Tiffany, Kaitlyn. 2017. 'Three Nights Following Spotify Playlist Editors around New York's Live Music Scene'. *The Verge*, 13 November 2017. https://www.theverge.com/2017/11/13/16617900/spotify-playlist-curation-nyc-live-shows-fresh-finds-indie-latin-new-music (Accessed 17 August 2018).

Ugwu, Reggie. 2016. 'Inside the Playlist Factory'. *Buzzfeed*, 12 July 2016. https://www.buzzfeed.com/reggieugwu/the-unsung-heroes-of-the-music-streaming-boom?utm_term=.flR3Xyplq#.emjev5ZMz (Accessed 15 July 2017).

Universal Music Group. 2017. 'Spotify and Universal Music Group Announce Global, Multi-Year License Agreement'. Press Release April 4th, 2017. https://www.universalmusic.com/spotify-and-universal-music-group-announce-global-multi-year-license-agreement/ (Accessed 4 August 2018).

Valentine, Gill. 2001. 'At the Drawing Board: Developing a Research Design'. In *Qualitative Methodologies for Geographers: Issues and Debates*, edited by Melanie Limb and Claire Dwyer, 41–54. London, UK: Arnold.

Valentine, Gill. 2005. 'Tell Me About...: Using Interviews as a Research Methodology'. In *Methods in Human Geography: A Guide for Students Doing a Research Project*, edited by Robin Flowerdew and David Martin, 110–27. Essex, UK: Pearson Education Ltd.

Veblen, Thorstein. 1912. *The Theory of the Leisure Class*. New York, USA: A.M. Kelley.

Verboord, Marc. 2010. 'The Legitimacy of Book Critics in the Age of the Internet and Omnivorousness: Expert Critics, Internet Critics and Peer Critics in Flanders and the Netherlands'. *European Sociological Review* 26 (6): 623–37.

Verboord, Marc. 2014. 'The Impact of Peer-Produced Criticism on Cultural Evaluation: A Multilevel Analysis of Discourse Employment in Online and Offline Film Reviews'. *New Media & Society* 16 (6): 921–40.

Vonderau, Patrick. 2014. "The Politics of Content Aggregation." *Television & New Media* 16 (8): 717–33.

Wacquant, Loïc. 1989. 'Towards a Reflexive Sociology: A Workshop with Pierre Bourdieu'. *Sociological Theory* 7: 26–63.

Warde, Alan, and Modesto Gayo-Cal. 2009. 'The Anatomy of Cultural Omnivorousness: The Case of the United Kingdom'. *Poetics* 37 (2): 119–45.

Warde, Alan, David Wright, and Modesto Gayo-Cal. 2008. 'The Omnivorous Orientation in the UK'. *Poetics* 36 (2): 148–65.

Watson, Allan. 2015. 'New Business Strategies and the Reinforcement of Intellectual Property Rights in the Digital Economy: The Case of the Online Digital Marketplace for Music'. *New Economic Models in the Digital Economy Working Paper*. Published online at http://www.nemode.ac.uk/wp-content/uploads/2012/12/Watson-2015-Online-Digital-Markeplace-for-Music.pdf (Accessed 10 September 2018).

Watson, Allan. 2016. "Laptops, Pro Tools, and File Transfer Protocols: On the Intensification and Extensifiction of Recording Work in the Digital Age." In *The Production and Consumption of Music in the Digital Age*, edited by Brian J. Hracs, Michael Seman, and Tarek E. Virani, 11–24. New York City, NY, USA: Routledge.

Wayne, Michael L. 2017. 'Netflix, Amazon, and Branded Television Content in Subscription Video On-Demand Portals'. *Media, Culture & Society* 0(0): 1–17 (Accessed 20 September 2018).

Webster, Jack, Nicholas Gibbins, Susan Halford, and Brian J. Hracs. 2016. 'Towards a Theoretical Approach for Analysing Music Recommender Systems as Sociotechnical Cultural Intermediaries'. In *Proceedings of the 8th ACM Conference on Web Science*, Hannover, Germany, May 22-25, 137–45. New York, USA: ACM.

Whiteley, Sheila, ed. 1997. *Sexing the Groove: Popular Music and Gender*. Oxon, UK: Routledge.

Whitney, Lance. 2009. "ITunes Reps 1 in Every 4 Songs Sold in U.S." *CNET News*. Accessed December 23, 2018. https://www.cnet.com/news/itunes-reps-1-in-every-4-songs-sold-in-u-s/ (Accessed 28 December 2018).

Wikström, Patrik. 2013. *The Music Industry: Music in the Cloud*. Cambridge, UK: Polity Press.

Wright, David. 2005. 'Mediating Production and Consumption: Cultural Capital and "Cultural Workers"'. *The British Journal of Sociology* 56 (1): 105–21.

Wright, David. 2011. 'Making Tastes for Everything: Omnivorousness and Cultural Abundance'. *Journal for Cultural Research* 15 (4): 355–71.

Wright, David. 2015. *Understanding Cultural Taste: Sensation, Skill and Sensability*. Basingstoke, UK: Palgrave Macmillan.

Young, Sherman, and Steve Collins. 2010. 'A View from the Trenches of Music 2.0'. *Popular Music and Society* 33 (3): 339–55.

Ziellen, Nicole, and Eszter Hargittai. 2009. 'Digital Distinction: Status-Specific Types of Internet Usage'. *Social Science Quarterly* 90 (2): 274–91.

Ziewitz, Malte. 2015. 'Governing Algorithms: Myth, Mess, and Methods'. *Science, Technology & Human Value* 41 (1): 3–16.