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University of Southampton

Faculty of Music

School of Arts and Humanities

Crafting Online Identities: Active and Reflexive Identity Work on Spotify

by

Clarissa Brough

Thesis for the degree of Doctor of Philosophy

April 2022

University of Southampton

Abstract

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The development of on-demand music streaming platforms, such as Spotify, Apple Music and Pandora, have transformed the dissemination and consumption of music. These networks provide open forums for listening, sharing, rating and recommending music. They have the ability to shape music consumption in ways not previously encountered. These online music streaming services not only offer instant, ubiquitous access to vast catalogues of music, but they also have the potential to influence what music users listen to and the ways they consume it. By collecting a vast amount of user data on music choices, listening habits and interactions, computational techniques, in the form of recommendation algorithms, can recognise and predict the similarities and differences in musical preferences of an entire user database. These recommender algorithms help structure the large and diverse array of possible song choices, but they also have the ability to influence the music that individuals are and are not presented with on an increasingly personalised basis.

Music has traditionally served as a powerful resource for identity work, allowing individuals to construct, manage and perform who they are and who they want to be. What do these online music streaming platforms with integrated recommendation systems mean for our identity work? Do they have the potential to shape our identities as they do our music consumption? Drawing on a mixed methods approach and focusing on Spotify, the market leading music streaming service in the UK, this thesis contributes to existing scholarship on music consumption in an online context. Extending current knowledge, primary research focuses on users to explore how music streaming platforms can enable the effective construction and performance of online identities. Through the triangulation of online survey responses, online observation and semi-structured interviews, I investigate the types of identity work achieved through feelings of psychological ownership, the

curation of online music libraries, playlists and public and private streaming choices. Spotify also has the potential to shape identity work. A diverse array of data points collected during engagement with the platform become reassembled into what Haggerty and Ericson (2000) refer to as 'data doubles'. These data doubles are perceived as online mirrors to human identity that are subsequently used to determine the music choices that users are and, perhaps more importantly, are not presented with.

The research contributions that this thesis makes are highly important considering the modern world we live in today, where qualitative, non-numeric aspects of daily life are increasingly becoming datafied, smart devices are ubiquitous and always-on mobile Internet access is prevalent. This thesis therefore sheds light on the role of the platform and its technologies in crafting online identities, exploring how Spotify attempts to reflect a user's identity through profile construction and personalised recommendations. It considers how processes of self-fashioning through music can be mediated and shaped by the technology of recommender systems. These platforms do not only reflect user identity. Unlike much of the existing literature in data studies, which addresses concerns over online surveillance and algorithmic control, this thesis presents users as data activists who appropriate platform affordances and adapt them to their benefit. This research therefore explores the power and agency exerted by both the user and the system. Understanding this reciprocal relationship allows for new insights into online identity work.

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Research Thesis: Declaration of Authorship

Print name: Clarissa Brough

Title of thesis: Crafting Online Identities: Active and Reflexive Identity Work on Spotify

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

Signature:

Date: Tuesday 19th April 2022

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Chapter 1 Introduction

Imagine a young man in a crowded coffee shop, headphones on as he works at his laptop. Oblivious to his physical surroundings, he is listening to a personal playlist he has prepared in advance, constructed within an online streaming platform. This attentively curated sequence of songs helps him get in the mood for work and stay focused. Each song he streams is simultaneously being shared with his friends online. How did he decide which tracks to include and exclude from this list? How did the platform itself affect his decisions? What does he think his playlist reveals about him, and how do other inhabitants of his online world read his music choices?

The emergence of interactive music technologies during the twenty-first century has transformed the dissemination and consumption of music (UiO Department of Musicology, 2016). Online music streaming platforms, such as Spotify, SoundCloud and Apple Music, now provide instant access to vast catalogues of music and enable ubiquitous listening. Use of these on demand music streaming services increased yet again between 2019 and 2020 by 23% (MRC Data, 2020), evidencing their continued popularity as a means for music consumption. By having a free account, in exchange for being served sporadic third-party advertisements, or paying a monthly fee of approximately £9.99 (2021), consumers are no longer confined to listening to music they physically own but have the opportunity to stream an almost-complete history of recorded music. Music streaming platforms not only provide access to large libraries of music; they also collect and employ user data as input for algorithms to produce personalised recommendations. They therefore have the potential to shape the dynamics of music consumption in ways not previously encountered, possessing the ability to control the music we are exposed to as well as the music that remains concealed.

1.1 The Digitisation of Music: From LPs to Cloud Based Systems

Notable changes relating to personalised music listening emerged last century with the introduction of headphones to the transistor radio, followed by commercial releases of the boom box, Walkman, portable CD players, MP3 players, the iPod, iPhone and finally online music platforms. When released, the boom box and Walkman employed cassette tapes as the medium

for recording and listening to music, signalling the beginning of the marginalisation of LP records¹ and instigating considerable changes within the music industry (Levy, 2006). The iPod propelled this development further by employing an MP3 digital format to store and play songs. Today, digital music formats continue to be utilised by online platforms.

The entwining of music and computers provided new ways to find, play, store and share music. Initially, CD-ROM drives played CD-ROM discs of video games, encyclopaedias and other large database programs. Since sound on the first personal computers was an afterthought, as well as using the device for any form of music consumption, CD-ROM drives and discs were not initially capable of reading audio. It was not until the late 1980s and early 1990s that CD-ROMs enabled individuals to listen to CDs on something other than a CD player, recontextualising music consumption on a new device (Morris, 2015). CD-ROM drives were considered one of the central technologies of the 'multimedia revolution' (Morris, 2015, p. 37) that brought significant changes to the capabilities of computer audio and video. CD-ROMs also introduced verbs such as 'ripping' and 'burning' to music experiences, describing the ability to extract data from or store data on discs. Initially, these capabilities were limited and costly. For example, Sony and Yamaha released a CD burner in 1989 for desktop computers costing \$30,000 (Morris, 2015). Although the did decrease over the coming years, this technology was initially only available for specific, experienced users.

Launched in 1993, programs like cdda2wav and XingSound made ripping music less challenging and later software like Windows Media Player allowed users to burn CDs in just a few clicks. It was therefore the software itself that was encouraging people to rip CDs and play them. The subsequent ease of creating and then sharing copies of personal CDs, however, broke copyright law and sparked wide-scale music piracy. In the mid-1990s, a number of companies sought to develop new music formats to make sound more suitable for computers and the Web, including Real Audio and Windows Media Audio. Eventually becoming the standard for digital music files,

¹In 2020, streaming accounted for approximately 80% of music consumption in the UK but this figure was complemented by the purchase of almost five million vinyl LPs (BPIa, 2021). Despite an initial, rapid decline in the sale of LPs during the advent of digital music, sales of vinyl increased in the UK for the thirteenth consecutive year in 2020 (BPIa, 2021). The purchase of vinyl has been supported by a number of recent online campaigns, including Tim Burgess' #TimsTwitterListeningParty and #RecordStoreoftheDay; however, it also suggests that the appeal of collectable, physical formats continues alongside the use of on-demand audio streaming services.

the MP3 format, a compressed digital file, propelled the uploading, downloading and sharing of music even further. It also introduced a new personal and portable music listening device into the market-the MP3 player. When first launched, these devices could only hold between 20 to 30 songs. With the development of audio compression and improvements to storage, a listener could eventually carry their entire music library of up to 40,000 songs. Having a device capable of storing an extensive catalogue of music, however, only further encouraged music piracy.

In the mid-1990s, hard-drive storage space, hardware, bandwidth and both the speed and stability of the average Internet connection were still too limited to make the transfer and use of audio files a possibility for most people (Morris, 2015). Sharing of music became more feasible through the development of music on computers and its compression and digitisation. Digital music was initially acquired on the Internet via illegal peer-to-peer file sharing networks. In 1998, IBM and the 'Big Five' record labels at the time (Sony, Warner, BMG, EMI and Universal) were among the earliest adopters of digital rights management (DRM), which was the most overt form of control that emerged during the transition to digital music (Morris, 2015). Encrypting information in files and encoding devices with strict instructions on how they could and could not be used, DRM significantly affected the usability and reproducibility of digital music and enforced intellectual property rights for digital goods, in particular music (Morris, 2015). The drive to determine usability and secure legal, economic and technical control of music only further encouraged the use of technologies that embraced the lack of constraints traditionally tied to physical music (Morris, 2015). In a new bid to perturb illegal downloading, from 2001 record companies began to establish their own online music emporiums in the form of Pressplay and MusicNet. These sites proved problematic, as the various record labels refused to collaborate in constructing a single network that sold songs sourced from all their musical catalogues. Thus, unlike the extensive and diverse song choices offered by sites like Napster, no legal service was able to provide all the songs a consumer could ever want (Levy, 2006). Not surprisingly, these services proved unsuccessful, with Pressplay closing a year later. Now, with increased access to the internet, mobile internet connections and the advancement of digital storage technologies, music listening has become ubiquitous and, for many, strongly integrated into daily routines.

During the development of the iPod in 2001, the notion of distributing music via an online Apple store did not materialise. Originally, songs could be loaded onto Apple's iTunes computer software by inserting a CD or importing digital files that had been downloaded from the Web. By 2002, Steve Jobs, having witnessed the collapse of many legal online music services, believed that

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Apple could provide an efficacious legal digital music store (Levy, 2006). Launched in April 2003, the iTunes Music Store offered consumers a potential two hundred thousand songs to download. Within a week, users had purchased more than one million songs, more than the entire number of legal downloads that had been bought previously (Wittkower, 2008). This method of distribution culminated in a significant deviation from purchasing entire albums to downloading individual tracks, demonstrating what Andrew Wells Garnar termed 'micro-consumption' of music (Wittkower, 2008, p. 36).

Today, music downloads are dwindling and an alternative means of acquiring music online has become increasingly widespread. From around 2005, multiple music streaming services have been launched, offering a new online format for music distribution and consumption. Listeners now frequently stream songs on the Internet, a system that permits instant music listening in real time. Unlike platforms for music downloading, music streaming sites typically employ 'freemium' business models, combining both "free" and "premium" services (Kumar, 2014). Within these models, users may be provided with basic features at no cost, although their music listening is interrupted by sporadic third-party advertisements, or may access richer functionality by paying a monthly subscription fee. The increasing popularity of music streaming services has signalled noticeable structural shifts in the relationship between music and the listener (Hagen, 2015b). Streaming tracks has been frequently likened to music renting, questioning users' feelings of physical and psychological ownership (Sinclair and Tinson, 2017). Streaming makes it easier to give new songs vast worldwide exposure by offering diverse music choices that are not often heard within mainstream outlets (Levy, 2006). YouTube offers the possibility to stream copious music and videos uploaded by others and, more recently, other outlets-such as Pandora, Last.fm, Spotify and Apple Music-offer this kind of service. These types of streaming platforms appear to further encourage music 'micro-consumption' (Wittkower, 2008) as users rarely listen sequentially to an entire album but instead choose individual tracks from a plethora of albums stored in their online streaming catalogue.

Music streaming platforms are making more music available than ever before (Webster, 2019). They also have the potential to shape what and how people consume this music by collecting and analysing digital data about user behaviour, which is used as input for recommender systems. Recommender systems, originally developed within the context of artificial intelligence and information systems, filter content by generating and serving personalised recommendations to online consumers. The development of recommender systems gained increasing importance

during the 1990s as the Web became an important medium for both business and e-commerce transactions (Perugini et al 2014). The advent of Web 2.0, characterised by an abundance of user-generated content, necessitated systems that filtered information to reduce cognitive effort when online (Johnson, 2015). Today, recommender systems are ubiquitous on the Web (Eriksson et al, 2019). Their accuracy and success depend upon employing online tracking mechanisms to solicit and analyse vast amounts of user data. From the amassed data, recommender systems construct user-profiles, which are employed to make predictions as to who we are as well as our likes and dislikes.

1.1.1 A Case Study: Spotify

As of 2020, Spotify reported approximately four billion manually curated playlists, fifty million songs and two-hundred and eighty-six million active monthly users (Iqbal, 2021). Founded in Stockholm in 2006 by Daniel Ek and Martin Lorentzon, Spotify is the market-leading, on-demand music streaming service (Statista, 2021). The streaming service also has an integrated recommendation system that powers several personalisation features. Spotify's software initially distributed music to recipients over the Internet via a central server. Its early distribution channel therefore relied on peer-to-peer file-sharing networks (Eriksson et al, 2019). The first version of the platform was released on 1st May 2007 to a small circle of the founders' acquaintances. Being invited to become a member of the Spotify community became a sign of exclusivity and facilitated controlled growth. It also added to the hype that surrounded the platform at the time (Eriksson et al, 2019). In the beginning, the invitation-only system resulted in a rather affluent user demographic, mainly comprising of men between twenty-five and forty years old who lived in Stockholm's city centre and worked in the field of technology.

The public version of Spotify was not launched until October 2008 when the platform promised free music consumption, relying on advertising for its main source of revenue. From late 2009 Spotify offered either (paid) subscription or (free) ad-supported accounts to its users. The system relies on users listening to new material in order to generate income from music-label revenue sharing, advertisements and subscriptions and so the recommendation system integrated within Spotify is there to help incentivise monetisation. There are currently 190 million users with ad-supported subscriptions on Spotify (Spotify, 2020) but over time these accounts have had a variety of restrictions imposed on them, including being invitation-only, having a maximum number of music listening hours per month and a maximum number of streams per track.

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Spotify's user interface has also undergone significant transformation throughout its history. Users were initially able to build a personal profile, add friends and share music on the platform. Later, profiles could be connected to Facebook to enable users to find more friends on Spotify and allow for more extensive data collection on friendship networks.

Personalisation was not regarded as an essential feature during the platform's initial development. Instead, becoming a social platform was the driving force. This however led to Spotify being criticised and labelled as solely a database of songs, not aiding users in selecting music that suited personal preferences (Eriksson et al, 2019). It was not until December 2012 that Spotify released a selection of personalised recommendation features that served users with the most relevant content. Users were also given the ability to asymmetrically follow music suggestions from artists, editors and music experts. From this point onwards, Spotify was not only a music distributor but also a recommender of music that users would be unlikely to find themselves. The algorithms that generate these recommendations have advanced over time and are now taking into account streaming patterns, friendship networks as well as spatial and temporal data (Webster, 2019).

Spotify analyses a vast amount of user data, including music streaming patterns, to produce personalised music recommendations (Bernhardsson, 2014). Though commercial platforms closely guard information on precisely how their recommender systems work, Spotify's recommendations are most likely achieved through a method of collaborative filtering. Here, computational systems generate predictions about an individual's music preferences by analysing patterns in their past streaming behaviour (Schedl et al, 2015). Individuals are then grouped by the system based on perceived similarities in their music taste. These inferences are employed to determine the music to present to specific users. Unlike some recommendation systems, Spotify does not rank its recommendations. When recommendations are ranked users typically focus on those at the top of the list due to cognitive limitations or trust bias, even though recommendations lower down the list may be more relevant. Spotify seeks to present its recommendations in a way that encourages exploration rather than restricting attention to top items in a list. Personalised recommendations on Spotify are grouped in terms of similarity and can be found in the 'Daily Mix', 'Discover', 'Radio' and 'Related Artist' features on the platform.

Spotify continuously seek to develop and improve their streaming platform by experimenting with different recommendation models. In 2014 Spotify acquired The Echo Nest, a music database containing the characteristics of approximately thirty million songs at the time of its takeover (The Echo Nest, 2016). As well as music fingerprinting, which recognises and names songs by listening to them, machine learning techniques embedded within The Echo Nest can generate recommendations based on preferred auditory features (The Echo Nest, 2016). Spotify are currently exploiting Echo Nest data to develop machine-learning algorithms capable of recognising and analysing auditory features, lyrics and even album images. This model is more computationally driven, employing music information retrieval techniques and seeks to recommend songs based on a user's perceived auditory preferences, such as tempo and timbre, to improve personalisation features and is used to generate a number of Spotify's personalised and mood-based playlists (Webster, 2019).

1.2 Music Consumption in the Streaming Era

How have these developments in streaming platforms affected music consumption? Every song a user listens to, every time they search for a particular music artist or select a playlist to stream data is recorded in their user profile. Extensive data collection on music listening habits has culminated in the 'datafication of listening' (Prey, 2016, p. 31). Accuracy and success of any recommender systems relies on online tracking mechanisms. These mechanisms solicit and analyse vast amounts of user data, which is either knowingly or unknowingly provided by the user during instances of human-technology interaction (Jawaheer, Szomszor and Kostkova, 2010). Songs must be played for a minimum of thirty seconds to be recorded as a stream within a user profile (Johnson, 2015). These platforms can also track the times of day a user listens to particular types of music and their physical location while listening. If an individual has their account linked to social media profiles, these platforms can extend data collection and analysis to include information about social networks. These diverse data points are all aggregated into an online matrix. The constructed matrix will be relatively sparse since most users will not have listened to a substantial amount of the catalogue and are also likely to skip a number of songs during streaming sessions. The frequency weighting of data recorded within Spotify's matrix is predicated on the underlying assumption that the amount of time a user spends accessing specific content is directly proportional to how much an individual likes that item (Amatriain, Pujol and Oliver, 2009). The weighted data is then inputted into music recommendation technologies where Spotify is likely to use collaborative filtering alongside other models for recommendation to better understand and predict musical taste (Morris, 2015). The basic premise of collaborative filtering is

that if users have demonstrated similar interests in the past, for instance they have streamed the same songs and/or playlists, they are more likely to have similar interests in the future (Jannach et al, 2010). Using this data, music streaming services have the potential to significantly shape music consumption through the strategic selection and presentation of music.

The volume of available music on streaming platforms, combined with their attempts to shape music engagement and consumption, is something not previously encountered with other music consumption formats. Influencing what users see and, perhaps more importantly, what they do not see has the potential to shape current and future identities constructed by both the user and the platform. Identities have therefore become constituted through technologies such as algorithms which reflect our perceived identity back to us in the form of personalised recommendations. By personalising music consumption and presenting similar content, these services have the potential to reinforce existing tastes and isolate people from a diversity of content. In doing so, music streaming platforms may be reducing instances of serendipity online.

Although there has been extensive research on music as a resource for identity, there is limited literature on how online music streaming services can be used for active identity work. Currently, much of the existing literature has focused on music consumption practices on streaming platforms or the methods used to generate personalised recommendations. This thesis instead explores the amalgamation of human and machine actors on Spotify that enable particular types of active and reflexive identity work. It poses highly significant questions at a time when so much social anxiety exists about how social media is shaping individual and public opinion (Spohr, 2017), having both micro and macro effects. This thesis extends beyond social media to consider the extent to which processes of self-fashioning are being shaped by the technology of recommender systems.

1.3 Research Aims

In this thesis I aim to address gaps in existing literature by exploring consumption practices on music streaming platforms and how these practices enable active identity work. Unlike earlier formats for music listening, through the collection and analysis of user data these platforms assume an active role in shaping identities in ways that could not have previously occurred with downloading, CDs, cassettes or vinyl. It is therefore important to consider how and why platforms like Spotify mediate the construction, management and performance of individual and group identities. More specifically, this thesis poses three research questions:

- RQ1: How do users actively engage in music streaming practices and how does this relate to the construction of identities?
- RQ2: What types of active identity work can be witnessed on Spotify?
- RQ3: How does the user perceive the ways in which the system constructs their profile?

Researching active identity work on Spotify necessitates an interdisciplinary approach, using theories and methodologies from a wide range of disciplines. To understand individual and group constructions, management and performances of identity requires engagement with sociological perspectives on identity. Theories from musicology are also vital for interpreting how music can be used as a resource for identity work and, more broadly, to analyse accounts of music consumption practices. Music consumption patterns are also informed by consumer theory, which provides a framework for explaining why individuals purchase and consume particular goods. To understand how, in technical terms, Spotify generates personalised content via its music recommendation technologies, literature from the field of computer science is crucial. It is not solely the technology underpinning these platforms, however, that shape music consumption patterns and available resources for identity work. I also explore user perceptions of the platform's interface and features to understand how these have the potential to influence music streaming. Engagement on Spotify is not a one-way process from the platform to the user. Using Spotify relies on reciprocal interaction between humans and technologies, where each affect the other. Literature from the field of science and technology studies (STS) and web science is used to explore the reciprocal nature of this interaction. Only by amalgamating research from multiple disciplines, including sociology, musicology, and business, can the complexities of identity work on Spotify begin to be understood.

The research questions outlined above are explored through the analysis of empirical data obtained via mixed methods research. Using Spotify, the market leading music streaming service (Statista, 2021), as a case study I developed and implemented an online survey that was completed by 638 Spotify users. This survey explored broad online music streaming practices and uses of Spotify, addressing my first research question. From those who left their contact details at the end of the survey, a number of individuals were selected for continuing participation. Twenty-one participants completed a one-week streaming observation and an in-depth, semi-structured interview. These three phases of data collection, combined with relevant literature, demonstrate how and what types of active identity work are performed on Spotify. Since commercial interests

and proprietary concerns prevents exploration of the inner workings of Spotify, including its data collection practices and recommendation algorithms, this research instead focused on users' perceptions of the ways Spotify shapes their online identities.

1.4 Key Findings

This thesis makes three important claims about how identity work is constructed, managed, and performed on Spotify. Firstly, although current literature on music streaming services argues that there is no sense of ownership attached to digital music and streaming is only akin to music renting (Kibby 2009, Sinclair and Tinson, 2017), findings from my research suggest otherwise. It is precisely because participants feel a sense of psychological ownership towards their music on Spotify, mostly in terms of their personally curated playlists, that identity work is performed on the platform. This identity work is enacted through self-to-self reflection as well as in more public performances. Those who participated in this research were keen to express and reinforce their personal investment in Spotify, relating to both emotion and time, and therefore did not perceive their online music as rented and temporary. Collections of self-representative music stored within Spotify accounts reveal dynamic and multifarious identities that were current, long-term, transitional, context-dependent, and aspirational.

Secondly, this research reveals how conscious users are of data collection practices when they engage with online platforms, including music streaming services. Most interviewees were aware on some level of data collection practices on Spotify, although none could be sure what data was being collected and how it was then used. Participants, however, trusted the data collection practices of Spotify and placed it in direct opposition to platforms such as Facebook, where they viewed data collection as potentially malicious and harmful. Distrust of Facebook, as a platform that collects a copious amount of user data, was unsurprising given the significant amount of media attention it has received in recent years, particularly in relation to the Cambridge Analytica scandal and the resulting lawsuits for allegedly failing to comply with data protection laws (Criddle, 2020). In light of this, it was even more surprising that interviewees displayed willingness to contribute to their datafied self, intentionally providing the platform with more and more listening data to train the algorithm to produce more accurate personalised recommendations. This two-way interaction suggests that online identities on Spotify are crafted via societal co-construction, with the user and technology affecting each other in reciprocal ways.

Finally, despite the trust and reliance users place on the personalised content generated for them by Spotify, human trust networks remain important for music consumption and associated identities. Interviewees valued human music recommendations more than those generated by machines. They were also more willing to consider and listen to music outside their existing preferences if it was recommended by someone in their human network, which was not the case if suggested by Spotify. Interviewees believed that a human being knows and understands another human being, including the full spectrum of their emotions, far better than a machine ever could. This reasoning assumes that the datafication and algorithmic analysis of listening habits cannot replace the importance of human networks in music consumption.

1.5 Contribution

This thesis contributes to literature on identity and music as a resource for identity by showing its continued relevance in an online context. Symbolic interactionism and theories that conceive of identity as a performance remain pivotal to understanding instances of identity work on Spotify. Music consumption on online streaming services is gaining increasing scholarly interest but few studies have thus far focused on users' practices and perspectives. The Clouds and Concerts Research Project (UiO Department of Musicology, 2016) has offered some accounts of users' motivations for using streaming services. In particular, Hagen's work (2015a, 2015b, 2016) has provided illuminating accounts of user engagement with music on WIMP (now known as Tidal), investigating how users make sense of their music streaming and how personal collections of music are organised. This thesis corroborates findings from the Clouds and Concerts Research project (UiO Department of Musicology, 2016); however, it also extends their research by considering how users engage in streaming platforms as part of their identity work. Narratives from primary research demonstrate how online music streaming services serve as arenas for online identity work in ways not previously researched.

Primary research conducted for this thesis argues against the view that psychological ownership, which contributes to construction of identities, can only be experienced with physical objects, such as CDS or LPS (Kibby, 2009). This thesis presents narratives of Spotify users exhibiting a strong sense of attachment to their digital music collections, most notably personal playlists, that in turn contribute to feelings of ownership. Non-tangible music can therefore be used as a resource for identity work. Psychological ownership was notable in the personalised practices of music curation on Spotify. Existing literature on music curation has predominantly focussed on

the organisation of physical objects, such as CDs or vinyl, with new forms of non-tangible curation made possible by music streaming platforms receiving little attention. More recent research, including that conducted by Sinclair and Tinson (2017) and Hagen (2015a), has started to acknowledge the intensifying importance of online curation in an era of instant access to copious amounts of digital music. Music recommendation systems also now perform the role of curators by aggregating music into playlists presumed suitable for different contexts, moods and activities, helping to alleviate the cognitive burden associated with having significantly expanded choice. Existing literature has thus far not made the connection between the act of online music curation and identity work. Whether curated by the platform or the user, playlists enable the negotiation and expression of identities with and through technology. In this thesis, I demonstrate the importance of music curation on music streaming platforms and the ways it can be used as a resource for the construction, management, and performances of online identities.

Research conducted in this thesis shows that Spotify does not only reflect user identity. Current literature on music streaming depicts online platforms as distributors of content and rarely addresses their ability to shape music choices and subsequently online identities. Technologies, including Spotify, are providing new ways for constructing and shaping identity. Both machines and human users have agency and power in this online identity work. In this thesis, I discuss Spotify's potential to shape identities through its application of data doubles to determine the content it does and does not present to users in personalised recommendations and platform features. Users' online identities determine the data that recommender systems are able to collect, meaning that their identity shapes how the technology constructs and employs the user profile. Research participants were keen to assert that they were not passive actors but, as data activists, assumed an active role in online music consumption. Users exerted their agency in the curation of personalised playlists, awareness of data collection practices and the conscious and sub-conscious methods they used to train the platform's algorithm to produce music recommendations more aligned to their preferences. The process is therefore better explained by societal co-construction theory, where both the user and the technology affect each other in reciprocal ways (Pinch and Bijker, 1984). Co-construction allows for a reflexive identity that the user has some control of shaping. Recognising the reciprocal relationship between the two is important considering the modern world we now live in, where smart devices, always-on internet access and interactions with non-human actors are commonplace in everyday life.

In a digital age, interviewees still place greater levels of trust in human beings. As discussed above, individuals were more likely to trust music recommendations from those in their human network, including their offline and online peers and family members. Those interviewed suggested that human beings can understand other humans in ways that technologies cannot replicate. Thus, recommendations from human actors were perceived as being more authentic and driven by an understanding of human emotions. Although Spotify was recognised as a means for expanding music horizons, interviewees were more likely to stream music outside their existing tastes if it had been recommended by someone in their human trust network, increasing chances of serendipity. This same level of trust is not awarded to computationally driven recommendations.

The methodological approach I have adopted in this thesis highlights the importance of engaging with interdisciplinary and mixed methods research. Triangulating data from an online survey, online observations and semi-structured interviews has provided illuminating insights in ways that a single research method alone could not. For instance, online streaming observation offered a means to collect data in real time. This non-biased music listening data is not something researchers would previously have access to, revealing streaming routines and how users negotiate their different identities through music choices. It also supported the narratives of participants in subsequent semi-structured interviews, encouraging richer and more detailed. This thesis contributes to attempts made within the humanities and social sciences to utilise theoretical and methodological perspectives from Science and Technologies Studies (Sismondo, 2004) and the use of qualitative research methods in digital settings.

1.6 Outline

The remainder of the thesis is organised into chapters representing a literature review, methodology and study design, followed by sections devoted to research findings and analysis.

In Chapter 2 I review theories on identity from a range of academic disciplines. There are a multitude of theories on identity presented in literature from a variety of fields. To narrow the scope of this review, I have selected those most relevant to my research on online identities crafted through music. I begin by introducing the theory of symbolic interactionism which asserts that individuals are always active in interpreting and shaping their world via internal and external interactions. This theory was expanded upon by Goffman (1959) who adopts a dramaturgical

Chapter 1

metaphor to convey how we consciously prepare and present ourselves to others through the adoption of roles and masks. The notion of identity as a performance is also explored in the feminist works of Joan Riviere (1929); studies by Judith Butler (1990, 2004) have forcefully articulated how gender identities have no ontological status but instead rely on ritualised and socialised acts. Following this discussion of active identity construction, I review current literature on the use of music as a resource for identity. Firstly, I define different types of musical identities, using MacDonald Hargreaves and Miell's (2002) identities in music and music in identities, before moving on to address how music can be appropriated as a resource for individual and collective identity work. Christopher Small's notion of 'musicking' (Small, 1998) provides a particularly useful lens for understanding how music streaming can be a meaningful act for users to partake in. In the final sections of chapter 2, I explore the role that recommender technologies have in influencing music consumption practices and shaping user identity. Here, I discuss more recent research conducted on music streaming platforms, including the Clouds and Concert Research Project (UiO Department of Musicology, 2016). Although seemingly diverse and wide-ranging in scope, these accounts all portray individuals as social actors in the construction, management, and performance of individual and collective identities. There are limitations to the existing literature and so chapter 2 also addresses how this thesis can build on current research.

Chapter 3 outlines my methodological approach and research design. I begin by explaining my reasons for adopting a mixed methods approach. Each phase of the methodology, the data it aims to collect and associated sampling technique is discussed in turn. This is followed by a consideration of the strengths and weaknesses of using an online survey, online observation and interviews for collecting data. Data analysis was conducted following each phase of research and again once all data had been collected. Chapter 3 therefore outlines data analysis techniques utilised for interpreting qualitative and quantitative data. This chapter concludes with a discussion of the ethical considerations relevant to my research.

Analysis of empirical data begins in Chapter 4, which explores everyday music listening practices on Spotify. Using the identity theories reviewed in chapter 2, I identify forms of active identity work performed when streaming music on Spotify, including identities in music and music in identities (MacDonald, Hargreaves and Miell, 2002). The expression of music preferences to self and others remains significant to the online construction, performance, and management of individual and collective identities. Interviewees described their music preferences in diverse ways. Some utilised broad music genre labels to discuss preferences and others provided a

greater level of detail, explaining their enjoyment of particular sounds and rhythms. The communication of non-self-representative music was of equal importance to self-representative music likes in identity work. Interpreted from the perspective of symbolic consumption, accounts from semi-structured interviews addressed self-representative music preferences as well as songs participants identified as being pertinent to their identity. Identities constructed through music are dynamic and performative. Chapter 4 therefore outlines the changing nature of musical identities through a discussion of current, long-term, transitional and aspirational identities. These active identities are crafted through changing music preferences, biographical affiliations with music and the influences of particular social groups. Identity work on Spotify was most prominently performed through the careful curation of music libraries. Personal playlists were the most dominant and important means for streaming music among participants and they provided individuals with the opportunity to construct, manage and perform their multiple identities through particular music collections. The unique practices for playlist curation and how they are used for identity work are presented in chapter 4 using theories of psychological ownership and literature from the Clouds and Concert Research Project (UiO Department of Musicology, 2016).

In chapter 5, I seek to extend current literature on online music consumption by framing the discussion from a user's perspective. The chapter explores users' perceptions of the ways in which the system constructs their profile, outlining the positive and negative aspects of the platform as discussed by interviewees. This chapter focuses on personal user investment through consideration of particular music streaming practices and routines that employ user-facilitated and/or service-facilitated features. Expanding on playlist curation in chapter 4, the use of playlists curated by Spotify forms a large part of the discussion. I elaborate on the ways Spotify curates and presents content to its users that ultimately shapes music consumption and discovery on the platform. From this, however, emerged a surprising dichotomy between user investment and loyalty to the platform. Participants have become so accustomed to personalised music offerings that they now rarely engaged with non-customised content. Thus, to conclude the chapter, I explore the technologised identities crafted through engagement with Spotify.

Although Spotify is not an archetypal example of a social media platform, having limited social features, chapter 6 explores the formation and presence of temporary and long-term online networks that emerge when streaming music. By again adopting a user-centred approach, I employ a framework central to Actor Network Theory (ANT) to trace some of the network actors and the relations between them (Latour, 2005). I utilise Granovetter's (1973) typology of network

ties to further understand the relationship between human actors online and the potential they have in shaping music consumption and the construction of particular identities. Networks constructed on Spotify, however, are not only founded on human-to-human interaction but also include non-human actors. Posthumanism and ANT are therefore used to frame the discussion of human-technology networks, which introduces the concept of active profile construction.

Following analysis of my empirical data, I return to the research questions that have guided this research and present my conclusions in chapter 7. I outline the broader implications of this thesis and suggest future research areas arising from my findings. Key themes that have emerged are identified and I discuss the importance of research, particularly in socio-technical fields, that uses the appropriate skills and resources to investigate the types of data collected by recommendation-based platforms and how it is used. This would, however, require online platforms to be more transparent about the often opaque workings of their data collection practices and the algorithms that drive personalised recommendations, as well as being more open to engaging with a research community beyond their own companies.

Chapter 2 Reviewing User Constructions, Performances and Management of Identity

2.1 Introduction

The departure from music listening via owned, physical artefacts to more transient, online streaming has provided platforms such as Spotify, Apple Music and Pandora with the potential to shape music consumption in new ways. Not only are these music streaming platforms offering access to vast catalogues of music for little or no money, but they are also seeking to shape music choices and streaming activity. This, in turn, means that they have the potential to influence the construction, management and performance of users' online identities through music. To begin formulating responses to my research questions, below I present a narrative review of literature related to this thesis that seeks to generate a greater understanding of significant research areas and enrich current human discourse. This approach aligns with the overarching interpretivist epistemology of my project.

The purpose of this review is to ascertain an initial impression of my research area, which is wide-ranging in scope, and outline how this thesis contributes to the existing literature. Primary data are later interpreted through these various theoretical lenses to understand and give meaning to instances of active identity work on Spotify. This thesis is founded upon literature from different academic disciplines and ontological perspectives and so the following chapter is organised into sections that explore particular areas of relevant research. Specifically, this chapter explores the potential for music streaming platforms, with integrated recommender systems, to influence the identities that users can construct online. It outlines existing research on music streaming platforms, online music consumption and the technologies of recommender systems. In considering the existing literature, this chapter begins to shed light on the potential role music recommendation systems, such as Spotify, play in the construction of users' online identities. I then move on to consider how music is used as a particular resource for both online and offline identity work. Here, I convey the means through which music serves as a resource for the formation of individual and collective identities by considering, for example, the symbolic consumption of music and music biographies. To conclude this review, I provide an overview of some of the differing definitions of identity offered by particular theories. A subset of theoretical perspectives, including symbolic interactionism, dramaturgy and posthumanism, has been selected based upon their relevance to my own research. This review addresses how each theory

perceives identity construction, performance and management and evidences its relevance and application to this thesis. In the conclusion to this chapter, I consolidate these perspectives on identity and musical identity to provide my own definition of each.

2.2 Music Consumption and the Possibilities for Identity Work on Music Streaming Platforms

The prevalence of on-demand streaming services in everyday music consumption has, in recent years, inspired an increasing volume of academic research. Current literature in this field tends to focus upon the technical underpinnings of music recommendation systems. More recently, research has started to explore the practices and influences of different human actors, such as users, artists and music labels, who together construct music streaming assemblages. This thesis contributes to and extends existing literature on music recommender systems by considering the reciprocal relationship between human and non-human actors within a music streaming network as well as the role each plays in the currently understudied area of online identities constructed through music.

As one of the largest research projects conducted on music streaming thus far, the Clouds and Concerts Research Project is pertinent to this thesis. Conducted between 2010 and 2016, WiMP, now known as Tidal, granted the research group access to the streaming data and search logs of anonymised users in Norway. Having access to this type of dataset is rare in academic research as platforms are highly reticent about the data they collect and store. This research project was therefore able to use Big Data to reveal streaming practices that may not have been observable using other research methods. In addition to this data, the group conducted interviews, focus groups and diary studies to research uses and experiences of music streaming (UiO Department of Musicology, 2016). Over the course of six years, the project investigated streaming platforms from a user perspective, revealing everyday practices related to music listening. Although the research evidenced the importance of online music collections to users, none of the work reflected on its importance to identity work. This is a gap my own research seeks to address.

Data collection and analysis resulted in several research outputs, including journal articles, conference papers and PhD theses. The project found that the predominant motivation for using

streaming services was instant access to a vast library of music (UiO Department of Musicology, 2016). Distinct patterns were also found in the ways that music was used on specific days and at specific times. For instance, the research team found that Friday and Saturday evenings were prominent times for weekly streaming. Weekday afternoons between one and three o'clock were dominated by playlist listening and offline listening using mobile phones was typical during commuting hours. The discovery of new or unfamiliar music typically occurred during the evenings when search and playlist curation were more frequently undertaken (UiO Department of Musicology, 2016). Referred to as 'eventization' (Maasø, 2016, p154), particular events, such as music concerts or festivals, also had an impact on the daily use of streaming services. This was seen to contribute to a collective and shared music culture where people, who were otherwise characterised by fragmentation, streamed the same artist and songs (Maasø, 2016).

The research group discovered that, on average, playlists occupied one third of the total amount of time that users spent listening to music on streaming services, representing the most dominant form of listening for those under twenty-five years old (Hagen, 2015a). Approximately 80% of playlist names in the study were unique, with the most common titles using artist names, a specific listening context or an event (UiO Department of Musicology, 2016). The creation and maintenance of playlists was an important activity for many; however, their significance to constructions and performances of identities through music remained unexplored. These collections of personal music were organised according to the user's individual logic and were experienced as either collections that users possessed and displayed or ephemera that were created, modified or deleted (Hagen, 2015a). Evident differences emerged in the listening patterns of demographic groups. Throughout the research, young women were more likely to listen to single tracks in succession whereas men over the age of forty-five mainly listened to songs sequentially in album mode (UiO Department of Musicology, 2016). Social activity on WiMP, such as sharing songs and personal playlists, occurred much less than had been anticipated by the research group. When reviewing WiMP data, researchers found that, on average, nine out of ten curated playlists were not shared with others, evidently being created for personal use (UiO Department of Musicology, 2016). Most participants therefore seemed to experience streaming services as a personal rather than social music medium.

Of particular relevance to this thesis is the research conducted by Anja Hagen, a member of the Clouds and Concerts research group. Hagen produced a thesis comprising of four articles that explore specific aspects of music streaming on WiMP (Hagen 2015a, 2015b, 2016 and Hagen and

Lüders, 2016). Her thesis researched three intrinsic qualities of music streaming that shape user experience: the intangibility of music on cloud-based systems, the abundance of music available and social networking features (Hagen, 2015b). She is one of the first researchers to be explicitly concerned with music streaming services from a qualitative user perspective, an area that this thesis aims to expand upon. Hagen (2015b) used a mixed methods approach to research the practices of twelve heavy streaming users, aged between seventeen and sixty years old. Over a sampling period of two months, participants self-reported their practices and experiences with music streaming services via diary entries in combination with online observation. These methods were followed by individual in-depth interviews. Her work sheds light on how music streaming is perceived, made sense of and practised in everyday life (Hagen, 2015a, 2015b, 2016). It suggests that streaming provides musical meaning and is intensely self-referential and personal while also serving as a malleable life-world resource to experience emotional, psychological and physical processes (Hagen, 2015b).

Jack Webster (2019) has recently provided further insights into the disruptive role that music streaming services occupy in the social dynamics of music streaming. His research investigates the ways in which Spotify simultaneously diminishes former class practices and creates new ways to achieve class distinction (Webster, 2019). By considering the multiple actors and processes involved in curation performed by Spotify, Webster (2019) found that the platform challenged current understandings of what it means to be a cultural intermediary. Spotify therefore has the potential to disrupt traditional power dynamics in the recorded music industry. His research conveys the power Spotify has in this marketplace to shape social dynamics and, in particular, music consumption (Webster, 2019). The power and ability to influence users is something this thesis investigates. Rather than focusing on class identity and distinction, my own research explores identity more broadly, with a focus on two particular actors: the user and the platform.

The potential for Spotify to disrupt dynamics of power in music consumption has also been addressed in research conducted by Maria Eriksson et al (2019). Their book, *Spotify Teardown*, combines front-end enquiries with experimental back-end studies, which include establishing a record label, intercepting network traffic and scraping data, to research the changing processes of cultural dissemination in an online context. Considered as a 'mediator' from the perspective of Actor Network Theory, the research frames Spotify as an actor that transforms, translates and modifies musical meaning. It investigates the multiple human and non-human actors involved in the manipulation and presentation of music content, including biases potentially engrained in its

recommendation model (Eriksson et al, 2019). Based on the experiments, the authors were able to capture the complex data infrastructures that emerge when music is streamed and how monetisation occurs on the platform through third party advertising (Eriksson et al, 2019). Not all the actors discussed in this book are relevant to my research. For example, the authors describe the process of uploading music to the platform as a music artist. As my thesis focuses on users' perspectives, the back-end insights that this research provides can be used to either corroborate or contradict accounts from research participants. In particular, their accounts of user profiling and recommended content aid in interpreting and understanding user perceptions in this thesis.

2.3 Reflecting the User: Active Profile Construction

What role do recommender systems have in facilitating and shaping identities when we engage with them? Since recommender systems are central to many music streaming services, which are prominent sources for music consumption (BPIa, 2021), they are an important area of research. Originally developed in the context of artificial intelligence and information systems, recommender systems have become ubiquitous on the Web (Hosanagar et al, 2013). They are now integrated within a multitude of online platforms, including many current and popular music streaming services. Recommender systems seek to filter content by generating and serving personalised recommendations to online consumers. They can therefore significantly influence what we see and do not see online, thus having the potential to impact processes of self-fashioning by themselves constructing representations of who you are. Considering the ways in which the technology of recommender systems can shape online identity work, reviewing this literature is pertinent to addressing the types of identity work that can be witnessed on Spotify (RQ2) and users' perceptions of profiles constructed via data points and algorithms (RQ3).

Many identity theories, including symbolic interactionism and dramaturgy discussed below, consider identity to be built upon dynamic principles produced through interaction with the self and others. Although some platforms on the Web do facilitate social interaction, such as online social networks, others are founded upon human-technology interactions, such as recommender systems. Through this interaction, it appears that recommender systems are creating new posthuman identities foreseen in *Haraway's Cyborg Manifesto* (Haraway, 1991). As part of the significant social phenomenon of datafication, where aspects of life previously experienced in qualitative, non-numeric ways have become quantified (Kennedy, 2018), the accuracy and success of recommender systems, including Spotify, relies on online tracking mechanisms that solicit and analyse vast amounts of user data. Data is either knowingly or unknowingly provided by the user

during human-technology interaction. For music streaming platforms, analysed data may include streaming patterns, preferred artists, search methods and purchase history (Jawaheer, Szomszor and Kostkova, 2010). Through data collection, human identity is deconstructed by technologies into disparate data points and subsequently reconstructed by algorithms that filter content to provide users with their assumed preferences (Kembellec, Charton and Saleh, 2014).

Collected data is stored and maintained within electronic representations of users, known as user profiles. 'Profiling' or modelling of individuals via a profile was initially introduced in the field of criminology as a research method during the nineteenth century (Anter et al, 2016). Within the field of data studies, abstracting and separating the human body into a diverse range of data points and reassembling them into online profiles culminates in the creation of distinct data doubles (Haggerty and Ericson, 2000). These supposed online mirrors of human identity are subsequently put under surveillance, scrutinised and targeted for the purposes of control, governance, profit and/or entertainment (Haggerty and Ericson, 2000). Today, profiling is commonly used to customise content. Single user profiles are intended to represent one coherent identity, which is then reflected back to users in the form of recommendations. This perception of singular and fixed identity is further affirmed by Facebook co-founder Mark Zuckerberg who, in an interview, claimed 'You have one identity...The days of you having a different image for your work friends or co-workers and for the other people you know are probably coming to an end pretty quickly...Having two identities for yourself is an example of a lack of integrity' (Kirkpatrick, 2010, p. 199). The creation and maintenance of these individual profiles is not fully controlled by the user. Although users can implicitly or explicitly state their preferences, they are often unaware of what data is being collected and stored about them as well as how it is being utilised. Instead, the platform is actively creating and refining a theory of who users are as well as what they will do and want next (Jannach et al, 2010).

Transforming the body into raw information so it can be made increasingly mobile and comparable appears to be based on a discriminant model, leaving little agency for Internet users (Beck, 2015). The electronic representations are used to produce recommendations and ultimately determine what a user sees, and perhaps as importantly, does not see. Eli Pariser (2011) has coined the term 'filter bubble' to describe the potential for online personalisation to isolate people from a diversity of content, culminating in a self-reinforcing pattern of narrowing exposure. It also leads users to become increasingly passive when online, consuming content that is served to them rather than actively searching for choices (Pariser, 2011). Recommender

systems are likely to construct filter bubbles as the recommendations they generate reinforce existing preferences and reduce instances of serendipity online (Pariser, 2011). For online music platforms like Spotify, the filter bubble produces music recommendations that align with existing user preferences as have been inferred by the data collected during interaction with the system. Music standing outside of these preferences remains unexplored.

By presenting possibilities and concealing others, this invisible filter bubble influences the decisions users can make and ultimately shapes who they become (Pariser, 2011). Research has shown that recommender systems assume user preferences remain consistent and stable over time (Hawalab and Faslu, 2015). They do not allow a user to alter, refine and replace preferences already integrated within their user profile. As a result, short-term and long-term preferences are indistinguishable. Online identity, as determined by recommender systems, is therefore considered fixed and coherent as opposed to plural and contradictory. Over time, recommender systems only construct a coherent and single identity for a user, presenting homogeneity of content that users consume and are then solely exposed to (Pariser, 2011). In terms of music recommender systems, user profiles will culminate in homogenous musical identities that are, at least currently, unable to take into account the historicity of data as well as the changing nature of musical tastes. Unlike this existing literature that frames online consumers as passive, this thesis argues that users continue to exert their agency against these algorithmic filter bubbles.

The exact inner workings of recommender systems remain largely unknown. Platforms are typically opaque about the data they collect, how it is employed and the particular algorithms used to generate recommendations. Research on recommender systems has deduced, however, that the majority of platforms appear to employ a model of collaborative filtering. Spotify is also likely to use this model within its system. Collaborative filtering relies on exploiting information about a community of users to predict items a particular user will most likely be interested in (Jannach et al, 2010). Referred to as consumer subcultures, individuals are bound within coherent and homogenous groups constituted by patterns of similarity as perceived by the platform (Kembellec, Charton and Saleh, 2014). Although their offline identities may not constitute a consumer subculture, the overlap in their constructed recommender identities is perceived to be significant when compared to those outside the bounded group (Kembellec, Charton and Saleh, 2014). Users may not be aware that they have been ascribed with a group identity by the platform and so cannot actively remove themselves from the consumer subculture. As a result,

the recommender system will continue to present very similar content to each member, only reinforcing their perceived homogeneity (Pariser, 2011).

The concept of opaque user profiles and invisible filter bubbles presents a technological deterministic stance. Technological determinism assumes that a society's technology governs the development of its social structure, cultural values and identity (Pinch and Bijker, 1984). Pariser (2011) claims that recommender systems determine the content and viewpoints we encounter and those we do not. The technology therefore shapes a single present and future identity for each user. Who we are online, however, determines the data that recommender systems are able to collect, meaning that our identity shapes how the technology constructs and employs our user profile. Rather than presenting the user as powerless during engagement with music streaming services as has been suggested above, this thesis presents numerous instances of data activism (Kennedy, 2018) where users harness the power of their data and platform affordances to shape online experiences. Specific features included within some online music services provide users with the opportunity to interact with the system to steer recommendations, enabling them to construct a more flexible musical identity (Johnson, 2015). Spotify's radio function, for example, allows users to provide instantaneous and explicit feedback, culminating in users and the system synchronously constructing a musical identity in real time. Alongside the realisation that musical identity may not be as coherent as the system assumes, this real time data may culminate in greater chances of serendipity. This two-way process seems more akin to societal co-construction theory, where both the user and the technology affect each other in reciprocal ways. Co-construction allows for a reflexive identity which the user has the control of reshaping (Sismondo, 2004). Societal co-construction can be noted in the way that specific technologies and music, which are both abstractly non-gendered, become imbued with gendered qualities once humans interact with them.

2.4 Music as a Resource for Identity

As outlined above, the technologies of music streaming services have the ability to shape processes of self-fashioning, but what role does the music itself have in the constructions, management and performances of these identities? Music now plays a greater part in the everyday lives of more people around the world than at any other time in the past (BPI, 2021b). This perhaps relates to the widespread availability of music and the profusion of rapid technological developments in the last three decades. The advent of the Web and its growing

number of music-based platforms has expanded the means for music consumption and the types of music available to be consumed, making music a ubiquitous part of people's everyday lives (Hagen, 2015b). Vast arrays of music styles are now available online and, as a result, within particular social and cultural groups music is increasingly used as a resource for identity work (Duffett, 2015).

Music preferences project important statements about our attitudes and values, not only being significant in conveying who we are but also who we want to be (Shuker, 2013). Music tastes are also capable of defining the social groups that one does or does not belong to, providing a tool for making social comparisons and constructing collective identities with those who possess similar music preferences (MacDonald, Hargreaves and Miell, 2002). Previous research has found that listening to music to define and express identity is particularly pertinent in those under thirty (Lonsdale and North, 2011). Following on from the discussion of technical constructions of identity, in this section I explore the appropriation of music as a resource for the formation, performance and management of identities. Music is not the sole resource that can be employed for identity work but, given the aim of this thesis, it will be the focus in the literature I present in this chapter. Discovering how users define themselves through music is pertinent to engagement in and construction of identities on Spotify (RQ1).

2.4.1 What are Musical Identities?

Identities constructed through music rely on understanding the widespread and diverse interactions between music and individuals. Musical identity has frequently been associated with gender, age, class, peer groups, personality dimensions and levels of musical training (MacDonald, Hargreaves and Miell, 2002). As opposed to being founded solely on surface level music preferences, musical identity is constructed via deeper and more significant forms of musical engagement, which are founded on dynamic processes of being, thinking, choosing, gathering, discarding and creating (Mans, 2005). MacDonald, Hargreaves and Miell (2002) have suggested two particular types of musical identity: identities in music and music in identities. The former is constructed via the adoption of specific social and cultural roles in music, such as the role of performer, composer, collector or fan. The performance of these roles possesses certain expectations, such as the enactment of particular behaviours, which allow individuals to convey a sense of their self in particular contexts relating to music (MacDonald, Hargreaves and Miell, 2002). Alternatively, music in identities entails the use of music as a resource for developing aspects of personal and social identity. This use of music can serve a greater or lesser role

depending on the individual (MacDonald, Hargreaves and Miell, 2002). Music as a resource for identity can be noted in acts of conscious and symbolic consumption, incorporating both music likes and dislikes. These acts of consumption serve as badges of musical identity used to communicate values, attitudes and opinions to others, potentially signalling group allegiance or difference (North and Hargreaves, 1999). Identities in music and music in identities have been previously researched in offline contexts; however, I intend to show their continued relevance in online arenas in this thesis.

Symbolic consumption of music can be understood as a form of self-expression (O'Reilly, Larsen and Kubacki, 2013). As a consumer culture theory, symbolic consumption focuses on the diverse relationships between consumer actions, the marketplace and cultural meanings. Cultural and symbolic meaning embodied within products allow users 'to construct, sustain and express their selves/identity and to locate them in society' (Larsen, Lawson and Todd, 2010, p. 673). Because of its rich and complex symbolic, cultural and political status, music is a product that can be used by individuals to express and perform identities (Larsen, Lawson and Todd, 2010). Being expressive, socially constructed and a form of communication between individuals, listening choices and practices of music consumption can signal an individual's allegiance to particular types of music, performers and groups in society. Acts of symbolic consumption, including singing along, dancing and involvement in knowledgeable discussion, vary depending on an individual's levels of self-monitoring and involvement with the music (Larsen, Lawson and Todd, 2010). Much of the current research on symbolic music consumption has addressed consumer habits in the purchase of CDs or music downloads; however, this theory can be extended to understand consumption on music streaming platforms. It is used to explore whether music can still be consumed symbolically online and, if so, how active identity work can be achieved through musical self-expression.

Music for self-expression requires individuals to assess the level of congruency between the music's image and the identity they want to present, both of which are socially constructed and situated (O'Reilly, Larsen and Kubacki, 2013). This congruency can be purposefully manipulated by selecting particular types of music to convey a specific public image. As individuals may adopt different roles in different contexts, self-expression through music is understood as being fluid and prone to change at different times and in different contexts (O'Reilly, Larsen and Kubacki, 2013). Dynamic self-concepts vary in importance, with some self-images considered more core to the individual while others are more peripheral and less prominent. Forms of self-expression can

also be actual or idealised, potentially linked to past, present or future selves (Larsen, Lawson and Todd, 2009).

Levels of congruency between music and self-image can culminate in either self-representative or non-self-representative symbolic consumption (Larsen, Lawson and Todd, 2010). Self-representative consumption relates to products that are considered acceptable. In the context of music, self-representative consumption relates to music preferences whereas non-self-representative consumption refers to music dislikes. Music likes and dislikes are both capable of reflecting individual and group identities. Individuals also assess levels of congruency between music and other possible selves performed in different situations. This often occurs when music consumption is performed publicly, where it can be interpreted and judged by the public, or it is mood-dependent, allowing for identity to be multidimensional and situational (Larsen, Lawson and Todd, 2010). Research conducted by Banister and Hogg (2001) noted that non-self-representative music tended to relate to the negative self, with music being categorised into either the undesired self or the avoidance self. The undesired self was found to be the most extreme view of the negative self and typically manifests through the active rejection of certain music choices. Participants articulated a definite view of the type of person who would enjoy music associated with their undesired self, often referred to through negative stereotypes (Banister and Hogg, 2001). In certain cases, the undesired self was related to past experiences, such as the music that parents made them listen to. The avoidance self manifested itself in music viewed negatively in relation to the participant, but it did have the potential to be viewed positively when related to someone else (Banister and Hogg, 2001). The avoidance self could become relevant to the individual if their situation changed, for example a change in employment or location (Banister and Hogg, 2001). Choosing what not to listen to is therefore as important as choosing what to listen to.

As with public symbolic consumption of music, Tia DeNora (2000) argues that a great deal of identity work is accomplished via the presentation of self to others. Of equal significance is 'a form of introjection, a presentation of self to self, the ability to mobilize and hold on to the coherent image of "who one knows one is"' (DeNora, 2000, p. 63). As part of this process of introjection, 'musical materials provide terms and templates for elaborating self-identity- for identity's identification' (DeNora, 2000, p. 68). Music therefore serves as a technology of the self which provides a structuring force for human agency. The presentation of 'self to self' via music entails the social and cultural activity of remembering, cultivating self-accountable images of

former self-identity while, at the same time, providing a means to negotiate ongoing constructions of identity (DeNora, 2000).

DeNora (2000) found that music often serves as a medium people use to remember others, such as loved ones or family members, and to relive events or times. Through its co-presence with other things, music becomes an emblem of a larger interactional and emotional complex. Music can therefore serve as a prosthetic biography where the telling of the past is part of producing a coherent identity over time and retrospective practises provide a 'cueing for how to proceed' (DeNora, 2000, p. 66). Former research has found that females are more likely than males to use music as a form of remembrance (Lonsdale and North, 2011). Acts of music remembrance have previously been studied through the use of CDs or mix tapes. Biographical affiliations still exist in the context of music streaming, where acts of retrospection or remembrance are performed on Spotify. This thesis suggests that this type of identity work is more readily achieved via instantaneous access to a user's music library or, more commonly, through their personal playlists that relate to particular times, events or people in their lives. Similar to non-self-representative music, identity work is also achieved through music no longer listened to (DeNora, 2000). This typically occurs once a particular song or genre no longer seems tenable or reflects the self.

Acts of remembrance through music have repeatedly been associated with notions of ownership. Ownership is based upon particular motivations, including efficacy and effectance, identity and place, which can be experienced either simultaneously, complimentary or additively (Sinclair and Tinson, 2017). Materiality is also considered fundamental to feelings of ownership and so CDs and vinyl, with their tangible qualities, serve as artefacts to be collected. Thus, record collecting is strongly associated with identity formation as well as life history, completism, discrimination and connoisseurship (Kibby, 2009). The physicality and processes of actively searching for music, as well as the social, cultural and ritualistic aspects of music collections, have been somewhat lost online (Sinclair and Tinson, 2017).

The absence of tangible products has led some consumer theorists to argue that we are moving towards a post-ownership economy (Sinclair and Tinson, 2017). This viewpoint is strengthened by statistics evidencing a further 5.7% increase in audio streams between 2020 and 2021 (BPI, 2022). Streaming has therefore become the most common format by which people access, share and listen to music (BPIb, 2021). Loss in the perceived sense of ownership is linked to a weakened

relationship with music as a product, with no physical permanence or fixed point of reference provided when streaming music (Sinclair and Tinson, 2017). Cills (2015) agrees that the act of buying and physically owning music is not imbued with the same importance as it once was. A binary opposition has therefore emerged between the possessiveness of musical ownership, as seen in record collecting, and carefree music renting on streaming services (Giles, Pietrzykowski and Clark, 2007). This thesis addresses the extent to which Spotify users convey a sense of ownership, and therefore personal investment, towards their online music collections. As Cills has claimed, it is 'what you *do* with the music once you have access to it is where listeners stake their claim as owners' (Cills, 2015, para 17).

The literature outlined above emphasises the importance of physicality in forging feelings of ownership, which in turn allows for the construction and performance of identities. How then can online music enable identity work? In a participatory practice akin to record collecting streaming platforms, such as Spotify, do allow for music to be archived. These digital archives tend to be aggregated as single tracks rather than entire albums or an artist's complete back catalogue. Using psychological ownership theory, Sinclair and Tinson (2017) found that participants used music streaming platforms to organise music consumption, craft and project identity and foster a sense of control in everyday routines. Streaming services were found to allow for greater control, with opportunities for discovery and increased personalisation actually enhancing feelings of psychological ownership (Sinclair and Tinson, 2017). This thesis contributes to existing literature affirming that online music can be perceived in a similar manner to physical collections.

Sinclair and Tinson (2017) also proposed that the utilitarian aspects of music streaming platforms allow for the development of aesthetic and emotional factors, most notably through the creation of personal playlists. As discovered by the Clouds and Concerts Research Project (UiO Department of Musicology, 2016), personal playlists feature prominently in music streaming routines. Intentionally created by the user, playlists can be categorised according to how the music is to be used, specific time periods, contexts or in other more complex ways (Krause and Hargreaves, 2012). Often used to shape and control the environment or mood, playlists also enable greater control over the self (Hagen, 2015a). These aesthetic and emotional factors convey a sense of ownership and investment of the self into the organisation of music consumption as previously seen in the creation of mixed tapes. Collection and categorisation of lists is highly personal, making them ideal resources for active identity work on Spotify. As with record collecting, playlist curation can be a dynamic activity through the ongoing addition and deletion of song choices.

These collections of music can also be static where, in a similar manner to the completism aimed for in record collecting, the original aggregation of music is retained and deemed complete (Hagen, 2015a). Playlists may also be static if they have been forgotten, abandoned or replaced.

2.4.2 Musicking

Using music as a resource for identities, whether related to symbolic consumption, acts of remembrance or record collecting, is an active process that the individual engages in. Perceiving musical identity in this way resonates with Christopher Small's (1998) concept of 'musicking', which I believe can be utilised as a framework for understanding how music streaming can be a meaningful experience for users. Used as a verb to encompass all musical action from composing to performing to listening, musicking has traditionally been applied to the context of a concert in a symphony hall (Small, 1998). It is used as a descriptive rather than a prescriptive term, covering all participation in musical performance whether it is active or passive (Small, 1998). Small therefore frames music as an activity involving multiple actors, including performers, conductors, audience members and even support personnel. These participants co-operate, compete and co-ordinate their activities to construct and mobilise different types of social ties (Crossley and Emms, 2016). Small (1998) believes that, only by comprehending what people do in these musical acts, can we begin to understand the nature of music and the function it fulfils in human life. For Crossley and Bottero (2014), musicking is always immersive, embodied, and affective, with different music listening contexts offering distinct models of musical being and value. Through engagement with this activity musical meaning is created alongside the formation of relationships that constitute social identity.

Assigning musical meaning is affected by inherited dispositions and previous experiences, making individuals react differently and form differing musical meanings (Small, 1998). Social groups who broadly have comparable experiences and dispositions will typically have similar assumptions about musical meaning (Crossley and Emms, 2016). Musical meaning can change over time in a similar manner to who we are changes. This may change, for example, as an individual passes from one group to another or as they grow and change over time. Hence, music is appropriated and shaped by individuals while simultaneously forming and shaping a network of participants (Crossley and Emms, 2016).

In the context of music streaming, musicking moves beyond just human actors to incorporate corporate actors, platform interfaces, data and algorithms. Spotify users undertake a variety of actions when streaming music that involve emotional, cognitive, psychological, and physical processes (Hagen, 2016). Via 'acts of attention' (Hagen, 2015, p. 76), music streaming experiences move from merely lived to become meaningful. These music-related processes demonstrate that music streaming is an activity and process that aligns with Small's concept of musicking. Although users can publicly stream their music choices online, unlike in Small's account the relational aspects of streaming are not primarily social. Instead, the relational aspects are fostered through individual encounters with technology, the platform, contextual surroundings and themselves. Users' engagement in these meaningful music streaming experiences may be interwoven in processes of active identity work. Small's theory is utilised in this thesis to discern how the multiple actors, including users, connected friends, algorithms, and data, are involved in meaningful music streaming experiences as well as their impact on constructions of identity.

2.4.3 Music Fandom as Collective Identities

Group identities can also be constructed through music. Covering a diverse range of phenomena and identifications that occur in a variety of contexts, music fandom is an example of a group identity constructed, managed and performed through music. Fandom has traditionally been associated with stereotyped images of collectivities who adopt pathological and deviant behaviour (Duffett, 2015). Today it is far less stereotyped and instead perceived as an active and dynamic practice through which participants become members of a community and social identities are constructed (Duffett, 2014). Participating in fandom allows individuals to construct coherent identities for themselves. In the process, 'they enter a domain of cultural activity of their own making which is, potentially, a source of empowerment' (Duffett, 2014, p. 167).

Fans mediate identities, tastes and lifestyles through the content they consume. One definition perceives music fandom as 'a fascination with music, various romantic and folk ideologies, an emphasis on the star system' (Duffett, 2014, p. 4). Fans also tend to form social communities to pursue shared interests and follow characteristic activities. Hence, fandom is an active practice constructing individual and collective identities that need to be constantly reaffirmed and reinforced (O'Reilly, Larsen and Kubacki, 2013). In terms of the construction of individual identities, fans appropriate specific objects, such as music, books and celebrities, for self-reflection, 'essentially fashioning them into mirrors' (Click, Lee and Willson-Holladay, 2013, p.363). Fans

mimic and perceive themselves in these appropriated objects, which then function as focal points in the construction of life narratives and identities. This elides the boundaries between self and object, meaning that fans 'superimpose attributes of the self, their beliefs and value systems and, ultimately, their sense of self on the object of fandom' (Click, Lee and Willson-Holladay, 2013, p. 363). Although traditionally associated with a singular music preference, fandom is now considered 'far more fluid, multiple and dynamic: fans can combine a repertoire of varied fandoms synchronically, or they can move through a range of fan objects' (Duffett, 2014, p. 19), enabling individuals to explore group identities in less coherent ways.

Following the introduction and increased access to the Internet and Web, fan clubs have migrated online. The Web has significantly transformed fandom by providing new and improved ways to carry out traditional fan practices (Duffett, 2014). It has enabled new opportunities for fans to not only be consumers of products but also producers of content via the creation of websites, YouTube pages and blogs. These online practices are more communicative, communal and observable than former bounded geographical, offline activities (Duffett, 2014). Since fan practices have increasingly become translated online, it seems pertinent to consider whether these identities are constructed, performed and managed on online streaming platforms. Although the activities witnessed may not be considered traditional fan practices as discussed above, it may be that users perform an identity by devoting their music libraries to specific music artists or are part of a collective group that create artist-specific playlists.

2.4.4 Listener Typologies: You Are How You Listen

Typologies label particular music listeners in particular ways, ascribing them with types of collective identity. Various studies have investigated whether patterns exist in music consumption and these have culminated in the development of several listener typologies. Typologies are typically founded upon how individuals consume music as a cultural good, allowing them to express who they are and which social group they belong to (Molteni and Ordanini, 2003). Most typologies agree that categories are not discrete or fixed, but listeners can freely move between them during listening sessions.

Im and Jung (2016) compared consumer characteristics affecting four modes of music consumption: purchasing CDs, downloading, streaming and piracy. They employed a consumer

decision-making framework to investigate the significance of price, following trends, possessiveness and sensitivity to quality across the four consumption modes. The study found that those who are price conscious were more likely to pirate music and less likely to buy CDs. Alternatively, participants who are trend conscious typically stream music as it provides a way of meeting current, fashionable needs (Im and Jung, 2016). Current trends are easily accessible on music streaming platforms as most services tend to rank music in terms of popularity, affording individuals with the ability to follow a new trend in just a few clicks.

Molteni and Ordanini (2003) also applied consumer theory to categorise types of music listeners. This research was conducted before streaming became a prominent source for music consumption and so the study focused instead on music downloading, purchasing CDs and piracy. Molteni and Ordanini (2003) identified five types of listener profile: occasional downloaders, mass listeners, curious people, explorers/pioneers and duplicators. Mass listeners tended to consume music online for entertainment and to accompany other activities, such as work and sport (Molteni and Ordanini, 2003). Since music frequently served as background accompaniment to a more prominent activity, mass listeners were viewed as passive consumers. Pioneers/explorers enjoyed the 'search and explore' aspect of finding new music and the anticipation of future developments. At the time, this listener profile was fulfilled by those who downloaded music, allowing them to increase their music consumption and select music to later purchase on CD (Molteni and Ordanini, 2003). These profiles were not considered discrete but could overlap, with users able to fluidly move from one to another. All profiles were considered as means of self-expression and image projection (Molteni and Ordanini, 2003).

Much of the literature on listener typologies was produced prior to the widespread uptake of music streaming and so focused on music downloads as the sole form of digital music consumption. It is therefore necessary to ascertain whether different listener profiles continue to be relevant and update current literature to include music streaming platforms. Most recently, Hagen and Lüders (2016) investigated types of listeners in relation to acts of sharing and following on music streaming platforms. Many music streaming services now embed social features that allow users to connect and use music as a social object whilst also allowing for private listening. Hagen and Lüders (2016) conducted twenty-three focus group interviews with 124 Spotify and/or Tidal users alongside self-reported diaries, online observation and individual in-depth interviews. Their findings indicate that users are socially aware when making music sharing decisions and this drives them to behave in certain ways. These decisions are typically dictated by notions of

identity, sense of belonging, cultural capital, the listening context and impression management strategies (Hagen and Lüders, 2016). Hagen and Lüders (2016) developed a typology of music sharers consisting of share-all, selective sharers and non-sharers. This typology is by no means fixed but most listeners in the study typically remained within the same category throughout each listening session (Hagen and Lüders, 2016). Non-sharers did not share music and had no public playlists, considering music to be too personal. Typically, these listeners displayed some level of insecurity about their public image. Other reasons cited for not sharing music choices included: it was too much hassle and preferring to recommend and talk about music face-to-face. Selective sharers tended to share certain playlists with everyone, with more direct sharing carried out with specific friends in their network. The music choices considered at odds with their desired identity or that they felt insecure about, such as guilty pleasure tracks, were purposely not shared to preserve their public image. Those who shared all their music choices perceived themselves as music missionaries who wanted their network connections to know about the music they listened to. They put great effort into curating playlists, with the intention of making them relevant to share (Hagen and Lüders, 2016).

2.5 Theoretical Perspectives on Identity

To interpret the types of identity work engaged in during online music streaming, it is also necessary to consider the theoretical underpinnings of the term 'identity'. Although many of the theories discussed in this chapter were developed prior to the advent of the Web, I believe that they are still relevant and can be applied to this online context. They therefore provide useful frameworks for analysing how users actively engage in music streaming practices and how this relates to the construction of identities (RQ1) as well as the types of active identity witnessed on Spotify (RQ2).

Identity is a human capacity rooted in language and behaviour, integral to understanding who we and others are (Lawler, 2008). Since the 1970s, notions of identity construction, performance and management have undergone substantial revision. No longer conceptualised as a stable and coherent entity, identity has been recast as an on-going product of social work (DeNora, 2000). Achieved via the enactment of mini performances throughout the day, a great deal of identity work is achieved through the presentation of self to others (Lawler, 2008). The notion of 'identity', however, persists in being challenging to adequately define. This challenge is exacerbated by the disparate theories proposed by various academic disciplines, each of which

produces different definitions. Therefore, at present, it appears implausible to assign a single, overarching definition for identity, which also encompasses how it is constructed, managed and performed.

Early in the twentieth century, George Herbert Mead developed the social-psychological framework of symbolic interactionism. The symbol is the central concept within this theory. Representing something more than can be immediately perceived, symbols can include people, objects, words and action (Fine and Manning, 2003). An individual's Spotify account and online music library can be understood as a type of symbol. Considered from the perspective of symbolic interactionism, both enable individuals to interpret the world, define situations and develop perspectives. Symbols are developed through the interdependence of society and the individual (Charon, 1989). Each individual appropriates symbols from society and so without others symbolic life would not be possible. Society also necessitates and depends on human symbolic life, particularly in terms of symbolic interaction (Charon, 1989). According to Mead, most human action is considered purposively symbolic, both meaningful for the actor who performs it and the actor who receives it (Fine and Manning, 2003). Although individuals will interpret the world in a unique manner, these interpretations do not arise in a vacuum but are founded upon social realities developed during interaction with others (Murphy, 1959).

Symbolic interactions provide opportunities for active identity work to be performed. In these instances, Mead refers to two parts of the self that are pivotal to identity construction. The 'me' is the person as an object, a social self that arises in interaction with others (Morris, 1967). This is considered the most important part of the self, with the 'I' being more ambiguous and inconsistent to define. Mead defines the 'I' as the subject, an active part of the individual that is impulsive, spontaneous and unsocialised and therefore not intentionally performed (Morris, 1967). Both parts of the individual evidence that 'the self is something which has a development; it is not initially there, at birth, but arises in the process of social experience and activity' (Morris, 1967, p. 135). Society therefore enables individuals to perpetually construct and perform their identities and, since this identity is continuously constructed and reconstructed, 'a true, authentic person is not assumed' (Charon, 1989, p. 66).

Symbolic interactionism asserts that individuals are always active in shaping their world, bearing resemblance to users' active management of their music on Spotify. Symbolic interactionism

Chapter 2

specifically focuses on the nature of interaction, that is the diverse and dynamic social activities taking place between individuals (Morris, 1967). Focusing on the interaction itself as the object of study constructs a more active image of the human being and rejects the notion of the passive self, which is a self that merely responds to others. For Mead, interaction is only ever performed in the present meaning individuals are uninfluenced by what has occurred in the past (Charon, 1989). The significance of present action conveys individuals as perpetually changing actors, never becoming anything but always in a state of becoming (Charon, 1989).

Arising during interaction and being role-related, perspectives are also pivotal to symbolic interactionism and play an important role in individual and group identity work. Perspectives are active processes based on interrelated sets of words that cause us to make and receive assumptions and value judgments (Charon, 1989). Each serve as a guide to definition during interaction, as opposed to a response to a stimulus (Charon, 1989). Perspectives are dynamic, adapting and changing over time as different contexts and situations necessitate varying roles and perspectives (Charon, 1989). They are therefore not always consistent within the individual and, consequently, interaction and behaviour can be unpredictable. Tamotsu Shibutani (1995) notes that those who share similar perspectives form 'reference groups', whose interactions bind together modern-day society. Shibutani's portrayal of reference groups seems synonymous with Mead's concept of the 'generalized other', used to describe a generalised group attitude appropriated by an individual (Morris, 1967). Thus, the 'generalized other' comes to stipulate social conventions, co-operative processes and activities that influence the behaviour and development of the self (Morris, 1967). Extending this theory to the context of online music consumption, the generalized other is enacted by the platform's algorithms and visible human actors in the network that may influence music choices.

As part of active identity work on Spotify, users interact with themselves and the music-streaming platform to construct identities through music. Users are also able to interact with their peers who may influence how public listening situations are defined. Peers on the platform can connect and construct reference groups, likely formed through shared music preferences. Through online and/or offline interactions, an individual may subsequently internalise the general attitude of the reference group, which has the potential to dictate music streaming conventions, behaviour and identity work. For example, peers could influence the public performance of a user's identity by making them feel more conscious about music-streaming decisions. Relating to the concept of the mind and self, portrayed as processes rather than static entities (Charon, 1989), interaction on

Spotify is both an external and internal process, with the internal act commencing the external act. In making conscious music choices, the individual internally converses with the self, analyses stimuli from the surrounding environment, assesses its significance, interprets the situation, and considers the actions of self and others (Charon, 1989). These internal processes all occur prior to the external act of selecting a particular song to stream. Thus, dynamic interaction does not solely arise between individuals but also occurs within the individual as they internally interpret and define the situation as well as take the role of the other in considering their perspective (Charon, 1989). Charon refers to these continual internal/external processes as a never-ending 'stream of action' (Charon, 1989, p. 116). Humans make decisions along these ongoing streams that subsequently influence the direction of future actions.

Erving Goffman expanded on Mead's work and, more widely, the work of traditional symbolic interactionism by investigating how we present ourselves to others during interaction. Using a dramaturgical metaphor, Goffman perceived identity as a staged performance, a masquerade that is consciously or sub-consciously performed during social interaction (Burns, 2002). Goffman's dramaturgical perspective provides a lens from which to view the different performances users potentially adopt during public and private identity work on Spotify. Theatrical performances of identity rely on the adoption of a character, referred to as a 'role', which tends to be context-dependent, plural, and contradictory (Goffman, 1959). Enacting a role involves the presentation of specific and ritualised 'sign carriers' (Goffman, 1959, p. 136), including certain conduct, appearance and language. These visual and verbal cues provide a means for the actor to be perceived in a certain manner by the audience (Burns, 2002). I would argue that Goffman's sign carriers can be extended to include music streamers who prepare their masks by privately and meticulously curating their online music catalogues, in particular personal playlists, ready for public streaming performances. Goffman argued that 'masks' adopted during a performance are not only surface inscriptions that attempt to conceal an individual's true identity (Goffman, 1959). Instead, the repeated performances of these characters become internalised, even constituent parts of the individual (Goffman, 1959). Thus, the person 'is not *behind* the mask; rather, it *is* the mask' (Lawler, 2008, p. 108).

Constructing and performing identities in any social context often entails the adoption of impression management techniques. Music streamed during public listening may either consciously or subconsciously incorporate impression management strategies. Here, users may perform certain kinds of identities, by streaming particular music choices, to be perceived in a

certain manner by their peers. Impression management strategies manifest in the acts associated with Goffman's (1959) front and back-stage areas of social life. The frontstage is an arena where the individual is aware of an audience, who are the observers in everyday life, and so purposely performs to them through theatrical personas (Goffman, 1959). In a similar manner to the internal and external interactions outlined in symbolic interactionism and by DeNora, Goffman's personas entail an internal and external performance of specific behavioural cues and the adoption of specific language to be perceived in a desired manner by the audience (Goffman, 1959). During these performances, observers not only act as audience members but also become stage directors, authors, commentators, and critics (Charon, 1989). In contrast, back-stage is a more private space for preparing procedures and disguises for the performance, making the act appear more authentic (Goffman, 1959). Impression management strategies can therefore be understood as dramatic realisations of practised performances. The success of these strategies depends upon their conviction and the authenticity of the role as assessed by the audience (Burns, 2002).

Identity work as outlined by symbolic interactionism and Goffman's dramaturgical perspective is achieved via human interactions. With a plethora of scientific and technological advancements since both of these identity theories were published, posthumanism allows for the exploration of possibilities for identity work through technologies. As a critical theory, posthumanism engages in technology-centred discussions and poses questions about the structure of identity amidst the complexity of cogno-, bio-, nano- and information technologies (Herbrechter, 2013). Amid these contemporary technological and scientific advancements, the notion of human identity has been destabilised, or rather 'technologized' (Braidotti 2013). Thus, 'it has become customary to refer to contemporary culture as "technoculture"' (Herbrechter, 2013, p.19). Human enhancement is at the core of posthumanist debates as new and emerging technologies are fundamentally influencing the way people live together, the means through which identities are constructed and forms of embodiment available to individuals (Braidotti, 2013). For example, prosthetics, genetic engineering and the emerging autonomy of artificial intelligence are significantly altering traditional understandings of identity.

The posthumanist standpoint articulated by Rosi Braidotti (2013) discusses the interweaving of technology, gender and the posthuman in identity. Relevant to the types of identity work performed on Spotify (RQ2) and perceptions of the ways that the system constructs their profile (RQ3), this critical theory provides a framework to explore the integration of human and machine

actors on Spotify that both construct types of identity for the user. The unprecedented technologisation of society has eroded the opposition between nature and the constructed, including the boundaries between human, machine and animal (Braidotti, 2013). Human identity has been deconstructed and in place has become 'imbricated in, penetrated by, and reconstructed through objects and technologies' (Herbrechter, 2013, p. 50). No longer conceived as tangible and unitary, identity has become 'a construct, an interface...a volatile object which can be decorated with diverse accessories' (Herbrechter, 2013, p. 96). This technological reconstruction of identity accentuates the very precariousness of traditional body-related identities- instead, liberating and enabling multiple potentialities of the body (Braidotti, 2013). Consequently, for posthumanism, identity is not confined to a singular category of gender, sexuality, ethnicity or race but is dynamic and fluid.

Ambiguously natural and crafted identity can be inscribed onto the socio-technical crafting of a user's online music presence, as seen on Spotify. This online presence provides an example of the technologically mediated self depicted in Donna Haraway's *Cyborg Manifesto*, which presents a polymorphous, utopian vision where cyborg identities emerge as 'creatures in a post-gender world' (Haraway, 1991, p. 150). For Haraway, a cyborg is 'a hybrid of machine and organism, a creature of social reality as well as a creature of fiction' (Haraway, 1991, p. 149). These cyborgs are 'disturbingly lively' (Haraway, 1991, p. 152) and, since they amalgamate organism and machine, inhabit both natural and crafted worlds. Not constituted by birth, cyborg identities are mediated via the advancement of science and technology (Haraway, 1991).

2.6 Conclusion

This chapter has provided an overview of the diverse theories and perspectives relevant to my research questions on the types of identity work enacted on Spotify. These texts are wide-ranging in scope, including theories on streaming services, musical identity and identity more broadly from a variety of fields. Much of the literature outlined above only takes into account identities and musical identities constructed and performed in offline contexts. This thesis seeks to evidence the continued relevance of these theories to online music consumption. Furthermore, much of the research conducted on recommender systems and in the field of data studies has thus far failed to take into account the users' thoughts, feelings and agency during online engagement. This thesis puts users at the forefront of online interactions and argues that, rather than being

solely passive consumers of recommended content, individuals use platform affordances to emerge as data activists.

Considering all the perspectives I have reviewed, I view identity as the ongoing negotiation and performance of the self to self and to others. Identity is constructed, managed, and performed via the purposeful employment of visual and other cues, symbols and appropriated resources, including language and music. Based on an individual's interpretation of a social situation and how they want to be perceived, I believe that the performed self is consciously selected from a number of identities crafted by the individual. Identity is therefore never fixed and coherent but dynamic and multifarious. At this point it also seems appropriate to consider whether all individuals possess a musical identity. As I see it, rather than being something performed at all times, an individual's musical identity is just one part of much broader personal and social identities. I would also argue that very few people claim to have no interest in or liking for some aspect of music. It is perhaps useful to consider musical identity as a continuum relating to the differing levels of individual and collective engagement with music. For instance, listening to music in the background would be positioned at the lower end of the music engagement continuum. Here, although individuals tend to initially select particular music, they eventually become unaware of it as other tasks take prominence. At the other end of the continuum would be peak experiences where individuals report very strong emotional, cognitive and physical responses (MacDonald, Hargreaves and Miell, 2002). Various types of musical identity can be appropriated by individuals, some of which are more static while others are prone to change over time. This may culminate in the construction and performance of several musical identities that are context specific and function independently or in opposition to each other. As a result, musical identities are perpetually in the processes of construction and reconstruction.

Many of the theories, and indeed my own summations, depict individuals as social actors with identities that are being perpetually constructed, performed and managed during interactions with the self and/or others. Even literature from the more technological deterministic perceptions of data doubles considers online representations of identity as lively and never complete (Pink et al, 2017). Identities are therefore never fixed and coherent but are context-dependent, fragmented and plural. The theoretical frameworks reviewed in this chapter serve as lenses to interpret collected data and to formulate responses to my research questions on the crafting of online identities on Spotify.

Chapter 3 Methodological Framework

3.1 Introduction

In reviewing relevant literature, I was not only interested in the research findings but also in the methodologies previously adopted for research into identity work and online music listening. The strengths and weaknesses of these various methodologies informed my own research design, which I outline in this chapter. The various lenses through which identity work can be observed on Spotify necessitates the adoption of a mixed methods approach, with three research phases that focus on users being conducted sequentially. Here, I explain each of these research phases in turn, including my reasoning for selecting particular methodologies and sampling techniques. A mixed methods approach to research combines and integrates both qualitative and quantitative data that needs to be collated and analysed in different ways. Thus, in this chapter I also define the strategies used for analysing and interpreting the primary data. Since all phases of data collection involved human participation, certain ethical considerations had to be addressed prior to, during and after the research was conducted. These considerations are discussed in the final section of this chapter.

3.2 Research Philosophy and Approaches

This thesis investigates how music accumulated on a particular music streaming platform, Spotify, can provide users with an effective means to construct, perform and manage a composite of online identities. It also researches how users perceive the reflexive identity generated by Spotify through user profile construction. Achieving these research aims required the investigation of individual user experiences, with conclusions being derived from intersubjective interpretation. Hence, individual accounts of online music streaming and online observation served as the data sources.

Chapter 2 reviewed literature on music and identity work from a range of academic disciplines, perspectives and time periods. In undertaking this review, gaps in existing

research, particularly in relation to online streaming, emerged. These gaps informed the following research questions that were articulated in chapter 1, regarding the construction, performance and management of identities on Spotify, and which guided the research and analysis of this thesis:

- RQ1: How do users actively engage in music streaming practices and how does this relate to the construction of identities?
- RQ2: What types of active identity work can be witnessed on Spotify?
- RQ3: How does the user perceive the ways in which the system constructs their profile?

To answer these research questions, I adopted a pluralist theoretical approach (Saunders, Lewis and Thornhill, 2016), with each theory discussed in the literature review contributing a unique and valuable insight for data analysis. The theories outlined typically espouse an interpretivist stance that characterise individuals as social actors involved in continual processes of societal flux and revision (Saunders, Lewis and Thornhill, 2016). The literature principally related to constructions, performances and management of different types of identities witnessed in different contexts and crafted via different types of interaction. These established theoretical perspectives allow for the exploration of streaming experiences and the developing understanding of online identity work through the context of music. In turn, my own research seeks to contribute to new understandings of these theories. Prior to data collection and analysis, the relative importance of different concepts was not known. During analysis, however, particular perspectives became more relevant and useful in establishing understandings of online identity work in music streaming contexts.

3.3 Capturing Instances of Active Identity Work: A Mixed Methods Approach

To investigate active constructions, performances and management of users' online identities through music as well as their perception of the profile generated by Spotify, I have adopted a mixed methods approach. Employing this approach allowed for more comprehensive and diverse accounts of everyday user engagement in music streaming (Giddens and Sutton, 2013). The research strategy was founded on a case study that

conducted an in-depth inquiry into a single music streaming platform. Using a case study narrowed the research field to enable a higher level of granularity in subsequent data collection and analysis (Bryman, 2008).

Due to its dominance in the online music streaming market, Spotify served as an exemplifying case for the broader category of online music streaming platforms (Bryman, 2008). Recruiting participants who stream music on the platform was more likely as a result of its large user database; as opposed to studying a more obscure and lesser-known service. As of 30th September 2020, Spotify had accrued 320 million active users across 92 markets (Spotify, 2020) and in 2019 35% of global music streaming subscribers had a subscription to Spotify, a figure that was almost double that of Apple Music subscribers (Statista, 2021). Additionally, Spotify amalgamates a range of service-facilitated and user-facilitated features, therefore providing a suitable context for investigating all my research questions. Having checked Spotify's terms and conditions of use (<https://www.spotify.com/uk/legal/end-user-agreement/>), nothing stated specifically prevented academic research from taking place. In addition, as data was not collected or extracted from the system, but rather from users about their experiences on the platform, using Spotify as my research focus was not considered to be problematic. Within the case study, user data was collected in multiple phases to obtain insights into particular aspects of active identity work.

3.3.1 Platform Affordances for Online Identity Work

Since the public version of Spotify was launched in October 2008, the platform has seen a plethora of iterations that include changes to its interaction design, platform features and music library. With each of these developments comes certain affordances and constraints in the ways that individuals can interact and use the platform. Originally developed in the field of ecological psychology, the term 'affordance' was initially used to describe the possibilities of a physical environment (Bucher and Helmond, 2018). The concept was later adopted in design studies and, more recently, in the field of Human Computer Interaction (HCI). Capturing the relationship between the materiality of technology and human agency, affordances are artefacts that suggest certain forms of use (Norman, 1990). They therefore have the power to both enable and constrain. Affordances of Spotify are linked to the platform and its features, which as addressed above has undergone significant revision over time. Because of the changing nature of the system, it is important to outline the

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functionality of Spotify's mobile, Web and desktop applications at the time this research was undertaken. For example, at the time, Spotify had set a 10,000 song-limit for music libraries and personal playlists, which has since been removed. Table 1 outlines Spotify's main features at the time of data collection (2019).

Table 1 Spotify features available on mobile, desktop and web applications in 2019

Feature	Description of Functionality
Daily Mixes	Daily Mixes are Spotify-generated playlists based on music genres that the user regularly listens to. Currently, Spotify generates six Daily Mixes for each user. The playlists comprise of artists that the user has already listened to as well as new recommendations within that genre. The platform claims that Daily Mixes evolve alongside the user's music tastes. (Spotify, 2019a)
Discover Weekly	Discover Weekly is a playlist generated by Spotify. Recommendations for music are based on songs that the user and those with similar tastes have previously listened to. Spotify claims that the more the platform is used the more accurate Discover Weekly becomes. The playlist is automatically refreshed each Monday, but versions can be saved in the user's music library (Spotify, 2019c).
Release Radar	Release Radar is a playlist of new music recommended specifically for each user. The playlist is updated every Friday with music that has been released in recent weeks and includes artists that the user already listens to as well as artists perceived as similar by the recommender system (Spotify, 2019f).
Throwback Playlists	Throwback playlists are generated by Spotify to recall music released and likely listened to in previous years. These can be personalised, as is the case with Throwback Thursday playlists, or more general to reflect music eras (Eriksson et al, 2019).
Time Capsule	Spotify's Time Capsule is a personalised playlist comprising of songs that should reflect music from a user's adolescence (Spotify, 2019g).
Wrapped/End of Year Playlists	Spotify records the music an individual streams throughout the year to produce a personalised playlist of their most listened to songs each

	December, known as the 'Wrapped' or 'End of Year' playlist. For the playlist to be generated, the user must have listened to at least five different artists, thirty different tracks and sixty minutes of music before statistics are collected, usually in October each year. The songs on the Wrapped playlist are not necessarily presented in rank order, according to number of streams, but may be mixed to produce a more cohesive playlist. These playlists are only available to Spotify premium users (Spotify, 2018).
Tastebreaker	Tastebreaker playlists attempt to diversify personalised recommendations by presenting users with genres of music and artists they have not previously streamed. At the time these playlists were only available to Spotify premium users (Eriksson et al, 2019).
Radio	Spotify's Radio feature curates a collection of music from an inputted artist, album or song, referred to as 'seeds'. Prior to an update in 2019, Radios could be adjusted to preferences in real time via the thumbs up or thumbs down feature. The Radio feature now appears as a predetermined playlist of artists or songs similar to the input. The technology of the Radio feature is also used to stream music once a personal playlist has ended. Here, Spotify streams music that is perceived as being similar to the original collection of music (Spotify, 2019e).
Related Artists	Users are presented with artists that those with similar listening habits have previously streamed, most likely achieved via a method of collaborative filtering. This feature is most visible on Spotify's desktop and Web applications.
Personal Playlists	Personal playlists can be curated by individual users, organised according to individual logic and assigned unique names, pictures and brief descriptions. A maximum of 10,000 songs can be added to a single personal playlist.
Friend Feed	By following people on Spotify, users are provided with notifications and updates as well as the ability to see what other users are streaming in real time via the friend feed. This feature is displayed on the right-hand side of Spotify's desktop version.

Public Listening	A streaming setting that allows humans and machines in the network to view and record the music being streamed in real time. This is the default setting on all Spotify applications.
Private Listening	The private setting on Spotify allows users to conceal particular music choices from their Spotify friends. Personal accounts become temporarily private for the duration of individual songs or entire playlists. It is unclear whether songs streamed during a private session are recorded within the user profile.

3.3.2 Phase One of Data Collection: Self-Completed Online Survey

In the following, I outline the method for each phase of data collection and how the sample of participants was selected. The first phase of data collection explored broad research areas relating to online music streaming through an online survey. These areas emerged as priority research themes when reviewing literature on both online and offline music consumption. These themes also aided to structure the survey into sections, each of which focused on particular research areas. Because Spotify served as the case study, survey questions solely related to this platform. Participants needed to be current, active Spotify users, having either free or premium accounts. Survey questions investigated the frequency and context of music streaming, playlists, curation of online music, use of recommendation features and the construction and management of online music streaming accounts. The survey made use of closed questions, with embedded filtering to ensure conciseness and avoid participant fatigue. The survey also contained statements that sought to measure attitudes about the importance of music to individuals. These statements were measured using the Likert scale, one of the most common methods for measuring attitudes, requiring respondents to indicate their level of agreement with brief statements (Bryman, 2008). Levels of agreement were assessed using a five-point scale, ranging from 'strongly agree' to 'strongly disagree'. The scale also contained a middle statement for 'neither agree nor disagree'. Demographic questions were included at the end of the survey as well as a free text box that allowed participants to provide feedback or elaborate on answers if they wished. There was also the option to register interest for the second phase of data collection. The online survey was generated and hosted by iSurvey, a research tool for staff and students at the University of Southampton. Answering the whole survey was expected

to take between ten and fifteen minutes. A full copy of the online survey can be found in Appendix C.

3.3.2.1 Selecting the Sample

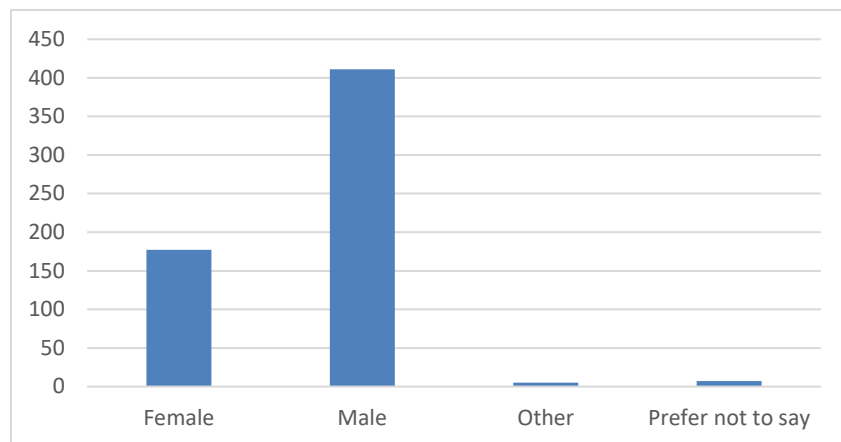
Participation in the survey relied on a non-probability sample, principally determined by the use of Spotify. Aside from those who had a premium family subscription, individuals who shared a Spotify account with others were not included in the sample as it would have distorted the data and perceptions of Spotify's profiling and recommendations. The link to the survey was shared on Facebook and through social networking groups. It was initially circulated using personal contacts, who were also encouraged to share the survey online. Personal contacts were approximately aged between nineteen and sixty years old, with the majority between twenty and thirty years old. They included both students and professionals from various locations across the UK. To ensure a large sample and participant diversity, other means were also used to distribute the online survey. For instance, posters publicising my research were placed around the University of Southampton's Highfield and Avenue Campuses (see Appendix D) and the survey link was shared with other social media groups, including Women in Academia, and Subcultures, Popular Music and Social Change Facebook pages as well as Spotify, Taylor Swift and Lady Gaga sub-reddits. Permission from these groups was sought prior to posting the survey link. Those interested in partaking in the subsequent phases of research were asked to leave their contact details at the end of the survey.

The survey was initially piloted by ten undergraduate students from different departments at the University of Southampton to assess whether the questions were comprehensible, the instructions provided were adequate and the structure was well-organised. After obtaining ethical approval, the online survey went live on the 23rd April 2018. The dispersal of the survey was not fully controlled by me but greatly depended upon how Facebook and Twitter algorithms spread the survey through various online networks. On the 23rd August 2018, four months after being activated, the survey was closed. During this time, 1533 people had clicked on the hyperlink to the survey.

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Survey responses were downloaded from the host platform and cleaned, during which non-completed responses were removed from the dataset. The non-completion rate was high, with many individuals either not beginning or completing the survey. Completed survey responses totalled 638. A brief overview of participant information from the survey can be found in Figures 1, 2, 3 and 4. Most survey respondents identified as male and were between the ages of eighteen and twenty-five. Most had been using Spotify for a number of years, with only four respondents having used the platform for less than one month prior to this research.

Figure 2 Gender distribution of online survey participants



(Source: Own data, N= 630)

Figure 4 Origin of online survey click-through

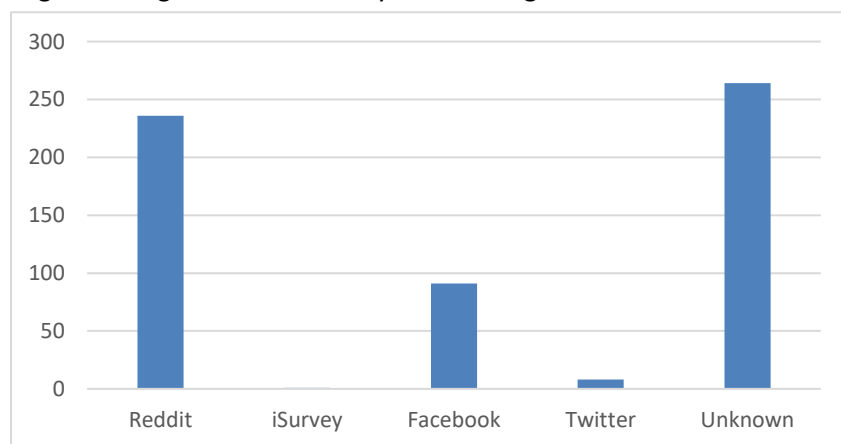
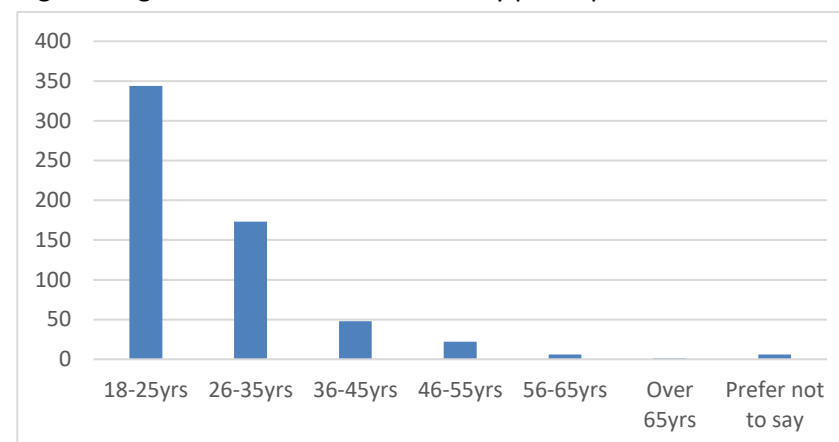
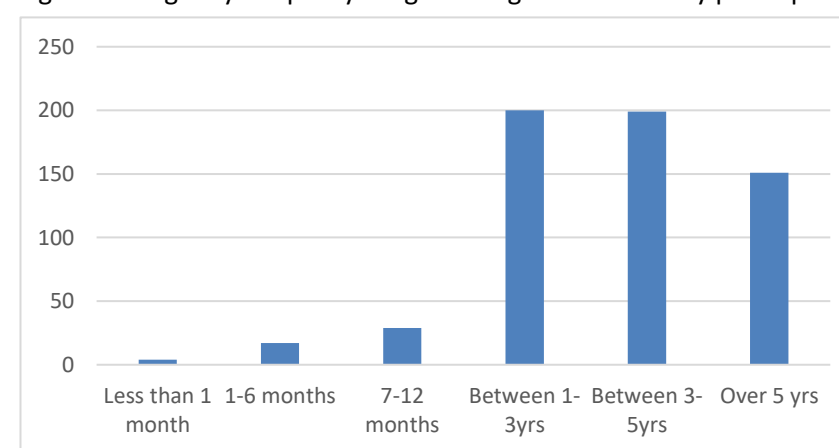


Figure 1 Age distribution of online survey participants



(Source: Own data, N= 630)

Figure 3 Longevity of Spotify usage amongst online survey participants



3.3.2.2 Overview of the Method

Table 2 Overview of online survey methodology

Self-Completed Online Survey	
Phase of Data Collection	1
Research Questions Addressed	<ul style="list-style-type: none"> • How do users actively engage in music streaming practices and how does this relate to the construction of identities? • What types of active identity work can be witnessed on Spotify?
Research Objectives	<ul style="list-style-type: none"> • Reasons for using Spotify for music consumption • Frequency of music streaming • Contexts for music streaming • Purposes of music streaming • Use of Spotify, including service-facilitated and user-facilitated features • Perception of recommendations • Curation of music • Creation and maintenance of playlists • Purpose of playlists • Discovery of new music • Private and public listening
Overview of the Method	<p>The online survey was completed independently by participants. It mostly comprised of closed questions and aimed to elicit responses on a wide range of online music streaming practices. The themes addressed in the survey emerged while reviewing literature on music consumption and identity work, including Christopher Small's concept of 'musicking' (Small, 1998) and Goffman's dramaturgical perspective on identity construction and performance (Goffman, 1959). The survey was formatted</p>

	and hosted on iSurvey, with the link shared on several social networking sites. The survey was also advertised around two University campuses in the UK.
Sample Selection	The link to the survey was posted on Facebook and other social networking sites. By clicking on the link, individuals were directed to the survey homepage on iSurvey. Participation was based on a non-probability sample, with respondents needing to be current, active users of Spotify and over eighteen years of age.
Time Scale	The survey remained active on iSurvey for four months. During this time, the link was reposted on social media and additional posters were displayed around the University as a reminder to participate.
Data Analysis Techniques	Most survey responses were analysed quantitatively via descriptive statistics. Frequency analysis of survey questions can be found in Appendix E. Some participants used the free text box at the end of the survey to elaborate on responses and share further thoughts. This data was analysed thematically.
Advantages of the Method	<ul style="list-style-type: none"> • Research tool already in existence • Inexpensive and quick to administer • Convenient • Able to reach a wide population • Absence of interviewer effects • Explores diverse themes • Responses are comparable • Responses inform subsequent study
Disadvantages of the Method	<ul style="list-style-type: none"> • Unable to prompt participants to explain or elaborate on their responses • Time-consuming if too many questions are included • Questions must be worded carefully to avoid ambiguity • Surveys may not be fully completed

3.3.3 Phase Two of Data Collection: Online Observation

Online observation enabled a cross-sectional type of study, providing a series of accounts about the use of Spotify within a short timeframe. This second phase of data collection relied on recruiting participants from phase one, ensuring that participants already used Spotify and were interested in the research. Streamed music choices were observed for a one-week period. Dates for online observation were staggered in accordance with pre-arranged participant interviews, allowing for questions about streaming activity to be addressed while the participant was still able to recall it. Online observation was included in the research schedule to provide insight into everyday engagement and instances of active identity work as they occurred: listening experiences that researchers would otherwise not have access to. It aimed to ascertain information about the frequency of music streaming, including any weekly listening patterns, and the types of music streamed.

Online observation was facilitated by the activation of the 'scrobble log' function on Spotify accounts. This method was successfully used in research conducted by Hagen (2015a, 2015b, 2016) on the individual streaming experiences of WiMP users, now known as Tidal. By providing accurate timestamps and information about track titles, artists and albums, scrobble logs were a valuable tool for obtaining information about music streaming as it happened and provided prompts for subsequent interview questions. Participants were asked to register for a Last.fm account to connect Spotify to the scrobble feature. If the participant already possessed a Last.fm profile they were advised to set up a new account for the purpose of this study, limiting the amount of data that was accessible. Assistance for setting up scrobble on particular devices was provided in a step-by-step guide (see Appendix F). Participants provided their Last.fm log in details to enable access to streaming data. Screenshots of daily streaming activity were initially taken to facilitate rapid data collection and to limit the amount of time an account needed to remain active and accessible. Once the sampling period and subsequent interview were concluded, participants were instructed to change their Last.fm log in details or, if not wanted, delete their account.

3.3.3.1 Selecting the Sample

Participants in the online observation were a non-probability sample, recruited via self-

selection during phase one of data collection. Here, those who had taken part in the online survey were asked to leave their contact details if they were interested in partaking in subsequent research. One hundred and ninety-three survey respondents left their details for further participation. Information for these 193 respondents, such as their age, gender and Spotify account usage, was coded into a spreadsheet. Using this data, I selected users to take part in subsequent online observation. To ensure diversity in the types of people included I contacted both heterogeneous and extreme cases from the survey population. A diverse group of users were sampled in an effort to uncover varied music streaming practices and patterns related to active identity work. I initially aimed to recruit between forty and sixty participants for this part of the study, with the intention of safeguarding my research against non-completion rates.

In the first round of data collection, I emailed seventy individuals of which thirty-two initially responded. Email exchanges between myself and participants provided more detailed information about subsequent research. As part of this communication, I provided a participant information sheet (see Appendix G) and answered any additional questions. If those contacted were happy to proceed, a consent form (see Appendix H) was signed and returned. Following this, a date and time was agreed for the one-to-one interview and preceding online observation. Information about how to set up the scrobble log feature through Spotify and Last.fm was communicated as well as the offer of additional assistance if required. Twelve individuals took part in this initial round of phase two. This was much lower than had been hoped for and so a second round of recruitment for phase two of the research was conducted. Those who had not initially responded to my email enquiry were contacted again. The initial sample was also extended by returning to and reviewing the survey dataset. Although additional participants were contacted, diversity in the sample remained a focus. Thus, a representative spread of age groups, genders and account holders were selected. An additional thirty individuals were emailed, of which twenty-two responded and nine completed phase two. Table 2 presents information about participants from phase two of data collection. More detailed information about these participants can be found in Appendix I.

Table 3 Demographic and Spotify account information for participants of phase two and three of research²

(Source: Own data, N=21)

	Survey Source					Age				Usage Time			Subscription		Account Sharing		Settings	
	Reddit	Facebook	Twitter	iSurvey	Other	18-25yrs	26-35yrs	36-45yrs	Other	Early Users	Middle Users	Long-term Users	Premium Account	Free Account	Yes	No	Public	Private
In-01-F		✓					✓					✓		✓		✓		✓
In-02-F	✓					✓					✓		✓			✓	✓	
In-03-M					✓	✓					✓			✓		✓	✓	
In-04-M					✓	✓						✓	✓			✓	✓	
In-05-F	✓						✓				✓		✓			✓	✓	
In-06-M	✓							✓			✓		✓			✓	✓	
In-07-F		✓					✓				✓		✓		✓		✓	
In-08-M	✓					✓					✓		✓		✓		✓	
In-09-M	✓					✓						✓	✓			✓	✓	
In-10-F		✓				✓						✓	✓			✓	✓	
In-11-M		✓							56-65yrs			✓	✓		✓		✓	
In-12-M	✓					✓						✓	✓			✓	✓	
In-13-F	✓					✓						✓	✓			✓	✓	
In-14-M					✓		✓					✓	✓			✓	✓	
In-15-M	✓					✓					✓		✓			✓	✓	
In-16-F					✓		✓					✓	✓		✓			✓
In-17-M	✓					✓						✓	✓			✓	✓	
In-18-M					✓		✓					✓	✓		✓		✓	
In-19-F					✓	✓						✓	✓		✓		✓	
In-20-M	✓								Over 65yrs		✓			✓		✓	✓	
In-21-M			✓				✓				✓			✓		✓		✓

² Within Table 2, the participant ID relates to the numerical order in which individuals took part in phase two of the research and whether they described themselves as male (M) or female (F). The usage time relates to the longevity of their Spotify use. Early users related to those who had used the service for less than one year, middle users had their Spotify accounts for between one and three years and long-term users has used Spotify for more than three years.

3.3.3.2 Overview of the Method

Table 4 Overview of online observation methodology

Online Observation	
Phase of Data Collection	2
Research Questions Addressed	<ul style="list-style-type: none"> How do users actively engage in music streaming practices and how does this relate to the construction of identities?
Research Objectives	<ul style="list-style-type: none"> Frequency of music streaming Types of music streamed Daily/weekly streaming patterns
Overview of the Method	Online observation was conducted during a specified sampling period, taking place one week before individual participant interviews. Scrobble logs, activated by the user, recorded data about the individual tracks streamed by each respondent. This data included the title of the track, artist and a timestamp.
Sample Selection	The sample comprised of people who left their contact information at the end of the online survey. Participants needed to be current and active members of Spotify to be included in the study. Additionally, they needed to be over eighteen years old to comply with ethical approval. The sample aimed to consist of between forty and sixty participants.
Time Scale	The sampling period had a one-week duration and took place the week prior to their interview. This timeframe was used to ascertain typical weekly streaming patterns and enable participants to easily recall specific streaming experiences during the interview.
Data Analysis Techniques	Data analysis investigated patterns in music streaming during the week, including the times of day and types of music that was streamed. Here, 'type' refers to specific artists and genres.

Advantages of the Method	<ul style="list-style-type: none"> • Inexpensive to administer • Data obtained in real-time • Access to data that researchers would otherwise not have access to • Data informs subsequent interviews
Disadvantages of the Method	<ul style="list-style-type: none"> • Failure to activate scrobble logs would lead to observational failure

3.3.4 Phase Three of Data Collection: Semi-Structured Interviews

Following the completion of online observations, semi-structured interviews were conducted with the same participants to obtain greater insights into their streaming experiences. Interviews also explored how users perceived the ways that Spotify constructs, manages and reflects their identity. Interviews were scheduled to last for approximately one hour and ideally were to be conducted face-to-face. If this was not possible, participants were interviewed through online video calling or by telephone.

The interview schedule employed a list of key questions to be discussed, which reflected and inquired about data obtained in phase one and two of the research (see Appendix J). The interview schedule comprised of some generalised questions, which all participants were asked, alongside personalised and more probing questions designed to encourage participants to elaborate on specific narratives. Although questions were organised around particular themes, for example playlist curation and social streaming, the structure of interviews was predominantly guided by the interviewee's narrative. Participants were also asked to bring the device they mostly used for Spotify streaming to more thoroughly view their music collections and prompt questions and responses.

3.3.4.1 Selecting the Sample

Every individual from phase two of data collection took part in a semi-structured interview and so the sample was the same. No interview was conducted before confirming the written and informed consent of participants (see Appendices K and L). Participants were also asked whether they had any questions prior to the commencement of each interview and were reminded that

the interview audio would be recorded. Because most of the interviewees lived abroad, Skype was used to conduct seventeen interviews and four took place face-to-face. Interviewees were very interested and enthusiastic about the research and, due to their willingness to engage with and elaborate on questions, interviews typically lasted longer than one hour. The duration of interviews ranged from fifty-six minutes to two hours two minutes. All interviews took place in one session, during which brief written memos were recorded to capture any thoughts or follow-up questions. Following each interview, a more substantial interview summary was written to paraphrase what had been said and to record any principal themes that had arisen (see Appendix M). Audio recordings were transcribed verbatim (see Appendix N) ready for subsequent analysis.

3.3.4.2 Overview of the Method

Table 5 Overview of methodology for semi-structured interviews

Semi-Structured Interviews	
Phase of Data Collection	3
Research Questions Addressed	<ul style="list-style-type: none"> • How do users actively engage in music streaming practices and how does this relate to the construction of identities? • What types of active identity work can be witnessed on Spotify? • How does the user perceive the ways in which the system constructs their profile?
Research Objectives	<ul style="list-style-type: none"> • Reasons for using Spotify for music consumption • Contexts for music streaming • Use of Spotify, including service-facilitated and user-facilitated features • Perception of recommendations • Curation of music • Creation and maintenance of playlists • Purpose of playlists • Discovery of new music • Private and public listening

Overview of the Method	Semi-structured, in-depth interviews were conducted with the participants from phase two of data collection. These interviews were either conducted face-to-face or via Skype. Questions were purposely designed to encourage respondents to elaborate on their music consumption on Spotify and to ascertain their perception of the platform.
Sample Selection	Phase two and three of the research comprised of the same participant sample.
Time Scale	Interviews were conducted soon after phase two of data collection was completed, typically two days later. Each interview was scheduled to last for one hour, however many of them continued beyond this.
Data Analysis Techniques	Interviews were transcribed verbatim and thematically analysed.
Advantages of the Method	<ul style="list-style-type: none"> • Participants answer in their own words • Interviewer is able to probe for greater information or clarification • Possibility of collecting additional data
Disadvantages of the Method	<ul style="list-style-type: none"> • Can be time-consuming • Possibility of interviewer effects • Responses may show social desirability bias

3.4 From Data to Analysis

Data from phase one was analysed quantitatively via descriptive statistics. Prior to analysis, the data was manually cleaned and any incomplete surveys were removed from the dataset. Analysis of this data was mostly conducted with the use of SPSS, which is a statistics package. Individual survey submissions were more thoroughly reviewed after this initial quantitative analysis to inform subsequent research, including questions to pose during interviews. Screenshots obtained during online observation were initially saved as images and then manually inputted into a spreadsheet, recording the date, time, artist and title of each song that had been streamed. An example of this can be found in Appendix O. Processing the data in this way revealed patterns in music streaming throughout the week.

Qualitative data, both from free text survey responses and interview transcripts was thematically analysed. Due to time restrictions, most of the interviews were transcribed verbatim by a professional transcription service. The process of coding this data entailed reviewing individual transcripts and assigning labels to significant, component parts (Bryman, 2008). Data was labelled, separated, compiled and organised manually in the order that interviews were conducted. Literature on qualitative methodologies has previously raised concern about text fragments being taken out of context following coding (Bryman 2008). To mitigate this, the complete transcript and interview summary were utilised to ensure context was still acknowledged. NVivo, a qualitative data analysis software, was used as a tool to support the recording of this thematic analysis and to write memos of initial and more detailed impressions of the interviews. At the first level of coding, distinct themes, concepts and categories were identified to form the basic units for analysis. Here, I began by using a list of predetermined themes that had arisen while reviewing literature to search for patterns across the dataset. These predetermined themes included:

- Music discovery
- Music curation
- Fandom
- Peer influence
- Public listening
- Private listening
- Changes in music taste
- Emotional responses to music
- Biographical affiliations to music
- Remembrance of a time/event

Initial codes were relatively broad to ensure coding and data were manageable. If unanticipated themes emerged during analysis, these were also incorporated into the list and later analysed, providing a systematic yet flexible and accessible approach to analysis (Saunders, Lewis, and Thornhill, 2016). The coding scheme for my thesis can be found in Appendix P. NVivo was also utilised to query words for comparative purposes and to retrieve quotations.

Analysis was conducted at the end of each phase of data collection since it informed subsequent phases of research. Once all phases of data collection were completed themes were analysed across all data to discover any coherent and underlying patterns. The themes that arose were then interpreted through the different lenses of the theories presented in the literature review,

used to extract meaning from the data and begin to answer my research questions. These interpretations are presented in the following three chapters of this thesis.

3.5 Generalisability

This research was not intended to test one overriding theory. This is due, in part, to the relatively small number of participants included in the research and to the fact that I employed a single case study as a research strategy. Instead, my interest was in exploring the different narratives that can help to account for diverse music streaming practices of different social actors. These accounts relay the meaning making processes of active identity work that Spotify users engage in, which can then be generalisable to a wider population. Research on this active identity work produced new and richer understandings and interpretations than currently exist within the literature on music streaming.

3.6 Ethical Considerations

The complexity of the methodology raised issues of research ethics. An ethics application was submitted for research approval to the University of Southampton's ethics board, a copy of which can be found in Appendix B. The application was submitted on 9th April 2018 and approved on 15th April 2018 (see Appendix A). Below, I account for the relevant ethical considerations that needed to be monitored during each phase of research.

3.6.1 Participant Briefing and Consent

Detailed informant briefings were conducted prior to each phase of data collection (see Appendices C, G and K). These briefings provided a thorough explanation and overview of the research purpose and clarified expectations so individuals could make an informed decision about whether to participate (Bryman, 2008). At this time, I also clarified the notion of voluntary participation and offered the opportunity for individuals to withdraw up to one month after all data collection had ended. Depending on the geographical location of the phase three sample, briefings were carried out either in person or on Skype. Following the relay of this information participant consent was requested. Participants were asked to connect their Spotify accounts to

the Last.fm scrobble log feature, for which they were provided with a step-by-step guide. Activating scrobble was voluntary and participants were advised to deactivate and delete their account once phase three of data collection concluded.

3.6.2 Anonymisation and Confidentiality

Participants were encouraged to speak freely about their music streaming experiences, particularly during the semi-structured interviews. While personal music experiences do not necessarily reveal information of a sensitive character, music connects very strongly with individual notions of identity, self and lived experience (Hagen, 2015b). This raised questions regarding the rules to apply when collecting personal data. The informants were guaranteed confidentiality during the research process. Anonymity could not be guaranteed at the point of data collection, since IP addresses were automatically obtained by the survey host platform and participants were known to the researcher during phases two and three. This information, however, was not used for the purposes of this research and all data was subsequently anonymised during the process of writing up. This anonymisation extended to removing names of personal Spotify playlists from qualitative data that, due to their unique nature, could identify the individual. Respondents will be referred to by their interviewee ID throughout this thesis.

3.6.3 Vulnerable Participants in the Sample

Ethical concerns may have arisen regarding the vulnerability of people studied. Although the sample required individuals to be over the age of eighteen, any issues relating to vulnerability were planned to be addressed on an individual basis; however, none arose.

3.6.4 Data Management

Data was stored securely and backed up regularly on a private and password protected computer. Any identifying and sensitive information was removed from the data before being deposited in the University of Southampton's data repository, making the University the data controller (University of Southampton, 2020). Once the data has been deposited it is provided with a DOI and made accessible via open access (Research Councils UK, 2016). Because this research was funded by the Digital Economy Network, certain aspects of data management are governed by

the funding body. Consequently, all data obtained will be securely preserved for a minimum of ten years from the completion date of this thesis (EPSRC, 2020).

3.7 Conclusion

This chapter has outlined the research design and underlying methodological approach adopted in this thesis. Although a number of music streaming platforms have emerged in the online market in recent years, Spotify was selected as the exemplifying case for this study. This selection was informed in part by the substantial number of global subscribers Spotify has accrued as well as the scope the platform offers for researching the role of both human and machine actors in online identity work. Reviewing pertinent literature on music consumption and identity highlighted several possible methodologies for obtaining accounts of individual music streaming experiences. Following reflection on the strengths and weaknesses of these varied approaches, I opted for a mixed methods research design that incorporated an online survey, online observation of Spotify streaming activity and semi-structured interviews. In this chapter, I have elaborated on each phase of data collection, outlining what, why and how I conducted research using these methods alongside the ethical considerations that were raised. I have also discussed the data analysis techniques employed for each research phase, using thematic analysis for qualitative data and descriptive statistics for quantitative data.

My methodological approach and research design has both strengths and weaknesses. As with other online platforms, Spotify is constantly redesigning its platform and features. The findings of this research are therefore reflective of the platform features, music catalogue and recommendation models at the time of data collection (2019). There were limitations to the types of accessible data and knowledge that I could obtain. Early in the research process, several attempts were made to contact Spotify via email, social media and job postings. I sought to establish communication to scope out the potential for obtaining anonymised user datasets and more detailed information about the recommendation models they employ. Having Spotify data would have allowed this thesis to be more comprehensive, providing insight into exactly how data doubles are crafted and employed by the system. Contact with the platform was unsuccessful and so this research focused on the users themselves. I employed a mixed methods approach to overcome some of the difficulties of not having access to Spotify data and to corroborate findings through the various phases of data collection. These research methods remain limited, however, to the perceptions of those who have taken part and do not include investigation of the technical underpinnings of Spotify and its recommendation algorithms.

The use of online observation facilitated real-time collection of streaming activity and provided an additional dimension to the interview data. Most semi-structured interviews took place on Skype. Using this application did bring additional challenges to data collection, such as time-lags in responses and poor internet connection; however, in turn, it provided the opportunity to easily communicate with participants from all over the world, all of whom were more than willing to share their screen and display their Spotify account.

Recruitment for each phase of data collection also had strengths and weaknesses. My survey had a good level of response; however, non-completion rates were high and respondents not as diverse as had been hoped for. Repeated attempts were made to diversify the sample by advertising the survey in different online and offline settings. Response rates from different groups did improve but the data gathered remains skewed towards males aged between eighteen and twenty-five. This, in turn, impacted the diversity of subsequent online observations and interviews. The number of participants in phase two and three of the research was also much lower than had been hoped for. Ideally, I wanted to recruit between forty and sixty participants for each of these phases but only twenty-one individuals took part. Participants from all three phases of data collection were very enthusiastic, however, and greatly enjoyed sharing their narratives of music listening and Spotify experiences with me. Many interviewees were eager to remain in contact should any additional thoughts or experiences arise.

The following three chapters present my empirical findings from my mixed methods approach. In chapter 4 I provide accounts of symbolic music consumption on Spotify, which in turn facilitates performances of particular identities online. Chapter 5 then explores specific Spotify features that enable users to construct, manage and perform their identities through music in this online arena. Finally, chapter 6 presents the various types of networks that users can engage in on Spotify, extending the discussion of music's role in group identity into a particular online context.

Chapter 4 Consuming Music Symbolically: Preferences, Practices and Identities

4.1 Introduction

Music accompanies a diverse range of everyday activities, aids in memory retrieval and regulates moods. Research discussed in chapter 2 also demonstrates how music can be employed as a multifaceted device for identity work (MacDonald, Hargreaves and Miell, 2002). Questions that guide this thesis on music streaming seek to explore how users actively engage with Spotify and how this engagement can lead to active identity work (RQ1 and RQ2). Using data collected from all methodological phases, this is the first of three findings chapters that seek to explore how identities are constructed, managed, and performed during instances of online music streaming. Questions have been raised in existing literature as to whether digitised music can serve as a means to perform identity work as physical music collections have in the past. One argument in this debate contends that online music is simply an accumulation of indiscriminate tracks that minimises the concept of ownership and collection, both of which are strongly associated with identity work (Kibby, 2009). This chapter argues that practices for performing offline identity work through music have largely been translated into an online context. This has, in part, been achieved via Spotify's platform affordances, such as providing access to a vast music catalogue that enables users to more readily search, stream and hone music preferences, but also through users' unique and individual practices for negotiating their multifaceted identities. For instance, in this chapter I argue that personally curated playlists on Spotify can be perceived as online containers for identity that are possessed and owned by individuals. Hence, they are a key example of the identity work that takes place on streaming services.

Identities discussed in this chapter were not always adopted consciously by interviewees but were, on occasion, only identified during transcript analysis. Frameworks, including those from symbolic interactionism and Goffman's dramaturgical perspective, are used to explore the ways in which research participants publicly and privately perform their identity work on Spotify. Literature from the field of musicology, which has predominantly focused on offline music listening for identity work, is used to analyse music streaming on Spotify. This includes the application of MacDonald, Hargreaves and Miell's (2002) music-based identities: identities in music and music in identities. In using these established identity theories, I convey how strong

attachments to music as well as specific music-related social and cultural roles continue to be constructed, managed and performed in an online context. Constructing identities via music is most notably achieved via the private or public disclosure of music preferences (Shuker, 2013), which continues to be relevant in online contexts. Preferences discussed by interviewees included both the enjoyment and dislike of particular music genres, lyrics and even particular sounds. Symbolic consumption, related to the congruency between self-concept and marketing, is used to consider the ability of online music to be self-representative or non-self-representative. Because of music's association with a number of different identities, it is also important to consider how interviewees use music streaming as a device for memory retrieval, as has been previously explored by Tia DeNora (2000) in offline contexts. Using these frameworks reveals that music preferences are not stable but reveal current, long-term, transitional, former, aspirational and location specific identities, all of which will be discussed below.

4.2 Music as a Resource for Personal Identity Work

Music can be used as a device to construct, manage, and perform both individual and collective identities (Lonsdale and North, 2011). Using music as a resource for identity can encompass a diverse range of activities, including the public expression of music preferences. Disclosed music preferences are likely to evolve and change over time. These preferences can be long-term, current, former and transitional, reflecting different types of identities within the same individual (Shuker, 2013). In the following, I present interpretations of the quantitative and qualitative data collected through the three phases of research and address my research questions on music's role in identity. Using consumer cultural theories, I explore participants' self-representative and non-self-representative music consumption on Spotify. I present detailed accounts of the different types of identities crafted and performed by participants when they engage in music streaming on Spotify. Below, I begin by outlining specific examples of identities in music performed by interviewees.

4.2.1 Identities in Music

Amongst interviewees, identities in music included a **music fan, DJ and collector**. Although some interviewees mentioned their ability to play instruments or had studied music in an educational setting, these roles were less related to their identities and so will not be discussed. Identities in music refer to specific social and cultural roles, such as that of a performer or composer (MacDonald, Hargreaves and Miell, 2002). These identities are not enacted at all times but are

dependent on the situation and context. They are also one of many possible identities an individual constructs, manages and performs.

Interviewees frequently mentioned specific styles of music or artists that they enjoyed listening to on Spotify. Without having access to their online music library, fandom was ascribed based on whether users framed themselves as fans or not fans of certain music as well as the assumptions each made about fandom during interviews. Interviewees rarely used language of fandom in their narratives. On only three occasions could these responses be considered as performances of fandom, enacted on Spotify and in wider social contexts. Fandom entails a variety of dynamic practices that allow for the construction and performance of individual and collective identities (Duffet, 2014). Fan practices are limited on Spotify as the platform only facilitates individual consumption of content rather than group consumption and production witnessed on online fan blogs and community-based platforms. Thus, in this particular online context, fan identity was constructed via individual activities. One interviewee was perceived by others in her offline network as a stereotypical fan of a particular artist. This mostly related to her physical appearance, more specifically the manner in which she dressed:

My boyfriend said that me and my denim jackets and my rolled-up jeans and things he said there's no one on earth who is more of a Mac DeMarco listener than I am.

(In-02-F)

Although she did not consciously adopt this attire to be perceived as a Mac DeMarco fan, she did admit that the style of clothing outlined above was common amongst those who enjoyed his music. She conveyed that this clothing 'does just seem to be reflective of that sort of like slackery, indie-ish type of music that's very chilled out' (In-02-F). Although her physical appearance is not visible on Spotify, her streaming habits reveal that Mac DeMarco is self-representative.

One interviewee notably performed fan identity for The Dear Hunter, his 'favourite band in the world' (In-14-M). When asked what appealed to him, he stated that:

the reason I love The Dear Hunter is because they're genre defying...They have a five-album series that's one storyline set around World War One, that goes from like a post-punk, hardcore in the beginning, the first album, second album, and then by the end it's this beautiful orchestral opera that's incredible... And it's amazing, it's all over the place, the genre, so.

(In-14-M)

Following their unexpected discovery on a Spotify playlist, he now owns the band's records, attends live performances and buys merchandise, all of which are typical fan practices (Duffet, 2014). These objects serve as resources for self-reflection and public acknowledgment of his identity as a fan. He continues to stream The Dear Hunter's music on Spotify, having listened to approximately six hundred hours of their music in 2018 alone. This statistic, provided by Spotify's end of year 'Wrapped' playlist, accounted for more than half of his streaming activity and evidences how Spotify facilitates and recognises his fan identity. Consequently, he stated that the band is 'something that I would point to, at least at this point in my life, and say, "This represents me specifically" and I can, you know, kind of tie my identity around that' (In-14-M).

The interviewee has also publicly performed his fan identity to others by hand-selecting and sharing songs that he thinks they might like, wanting others to experience the same type of identification with The Dear Hunter as himself. Although very few within his friendship group share his enthusiasm for the band, performing this fan identity to others allows him to reaffirm and reinforce his connection. Reaffirmation of fandom is integral to the ongoing performance of this identity (O'Reilly, Larsen and Kubacki, 2013). By engaging in such dynamic and active practices, the interviewee identifies himself as a 'fanboy', being part of 'an inward joke...amongst The Dear Hunter fan community about how crazy and obsessed all the fans are' (In-14-M). He acknowledges that being a fan not only relates to his personal identity but also a collective identity performed both online and offline. Being a member of a fan community has therefore enabled him to construct social identities (Duffet, 2014). By continuing to stream the band's music on Spotify, alongside engaging in other music consumption practices, both his personal and social identities can be continually constructed, managed, performed and reaffirmed.

During an interview, one participant revealed that he was a part-time DJ which, using Goffman's dramaturgical perspective on identity work, can be understood as a staged performance that is consciously adopted in public settings (Goffman, 1959). This role was one of several identities he discussed. In a similar manner to a fan, performing the role of a DJ is associated with certain expectations and behaviours, referred to by Goffman as 'sign carriers' (Goffman, 1959, p. 136). Here, sign carriers include having a particular skillset, keeping up to date with current music trends and tailoring music to an audience. As he DJs in public, this identity work is performed in Goffman's frontstage of social life where there is an awareness of an audience observing his

performance (Goffman, 1959). The audience may then adopt their own roles as hosts, commentators and/or critics.

Being a DJ also entails the adoption and performance of identities that are reflective of others. The interviewee recounted several instances where he has publicly played music far removed from his own personal music tastes, instead being songs representative of his clients or members of the audience. To coherently and successfully perform these identities, the interviewee researches and prepares event-based playlists in a space akin to Goffman's back-stage area of social life (Goffman, 1959). Back-stage preparations are facilitated, practised and performed on Spotify. During these preparations, the interviewee adopts a role similar to that of an online recommendation music platform by using clients' preferences as input to search for and produce similar recommendations for their events. Having a vast catalogue of digital music instantly available to search through alleviates the effort required to find recommendations for clients, as might have been the case when solely relying on physical or other purchased formats. These private preparations help to prepare convincing and authentic impression management strategies, enabling him to be perceived in a desired manner by his audience (Burns, 2002).

Currently, back-stage preparations and frontstage performances as a DJ, alongside his other constructed identities, are facilitated by a single Spotify account. Spotify therefore perceives the construction, management and performance of multiple identities as a single and coherent user, meaning the recommendations generated by the platform may be incoherent and not reflective of his identity. The interviewee, however, did express future intentions of creating a separate Spotify account to specifically convey his identity as a DJ:

I've been consciously and deliberately expanding my company's presence and that's one of the ways I'm doing that is I've just started a Spotify profile and I'm slowly starting to build some themed playlists exactly like you say. That I can share out, you know, hey, I clap to a couple and, like, "What are you guys into, what do you like? Oh, okay, check out this playlist that might match your tastes"

(In-18-M)

Creating an additional Spotify account is a deliberate and conscious means of separating his multiple music-related identities. It would also allow him to explicitly represent who he is as a DJ to others on Spotify.

Three male interviewees conveyed significant music knowledge, reflecting previous research on public displays of power and knowledge as a male dominated music practice (Straw, 1997). One male interviewee exhibited particularly in-depth and extensive knowledge of a plethora of eras and types of music, which he discussed at length during the interview. Music continues to be a significant aspect of his life and provides the means to express his identities. During the interview, he presented and described himself as a music historian, scholar, collector and list maker. He considers his music choices as objective selections rather than expressions of personal taste. The act of objectively listening to music relates to his use of Spotify. Similar to the DJ, this interviewee currently uses the platform as a research tool to 'fill in the gaps' (In-20-M) of his music listening and knowledge. Depicting himself as a list maker related to his steaming practices and the meticulous curation of playlists on Spotify. He believes that by streaming pre-categorised lists of music on Spotify, for example 'The 100 Greatest Metal Songs', he will not be wasting his time 'on second rate stuff' (In-20-M). The challenge of curating playlists that others will enjoy and sharing his knowledge greatly appeals to him and so he has undertaken several 'music projects' (In-20-M). His first personal playlists charted the history and evolution of dance music, the process of which he talked about in detail. Following a significant amount of research, the subsequent playlist was divided into three sub-playlists, each containing approximately one hundred songs, which thus far trace the evolution of dance music during the 60s and 70s.

Since curating these initial dance-based playlists he has spent a significant amount of time curating music from 1948 to 1988. These playlists adhere to strict rules established by the interviewee, for example only allowing two songs per year from different bands/artists, to depict the evolution of certain music genres. As part of curation, the interviewee has created sub-playlists for each year to meticulously organise the music and aid him in 'selecting just the right songs' (In-20-M) to include in the final version. So far, he has spent two years researching and curating this playlist, considering it a major accomplishment in his curational work. Alongside this ongoing project, he is listening to a selection of heavy metal playlists on Spotify to consciously fill in the gaps of his current music knowledge, describing the process as an intellectual curiosity. Although he admits that heavy metal is not self-representative, he still feels able to appreciate it from an analytical standpoint. Spotify therefore enables him to more comprehensively construct and subsequently perform his identity as a music expert.

It was apparent that the interviewee greatly enjoyed the research process. Since retirement he has invested a significant amount of time and effort in creating playlists and now has the desire to share them with others. Feeling accomplished and proud of his work, he wants to publicly convey his knowledge and achievement to others, moving this private, back-stage identity into a frontstage, public arena (Goffman, 1959). He freely admits that this is partly related to his 'ego just to say look how smart I am to figure out, you know, all this old music' (In-20-M). In the past, he has shared his dance music history playlists on Reddit but was disappointed by the lack of acknowledgement, which he thought may be related to the age of other users on the platform. He did, however, gain some recognition:

one person in particular really raved about it and she said she was playing it in her office and all the people in her office were listening to it which made me feel really good that at least somebody was as interested in this subject as I was.

(In-20-M)

Obtaining this recognition from others affirmed his identity as a competent music curator and increased his self-esteem.

4.2.2 Music Preferences: Self-Representative and Non-Self-Representative Music Tastes

As in previously researched offline contexts, music in identities (MacDonald, Hargreaves and Miell, 2002) were also observable on Spotify through the streaming and non-streaming of particular music. Music preferences are pivotal to understanding the use of music as a resource for identity work (Duffet, 2014) and this continues to be true in online contexts. Interviewees were able to confidently articulate the music they liked as well as the music they typically avoided. Thus, they had awareness of the music that was, for them, self-representative and non-self-representative. As in previous research, music preferences projected important statements about the interviewees' attitudes and values (Shuker, 2013). Preferences also served as resources for both self-to-self and public identity work. This section explores interviewees' music preferences consumed on Spotify as well as how these preferences relate to the construction, management and performance of online identities.

Online observations provided clear insights into the music preferences of research participants. Pre-arranged one-week observations of online streaming activity were conducted prior to each

interview, details of which can be found in the chapter 3. Online observation recorded and timestamped artists and songs streamed on Spotify during the week. Questions about the data were then posed to interviewees, asking for instance whether the artists streamed during the observation period were indicative of their general music preferences. All interviewees stated that the artists most frequently streamed during the observation were broadly reflective of their music tastes. Some of these artists were long-term preferences that frequently appeared in their personalised Wrapped end of year Spotify playlist.³ Although in some way reflective of music preferences, other prominent artists in observed streaming were isolated occurrences, with interviewees asserting that they would not feature as heavily in other weeks. Isolated streaming typically related to the release of new music on Spotify, revisiting an artist's music catalogue or attending live music performances.

Most interviewees were able to provide specific examples of music they enjoyed on Spotify. Music preferences were highly eclectic and shaped by factors such as age, location and friendship groups. One interviewee described music preferences as 'comfort zones' (In-09-M), echoing the familiarity, assurance of enjoyment and emotional regulation that was expressed by others. This perceived music safety net stands in direct contrast to the apprehension interviewees often experienced when listening to new or unfamiliar music on Spotify. Interviewees discussed the significant cognitive effort required to consciously and repeatedly analyse, interpret and assess unfamiliar music, which they may find does not appeal to existing music tastes:

when I go and listen to new music of whatever genre, I do that much less often because there's the risk that...I guess I'm lazy with it because I know it's going to take me more than one listen to figure out if I like it or not and so I just – I choose not to do that work.

(In-09-M)

Despite most interviewees having marked music preferences, as well as being cautious of unfamiliar music, others were keen to assert wide-ranging music interests, catered for by Spotify's expansive music catalogue. These nine interviewees revealed that they would be unlikely to disregard any type of music, describing themselves as open-minded. These interviewees have

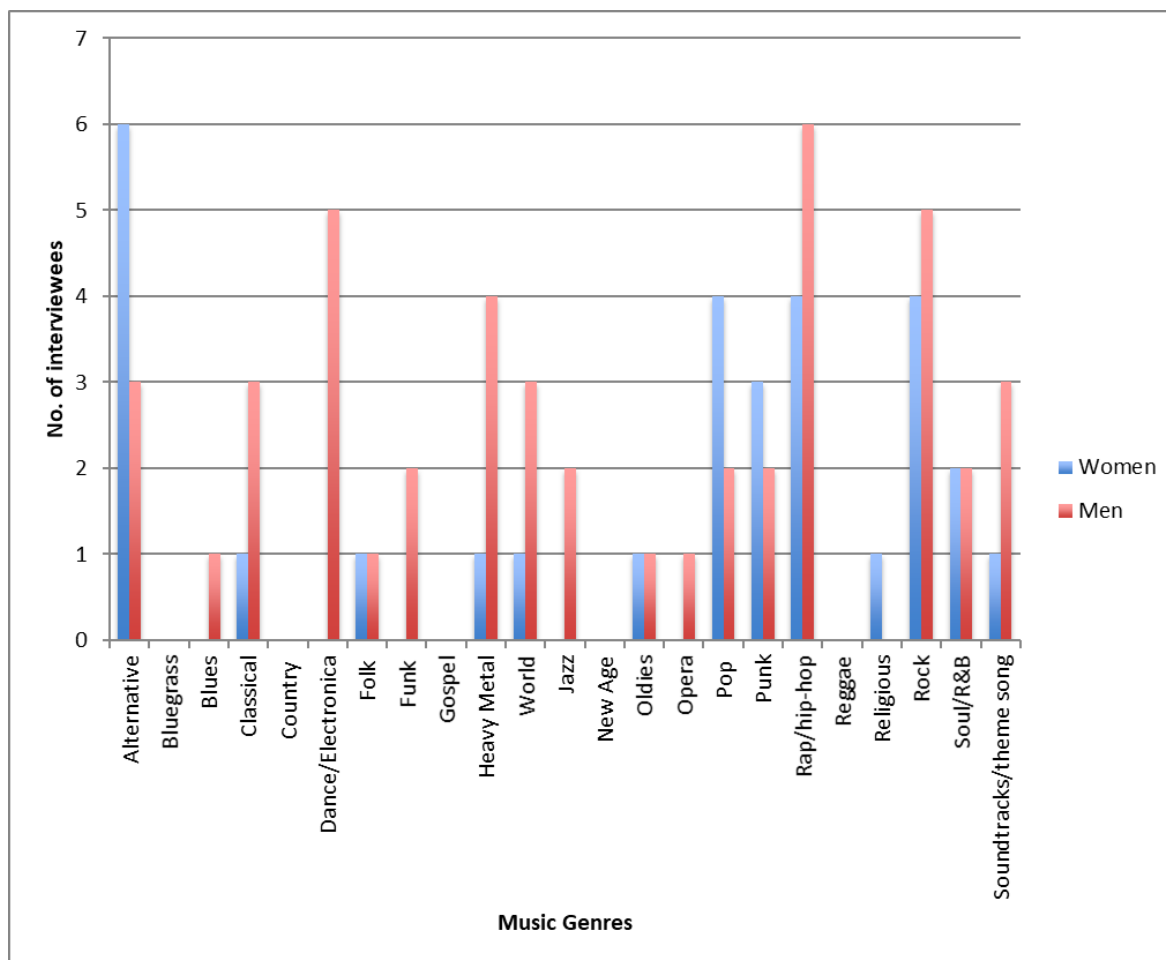
³ Spotify records music an individual streams throughout the year to produce a personalised playlist of their most listened to songs each December, known as 'Wrapped' or 'End of Year' playlists. The songs on the Wrapped playlist are not necessarily presented in rank order, according to number of streams, but may be mixed to produce a more cohesive playlist (Spotify, 2018).

previously felt limited by physical and financial access and knowledge of other types of music to be able to expand existing preferences. Access and awareness of music beyond their existing preferences has since been aided by the use of Spotify.

Despite Spotify not labelling songs on their platform by genre, these labels were most frequently used to describe music preferences. Interviewees discussed preferences for a variety and multiplicity of music genres and sub-genres that they enjoyed and listened to on Spotify. Those who enjoyed particular music genres also found that that they would prominently feature in the end of year and/or throwback playlist generated by Spotify.⁴ Using the most recent typology of music genres defined by Rentfrow and Gosling (2003, 2019), which comprises of twenty-three top-level genres, eighteen were mentioned by interviewees to label the music that they liked. A small number of interviewees stated preferences for lesser-known genres, being markedly different to the popular music labels mentioned by others. Here, interviewees discussed Sudanese and other African music, CCM (Contemporary Christian Music) and pick up jazz. Their enjoyment of these genres was unexpected when compared to their more general music tastes, meaning they were unlikely to have been discovered via Spotify's personalised recommendations. Instead, Spotify had facilitated access and further exploration of this music. Music preferences expressed by interviewees are visualised in Figure 5. For the purposes of Figure 5, music sub-genre preferences stated by interviewees have been integrated within the associated top-level genre. At times decisions had to be made about how to categorise genres of music into the defined categories. Thus, alternative includes both indie music, which was mentioned by seven of the interviewees, as well as alternative rock. Two interviewees expressed an enjoyment of acoustic music that seems to defy categorisation in the current typology and so has been excluded from the statistics presented in Figure 5.

⁴ Throwback playlists are generated by Spotify to recall music released and likely listened to in previous years. These can be personalised, as is the case with Throwback Thursday playlists, or more general to reflect music eras (Eriksson et al, 2019).

Figure 5 Interviewees' music preferences categorised by genre



(Source: Own data, N= 21)

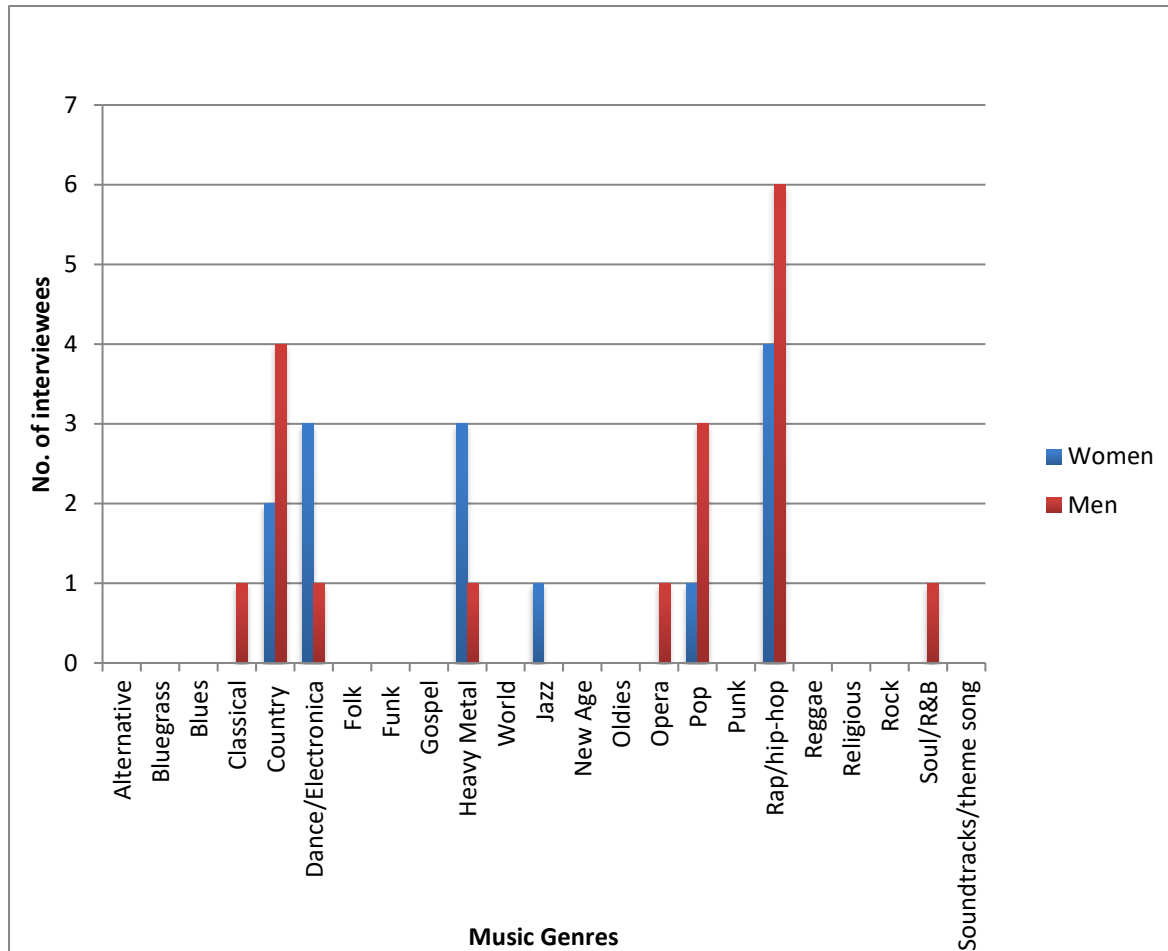
Music is often perceived as a technology of gender, creating gendered spaces that operate according to highly coded musical and performative conventions (Whiteley, 1997) and so Figure 5 depicts music preferences by gender. Over time, a pop/rock dichotomy has been established alongside a 'common tendency to associate women with the former and with mass commercial entertainment, and men with the latter and with the alternative and authentic' (Whiteley, 1997, p. 30). Amongst interviewees there was no significant differentiation in preferences for pop music between women and men. Rock and heavy metal tended to be preferred by more male interviewees, but this demarcation is not statistically significant. Only men in the sample expressed preferences for forms of dance music, which is interesting as the genre has traditionally been associated with performances of femininity (Hogg and Banister, 2000). As suggested by Butler (2004), social objects, including certain styles of music, have become saturated with symbolism and gendered but do not have any ontological status. Rap/hip-hop was the most preferred genre, mentioned by ten interviewees, followed by alternative music, which was liked by nine interviewees. Genre preferences were strongly correlated with the offline social contexts that interviewees engaged in. For instance, one interviewee's preference for styles of EDM

(electronic dance music) mirrored his enjoyment of going out and partying with friends. He was aware, however, that this music was not appropriate for all aspects of his life, explaining that he often listens to less intense forms of music outside the EDM genre when studying.

Other interviewees felt unable to identify with or define their music preferences in terms of genre. They therefore appreciated that music was not labelled solely in this way on Spotify. One interviewee deliberately avoids genre labels to define her music preferences as she consciously tries to widen her existing tastes through music discovery on Spotify and offline. By stating a preference for a particular music genre, she felt that she would be closing herself off to unknown styles that she may enjoy. Other interviewees asserted that genre labels were not sufficiently descriptive to convey their music likes. For example, an interviewee stated that EDM consists of many different styles so as a label it cannot fully convey his specific tastes.

When asked about music preferences, interviewees also provided examples of non-self-representative music, as shown below in Figure 6. As well as being the most liked genre, rap was also the most disliked, perhaps reflecting the genre's capacity to provoke strong reactions that can be either positive or negative. Some were able to articulate specific reasons for their dislike of certain music. For instance, opera was deemed to be non-self-representative for one interviewee due to its high-pitched vocals, which he finds irritating. Others more broadly stated that, although they are able to acknowledge the talent within different music, they ultimately struggle to identify with certain genres, usually those that are antithetical to the music they enjoyed. Interviewees, however, were much less explicit about the music they disliked and reasons they disliked it, simply stating that 'it's just not really my thing' (In-03-M). Interviewees were also keen to present themselves as being open minded to a variety of music, as has been discussed above. For instance, one interviewee admitted that she does not 'actively seek out' certain types of music but that 'if they stumbled upon me I'll still be open to it' (In-05-F). As a result of using recommendation-based music platforms, she rarely engages with music beyond her personal preferences. Figure 6 evidences the eagerness of interviewees to be perceived as open-minded since the number and diversity of genres mentioned as being non-self-representative are far fewer than those that were deemed self-representative, as was conveyed in Figure 5.

Figure 6 Music dislikes of interviewees categorised by genre



(Source: Own data, N= 21)

Although some interviewees expressed dislike of a particular music genre, they did, on occasion, discover self-representative songs within the category. One interviewee expressed a notable dislike of dance music, primarily because of the social situations in which the music is played. The interviewee later admitted to liking what was, at the time, the latest single by Calvin Harris, featuring Sam Smith, titled 'Promises'. Being outside her typical music preferences, the interviewee admitted that 'I wouldn't necessarily have gone out looking for it had it not been played on the radio' (In-02-F). It is unlikely that this song would have been recommended by Spotify as it is not in keeping with typical streaming habits recorded in her user profile. Therefore, her progressive fondness for the song related to initial exposure on the radio followed by access to it and repeated listening on Spotify. Similar experiences were recounted by those who had previously disliked a particular artist within their preferred music genre. One interviewee found it amusing that the most streamed artist during his observation period was a band he had previously disliked. This streaming had been prompted by the release of their new album on Spotify, which he felt had been heavily promoted. Having previously not liked the band, trialling this new music on Spotify did not require a physical or financial commitment as with purchasing a

CD. He was surprised to find that he enjoyed the new music, describing it as ‘really new territory but I really liked it’ (In-08-M). His newfound enjoyment seemed to relate to changes in the band’s music style, which he perceived as being more representative of his identity.

Interviewees also used other, more fine-grained descriptors to articulate self-representative music preferences. Several interviewees discussed their enjoyment of particular bands and/or artists. The availability of complete music catalogues on Spotify, including the ‘This Is’ artist-based playlists that collate their most popular tracks, appealed to those who enjoy sequential streaming of particular artists. These catalogues have also aided in the discovery of new preferences by providing a means to access previously unattainable music due to financial implications or opportunity. Alongside artist preferences, interviewees had particular albums or songs that were self-representative as determined by the music itself, lyrics or having elicited a strong emotional response. One interviewee cited David Bowie’s ‘Black Star’ as one of his favourite albums:

Take for instance David Bowie’s ‘Black Star’, which is probably one of my favourite albums. It’s just how different artists or even different people deal with like death, dealing with knowing that they’re going to pass away soon. How he interprets death is very different to say how Leonard Cohen does...it’s not just a way for me to take ideas on how to process this stuff but it’s also a way for me to relate to I guess my family and how they’ve dealt with these issues or even my other friends

(In-04-M)

The album’s themes of loss and death resonate with his life experiences and, by extension, are reflective of him. Having even more specific preferences, five interviewees expressed enjoyment of a particular sound. Some simply conveyed this in terms of the music having a particular beat or catchy tune but two interviewees addressed the sound of the music in more detail. One interviewee preferred music within the classical, popular and rock genres but she was also drawn to music with a particular sound. Her favourite classical music pieces all have solo instruments, usually piano or violin, playing a prominent melody that she can sing along to. For her, self-representative music facilitated interaction, mostly in terms of singing along or dancing, therefore she found large orchestral works without prominent melodies challenging. Following their acquisition of The Echo Nest, Spotify’s attempts to integrate data on preferences for rhythms and sounds into recommendation models suit those with more specific music preferences.

Lyrics were mentioned by a substantial number of interviewees, emerging as a significant factor in determining whether music was self-representative or non-self-representative. One interviewee prefers listening to the lyrics rather than the music when streaming. He therefore distances himself from EDM and Dubstep, genres he previously enjoyed, because they rarely contain lyrics. His transition from EDM and Dubstep to more lyric-based music was associated with personal issues and experiences with depression. Lyrics had become a vehicle to experience and express his emotions and identity. Interviewees' enjoyment of certain music genres also related to lyrics. This was often the case with those who enjoy rap or hip-hop. One interviewee, who enjoys rap and hip-hop, initially streams a track to gain an overview of the song. On subsequent listening occasions he will read through the lyrics, displayed under the 'now playing' bar on Spotify for particular songs, and consider how they relate to both the song and himself. Interviewees also admired songs that employed lyrics to depict a narrative, frequently mentioned again by those who enjoy rap and hip-hop. For one interviewee, liking lyrics seemed related to her identity as a literature teacher and her love of poetry. Rap and hip-hop were her favourite genres and these mirrored her enjoyment of spoken word and slam poetry. She also likened lyrics in these genres to storytelling, which were deemed to have more authenticity when written by the artists themselves. Because of this perceived authenticity and investment in the music, the interviewee was more inclined to repeatedly listen to artists who write their own lyrics. She did not assess song lyrics based on their ability to reflect her own identity but instead how they allow her to understand others, notably the artist. This lack of self-identification with lyrics has changed over time as, when at high school, the interviewee recalled writing lyrics in her notebook and on her social media profiles because she felt connected to particular songs that reflected her.

In other instances, lyrics were valued based on their ability to be representative of the individual. This was particularly pertinent for two respondents. One interviewee was keen for the lyrics in the music she streams to reflect who she is. The significance of lyrics seemed to stem from experiences studying abroad, including in Holland and Italy. In these countries she often felt unable to access music, primarily due to a language barrier, and so has at times felt alienated from cultures. Another example of lyrics being used for identity work was expressed by an interviewee who has ADHD. He predominantly listens to hardcore punk and finds solace in the emotions and self-esteem issues frequently expressed in the lyrics. He also recalls that as a child he was quite aggressive and lonely. The lyrics in this music therefore feel very personal to his own experiences:

hardcore, but with the lyrics, with feelings and self-esteem issues, because I have ADHD but really severe and I had a lot of problems having friends and everything and I was really aggressive as a kid and I had a lot of problems and everything and they talked about loneliness and being sad...they were talking about something I could feel as well but with the anger I felt, it was very face-to-face to me, that's why, when I go to a gig, it's so personal to me.

(In-08-M)

Other interviewees based their music preferences on personal value-based judgements. For one interviewee, this was the perceived and subjective 'quality' of the music. Here, he was not necessarily referring to the quality of the audio recording, which does not vary on Spotify due to the digital format songs are required in, or production but to how the music had been composed. When asked to elaborate on this, the interviewee stated that he listens for the use of interesting chords or the adoption of new compositional and/or instrumental techniques. His ability to hear compositional components of the music stems from studying music theory, which he started to better understand the music he enjoyed. Another interviewee was drawn to music that displayed 'dazzling musicianship' (In-11-M). When asked about his enjoyment of numerous music genres, the interviewee claims that they all have talented, well-developed and crafted musicianship in common. Because of this, the interviewee always finds music to enjoy on Spotify even within disliked or unfamiliar genres.

4.2.3 Beyond Music Self-Representation: 'This represents me specifically' (In-14-M)

Moving beyond the disclosure of music preferences, it became apparent during the interviews that some participants value music and forms of music consumption more fervently than others. This relates to my depiction of musical identity as a continuum, outlined in chapter 2. Nine male and two female interviewees presented identities strongly associated with music. Some discussed their strong connection to music in their own words whereas other music-related identities emerged following analysis of interview transcripts. These interviewees were often known within friendship groups for their intense music consumption practices, something that served as a badge that they valued and wore with pride. Several interviewees made a clear distinction between those heavily invested in music and those who are less devoted:

it can be a rare, like some people don't make music and the act of listening to music such an important part of their lives, and when I can find someone like that, we can have that bond, we can connect in that way.

(In-06-M)

For this interviewee, active music listening on Spotify had become ingrained in his everyday life and was employed to determine viable friendships. Moving beyond statements of music likes and dislikes, the following accounts present individuals whose identities are strongly rooted in music. Access to this music was most often facilitated by Spotify.

4.2.3.1 Music in Identities

Some interviewees more than others appropriated music as a significant resource for expressing identities, being a form of identity work discussed by MacDonald, Hargreaves and Miell (2002). Here, music served as a symbolic representation of individual and collective identities and provided a resource to express feelings or experiences, some of which interviewees felt unable or unwilling to express themselves.

Music in identities were more common than identities in music amongst those who were interviewed, frequently pertaining to songs interviewees labelled as 'me'. When discussing the song 'Heavenly Father' by Isaiah Rashad, one interviewee revealed:

I feel that song in a sense, I feel like that song is me. If I were to show someone through a song how I feel about things, or myself, that would be that song

(In-09-M)

He then went on to quote some of the song's lyrics, which reflect his own personal history. It emerged during the interview that this was not the only song that symbolically represents him. In the past he has also felt a strong connection with the song 'Days Before Rodeo, The Prayer' by Travis Scott. Rather than perceiving himself within the lyrics, on this occasion it was the sound and atmosphere of the music that reflected his anxiety at the time. For another interviewee, finding songs that were symbolic helped him to feel less like an outcast. The sound and ideas conveyed in this music enabled him to make sense of situations and reflect on who he is. Prior to finding music that reflected him, the interviewee had tried to force himself into liking EDM because it was popular amongst his school colleagues and allowed him to fit in with the mainstream. However,

he never really experienced a synergy between himself and EDM in the way that he does with songs in hardcore, punk and metal music genres that he now listens to on Spotify.

More than just a single song, one interviewee has consciously curated a personal playlist, comprising of his long-term, favourite dance tracks, as a symbolic representation of who he is. This playlist is often played through his car speakers, meaning that passengers become an audience to his identity work. Because of the potential of public streaming, the interviewee meticulously prepares his playlist in advance by carefully considering which songs to include. This conscious back-stage preparation ensures that the playlist reflects his preferred styles of music, conveying what he perceives as his more authentic, long-term identity rather than short-term music likes. He noted the similarities in editing his playlist to the way others edit their social media profiles:

So I probably do, so conscious/unconsciously, construct my perceived personality in terms of music listening, just in a similar way to what people probably do with their social media timelines and things. I'm sure people will only post things that they want people to see about them. People only post when they're having a good time or when they're doing things that they want people to know about, or photos that they want people to see of them...But I probably do that with my music.

(In-21-M)

The interviewee is therefore aware of his social identities and tailors music listening accordingly. Not wanting to misrepresent his music tastes was affirmed by his later statement of 'I don't want people to get me wrong' (In-21-M). He recalled doing the same when he owned an iPod. When younger, his friendship group would often play music publicly through their iPods in various social settings. Prior to these settings, the interviewee would curate the music on his iPod, deleting tracks he perceived as anomalies to his long-term music taste as well as music that may inaccurately portray his musical identities. He has now translated this former habit into his online music streaming practices.

Similar conscious curation was discussed by an interviewee who perceives his Spotify account as an extension of who he is. Although he was unsure whether those connected to him on Spotify were able to view who he followed, he wanted to ensure he followed an eclectic array of artists. He was keen 'to give off the idea that I listen to diverse music. It's not monolithic in that I only

listen to hip-hop, I only listen to rap. I want it to be more nebulous' (In-04-M). He therefore consciously curates those he follows on Spotify to be perceived in a certain way by others online.

4.2.4 From 'So Not Me' to 'Just Not Me'

Identities strongly affiliated with music did not only manifest in music that symbolically represented the research participants. Perceived incongruency between music and interviewees' identities related to music dislikes, distastes and the negative self (Banister and Hogg, 2001). As an alternative form of symbolic consumption, the negative self is constructed via the refusal of tastes, where products become imbued with negative meanings (Banister and Hogg, 2001). In their research on the negative self, Banister and Hogg (2001) derived a spectrum ranging from the avoidance self to the most extreme embodiment of the undesired self. Some interviewees performed identity work by strongly disassociating themselves with particular kinds of music, going beyond simple statements of dislike. This strong dislike was predominantly related to music that was in opposition to their tastes and seemed antithetical to their identities.

Within my research, interviewees articulated forms of the undesired self when discussing music deemed to be in direct opposition to who they are, most frequently perceived in music that expressed different values to those held by the individual. This was often mentioned in relation to country music, with one interviewee stating 'I haven't listened to a lot of country music, but I find it very – I find it difficult to relate to the values and thoughts etc.' (In-09-M). This echoes comments made by other interviewees who felt that the themes and associated culture of country music were not self-representative and so it was never streamed on Spotify.

Popular music was often related to the undesired self. The interviewee who presented himself as a music historian, discussed above, expressed a very strong dislike of current, popular music, stating that 'pop music of today does nothing for me' (In-20-M). His dislike of popular music stems from his personal belief that it is highly manufactured and inauthentic. In particular, he feels that he knows too much 'about how the music industry works today and the producers who are working behind the scenes are really crafting this music almost according to an algorithm' (In-20-M). His strong dislike of manufactured music is not surprising since his music-related identities are strongly associated with connoisseurship, requiring the adoption of an analytical and intellectual approach. He likes to be recognised for his expertise and popular music is typically perceived as

being in binary opposition to the authenticity and musicianship he admires (Shuker, 2013). A similar perspective was expressed by another interviewee who was very invested in various acts of music consumption. He rarely enjoys listening to commercial music, such as that found in the chart-based playlists on Spotify. He cited Taylor Swift's song 'Look What you Made Me Do' as a prime example of the music he dislikes, having a particularly strong emotional response:

it annoyed the hell out of me, I don't know why, but every time I heard it, and I was hearing it a lot when it came out (laughing). I just couldn't, I wouldn't say it made me angry, it didn't make me angry, but it was definitely bordering on it, like I would just roll my eyes, and I just didn't, like I say once I realised it was becoming popular I got really frustrated. It wasn't good, that's my opinion (laughing).

(In-06-M)

The interviewee felt that popular music does not challenge or musically reward the listener. It therefore stands in binary opposition to his own music tastes, which he describes as possessing an intrinsic quality in its composition and musicianship whilst also being highly eclectic.

Several interviewees also referenced the personal lives of music artists in their responses. In some cases, interviewees found parallels between their own personal lives and those of music artists. On a few occasions, however, knowledge of artists' personal lives influenced streaming habits and were given as reasons for rejecting the music:

the stuff that happens outside of the music definitely influences how I interpret and how I consume the music

(In-04-M)

Two examples emerged during interviews where individuals consciously chose not to stream certain music because of concerns over the artists' personal lives. One interviewee no longer listens to some of Brockhampton's music following allegations of sexual misconduct against Ameer Van, who was once a member of the group (Newsbeat, 2018). The interviewee was very aware of the case and felt that it had tainted the music he once enjoyed, making him feel uncomfortable and conscious about listening to it. Another interviewee recounted a similar experience. She no longer listens to music by Brand New as she does not want to be perceived by others as endorsing the frontman's alleged sexual assault of multiple females (Reilly, 2017). In both cases, the artists had become imbued with negative associations, leading to constructions of the undesired self as interviewees intentionally distanced themselves from any association. This

prompted interviewees to search through their music collections on Spotify and delete specific tracks.

Banister and Hogg's (2001) avoidance self is a less powerful form of the negative self, often linked to feelings of aversion. It is also performed when products are considered antithetical to present identity. These antithetical products could become relevant, however, if an individual's situation alters, such as a change in occupation or age. It also relates to products viewed negatively in regard to the individual but positively for someone else. The avoidance self was also articulated by interviewees in the current sample when discussing the music tastes of those in their familial network or on the periphery of a friendship network. For instance, a young male interviewee intentionally distances himself from the music his father enjoys. He articulated that his father's favourite band, The Bee Gees, were not in keeping with the identity he is attempting to construct and perform to his online peers on Spotify and other social networking sites. He consciously curates his online music collections to convey an eclectic taste. Although The Bee Gees were not tenable to his present identity, the interviewee did perceive the band positively in relation to his father and expressed the possibility of listening to their music in the future. The music did have the potential to become relevant to his future identities. The avoidance self was similarly constructed by the interviewee who worked as a part-time DJ. He strongly disliked rap, notably 'the sort of a mumble rap thing going on right now that's not my style' (In-18-M), citing the lyrics and tempo as elements of the music that do not appeal to him. Although this genre does not appeal to his own identity, as a DJ he frequently has to research and play this music for clients and audiences. Therefore, he views the music positively in relation to clients but dislikes the music himself, stating 'I would never, ever listen to it for personal pleasure' (In-18-M). Having currently only one Spotify account for his personal and professional identities means, however, that when he streams rap for research the system infers that he enjoys the music and this will skew future recommendations.

4.2.5 On-Going Identity Work: Musical Transitions and Unstable Identities

Multifaceted identities could also be perceived within interviewees' music consumption practices on Spotify. Over time, identity has been revised, no longer deemed fixed and coherent it is now understood as fragmented and prone to change (DeNora, 1999). To some extent, Spotify acknowledges the construction and performance of different identities through its features, including the time capsule and throwback playlists that seek to reflect former identities.

Interviewees discussed an amalgamation of current, long-term, former, transitional, aspirational, and location-based identities that were all in some way related to music. Some were aware of changes they experienced in their musical identities over time while others perceived it as an organic evolution related to age.

For some interviewees, Spotify was used to construct, manage and perform current identities. Although some users' collections reflected current tastes because their Spotify accounts were relatively new, for others this was a conscious or subconscious decision. Interviewees consciously or subconsciously restricted their music streaming to current music preferences, only wanting to reflect who they are now. These preferences were often related to former music tastes, depicted as the result of a progressive music evolution. Current identities were most often organised and maintained via the curation of playlists, allowing immediate access to favourite, current music. These playlists, however, were dynamic and required constant maintenance to ensure that they continued to be reflective of the current self. One interviewee had established particular rules for his current music playlist on Spotify, regularly removing music that had been saved for longer than two months and adding newer music in its place. Removed songs were not deleted entirely but were usually added to another personal playlist in his Spotify account. Keeping his Spotify library representative of current tastes was linked to one interviewee's use of the platform, specifically engaging with it to discover new music. Although the interviewee did admit to listening to music from his childhood during the interview, he felt that reminiscing about the past did not drive his music consumption on Spotify. In fact, he explicitly stated that he was not a huge fan of nostalgia. Instead, he uses Spotify to experience new music and is willing to be taken out of his music comfort zone. Spotify facilitates the management of current tastes by constantly editing its music catalogue and adding the latest releases, advertising them through Release Radar⁵ and Discover Weekly.⁶

Many interviewees had grown up with music, with initial music tastes stemming from parents or siblings. Tastes shaped by family members were often related to access and exposure to

⁵ Release Radar is a Spotify-generated playlist of new music recommended specifically for each user. The playlist is updated every Friday with music that has been released in recent weeks and includes artists that the user already listens to as well as artists perceived as similar by the recommender system (Spotify, 2019f).

⁶ Discover Weekly is a playlist generated by Spotify. Recommendations for music are based on songs that the user and those with similar tastes have previously listened to. The playlist is automatically refreshed each Monday, but versions can be saved in the user's music library (Spotify, 2019c).

particular types of music. For example, an interviewee's long-term music preferences had stemmed from his father, being music they shared when he was younger. As a child, another interviewee was granted access to her parent's LP collection. During her interview, she shared her memories of looking through the collection to inform and inspire the development of her own music tastes. Once formed, long-term music-based identities were often described as comfort zones. These comfort zones, where music is considered highly self-representative, often result in reduced engagement with new music on Spotify. Instead, listening habits focus on the repeated streaming of particular artists or personal playlists. Hence, identity can become increasingly stable over time.

Former identities were most frequently discussed in regard to music associated with childhood and/or adolescence. Most interviewees recalled their music preferences, as well as changes to these preferences, when they were teenagers. At this time, many interviewees self-identified with particular labels, which helped them to fit into a particular peer group. One interviewee stated that as a teenager she identified and labelled herself as a 'grunger' (In-07-M). She engaged in public displays of allegiance to particular bands, and therefore particular identities, by wearing band t-shirts, owning band merchandise and sewing band patches onto her bags and clothing. Now the thought of being labelled with a particular identity does not appeal to her, preferring instead to be associated with certain kinds of music.

As teenagers many interviewees listened to emo and alternative genres of music, depending on their age this was facilitated by either offline or online music consumption. Songs within these genres, which adopt a confessional lyrical style and, at times, aggressive musicianship (De Boise, 2014), allowed them to express their identities and emotions to others. These genres were also perceived as being underground and experimental, appealing to those who wanted to adopt tastes intended to be different from others. One interviewee now perceived her adoration of emo and gothic music as a teenager as being narrow-minded, stating that 'back then I definitely would have defined it as "I only like that sort of music"' (In-02-F). These music genres are no longer tenable for her identity, feeling detached from them, and as a young adult she is now open to listening to a variety of music. This was similarly expressed by several interviewees who no longer felt the need to listen to the 'angsty' style of music associated with their adolescence. Reconciling this music with their past allowed them to explore music genres that, as one interviewee stated, they had previously been 'missing out on' (In-04-M).

On occasion, some interviewees did revisit former preferences in a practice that can be described as nostalgic listening. Nostalgic listening was often facilitated by the retention of former tastes in their Spotify library, made viable by its vast song limit. For those who had not retained former music preferences, music was easily accessed via Spotify's search bar. Revisiting former tastes was usually prompted by a reminder of that time or hearing the music. In some cases, friends who still enjoyed the music would play it, subsequently encouraging the interviewee to revisit it. Here, interviewees negotiated their present identities by listening to music that reminded them of who they were at a particular time in their lives.

Transitional identities were also often experienced during adolescence, associated with changes in friendship groups or schooling. As part of transitional identities, music tastes were depicted as phases or cycles, which would come and go over varying periods of time. One interviewee discussed the perpetual negotiation of music tastes depending on who he is with. In particular social contexts, he consciously selects appropriate music to listen to, taking into consideration preferences of others present. The interviewee makes decisions about appropriate music choices in ongoing streams of action, based on his interpretation of the situation and the perspectives of those within the present reference group (Shibutani, 1995). In doing this he hopes to craft how others perceive him, being akin to Goffman's (1959) impression management strategies. Some interviewees described instances of forcing themselves to like particular genres of music because they were popular amongst their peers. In these contexts, listening to their own music preferences rather than those of their peers conjured up fears of being social outcasts:

I have this phase when a lot of bands and groups were mainstream like LMFAO, David Guetta and everything when I was 12 and I tried to force myself to like that because everybody liked it, so I forced it and I did not enjoy it at all and I was sometimes an outcast, listening to hardcore, to punk, to metal and everything and it did not feel good

(In-08-M)

Interviewees recalled that they were only able to maintain this music façade for a certain amount of time before realising that the music would never be self-representative. Eventually, all interviewees stated that they chose to listen to their own music preferences publicly regardless of their friendship group. Aside from friendship groups, the fluidity of music tastes was also apparent when interviewees selected music based on mood. Here, music tastes could sporadically and abruptly change as individuals negotiate both their current and desired moods and emotions.

Transient identities related to mood and music were, depending on the individual, either publicly expressed or privately negotiated by selecting a particular streaming mode.

Phases in music listening often related to access, allowing individuals to indulge temporary and changing interests more readily. Many interviewees credit Spotify for exposing them and providing access to a vast music catalogue. The access and lack of financial commitment encourages users to trial potential music likes, some of which could become long-standing and others momentary. Transitional identities were also related to changes in the popularity of certain genres as well as how they had become perceived. One interviewee recalls her investment in emo music during the mid-2000s, however she stopped listening to it once it lost popularity, not being a notable music scene anymore. Current music trends appear on Spotify's homepage, which may encourage exploration of a range of music and culminate in more transitional identities.

Interviewees also demonstrated aspirational identities by saving music that was not tenable to their current self but had the potential to become meaningful in future. These identities mostly related to those who had saved songs on Spotify to listen to at a later date, feeling that in some way the music was not fully representative of who they currently were. One interviewee had saved multiple artists who might serve as resources for future identity work, some of which had been recommended by people in his network. He was currently listening to his saved Johnny Cash albums that he had wanted to listen to for a while but remains unsure 'whether it is reflective of me content-wise' (In-04-M). As a result of saving a significant volume of potential future preferences, this interviewee has, on multiple occasions, reached the 10,000-song limit for his Spotify music library.⁷ He wants to continue to explore unknown artists in the future but not being able to currently save them in his Spotify library without deleting something he knows he enjoys makes him feel frustrated.

Others saved music that they felt could be reflective of future identities in designated playlists. One interviewee described his 'Listen Later' playlist as containing breadcrumbs to follow up on. Two other interviewees had also curated 'Listen Later' playlists, which they sporadically stream

⁷ Since this interview took place, Spotify has removed the 10,000-song limit on personal playlists and music libraries. From May 2020, users have been able to add an unlimited number of songs to their personal music collections (Gartenberg, 2020).

depending on mood and time. Consequently, interviewees had either not yet returned to the music or were slowly working their way through a playlist that was progressively increasing in size. When they did return to this music, they often had mixed responses. On some occasions they discovered that they did not enjoy the music and so deleted it from their library. Songs that were considered self-representative were also removed from the playlist but usually added to collections of music that were streamed more frequently.

Because of the international nature of interviewees, location was a significant factor in identity work, changing the experiences of individuals and the types of music they engaged with on Spotify. This was particularly pertinent for those who possess dual nationality, exploring the music of their current location while still being attached to some music from their home. Interviewees recounted identity work associated with locations, most of which related to moving to attend university. Moving to university allowed interviewees to develop their identities and exposed them to alternative styles of music. One interviewee had moved a significant distance from his home country of India to study in France. Until the age of fourteen he had not engaged with Western music and instead listened to regional music, either Tamil songs or Kannada music. He started listening to Western music to fit in with a particular group at school and to support his English language acquisition. Despite initially liking the music, he felt that his peers significantly shaped his choices at the time. Moving to France for university allowed him the freedom to experiment and discover music he personally enjoys. This discovery mostly occurs in public spaces where he uses Shazam to recognise songs and then adds them to his Spotify account. He still considers some Indian artists to be amongst his favourites, with A.R. Rahman having a long-term significance in his life. However, he struggled to access songs by Indian artists, particularly those sung in Tamil, as at the time of his interview Spotify had not yet launched in India.

Formerly living in Serbia, one interviewee had access to certain types of social contexts and music choices. She stated that adolescents in Serbia tend to spend their time at smaller house parties rather than going out to nightclubs. She was therefore influenced by the music played and shared in these social contexts, typically ex-Yugoslavian rock or popular music. She also cited traditional Balkan music as being significant to her. Despite being important to her identity, traditional Serbian music was in opposition to her music preferences. However, she willingly plays and translates traditional music for friends to express her Serbian identity. Because Spotify was unavailable in Serbia at the time, it did not provide a means to reflect and perform this identity through music. Instead, she used Deezer or YouTube to stream music online. While studying

abroad, the interviewee started using Spotify, creating an account in each country she studied in. She now has three accounts, based in America, Italy and Holland. Studying abroad enabled her to discover a wide range of music through Spotify accounts, social settings, live performances and friendship groups.

While some interviewees considered music as a significant device for the construction, management and performance of their identities, others asserted that it was less important to their identity work. These individuals cited other resources as more significant in reflecting who they are. Although interviewees believed that music was important to who they are, two respondents stated that other resources are more deliberately employed to construct and perform their identities:

I am vegan, and I think that that is more...like, I go to vegan events, and I seek out friends that are vegan, and do specifically things that celebrate the vegan lifestyle

(In-06-M)

This interviewee is also a fan of the New York Giants football team, which he perceives as being a significant and important part of his American identity. He publicly performs this fan identity by wearing New York Giants shirts as well as owning and displaying artwork and memorabilia. He also self-identifies as a nerd, which he relates to his occupation as a Systems Engineer. Despite the interviewee perceiving the above as more significant and deliberate resources for his identity, music listening accompanied most of his daily life. Some of his social relationships were also founded on shared music preferences. The music-centred discussion led him to state at the conclusion of the interview 'Maybe listening to music is a bigger part of my identity than I realised' (In-06-M). Other resources deemed important for identity work were often linked to music. As an example, one interviewee perceives films as the most significant resources for his identity. He did admit, however, that there is significant interplay between films and his music listening, causing him to re-evaluate the importance and relationship between music, film and his identity.

4.2.6 Music Biographies

In addition to the multitude of identities enacted on Spotify that have been presented above, multifaceted identity work was apparent in the way individuals used Spotify as a device for the

retrieval of particular memories. Using music as a device for memory retrieval has been widely acknowledged in academic literature. For DeNora (2000), music associated with personal biography enables a form of introjection, where a coherent image of the ongoing self is cultivated via reflections on former self-identity. Associations between music and memories were addressed in the online survey to obtain a broad understanding of how music tastes are shaped by personal biography. Responses indicated that music tastes have been shaped by life experiences, with 38% of respondents strongly agreeing and an additional 37% agreeing to this statement. These statistics confirm that music listening is attached to aspects of personal biography for those within the sample and, as a result, was included in a series of questions within the interview schedule.

Research by Lonsdale and North (2011) suggests that women are more likely than men to use music as a form of remembrance. During interviews, however, an equal proportion of men and women recounted instances where music has become affiliated with aspects of their biography. No gender differences were therefore noted in this thesis. Music functions as a medium that interviewees use to remember others, including loved ones and family members, and to relive events or times in their lives. Music associated with these aspects of biography were discussed in relation to specific songs attached to certain memories or coincidental music that had become associated with a memory because of its co-presence.

Reflecting on former selves through music is part of ongoing identity work in the present. Several interviewees used terms similar to 'history book' or 'notebook' to describe their Spotify library, evidencing the ability of Spotify accounts to serve as containers for musical biographies. Perceiving Spotify in this way reflects research conducted by Hagen (2016) on how users make sense of their experiences on Spotify and Tidal. Hagen (2016) demonstrated that users adopt metaphors to describe their online streaming experiences, the most common being the tool metaphor that perceives technology as an extension of the body and senses. As in Hagen's work, this thesis demonstrates that Spotify can be considered as a music memory prosthesis or container that enhances the ability to store, recall and retrieve music in highly personal ways. To review and revisit their music history, some interviewees intentionally track and record songs they listen to, mostly via Last.fm's scrobble log feature. Describing himself as a 'list maker' and 'music hoarder', one interviewee admitted that he disliked deleting any of his music on Spotify. Alongside using Last.fm to retain his streaming history, he also uses an online platform called IFTTT, which enables users to create and link applets to online services (IFTTT, 2019). Using IFTTT allows him to connect his Spotify account to a Google spreadsheet. In doing this, every song

added to his playlist of favourite music was automatically recorded in a spreadsheet, including the song title, artist and the date and time it had been streamed. Having this record outside of Spotify provides him with the assurance that his music listening history will not be lost. Acting like a music diary and memory aid, the spreadsheet also enables him to recall individual songs from specific times in his life.

Particular playlists on Spotify served as conscious or sub-conscious containers of personal biography. These playlists reflect interviewees' long-term or short-term identities, marking aspects or moments in their lives. This was most apparent amongst those who created monthly playlists. Other biographical playlists related to specific life events, which were typically static collections of music, or people. Because of the personal effort invested in curating these collections of music, which often reflect positive memories and emotions, biographical playlists were more likely to be revisited than individual songs or artists. Revisiting these playlists occurred as a means to relive particular memories but also because the music was greatly enjoyed.

Curating a playlist to reflect personal biography was discussed at length by an interviewee who was seventy-one years old. He consistently adds tracks to a playlist of his favourite music on Spotify, which includes songs from all stages of his life, to reflect long-term, temporary and current music tastes. For him, it was important to curate a playlist that reflected his life, functioning as a music biography that was able to remind him of who he was at a particular point in time and who he is now. He revealed that the underlying incentive of curating a playlist of his favourite music was a fear that he would be diagnosed with Alzheimer's in the future:

So, I do have a couple playlists of my all-time favourite songs, I had the... this is going to sound really silly, I had the feeling if I ever were to become demented or had Alzheimer's that maybe if I had a playlist that somebody could play me that I put together when I was still, you know, mentally sound that it might revive some kind of ideas within me that otherwise wouldn't be there because that is true with music that if you listen to it even when you're very old or, you know, your mind is really going, the music will still make sense to you.

(In-20-M)

This is the most conscious example of curating a collection of music to capture personal biography. It also conveys how important and powerful this individual believes music is to his identity.

To chronologically store music discovered during months of the year, three interviewees curate monthly playlists on Spotify. These usually consist of diverse music, not linked to a particular genre or overriding theme and, because of their up-to-date nature, they are frequently listened to. Each interviewee felt a strong sense of attachment to their monthly playlists, describing them as an archive that they would not want to delete. Monthly playlists were a means to signpost their lives, whether or not it was the intended purpose. One interviewee was able to chart particular life events when revisiting monthly playlists. A monthly playlist from 2018 serves as a signpost for the beginning of a romantic relationship:

I do log all of my playlists because I like to look back on them and I look back at things that happened at different points in my life... So I have a boyfriend. I met him last summer and if I look at the playlists between July and August they are all so soppy and overly romantic and it definitely expressed my identity in that moment of someone who had met somebody and was very excited about it and hopeful about where it was going to go.

(In-05-F)

For these interviewees, the monthly playlists initially provided a means to structure their new music but have since become something more significant, perceived as a musical biography stored on Spotify.

Personal playlists were also used to signpost particular life events. Most often these related to live music performances, such as concerts and festivals. These playlists were usually created prior to the event and included tracks by those performing. Interviewees used them for 'hyping' prior to the event and to get a general sense of what the music would sound like when played sequentially. Following the event playlists served as a static reminder. Many revisited these collections of music, particularly if it became associated with a friendship group or was an annual event, to transport and remind them of the live event, how they felt and who they were with.

Four interviewees had curated playlists on Spotify for people in their lives. Although many had collections of music related to friends, only one had created a specific Spotify playlist based on a long-term friendship group. Despite her friends not having Spotify accounts, the interviewee had curated a list of music that they had all enjoyed at some point over their fifteen-year friendship

and so was representative of their collective musical identity. One interviewee had curated a playlist intended for his brother, consisting of songs he knew his brother would enjoy as a drummer and rock musician. Although the interviewee is unsure whether his brother has ever listened to it, he retains it as a collection of music and reminder of his brother. Another interviewee had curated multiple playlists on Spotify to reflect the relationship with her partner. Despite music being important to both of them, they do not share similar music interests. To discover similarities in their music tastes they frequently send music back and forth. The interviewee had curated a playlist of music they have shared, perceiving it as an archive of their relationship. The playlist not only reminds her of her partner but also the beginning of their relationship. The interviewee also has another playlist that consists of songs they mutually like, reflecting them both as a couple. This is a dynamic playlist, with music progressively being added and is often streamed when they spend time together.

Revisiting former music tastes to convey who you were at a particular moment in time was significant to one interviewee's relationship with her partner. Both her and her partner shared music they enjoyed when growing up to discern whether they were similar people at certain points in time:

We spent a long time trying to work out whether we were similar people growing up, like, would we have been friends if we were in the same school, like, really random things like that, and one of the ways we did that was through music. So, we used to sit down and play each other songs that we listened to when we were, like, 14 and be, like, 'Oh, did you listen to this band? Did you listen to this song?' like, and, kind of, find out whether we were, like, whether we, kind of, were similar at different points, and we found out we were. Not the whole time...I think it's funny, on reflection, that that's how we thought to identify who we were at 14/15 was based on the fact that we both liked Blink-182 and Green Day. That meant we were similar in our heads.

(In-10-F)

Playing the music that they listened to when younger served as a public display of who they were at a particular point in time. This act provided a telling of the past to produce an understanding of their identity over time. In terms of biography, it was an act related to former identity and one also associated with the start of the relationship.

Music was also affiliated with breakdowns in relationships. Several interviewees mentioned music being linked to a romantic break-up. These songs initially served as tools to reflect emotions but eventually became associated with that time in their lives. One interviewee recalled how his perspective of one of his favourite songs had changed after breaking up with his girlfriend. At the time, he struggled to express his emotions about the break-up to his friends and so consciously used songs instead. A biographical connection between the music, including what was once his favourite song, and the end of his relationship makes it difficult for him to now revisit and enjoy. Particular music was also associated with breakdowns in familial relationships. One interviewee recalled listening to a particular style of music when his mum left, mostly 'angsty rock music' (In-04-M). He explained that he was drawn to this music at the time because it expressed how he felt. Once he was able to process his emotions his music tastes changed, moving towards rap and hip-hop. Now, unless played by his friends, he never revisits angsty rock music because of its attachment to the relationship with his mum. Another interviewee relates the lyrics from a particular song to the breakdown in the relationship with his father. Here, he conveys how the lyrics to the song are poignant to his own life:

it goes, "Everybody telling me a lie, Lord you gave me something for my soul" and so I'm, "Yes, that's so true, I feel that way" ...he's talking about not having a father basically and he's talking both in a spiritual sense, I guess about God or whatever, but also his own father. And I myself, I had a dad growing up but he was very abusive and things like that and so the lyrics are like that. But, also, I'm not a Christian, I'm an atheist, agnostic or whatever, but the idea of – because I was Catholic and then I did feel a loss, a spiritual loss of a father but – and he's also, it seems to me he's looking for truth or meaning in the world and then it seems like everyone is not about that or not really caring and so I relate to that and that's in the lyrics and then also with his own history similar to mine, with his father.

(In-09-M).

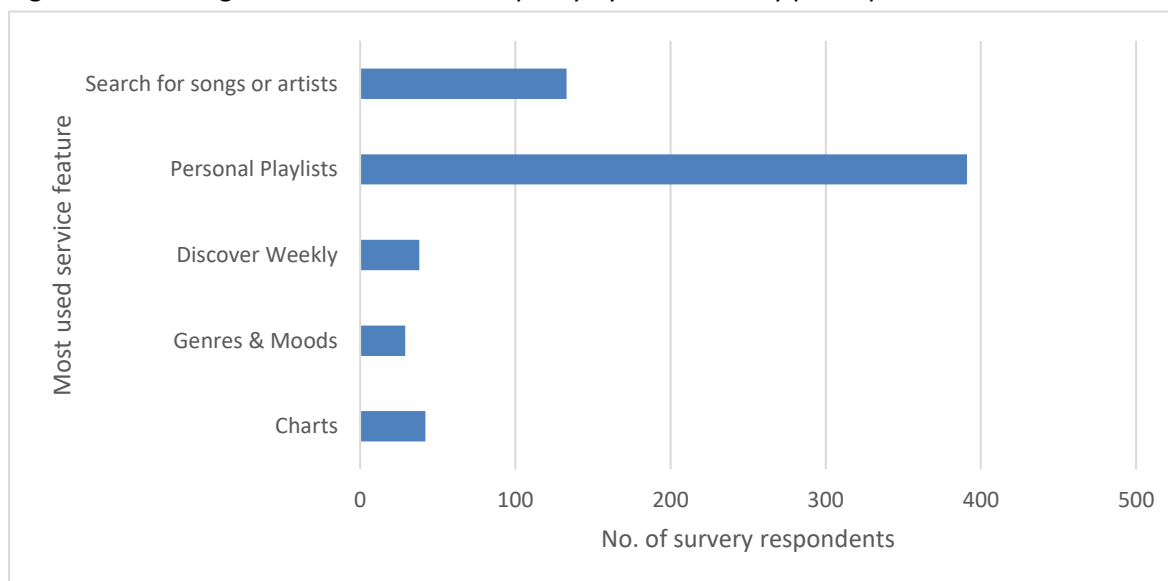
The song is a recent discovery and so was not listened to at the time the relationship with his father collapsed. Despite this, he felt that the lyrics reflected his own life experiences, providing him with a sense of solitude and shared experience. He therefore associates this song with a time and person in his life. Even with these negative connotations he continues to stream and enjoy the song.

As above, some interviewees nostalgically revisited music from their past, expressing feelings of comfort in that music. Revisiting would typically occur when individuals were reminded of the music or became bored with their current listening. In these instances, music serves as a prosthetic biography where the telling of the past was part of producing a coherent identity over time (Hagen 2016). Others never revisited this music, mainly because the music no longer seemed tenable to who they had become or the emotions associated with it were too painful to relive. Here, identity work was achieved through the music that the interviewees chose to no longer listen to on Spotify.

4.3 Curating Identities with Playlists

Playlists serve as important containers for music biographies and tools for structuring and organising multifaceted identities. Research conducted by the Clouds and Concerts Research Project discovered that playlists occupied a third of the total time users spent listening to music on streaming services (UiO Department of Musicology, 2016). Playlists were also the most dominant mode of music listening for those under the age of twenty-five (UiO Department of Musicology, 2016). Curating and listening to playlists on Spotify was prominent in my research. Of those who completed the online survey, 94% had curated personal playlists on Spotify. Although the frequency of creation did differ, over half of survey respondents curated a new personal playlist at least once every month. As Figure 7 presents streaming personal playlists far surpassed the use of any other platform features.

Figure 7 Streaming feature most used on Spotify by online survey participants



(Source: Own data, N= 633)

All interviewees had curated at least one personal playlist on either Spotify or an alternative online music platform. Creating and maintaining these playlists, which were organised according to individual logic in terms of content and structure, were important activities for many. After their creation, playlists were the preferred means for music listening, with several interviewees revealing that they rarely browse music on Spotify and immediately navigate to their personal playlists.

4.3.1 Online Digital Libraries: Collection or Accumulation?

Collecting is strongly associated with concepts of identity, related to self-to-self expression and public performance of who we are through physical objects. As discussed in chapter 2, existing literature on collections has tended to affiliate the practice with materiality and feelings of ownership (Kibby, 2009). Research on music collections has therefore exclusively focused on LPs and CDs, which are tangible music objects and can be publicly displayed (Kibby, 2009). In the current digital environment, the physicality of music listening has been lost and online music libraries are perceived as an accumulation of indiscriminate tracks that require little self-investment (Cills, 2015). Hence, a binary opposition has come to exist between the possessiveness and prestige of tangible music collections and the non-attachment and disposable nature of music renting associated with online platforms. Considering former literature on music streaming, the present research aims to ascertain whether participants experience a sense of ownership over their online music or if they perceive it as an accumulation not tied to themselves. This, in turn, impacts the potential for Spotify to be utilised as a resource for identity work.

According to the 2021 Global Music Report, global revenue from sales of vinyl sustained an upward trajectory last year (+25.9%), increasing in number for the sixteenth consecutive year (IFPI, 2022). It was not surprising to discover that some of the interviewees owned physical collections of music. Alongside their Spotify accounts, five interviewees discussed their physical music collections, comprising of CDs and vinyl, with one interviewee also referring to a collection of downloaded music on iTunes. Owning physical objects for music listening mostly related to interviewees' concerns over the availability and permanence of online music as well as the sound quality. Public displays of power and knowledge associated with collecting have historically been deemed a predominantly male practice (Straw, 1997). Amongst those who referenced physical collections of music in this research four were male, ranging from eighteen to sixty-five years old.

One interviewee had amassed a collection of 650 CDs with her partner that are visibly displayed in their house. The interviewee expressed strong feelings of pride towards her collection and deemed it to be impressive in terms of the collection she has accrued as well as the display:

it's something that we're quite like both of us quite proud of...and I like that we've got quite a big collection, I like that a lot of the time people say, 'Oh I really love this' and it starts conversations and I like that kind of aspect of it that you find out more about people

(In-07-F)

Because her music collection is physical and on display, it can initiate conversations far more easily than forms of digital music. It also allows for more public displays of an identity attached to music. In contrast to her physical collection, she spoke about the transience of music online. The prestige of her CD collection stood in direct contrast to the way she accumulates music on Spotify, admitting that she constantly adds music but rarely deletes it. Therefore, there was a notable difference in how this interviewee perceives and talks about her CD collection and the music she accumulates on Spotify.

Three male interviewees possessed collections of vinyl records, comprising of special editions or older music rarely available in a digital medium on Spotify. Vinyl was often gifted or purchased at live events and sometimes signed by bands, making it highly prized and a physical memory aid. These relational aspects are indicative of physical collections and cannot be replicated in an online medium. Enjoyment of vinyl was also mentioned in regard to its sound quality:

I don't know, it's the – it's not better, it sounds worse, it's not so clean as a CD or even Spotify; it has this different feel to it, I really enjoyed it.

(In-08-M)

Even though the sound quality is not as clear as other forms of media, it provides a unique listening experience. Despite owning physical collections, these interviewees replicate their music collections on Spotify where possible and adopt listening practices associated with their physical music. For instance, collecting vinyl seemed strongly associated with one interviewee's enjoyment of listening to complete albums. This practice is reflected in the way he saves music in his Spotify library, retaining complete albums rather than individual tracks. Discerning what to include in his physical record collection is also a trait adopted when curating personal playlists on Spotify. He assigns particular rules or themes for curating personal playlists, such as tracks being over seven

minutes in duration or only having a female vocalist. Despite wanting this online catalogue, he did express concern about losing it due to the transient nature of digital music stored online:

I mean, it would suck to lose, you know, this compilation of all the music that I listened to... And it's certainly something to think about, we think about this a lot, especially with all sorts of digital media when you buy it, when you rent, you know, a movie or buy a movie through Microsoft or Apple, what happens when Microsoft or Apple goes under, you know? What happens to your stuff?

(In-14-M)

Here, the interviewee makes a distinction between physical ownership and digital renting. The distinction, however, seems to be based on the permanence of the music rather than feeling less connected to it.

One collector of vinyl challenged current understandings of physical ownership by giving away his LP collection when relocating to the UK. The interviewee expressed mixed feelings about owning a physical collection:

with a record collection, that has its plusses and minuses. Having to lug it around, that's a minus, having a wall full of records, plus (laughs)...on the one hand it's nice to have all that stuff and on the other hand it's nice to not have all that stuff. I find that getting rid of things is really deeply satisfying these days (laughs). Anyway, I don't miss the record collection

(In-11-M)

He enjoyed the ability to possess and display physical items and, at the same time, disliked the space they occupied. Throughout the interview it became evident that the interviewee now perceives his Spotify account as a collection, repeatedly using the term to refer to the music he has accrued. Spotify offers him a curational tool, allowing him to collect tracks and build playlists out of interest, memory or genre. Although he stated 'that's the thing with Spotify, you don't really own anything, you have access' (In-11-M), he did convey a strong sense of ownership and attachment to his Spotify track listing, which amounts to several thousand tracks. During the interview, he expressed the need to 'safeguard' the track listing because it was very important to him. Despite the different mediums of music listening, he valued each as a collection that had the ability to express who he was and is.

In comparison, another interviewee expressed a greater sense of ownership in regard to his collection of music on iTunes. Although this collection of music is digital, the interviewee regarded it as more permanent because he had paid for it. Music downloaded on his iTunes account has been amassed over a fifteen-year period, serving as a container for his music history. During the interview, he explained that Spotify and iTunes are different tools for his music listening. He uses Spotify for music discovery, carefully considering the extent to which songs are self-representative before downloading them on iTunes. This downloaded collection of music is carefully and consciously curated to ensure that it accurately reflects him. The interviewee perceives music downloading in a similar manner to physical ownership of CDs:

when I was teenager, people still bought CDs more. And I would always like thinking, “Right, I’ve got that CD, that’s kind of like I’ve supported that artist because they’re my favourite artist. I’ve got the CD of them. And also, that’ll kind of last me, like, I’ve got that CD; that’s like a show of my personality and what I like and also it’s there kind of to keep.” And in addition, I can’t think of the word, like maybe like some memorabilia-[memento] type, almost like memory keepsake thing of it.

(In-21-M)

For this interviewee, ownership and display of identities is specifically associated to physicality, which in turn represents his identity and is a container for memories. Although the music he downloads does not have this physicality, he feels it has more permanence because he has paid to be able to retain it for the future. As a result, he feels more connected to it than the music he streams on Spotify.

The music some interviewees had accrued on Spotify was indeed an accumulation of songs, as has been previously depicted in research conducted by Cills (2015). More specifically, for eight interviewees music on Spotify appeared to be more akin to an accumulation rather than a collection. Three interviewees described themselves as music hoarders, which related to the amount of music stored within their Spotify library and/or individual playlists. For one self-proclaimed music hoarder, the amount of music accrued was linked to the capacity she had to download music from Spotify to her phone, which removed the need to delete songs she rarely listened to. Most of those who had accumulated music on Spotify had curated very few personal playlists. Instead, they tended to store an eclectic array of music within a single playlist and frequently skipped songs to find something they wanted to listen to. One interviewee, whose

identity is strongly linked to his music listening, has accumulated a significant amount of music on Spotify, personally curating over thirty playlists and tending to save entire albums when hearing a single song he likes. He attributed his accumulation to the ease of adding new music to a Spotify library:

Just allowing me to almost impulsively save things, like the bar to entry is so low, curating music that I think it really lets you just kind of be impulsive, just play with a certain mood, or sound, or genre, like it really just adds something. Like, it's two clicks and it is saved in this thing that you have just created.

(In-06-M)

Because Spotify easily facilitates the addition of music, the interviewee admitted that he does not recognise most of the content in his library, describing it as 'a bunch of junk' (*In-06-M*). He described this saved music as breadcrumbs to revisit and decide whether or not to retain, relaying intentions on multiple occasions to 'go in and clean it up' (*In-06-M*). Therefore, he has aspirations of transforming his accumulation of music into a collection but currently this process seems time consuming and daunting, especially as he does not want his music listening to become labour-intensive. Interviewees rarely 'decluttered' their music libraries, investing little time in revisiting the music they have saved. One interviewee even described herself as lazy as 'even if the playlist is pretty diverse, I really don't care [laughs] so it's just lump it all together and that's it. I just really didn't invest a lot of time in it' (*In-01-F*).

In contrast to the above, half of those interviewed described their music on Spotify as a collection. Many also adopted practices on Spotify traditionally affiliated with physical collections. For instance, one interviewee was able to recall the exact number of songs compiled in individual playlists and his Spotify music library. This interviewee has also linked his account to an app that sorts titles of his saved song alphabetically, creating a very ordered collection of music. As was previously suggested by Sinclair and Tinson (2017), interviewees used Spotify to order their music listening as well as craft and project aspects of their identity. Playlists in particular fostered a strong sense of ownership and self-investment. The systemisation of playlists also conveyed inherent procedures and structures, where participants curated different playlists for different purposes, themes and contexts. Some added pictures and text overviews to those they had created and stored them within folders, requiring a significant amount of time and effort.

Collecting is considered a dynamic process for identity work as objects are searched for, added, curated and displayed (Kibby, 2009). Many of these processes occur on Spotify, with users continually searching for music, editing and curating music collections as well as engaging in public music streaming. Unlike the completism strived for when collecting physical artefacts (Kibby, 2009), Spotify users are aware that their collections will largely be incomplete as a result of having a vast music catalogue to explore and the constant addition of new music. In some cases, certain playlists were static and seemingly deemed complete, akin to a completed record collection. These were often playlists associated with events, such as live music concerts, or those created with friends.

Record collecting holds significant cultural capital, projecting statements related to identity and connoisseurship via physical objects (Straw, 1997). However, the same could be witnessed in the sense of pride felt in putting together collections of music and being able to share them with others. Those who possessed physical or downloaded music collections did perceive them differently to their online music libraries. This mostly related to their impressive physical display, showcasing their identity to others, and notions of permanence. The argument that online music is a compilation of indiscriminate tracks is also bolstered by accounts of disorganised accumulations of songs on Spotify. The narratives presented above, however, do evidence users engagement in practices associated with music collection, organising their music in highly personal ways. Many used the term 'collection' to describe their Spotify library and the high levels of personal investment reveal feelings of psychological ownership and further evidence online music is a resource for identity work.

4.3.2 Collecting Identities: Curational Practices and Musical Content of Personal Playlists

Interviewees experienced their playlists as either collections that were possessed and displayed or ephemera that were created, continuously updated and then perhaps deleted. For those interviewed, the curation of personal playlists was not a constant activity but based on a specific and individual need. Some interviewees slowly construct playlists over a period of time and listen to them repeatedly before curating another. Others curate them as and when they were needed to accompany daily routines, moods, purposes and/or contexts. Interviewees curate and heterogeneously manage both static and dynamic playlists. Static playlists retained the original aggregation of music, potentially related to a sense of completism or were either forgotten or abandoned. Amongst the interviewees, static playlists were mostly related to a particular event,

such as a live music performance or a holiday. Although these playlists were typically perceived as archives, they were still listened to, particularly if interviewees were reminded of the event to which the music was associated. Dynamic playlists were more common amongst the interviewees as well as with those who completed the online survey, of which 89% added or deleted music to their personal playlists after they had been created. More often, the modification of content was in relation to changes in music preferences or the release of new music that could be stored in an appropriate, existing playlist.

Playlists afford users the ability to organise and categorise music in highly personal ways. They are:

one person's very personal vision of what this is going to sound like, and if you have a couple of people working on it together it is very rare that all the nuances are going to be synced up.

(In-06-M)

Curating cohesive playlists is the primary aim. All interviewees demonstrated significant self-investment in curating a variety of playlists, with two interviewees even taking the time to add pictures and overviews to those they had created. Interviewees also recalled the use of rules to curate playlists, for example allowing only a certain amount of music from particular artists.

Being able to name playlists in a unique manner facilitates personalisation and the display of identity. In a sample of 250,000 user-generated playlists names, the Clouds and Concerts Research Project discovered that 82% were unique (UiO Department of Musicology, 2016). Across their user group only 6% employed genre-based titles for their personal playlists (UiO Department of Musicology, 2016). These findings echo my own research where, despite interviewees having at least one playlist based on a particular music genre, very few actually labelled playlists in this way. This is interesting in light of recent research that argues whether the concept of genre is still relevant in the digital environment where contextual and mood-based playlists are particularly prominent (Eriksson et al, 2019).

Most interviewees named playlists in distinctive ways. When interviewed, one respondent discussed the curation of twenty-eight playlists as well as two folders to store personal collections of music, all of which were named in a highly unique manner. Due to data protection, specific

playlist titles cannot be mentioned but names were assigned based on liking the sounds of words, pun-based genre labels, likening music to certain food and version control. When asked about the reasons he labels his playlists in this way he stated:

It's because it appeals to my emotional basis, so my emotions, they don't talk genre names. They talk, "What do you feel like names".

(In-12-M)

Although he had playlists that he used to self-regulate moods, none of them were labelled in this way. He explained:

I wouldn't do that. It's ... if I called something Happy Music it would be like, "Well is there an expectation that I should be happy when listening to this?" I don't like to make expectations for myself.

(In-12-M)

Most interviewees had created a single playlist that contained all their favourite music, which was the collection most frequently listened to. This collection showcased either current or long-term music preferences, reflecting current or long-term identities. One interviewee's playlist of favourite music had been expressly curated at the request of an Instagram follower to provide a general sense of what he listens to. He therefore wanted to convey some sense of narrative and attentively compiled a playlist of between two and four songs from each artist he had saved in his Spotify library. Here, the interviewee was consciously performing his current identity via music to an online friend who he had never met. Impression management strategies were employed to ensure the interviewee showcased a true reflection of how he wanted to be perceived. For other interviewees, playlists of their favourite music enabled more self-to-self reflection, expressing who they are as well as who they were. Favourite tracks were also collated in artist-based playlists where interviewees typically hand-selected their favourite tracks across multiple albums.

To segregate favourite music from recent discoveries, which interviewees were unsure were tenable to their identities, several had curated personal playlists of newly discovered music. Having a separate playlist reminded them of more recent music discoveries and encouraged them to listen to it. Playlists of new music were typically dynamic, reflecting the changing music tastes of the curator. Of those who had these new music playlists, two also separated the music based on its origin, for instance having playlists of new music discovered from SoundHound and Shazam.

For them, it was important to segregate and categorise their music discoveries to track which systems were most reliable at providing them with music they enjoyed.

There were also examples of playlists labelled in a sarcastic or derogatory manner. Amongst the sample, playlists labelled with negative connotations tended to contain forms of popular music. Although these playlists consisted of music that interviewees enjoyed, it suggested that they felt conscious about how it would be perceived by others. Interviewees intentionally labelled playlists in this manner so if others did see the collection of music they felt secure having already acknowledged it as mainstream, an example of an impression management strategy. Examples include an interviewee, who typically enjoyed female-fronted bands that expressed a political message, having curated a personal playlist with a derogatory title that contains pop songs she also enjoys. Another interviewee had labelled his mainstream playlist to convey his negative perception of this music as being mainstream and unoriginal. He admitted that, although he did not feel insecure about having a list of mainstream music, he did feel insecure about listening to it.

Personal playlists are very diverse, being created for a range of purposes and contexts, and labelled in very personal ways. Therefore, they require a significant amount of self-investment. The activity and process of curating personal playlists resonates with Small's concept of musicking (Small, 1998). Playlist creation can be perceived as an act of individual musicking that produces functional everyday structures in the interviewees' lives. As such, curating playlists is a subjective yet socially meaningful activity for those interviewed. In this context, the relational aspects of musicking relate to the individual's engagement with the platform, algorithms, contextual surrounding, themselves as well as those who they may share their playlists with. Consequently, personal playlist curation fosters agency, meaning making, goal achievement and aesthetic experiences.

4.3.3 Non-Curation of Personal Playlists for Identity Work

Personally curated playlists were important to survey respondents and interviewees and were significant to their music streaming practices on Spotify. Although not statistically significant, 6% of survey respondents had never created their own music playlist on Spotify, provoking questions as to why they choose not to curate playlists. Repeated attempts were made to contact all those

who answered no to the question 'Do you create your own music playlists on Spotify?' but only one responded and agreed to partake in further research. During the interviews two additional respondents revealed that personal playlists were not important to their music consumption on Spotify. These atypical cases stand in stark contrast to the overwhelming majority and so will be discussed below.

Not creating personal playlists on Spotify related to specific uses of the platform. One interviewee had recently opened a Spotify account to explore and discover new music. He stated that if he were to curate his own playlists on the platform, he would be more likely to listen to them rather than discover new music. He does stream Spotify's own genre-based playlists to explore and discover music similar to existing tastes and, after discovering a new track, then downloads it to his iTunes account, adding it to playlists he has created there. When asked why he chooses to curate playlists on one platform but not another he responded by addressing feelings of ownership over digital music. As aforementioned, because he has to pay to download music on iTunes, he feels a greater sense of ownership and permanence than he experiences when streaming content on Spotify.

Despite having created playlists on the platform, two other interviewees revealed that curating playlists was not important to them. For one interviewee, who referred to himself as a 'music purist' (In-14-M), music streaming practices centred around sequential album listening as opposed to playlists. When initially opening his Spotify account this interviewee did not like or stream playlists at all. A few years later, he was intrigued by the challenge of curating what he deemed 'good playlists' (In-14-M), referring to the challenge of putting together different songs from different artists that are thematically or musically cohesive. He has now curated five personal playlists but still does not consider them important to his music listening practices on Spotify. Similarly, another interviewee rarely curates or streams playlists because he prefers listening to complete albums. To date, he has only curated one personal playlist on Spotify at the request of an Instagram follower. Following this experience, the interviewee felt that personally curated playlists required too much effort, especially in relation to the amount of music he listens to and enjoys. He also expressed difficulty in thinking of themes for playlists.

4.4 Conclusion

Much of the research conducted on identity within the field of musicology has tended to focus on offline listening contexts. Using data from three phases of collection, this findings chapter has sought to extend existing literature by exploring music consumption on Spotify. It is evident that research participants actively construct, manage and perform their online identities on Spotify in a similar manner to how identity work has traditionally been performed offline. Spotify enables users to perform identity work through platform affordances, in particular by providing unlimited access to its online music catalogue and through the ability to curate personal playlists.

Interviewees revealed multifaceted identities that could be constructed and performed via music in this online context, including former identities that were often revisited but no longer seemed tenable to their present selves. It seems that identity work is in fact more readily facilitated on Spotify than via previous modes of music consumption through the lack of financial and spatial commitments as well as providing instantaneous access to a plethora of music. Individuals are therefore able to explore and trial identities through music, leading to increased performances of transitional identities and preparations for potential future identities. All interviewees discussed affiliations between music and memories, where music of their past has aided them in negotiating who they have become. For some, Spotify has become a container for personal biography, charting their music listening over a prolonged period of time and allowing them to easily revisit music attached to particular times, people or life events.

An apparent example of identity work on Spotify was the symbolic consumption of personal music preferences. These preferences were frequently streamed and so tended to appear during the online observation period as well as in Spotify's end of year playlist curated for each user. Interviewees described their music preferences with varying levels of detail. Some stated enjoyment of broad music genres whereas others preferred music with particular lyrics and even sounds. In all the examples given, music was in some ways deemed to be self-representative and so employed as a device to convey identities to peers in social situations, including public streaming on Spotify. As well as self-representative music, interviewees were able to highlight types of music that were not tenable to their identities. Examples of non-self-representative music were described in less detail and were overall far less diverse, perhaps to convey that interviewees perceived themselves as being musically open-minded. MacDonald, Hargreaves and Miell's (2002) identities in music were also actively performed on Spotify with interviewees adopting roles of fan, collector, and DJ. Despite the rare opportunity for public performances of

these roles on Spotify, the platform served as a tool that facilitated backstage construction and management of these identities.

A platform feature most associated with identity work was the ability to curate and stream personalised playlists. All interviewees had curated at least one personal playlist online and these were employed for a range of purposes and contexts. Thus, they revealed a multitude of identities constructed by each user. These personalised collections require a significant amount of self-investment and, as a result, interviewees expressed strong feelings of ownership over the playlists they had curated. Personal playlists also facilitated performances of prestige and connoisseurship in some cases, which challenges current conceptions of online music being solely an accumulation of indiscriminate tracks. Playlists are one example of a platform feature that provides insights into identity work. This will be expanded upon in the following chapter which explores user engagement in specific Spotify features and how these shape the construction, management and performances of technologised identities.

Chapter 5 From a User's Perspective: Perceptions of the Platform and the Potential for Identity Work on Spotify

5.1 Introduction

In this chapter I address a notable gap in the present literature on music consumption, most of which explores traditional modes of offline music listening and rarely mentions online streaming platforms. Much of the current research that does explore music streaming focuses on the platform's technical underpinnings rather than platform features or those who use it. This chapter therefore seeks to extend current literature by focusing on the uses of Spotify for music consumption solely from a user's perspective. Over time, research participants have developed online music streaming practices to satisfy existing tastes and discover new music. These practices make use of both user-facilitated and platform-facilitated features on Spotify. A discussion of the curated and personalised content generated by Spotify features prominently, being a significant aspect of recommender systems and one that interviewees frequently commented on. It also allows for comparisons to be drawn between the personalised content generated by Spotify and by users, posing questions about how this content is perceived as well as the opportunities and advantages each afford. Findings also draw comparisons with the music streaming practices of participants in the Clouds and Concerts Research Project (UiO Department of Musicology, 2016) and Hagen's research based on the online streaming service WiMP (Hagen, 2015a, 2015b, 2016).

User perceptions and practices are analysed with frameworks and theories from symbolic interactionism, posthumanism and data studies to consider some of the ways interviewees realise their identity work on Spotify. Not all interviewees believed that the platform serves as a resource to perform their online identities; however, consideration of the changing perspectives on identity reveals how interviewees consciously and unconsciously construct, manage and perform their online identity each time they engage with the platform, culminating in the realisation of technologised identities. This chapter concludes by

outlining interviewees' perceptions of Spotify as a streaming service, which is an important factor for addressing research questions on users' active engagement on the platform and the perceptions of the ways in which the system constructs their profile (RQ1 and RQ3). Interviewees were keen to discuss positive and negative aspects, referring to the platform's features, interface and advertisements. This posed interesting questions about user loyalty, especially when considering individual user investment in terms of the time and energy expended in crafting and managing their account, and so this is also discussed below.

5.2 Music Streaming Practices on Spotify

Spotify had been integrated into the daily routines of research participants for a significant period of time. Of those surveyed, 33% had been using Spotify for between one and three years, with an additional 33% having their account for between three and five years. As a result of the longevity of use, interviewees had developed particular streaming habits and used platform features in certain ways. Engaging in these user-facilitated and platform-facilitated acts of online music consumption revealed insights into identity work performed on Spotify.

5.2.1 Beyond Casual Streaming: Music Streaming Routines on Spotify

Research participants were strongly invested in Spotify as evidenced by the amount of time each spent on the platform, the effort put into curating their music libraries and its ubiquitous integration with daily routines. Survey data revealed that 71% of survey respondents used Spotify to stream music more than once a day. The integration of Internet applications and personal media devices has made ubiquitous music streaming more feasible. Self-investment and omnipresent integration into everyday life demonstrates that the platform has the potential to be used for online identity work.

Most interviewees listened to music on Spotify via their mobile phones and headphones, allowing for portable, personal and ubiquitous consumption. Streaming on Spotify had mostly replaced other forms of music consumption, such as purchasing CDs or downloading.

As in Hagen's (2015b) previous research conducted on the streaming platform WiMP, over time interviewees have developed personalised practices for streaming music on Spotify, depending on their specific abilities, approaches and expectations. This was most evident in the ways that former listening practices had been adopted in this online context. Other distinct streaming patterns related to the types of music streamed at particular times of the day and days of the week as well as the use of specific platform features. Some of these practices were apparent in the online survey and online observation period whereas others emerged during interview discussion.

The most prominent streaming patterns were observed during the working week. Interviewees who were employed typically used Spotify to accompany their commute, allowing them to regulate moods pre and post work as part of DeNora's (1999) care of self. Those in working environments that permitted music listening continued to stream music throughout the day on Spotify. Despite music streaming taking place on personal computers and through headphones to keep listening private, interviewees were very conscious about the music they streamed in their work environment. Being an example of an impression management strategy (Goffman, 1959), interviewees intentionally avoided streaming music deemed incongruent with professional identities performed while at work. Examples of music that were purposely avoided included songs with explicit lyrics or an aggressive sound. Spotify therefore allowed interviewees to tailor listening according to context. One interviewee described listening to music at work as a 'a bubble, you know, and there's nothing else around me' (In-17-M), aiding him to focus on work-related tasks rather than the surrounding environment or passing of time. Since music streaming was not the primary activity when at work, listening did greatly vary in intensity when compared to streaming sessions that took place outside of work. When at work, interviewees typically skipped far less music, streaming continued for longer periods of time and music collections were less likely to be edited. Table 5 provides an example of streaming data obtained on a weekday during the online observation period. This data belongs to a research participant who streams music on Spotify during her working day, which typically begins at 9am and finishes at 4pm. As can be noted from the table, the participant streams music during her commute to and from work as well as throughout the working day. On this particular date the respondent streamed seventy-eight songs between the hours of 9am and 4pm, comprising of twenty-one different tracks. The data revealed that tracks were rarely skipped and there was little variation in song choices or artists streamed during the day.

Table 6 Online streaming observed during a working day.

<i>Music streaming during commute to work</i>	Time	Artist	Song
	07:15:00	Darlene Zschech	The Potter's Hand
	08:49:00	Ariana Grande	Thank U, Next
	08:52:00	Ariana Grande	Thank U, Next
	08:55:00	Ariana Grande	Thank U, Next
	08:59:00	Ariana Grande	Thank U, Next
	09:02:00	Ariana Grande	Thank U, Next
	09:06:00	Ariana Grande	Thank U, Next
	09:09:00	Hillsong Worship	Open Heaven (River Wild)
	09:17:00	Hillsong Worship	Transfiguration
<i>Two songs streamed in succession for the next 2 hours and 44 minutes</i>	09:22:00	Hillsong Worship	Open Heaven (River Wild)
	09:30:00	Hillsong Worship	Transfiguration
	09:35:00	Hillsong Worship	Open Heaven (River Wild)
	09:43:00	Hillsong Worship	Transfiguration
	09:48:00	Hillsong Worship	Open Heaven (River Wild)

09:56:00	Hillsong Worship	Transfiguration
10:01:00	Hillsong Worship	Open Heaven (River Wild)
10:09:00	Hillsong Worship	Transfiguration
10:14:00	Hillsong Worship	Open Heaven (River Wild)
10:22:00	Hillsong Worship	Transfiguration
10:27:00	Hillsong Worship	Open Heaven (River Wild)
10:35:00	Hillsong Worship	Transfiguration
10:41:00	Hillsong Worship	Open Heaven (River Wild)
10:48:00	Hillsong Worship	Transfiguration
10:54:00	Hillsong Worship	Open Heaven (River Wild)
11:01:00	Hillsong Worship	Transfiguration
11:07:00	Hillsong Worship	Open Heaven (River Wild)
11:14:00	Hillsong Worship	Transfiguration

*New streaming
session
Song from
previous
streaming
session listened
to
Start of
sequential
album listening*

11:27:00	Hillsong Worship	Transfiguration
11:33:00	Hillsong Worship	Open Heaven (River Wild)
11:40:00	Hillsong Worship	Transfiguration
11:46:00	Hillsong Worship	Open Heaven (River Wild)
11:53:00	Hillsong Worship	Transfiguration
13:05:00	Craig Armstrong	Hotel Sayre
13:05:00	Hillsong Worship	Open Heaven (River Wild)
13:08:00	Craig Armstrong	All Lit Up
13:10:00	Craig Armstrong	Two Minutes To Four And Reunited
13:14:00	Craig Armstrong	Cello Theme
13:16:00	Craig Armstrong	You Kept My Letters
13:17:00	Craig Armstrong	Dream Violin

*Album
streamed for
second time*

13:21:00	Craig Armstrong	Magic Tree And I Let Myself Go
13:26:00	Craig Armstrong	Let's Go To Town
13:31:00	Craig Armstrong	Dead Myrtle
13:35:00	Craig Armstrong	That Night He Told Me Everything
13:40:00	Craig Armstrong	Boats Against The Current And Daisy's Theme
13:45:00	Craig Armstrong	Buchanan Mansion And Daisy Suite
13:49:00	Craig Armstrong	Hotel Sayre
13:52:00	Craig Armstrong	All Lit Up
13:54:00	Craig Armstrong	Two Minutes To Four And Reunited
13:58:00	Craig Armstrong	Cello Theme
14:00:00	Craig Armstrong	You Kept My Letters
14:01:00	Craig Armstrong	Dream Violin
14:05:00	Craig Armstrong	Magic Tree And I Let Myself Go

*Album
streamed for
the third time*

14:10:00	Craig Armstrong	Let's Go To Town
14:14:00	Craig Armstrong	Dead Myrtle
14:19:00	Craig Armstrong	That Night He Told Me Everything
14:23:00	Craig Armstrong	Boats Against The Current And Daisy's Theme
14:29:00	Craig Armstrong	Buchanan Mansion And Daisy Suite
14:32:00	Craig Armstrong	Hotel Sayre
14:36:00	Craig Armstrong	All Lit Up
14:38:00	Craig Armstrong	Two Minutes To Four And Reunited
14:42:00	Craig Armstrong	Cello Theme
14:44:00	Craig Armstrong	You Kept My Letters
14:45:00	Craig Armstrong	Dream Violin
14:48:00	Craig Armstrong	Magic Tree And I Let Myself Go
14:54:00	Craig Armstrong	Let's Go To Town
14:58:00	Craig Armstrong	Dead Myrtle

*Album
streamed for
the fourth time
but not in full*

15:02:00	Craig Armstrong	That Night He Told Me Everything
15:07:00	Craig Armstrong	Boats Against The Current And Daisy's Theme
15:12:00	Craig Armstrong	Buchanan Mansion And Daisy Suite
15:16:00	Craig Armstrong	Hotel Sayre
15:20:00	Craig Armstrong	All Lit Up
15:22:00	Craig Armstrong	Two Minutes To Four And Reunited
15:26:00	Craig Armstrong	Cello Theme
15:28:00	Craig Armstrong	You Kept My Letters
15:29:00	Craig Armstrong	Dream Violin
15:32:00	Panic! At the Disco	The Greatest Show
15:35:00	Panic! At the Disco	The Greatest Show
15:38:00	Hillsong Worship	Who You Say I Am-Instrumental Version

*End of the
working day
Commute from
work*

15:44:00	Hillsong Worship	You Are Life- Instrumental Version
15:47:00	Hillsong Worship	The Passion- Instrumental Version
15:52:00	Hillsong Worship	God So Loved- Instrumental Version
15:57:00	Hillsong Worship	Be Still- Instrumental Version
16:07:00	BTS	IDOL
16:11:00	BTS	FAKE LOVE
16:15:00	BTS	Euphoria
16:19:00	BTS	I'm Fine
16:23:00	BTS	Blood Sweat & Tears
16:27:00	BTS	Trivia: Seesaw
16:31:00	BTS	DNA
16:34:00	Ariana Grande	raindrops (an angel cried)
16:35:00	Ariana Grande ft. Pharrell Williams	blazed
16:38:00	Ariana Grande ft. Nicki Minaj	the light is coming

*Consecutive
streaming of
two artists
during
commute*

*New streaming
session
beginning with
an artist
previously
streamed*

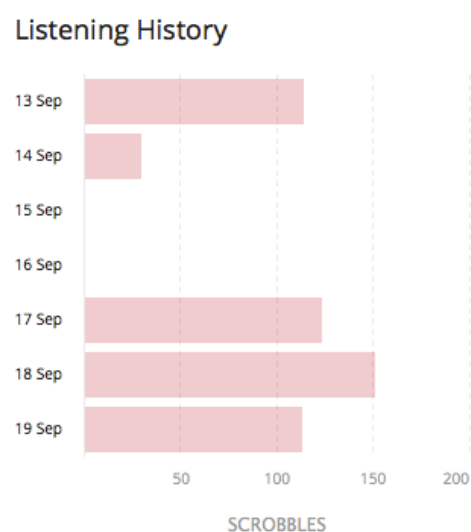
*New streaming
session*

16:40:00	Ariana Grande	R.E.M
16:44:00	Ariana Grande	God is a woman
16:59:00	Ariana Grande	sweetner
18:21:00	Ariana Grande	Thank U, Next
18:25:00	Drake	Crew Love
18:30:00	Frank Ocean	Sierra Leone
18:32:00	Majid Jordan ft Drake	My Love
18:37:00	Salt-N-Pepa	Push It
21:49:00	Ariana Grande	Thank U, Next
21:52:00	In The Heights' Original Broadway Company	Breathe
21:52:00	Kendrick Lamar	DUCKWORTH.
21:56:00	'In The Heights' Original Broadway Company	Blackout
21:59:00	Craig Armstrong	Hotel Sayre

The streaming data reveals that music was used to prepare the interviewee for the working day, as part of care of self, and on the commute home. Music listened to on Spotify when at work lacked variety and was streamed continuously for substantial periods of time (three hours in the morning and three hours in the afternoon). On this day, the respondent streamed two songs in succession, listening to them thirteen times each, and then consecutively streamed an album by Craig Armstrong in sequential order nearly four times. These streaming habits demonstrate that, although music is listened to as accompaniment, it is rarely engaged with when at work. This is confirmed by the greater variation in artists streamed in the evening. Songs streamed at work, however, still enable the performance of work-appropriate identities whether negotiated privately or publicly.

Despite typically demanding less attention, listening to music at work was still considered important to interviewees and some interviewees reported listening to music on Spotify for between ten and twelve hours a day during their working week. Music listening was less frequent at weekends when other activities or forms of music consumption took priority. This was confirmed by scrobble log data. Streaming data in Figure 8, for instance, depicts frequent listening during the week and then none at the weekend (15th and 16th September). The absence of music streaming at the weekend was addressed during the interview where the interviewee revealed that she had spent time socialising with friends and so music streaming had not been a priority. When at home, interviewees often used their personal computers for streaming and listened via external speakers, making their listening more public.

Figure 8 Scrobble log data from one-week online observation



(Source: Last.fm scrobble log, N=1)

Most interviewees recounted periods of what they referred to as intense music listening on Spotify, which related to the repeated listening of individual songs, albums or even artists for more than an hour at a time and over the course of multiple days. Repeated music listening was recorded during the online observations where interviewees consecutively listened to the same artist for 40% of the time throughout the observed week. The frequency of consecutive listening was, however, dependent on preferred streaming habits. Interviewees who enjoyed listening to playlists rarely streamed consecutive artists when compared to others who habitually listened to albums or 'This Is' artist-based playlists. Streaming data revealed that one interviewee listened to consecutive artists for 95% of his weekly streaming activity, mostly as a result of streaming complete albums. One notable example of intense music listening involved streaming Thank U, Next by Ariana Grande seventy-seven times of which sixty-three were consecutive:

And so, I play a lot of songs. But then sometimes I'm okay with listening to one song for a whole day. And so Thank U, Next I like really got into it, and I was like "Oh my God, this song's the greatest". I listened to it on the way to work, I listened to it at work, and I listened to it after work...I'll listen to things for ever (laughter)

(In-13-F)

The interviewee believed that consecutive listening is encouraged by the platform itself, citing that the heavy rotation and 'jump back into' features cause her to revisit music from previous streaming sessions. Only when she becomes bored of the song or discovers something new that she really enjoys will she then cease listening to music on heavy rotation. Repeated listening often related to the release of new music or favourite artists and/or songs. The music was therefore strongly reflective of current identities, which were often publicly performed when the music was shared with peer groups. All interviewees who exhibited intense listening habits eventually became bored of the songs over time. This prompted them to seek out other music, mostly via playlists, recommendations or new releases. There were relatively few cases where artists and songs were not streamed on multiple occasions during the observation. For some, non-consecutive artist streaming was reflective of a dislike of listening to the same artists for long periods of time and the enjoyment of variety.

Active engagement and music consumption patterns also related to particular features that streamed music recommended by Spotify. Many interviewees started their week by listening to the newly updated 'Discover Weekly' in a deliberate attempt to find new music. One interviewee used this platform feature to guide further music discovery throughout the week. Every Monday

and Tuesday he actively explores the artists included in his Discover Weekly, browses their music catalogues on Spotify and creates personal playlists of favourite songs. Seeking out new music also encouraged interviewees to listen to their Release Radar on Friday, which one interviewee credits with breaking him out of the familiar and exposing him to new music. Both these playlists, curated by Spotify, are intended to reflect the musical identity of each user, employing user data as input and then filtering techniques to predict music preferences. These two curated playlists served as important 'checkpoints' in weekly streaming and discovery of new music, with many interviewees listening to them from beginning to end before they were updated. Integrating Discover Weekly and Release Radar into weekly streaming patterns reveals Spotify's apparent success at predicting and subsequently reflecting personal music tastes and associated identities. These tailored music collections seem to affirm current identities while also offering users the means to explore other potential identities in a controlled manner. To avoid this curated new music, one interviewee instead dedicates each Friday to listening to music via the 'New Music' tab on Spotify. Using the tab rather than Discover Weekly and Release Radar allows access to less curated music choices, which she prefers, as well as complete albums. In using this feature, the interviewee was more likely to engage in music outside the filter bubble constructed by Spotify and increased her chances of serendipitous music discoveries.

Discover Weekly and Release Radar were platform features most often integrated within weekly streaming routines, suggesting eagerness of interviewees to discover new music. Another personalised feature generated by the platform and adopted as a means to stream music throughout the week were Daily Mixes.⁸ Interviewees were aware that these mixes provided them with curated content, comprising familiar and unfamiliar tracks tailored to their individual preferences:

I quite like that they seem to have the different genres down as far as what it is that I enjoy listening to and I also like that a lot of the songs on there are songs that I already enjoy so I know that whatever one I click on there will be something on there that I already know and probably enjoy and then anything else is just like a happy coincidence I guess but yeah, I do think they are quite useful.

⁸ Daily Mixes are Spotify-generated playlists based on music genres that the user regularly listens to. Currently, Spotify generate six Daily Mixes for each user. The playlists comprise of artists that the user has already listened to as well as new recommendations within that genre (Spotify, 2019a). The platform claims that Daily Mixes evolve alongside the user's music tastes, however, interviewees felt that these mixes did not adapt as quickly as they would like.

(In-02-F)

Daily mixes provided interviewees with the assurance that they included music already enjoyed and so many interviewees gravitated towards these collections when they were unsure of what to listen to. They were also perceived as a less demanding means of streaming music in comparison to hand-selecting individual songs to stream sequentially or choosing particular artists to listen to.

Interviewees' investment in Spotify was most apparent in the time and effort they devoted to curating personal collections of music. It was therefore surprising to discover that three interviewees choose not save music in their Spotify library, initially being an unconscious act that had become a habit over time. In these cases, Spotify libraries were not used as containers for musical biographies or identities. Interviewees who did not save music were more likely to actively search on Spotify, facilitated by the platform's search bar, allowing them to consume a variety of music and avoid overfamiliarity. These interviewees therefore constructed momentary, transitional identities that were prone to reconstruction as music tastes changed. Active searching was often a result of an awareness of the music they wanted to momentarily listen to or was inspired from something displayed on their Spotify home screen, for instance the artists included in Daily Mixes. Rather than saving music to their Spotify library, these three interviewees would immediately save tracks in existing playlists. This practice greatly depended on whether the music was in keeping with their existing collections. If not, one interviewee creates temporary playlists and music collections by queuing tracks she wants to listen to. All three interviewees admitted that not saving songs in a library made them more likely to forget preferences; however, on occasion, preferences would reappear in Discover Weekly and/or Daily Mixes. It was therefore Spotify's features that prompted acts of remembrance, encouraging a coherent image of the ongoing self to be constructed by the revisiting of former musical identities.

5.2.2 Expanding Music Horizons: Routines for Music Discovery on Spotify

Survey data initially revealed the significance of music discovery on Spotify with 65% of survey respondents strongly agreeing to the statement 'I like to discover new music'. Most respondents also strongly agreed that Spotify aids in this discovery. These sentiments were echoed during interviews, with all interviewees acknowledging that Spotify has enabled them to discover new music:

I would say that the best thing that Spotify has done for me is to allow me to broaden my tastes, you know, through the Discover Weekly playlist or the personalised playlist I'll discover new music. My favourite band in the world right now, that I'd never heard of, I discovered two years ago because of a random playlist on Spotify.

(In-14-M)

Spotify's reputation for aiding music discovery had led one interviewee to create an account solely for this purpose, choosing to use other online platforms to save music and curate personal playlists. Spotify tended to be integrated within a variety of other offline and online sources for music discovery, including recommendations from offline and online networks, films, television programmes, live performances and public settings. Since music discovery was a prominent impetus for engagement on Spotify, interviewees have developed specific practices to assist in successful discovery of new music.

Music discovery on Spotify is significant to identity work as users determine whether new music is self-representative and tenable to identities. Discovery was strongly associated with exposure and unlimited access to a vast amount of music at little or no cost, providing interviewees with an effective legal alternative to music pirating. One interviewee explained that accessing new music no longer relied on the ability to recall the name of an artist, song or album as now music is recommended to individuals or can be searched for without the need for extensive knowledge. Two interviewees, one of whom was employed as a teacher and the other as a part-time DJ, believed that music discovery on Spotify allowed them to keep abreast of new music trends among their colleagues and peers. Discovery on Spotify was not only mentioned in regard to new music but also to music from the past. Here, the platform offers interviewees the opportunity to revisit music that they were previously unable to access due to financial, spatial or temporal factors. Spotify also facilitates the discovery of music outside established personal tastes, allowing risk-free exploration of potential, future identities. The broadening of existing music tastes via Spotify's discovery features was mentioned by most interviewees and was experienced as a thrill or rush of excitement:

I pride myself on finding music like, I don't know, it gives me a rush of like 'Oh, this is great. I've found music that I love' or something. I really enjoy it

(In-04-M)

However, some interviewees felt more melancholy about the discovery of new music, questioning how much other music is out there and how to possibly discover it all.

Spotify features dedicated to music discovery received mixed responses during interviews. Interviewees disliked that these features often recommend new music by popular, mainstream artists rather than smaller, lesser-known musicians. They therefore felt that their identities were being restricted due to the absence of less mainstream choices. For others, Spotify's discovery features were a positive attribute, producing focused and more successful recommendations than those found on other online music streaming platforms. Discussions of discovery features during interviews included the use of Daily Mixes, Discover Weekly, Release Radar, Discover Tab and Related Artists. Within the online survey Discover Weekly and Related Artists appeared to be the most successful features for music discovery, with over 70% of respondents stating that these were their most used features. These two features were also significant for a number of interviewees, with some adopting and trusting them as their sole sources for music discovery on the platform. Interviewees also credited their Daily Mixes for the discovery of new music, with one interviewee having found his favourite band approximately two years ago on a particular mix. The use and positive feedback on these features demonstrate Spotify's success at inferring existing preferences and using them to generate new music recommendations that the user enjoys.

Interviewees recounted different practices for music discovery on Spotify. Some discussed their preference of active searching and browsing whereas others preferred consuming content already curated for them by the platform. Catalogue searching was the least used method for music discovery, with only 40% of survey respondents stating that they find music in this way. Although catalogue searching and browsing was least used amongst interviewees, it did allow them to discover and support smaller, lesser-known bands that were unlikely to be recommended by the platform. Interviewees also actively searched for new music using the Related Artists feature. This personalised feature presents users with artists that those with similar listening habits have previously streamed, most likely achieved via a method of collaborative filtering. Inferred from previous activity on the platform, the system assigns users with a form of group identity, which they are personally unable to adjust, to recommend music. Many interviewees reported spending a significant amount of time browsing related artists, listening to their most streamed tracks and subsequently discovering new music. One interviewee felt that actively searching through related artists enables him to carefully consider whether he does or does not like the music, which he believed helped to foster an emotional connection with the music. Actively engaging with new music in this way also enables him to negotiate whether the music was tenable to his online identities. This was not something he often experiences when songs are directly presented to him

via recommendations, partly because of an awareness that the music should supposedly align with his existing tastes.

Despite not being a significant feature for music discovery in the survey, interviewees praised Spotify's Radio feature for finding new music.⁹ The Radio can be used in two ways: to generate radio stations or stream music at the end of personal playlists. Most of those who used the feature had created radio stations based on particular artists, songs or genres of music. The Radio then streams similar styles of music, allowing interviewees to widen their music encounters stemming from something they already know. Interviewees also gave examples of the Radio feature following the end of personal playlists. Many interviewees viewed this feature positively, describing the transition between their own music and that recommended by the platform as seamless and aiding in the discovery of new music. On the day of his interview one participant's personal playlist had been followed by what he describes as:

an absolutely perfect apposite track, one that I'd never heard before, and it is amazing, it is absolutely amazing...They got it spot-on for me this morning

(In-11-M).

Interviewees expressed that music streamed at the end of their playlists by the Radio feature was often in keeping with personal preferences and reflected the contents of their playlists. As a result, many immediately clicked 'add' to include them within their personal collections.

Interviewees also had specific processes for discovering new music on Spotify that did not relate to the platform's features. Some interviewees listened to new music as background to obtain a general sense of whether they enjoyed the music. Alternatively, others felt unable to listen to new music in this way and so set aside time to solely focus on listening to it. If they enjoyed the music, interviewees usually spent time 'diving deeper' (In-04-M) by visiting the artist's page on Spotify and searching in the related artists' feature. From there, interviewees can choose to listen to each artist's most streamed songs, which some then followed and saved in their music library.

⁹ Spotify's Radio feature curates a collection of music from an inputted artist, album or song, referred to as 'seeds'. Prior to an update in 2019, Radios could be adjusted to preferences in real time via the thumbs up or thumbs down feature. The Radio feature now appears as a predetermined playlist of artists or songs similar to the input. The technology of the Radio feature is also used to stream music once a personal playlist has ended. Here, Spotify streams music that is perceived as being similar to the original collection of music (Spotify, 2019e).

This then becomes a cyclical process. Exploring new music in this way evidences the careful consideration interviewees place in determining whether new music is self-representative and aligned to identities.

5.2.3 Platform-Generated Playlists: Reflecting the User through Curated Content

As we saw in chapter 4, the curation and streaming of personal playlists on Spotify was a significant musical practice for research participants and important to identity work. To understand users' perceptions of the ways in which the system constructs their profile (RQ3), it was interesting to consider whether playlists generated by Spotify offered the same advantages and possibilities. Although Spotify-generated playlists were streamed less frequently than those curated by the interviewees, they still emerged as being important in streaming routines. Spotify playlists are visually represented on the home screen as square-shaped icons, reminiscent of album covers, with titles and brief descriptions that provide an affective value and context for use. Interviewees felt that Spotify's playlists were labelled intuitively, clearly and indicated the style of music included. This explicitness was particularly useful for those with free Spotify accounts, as the number of times songs can be skipped is limited. It also allowed playlists for particular purposes to be easily retrieved via Spotify's search facility. Interviewees often used Spotify's playlists in certain contexts, principally as background. They were also frequently streamed in the company of others, meaning that an individual's music taste did not take precedence over anybody else's. The most frequently streamed Spotify playlists were those curated specifically for the user, such as Discover Weekly, Release Radar and Daily Mixes, as well as mood-based playlists.

Many interviewees enjoyed streaming playlists that the platform had curated especially for them. Spotify's End of Year playlist, which collates a user's most streamed songs for that year into a single music collection, was particularly popular. Research from the field of data studies has investigated the prominent interest in personal analytics as part of the social phenomena of datafication. Today, individuals are increasingly using smartphones and tracking devices to self-monitor, measure and track psychological reactions, movements and activities. Lupton (2018, 2020, 2021) has conducted several studies on self-tracking practices and the uses of personal data. Participants in these studies meticulously recorded and reviewed their personal data as part of daily routines. It appears that humans have become increasingly datafied (Lupton, 2018) and many interviewees were interested in their streaming data, with some analysing their listening

habits outside of the platform using scrobble logs or spreadsheets. The End of Year playlist therefore offered users visible insight into yearly streaming habits, which were met with great interest and, on occasion, surprise:

I loved that, yeah, I loved that and I found it quite surprising and I really, really appreciated that that existed.

(In-07-F)

Many found that their most streamed artists were consistent over several years, described as long-term favourites and thus representative of long-term identities. Interviewees chose to retain End of Year playlists, although the frequency in which they revisited these in subsequent years did vary. Being representative of their datafied self, these playlists were perceived as a form of musical biography that, at particular times, were revisited as a reminder of former and long-term tastes. Interviewees also enjoyed other playlists that allowed them to revisit music, notably Throwback playlists. As a type of throwback feature, one interviewee regularly streamed her Time Capsule playlist.¹⁰ Despite not having a Spotify account at the time, she found that songs included in her Time Capsule were broadly reflective of the music she enjoyed between the ages of fourteen and seventeen.

Most interviewees commended the playlists that Spotify had personally generated for them, broadly aligning with their music preferences and safeguarding interviewees continued use of the platform. Only one interviewee recalled a particularly negative experience with a playlist that the platform had created specifically for him. At the end of the year, Spotify displayed a Tastebreaker playlist on his home screen, which he felt suggested that he had a poor taste in music. Music included in the playlist stood in direct contrast to his typical preferences and so he found the experience frustrating and unenjoyable, never returning to it. In producing Tastebreaker playlists, Spotify is attempting to diversify personalised recommendations by presenting users with genres of music and artists they have not previously streamed. Despite many interviewees discussing a willingness to be presented with more diverse recommendations, in this case the intention of the playlist and the music was not well received. It was far removed from existing preferences, thus was non-self-representative and reflective of the avoidance self (Banister and Hogg, 2001). No

¹⁰ Spotify's Time Capsule is a personalised playlist comprising of songs that should reflect music from a user's adolescence (Spotify, 2019g).

other interviewees mentioned the use of their Tastebreaker playlists, potentially indicating that there were limits to their willingness for expanding musical horizons.

As well as those especially curated for individual users, interviewees used a variety of other playlists created by Spotify. Considering the prominence of personal playlist curation, the number of interviewees who streamed mood-based playlists was far greater than expected. Through discussion it emerged that interviewees felt unable to personally create playlists attuned to their every possible mood, some of which were unpredictable and rarely experienced. Many therefore searched for appropriate playlists on Spotify, guided by an awareness of what the music needed to sound like to regulate moods. Although most of the music curated within these playlists was unfamiliar, interviewees agreed that the music included was in keeping with the mood-based title and purpose. Although mood-based playlists generated by Spotify were useful and successful for mood regulation, interviewees ultimately preferred streaming personally curated collections if they were appropriate. This corroborates previous research on music and moods that found mood regulation to be more attainable when the individual can personally control song choices (DeNora, 2000).

Some interviewees also reported streaming time-based playlists on Spotify, such as the 2000s playlist, which allowed them to revisit music preferences and memories associated with the music. These playlists were also used for public streaming sessions, mostly amongst groups of friends who shared a particular taste in music when growing up. They were therefore reflective of group as well as personal identities. Time-based playlists were used as ‘feel good’ music that increased energy levels. Spotify has also curated numerous playlists for exercise. Interviewees, however, rarely streamed these playlists as they were often deterred by the pretentious titles and intense styles of music included:

Like I don't need to see the Beast Mode playlist every time, I'm never going listen to it...And I haven't yet, so why is it still there?

(In-14-M)

Although genre was a significant means to describe their music preferences, relatively few interviewees recalled streaming Spotify's genre-based playlists. Avoidance of these playlists seemed related to the platform's inconsistent genre labelling. One interviewee stated, however, that he only streams Spotify playlists based on his preferred genres. Rather than relying on Spotify's curated discovery features, which tend to include both familiar and unfamiliar songs, he

listens to dance music playlists to find unknown music. Two other interviewees frequently stream genre-based playlists but for the purposes of research. The interviewee who is a DJ uses them to easily access genres of music that his clients enjoy but are, perhaps, unfamiliar to him. He then compiles the songs he finds into his own event-based playlists. Another interviewee uses genre-based playlists for his music research, filling in the gaps of his music listening in terms of music eras and styles. From these playlists, he then curates his own collections of music, which he subsequently listens to.

As Spotify develops and collects more user data, do listeners perceive any changes in the platform's ability to generate attractive or appropriate playlists? One respondent recalled how her perception of Spotify's playlists has changed over time. She previously disliked their playlists, feeling that they were too generic, but in recent years she has noted a significant improvement. She now feels that playlists curated by the platform are more complex in nature:

I think they've narrowed the focus of their playlists, but, naturally, it makes the music broader. So, it's like they've, kind of, stopped just focusing on one or two artists in their playlists that meet the category requirement. They, kind of, have gone, 'Actually, we need all the songs in this playlist to really reflect this specific emotion, and to reflect this specific emotion, that means we've got to have a lot of different artists.'

(In-10-F)

The interviewee therefore felt that the diversity of playlists offered has steadily become more specific over time while the content of each playlist has become more diverse in relation to the artists included. For her, this has resulted in a notable improvement. In addition, she believes that the context-based playlists are now more appropriate to certain situations and the mood-based playlists are no longer solely based on a binary opposition of being either 'happy' or 'sad'.

5.3 Technologized Identities on Spotify

Particular music consumption practices and the use of platform features enable identity work, revealing a plurality of identities within a single individual. Some of this identity work was recognised and discussed by the interviewees, particularly in relation to self-representative music preferences that project important statements about who they were at a given time, who they are now as well as who they want to be. It was important for this research to explore whether

Spotify users themselves consider the platform as a resource for their online identity work. This was initially addressed in the online survey. Nearly 63% of survey respondents either strongly agreed or agreed that the music saved within their Spotify library reflects who they are. Responses to the question asking whether Spotify allows the expression of who they are through music were more distributed. Although 42% indicated their agreement, 25% of the sample were undecided and responded with 'neither agree nor disagree'. Evidently there was a discrepancy between Spotify's ability to reflect identity and enabling users to express who they are. Although responses to these survey questions were revealing, they were limited to pre-defined statements of agreement. Interviews therefore provided the opportunity for individuals to elaborate on whether and how they perceived Spotify as a resource for identity work. Discussions on this topic were diverse, reflecting opposing opinions about the potential for identity work on Spotify. As in the literature, responses revealed that interviewees perceive the term 'identity' in different ways. This section explores the possibilities of identity work on Spotify as determined by the interviewees.

Without always realising that they do so, interviewees enact identity work every time they engage with Spotify. Despite realising music's potential for expressing identity, many interviewees questioned Spotify's ability to convey their identity, perceiving it solely as a tool for their online music consumption. Because music stored on a user's Spotify account is mostly inaccessible and private, some interviewees claimed that the platform did not serve as a means to express their identity. Here, interviewees associated expressions of identity with public performances, requiring the presence of others. Although in some ways this is true, identity work is not always a public performance. Identity can also be performed through self-to-self interactions, as noted by DeNora (2000) in her research on introspective identity work through music, and in the ongoing streams of internal action outlined by symbolic interactionism (Charon, 1989). Interviewees who stated that they only use Spotify to listen to and reflect short-term music preferences also conveyed particular assumptions about identity. They understood identity as being a long-term, consistent entity rather than something prone to constant change and flux (DeNora, 2000). Hence, they assumed that short-term music preferences were irrelevant to their identity work. Prior to the 1970s, identity was perceived as a stable and coherent entity, understood as a fixed core deeply rooted within each individual (Giddens and Sutton, 2013). In recent years identity has been revised as is now perceived as an ongoing construction achieved via malleable and multifaceted mini performances throughout the day (DeNora, 2000). When considered in this way even short-term or momentary mood-based preferences reflect the context-dependent and unstable nature of identities. Framing identity in this way also allows for the interviewees'

changing and developing music tastes on Spotify to be examples of types of identities. Aside from particular assumptions about identity, many within the younger demographic felt that their identity was better reflected via other online platforms, in particular Instagram where content is curated and made more public.

Most interviewees believed that the music saved in their Spotify library was broadly reflective of who they are and, particularly when played publicly, could express their identities to others. One interviewee described identity work as being an inadvertent but not deliberate result of his use of Spotify:

it has not given me a platform or a way to express any aspect of that listening. I mean, I suppose it could potentially expose my friends, whoever, to something that I am listening to. So, maybe inadvertently it does, but not deliberately, it is not a tool that I use in that way.

(In-06-M)

The ability to curate music on Spotify was an important factor in determining whether the platform allowed the expression of identities and interviewees perceived their personal playlists as the most apparent and deliberate forms of identity work on the platform. Playlists also revealed the potential for identities to be multifaceted, with many interviewees having curated a plethora of personal playlists comprising of music for different contexts, purposes and subsequently different identities. One interviewee was also very aware of how Spotify's personalised features, such as the Daily Mixes, accurately reflected his music tastes and so, by extension, enabled the performance of his identity:

That more curated stuff that's particular to my tastes because I feel that it matches what I've been listening to at the time and what I might be interested in. Because I know one of the Daily Mixes lately has been of just movie and video game soundtracks and it was like 'Oh, that's like super dope' because lately I've also been listening to movie soundtracks

(In-04-M)

Spotify's ability to reflect identity was also related to longevity of use. Like survey respondents, most of those interviewed had used the service for between one and five years, with three interviewees having used Spotify for in excess of five years. Those who had their Spotify accounts for a longer duration expressed stronger views about it serving as a container for their identity.

Since it charted their music preferences and listening over a more substantial amount of time, Spotify was considered to be more reflective of who they are. Long-term use or high levels of personal investment in the platform corresponded to fears of losing their music catalogues and track listings because of the transient nature of online music collections. Expressing these fears evidence significant attachment to the platform.

There were some interviewees who considered Spotify as a pivotal tool in their identity work. Considered from a posthumanist perspective, Spotify as a technology had influenced the means through which the identities of these interviewees were constructed (Braidotti, 2013). In these cases, interviewees consciously saved music that was strongly tied to their past, present or future identities. They also described their music and music listening on Spotify as integral to their daily lives and feared not having access to it. One interviewee in particular had a strong attachment to Spotify:

I think it's just because I see my account on there as an extension of who I am and I'm not totally aware if people can see who I follow, like music wise, but if they can I want to make sure it's artists that I'm interested in, that I listen to or artists that I'm venturing out into.

(In-04-M)

Describing his Spotify account as an extension of himself reveals its importance, indicating that it has over time become a prosthesis and container for his identity. Hagen (2016) described similar accounts in her own research, where participants referred to their WiMP accounts as tools and containers. Therefore, as in Hagen's research, Spotify accounts had the potential to become online extensions of the self, providing a means to project, maintain and develop identities. The identity of In-04-M was both mediated in and through Spotify. As outlined in posthumanist literature, this technologised identity obscures the boundaries between humans and technologies (Braidotti, 2013).

Braidotti (2013) recognises the technologisation of society via some main markers. Standing in direct opposition to humanism, Braidotti (2013) asserts that posthumanism allows for the breakdown in the binary distinction between men and women and poses alternative ways of conceptualising the human subject that are no longer based on sexualised, racialised and naturalised differences. This alternative conceptualisation can be perceived in the ways identities are crafted through an assemblage of human and non-human actors on Spotify. In

online contexts, such as Spotify, identity is not attached to a physical body and so cannot be easily categorised into sex, gender or race. Similar to the way identity is also defined by Latour (2005) in Actor Network Theory, interaction between human and non-human actors produce new human subjectivities. Posthumanism also addresses the fragmentation of human subjectivity through the use of technology (Braidotti, 2013). The absence of stability was apparent in the plurality of identities constructed, managed and performed on Spotify through personal playlists and context-dependent music preferences. Identities on Spotify therefore corroborate Braidotti's posthumanist assertion that the 'relational subject is constituted in and by multiplicity' (Braidotti, 2013, p.49). The autonomy of technology is also a consideration in posthumanism as human intervention is becoming increasingly peripheral. Braidotti (2013) addresses the technological feasibility of machines to by-pass human decision making at both operational and moral levels. Although Spotify does assume some kind of agency in selecting the content to present and conceal from users in personalised recommendations, the system is not fully autonomous. Spotify still relies on user input to generate recommendations and research participants were keen to assert their agency on the platform.

5.4 Perceptions of the Platform: Positive Experiences, User Loyalty and Suggested Improvements

Although questions of overall perceptions were not explicitly posed, online survey responses suggested that users have a mostly positive perception of Spotify. To explore how users perceive the ways in which the system constructs their profile (RQ3), perceptions of Spotify were explored in greater depth during interviews. Interviewees recalled positive experiences in using the platform for their music streaming. These experiences related to the use of both service-facilitated and user-facilitated features and actions. Having mostly positive experiences meant that Spotify had become an integral aspect of interviewees' everyday lives. Some interviewees did, however, express frustration over particular encounters with the platform and suggested improvements to ameliorate their experiences when streaming music via Spotify. Both positive perceptions and suggested improvements will be discussed throughout this section.

Many interviewees were initially drawn to Spotify because of its popularity, particularly when it was already used amongst their peers. Deciding whether Spotify was suitable for their music streaming often entailed the consideration and trial of alternatives, which were discussed during

the interview. Several interviewees had previously streamed music via Pandora. Although all praised it as a useful online radio platform, interviewees disliked the lack of freedom and control they had in personally selecting music to stream, which they experienced on Spotify. One interviewee succinctly conveyed the appeal of Spotify, reflecting the opinions of many interviewees:

So, it just allows me to keep everything orderly, and I can do what I want, when I want, where I want.

(In-13-F)

Some interviewees had trialled other music streaming platforms as they emerged in the online marketplace, including Deezer, Apple Music, Amazon Music and Tidal. So far, these platforms were not considered as viable alternatives, with interviewees citing sub-standard features and price as determining factors. Therefore, as of yet no interviewees have been tempted to move their streaming accounts to an alternative platform.

As well as its popularity, all interviewees asserted that Spotify offers a viable legal alternative to music pirating and is more cost-efficient than purchasing and/or downloading music. This opinion seems to relate to the age demographic of interviewees, with most starting to listen to music at a time when music pirating was prominent. Price consciousness was particularly apparent when interviewees wanted to listen to certain songs rather than an entire album. They were therefore reluctant to purchase a complete physical copy and instead chose to stream individual tracks on Spotify. Research conducted by Im and Jung (2016) confirms that price sensitive consumers are less likely to purchase physical CDs and more likely to stream or download individual tracks. Since Spotify users do not have to financially commit to be able to access a large amount of music, interviewees were more likely to indulge momentary music needs and curiosities, which one interviewee described as liberating:

I don't know, it's so liberating with music streaming because it used to be you went to the store and bought a CD and there was a much bigger risk there but there's virtually- there's no real physical risk because it's online and it's not really real.

(In-09-M)

The platform therefore allowed interviewees to experience more fluid identities. This search and explore mentality of finding new music and the anticipation for future music developments depicts interviewees as music pioneers outlined in Molteni and Ordanini's (2003) listener

typology. Most interviewees did pay for their Spotify accounts, with only four using the free version. Interviewees who paid for their accounts compared the price of their subscription to the volume of music they had access to, feeling that it offered good value for money. The platform also facilitated centralised access to a large music catalogue and provided opportunities to explore a plurality of music identities that could not have been previously realised. This included the discovery of niche and obscure styles of music, which interviewees were at times surprised to find within Spotify's collection.

Despite positive perceptions and experiences as well as the integration of Spotify into daily routines, only three interviewees stated that they were vehemently loyal to Spotify and would be unlikely to move to an alternative music streaming service in the near future. Others expressed less or no loyalty to the platform, which was surprising considering the investment of time and energy interviewees had spent curating their accounts. Thus, despite having curated their music preferences on the platform over a substantial period of time, these interviewees claimed that if a better streaming platform emerged, they would not hesitate in leaving Spotify. When asked for more detail in their responses, 'better' related to alternative or improved features for music streaming, increased social features and a reduced volume of advertisements. Lack of loyalty was also the result of Spotify's loss of streaming rights to certain music, encouraging some to consider alternative platforms. One interviewee found it particularly frustrating when Spotify lost the rights to music by Beyoncé and Jay-Z, which she now has to listen to elsewhere. She explained that if too many of her favourite artists were removed from Spotify then she would consider streaming her music via other platforms. She ultimately feared, however, that artists' music catalogues could eventually be dispersed across multiple platforms and that she would not be able to afford all the necessary subscriptions. Interviewees were keen for Spotify to continue to improve, adapt and develop to facilitate the best possible streaming experiences to retain its users.

Accessing music relied on navigating Spotify's interface, most of which is personalised for each user. The interface of the platform also determines the content users encounter and so has the potential to shape streaming choices. This potential was recognised by the interviewees. All interviewees commented on Spotify's interface, some viewing it positively and others feeling that it could be improved. Most found that it was simple to navigate and intuitive, facilitating straightforward searching as well as the ability to create, add and remove music in relatively few clicks. Despite being a digital platform, Spotify seeks to maintain certain aspects of physicality by displaying virtual album artwork, being reminiscent of physical music collections and encouraging

its selection. Having an aesthetically pleasing user interface was the most appealing aspect of the platform for three of the interviewees. One interviewee described the interface's appeal:

I like the black, I don't know it's clean, it's consistent...I love the album artwork when it's locked, it's nice...I don't know, it's – I don't know why but it just looks better to me.

(In-09-M)

These three interviewees compared Spotify's user interface with other online music streaming platforms, which they typically found less aesthetically pleasing and user-friendly. Interview questions that asked about the appeal of Spotify's home screen, which is immediately presented to each user when opening the desktop and mobile application, received a mixed response. Some found their personalised home screen useful for presenting collections of music that they might not otherwise find. When opening the application, interviewees were often presented with music listened to in their previous streaming session. Many were therefore more likely to continue streaming previous music rather than searching for something new. This had become a default action over time. Presenting previous streaming also encouraged interviewees to remain within their music comfort zones. Surprisingly, others were unable to recall specific details about their Spotify home screen, instinctively and immediately navigating to other areas for music streaming.

Spotify's platform-facilitated and user-facilitated features for music streaming greatly appealed to interviewees. Generally, interviewees enjoyed the ability to curate their own music collections in the library and personal playlists. They were also attracted to features that required minimal intervention for streaming music. For example, multiple interviewees enjoyed Spotify's Radio feature because it provided an efficient and effortless means to stream, and, at times, discover music that they liked for long periods of time. Interviewees were not required to interact with the feature to select music song-by-song, which prevented cognitive overload. Other features that were mentioned included the relatively new integration of videos with certain songs, which were enjoyed when music listening was the primary activity. Otherwise, they were considered unnecessary.

In addition to positive perceptions and experiences on the platform, interviewees shared their frustrations. Most frequently cited frustrations related to advertisements on Spotify. Alongside increased functionalities, most interviewees had specifically decided to transition from a free account to a premium subscription to reduce their encounters with advertisements, which disrupted their music listening. Disruption was most evidently experienced by the adverts that

begin playing after every three songs on Spotify's free version. Even when possessing a premium account, interviewees still felt bombarded by advertisements on the platform. For example, all interviews took place after Spotify's promotion of Drake's new album 'Scorpion'. As part of this promotion Drake's image was displayed at the top of every user's home screen and his songs were featured in an increased number of Spotify-generated playlists. Many interviewees discussed their annoyance of what they perceived as the heavy and unnecessary promotion of Drake's music on Spotify. Those who disliked Drake's music and had no desire to include it in their own collections expressed more fervent annoyance. Even those who had previously enjoyed his music were frustrated. Because 'his face was plastered on everything' (In-06-M), one interviewee's annoyance prompted the removal of Drake's music from his Spotify library. Grievances linked to the promotion of Drake's new album were not only expressed by those interviewed but also by Spotify users more broadly as evidenced by the media attention. An online BBC news article stated that some users had requested refunds, stating that they intentionally paid for ad-free accounts (Savage, 2018). Although interviews were conducted at a time when the promotion of Drake was controversial, interviewees also recalled other popular, well-established artists who had been featured on Spotify's home screen, such as Taylor Swift. They were disappointed that this prime advertising space was not used to promote smaller, lesser-known artists or made more personal to their tastes. Advertising these artists seemed to reinforce a perceived focus on mainstream, popular music, which many interviewees believed had emerged over time on Spotify. For one interviewee, the popularity-based bias in the music had overtaken a user-specific bias. For her, this bias was exacerbated by not being able to block songs from appearing on her account, meaning that she avoided some playlists entirely when finding a single song highly irritating. The perceived pull from advertisements towards popular, mainstream music was experienced as an attempt to ascribe users with a generalised group identity rather than catering to individuals. Here, Spotify's business model, founded on paid-for advertisements, somewhat contradicts its pursuit to serve personalised content.

Interviewees expressed disappointment in the number of features they previously enjoyed having now disappeared from Spotify, most of which were social features. Greater opportunities for making the platform more social, including the ability to directly share music with those in their online network, were hoped for in the future. Interviewees also called for the improvement of certain features, in particular wanting features to be more receptive to adaptation. One interviewee stated that his curated playlists, such as Discover Weekly and Daily Mixes, were not always up to date with his current music tastes and that it took a significant amount of time before they were altered to reflect changes in his music preferences. Other interviewees

expressed similar opinions, with some even excessively streaming certain types of music to force the adaption of curated features:

I stopped using Discovery playlist and like just put it away, tried to take it up like every six weeks or something hoping that I've given it enough sort of food for thought to give me something good. But I feel it's a bit sad that it will base itself on what I listen to and try to pull me towards something that's like mainstream.

(In-12-M)

Interviewees also wanted improvements in the options for streaming music. The shuffle function on Spotify frustrated many as they felt it tended to repeat the same songs rather than cycling through a complete collection. One interviewee felt so strongly about this that he had written to Spotify to complain, showing a high level of investment in the platform. Interviewees were also keen to have more access to their streaming data.

Although the platform has recently enabled users to download some of their streaming data, several interviewees wanted more frequent statistics. The desire for increasingly observable personal analytics had led some to open an account on Last.fm that, via the scrobble log feature, enables them to record and observe the music and artists they stream. The appeal of streaming data was evident in the number of interviewees who reported that they look forward to their End of Year Spotify playlist. It seems that a significant number of interviewees would therefore welcome the addition of more observable streaming data and to have greater insight into the construction and application of their datafied self. This seems reflective of the 'quantified self' movement described by Gopinath and Stanyek (2019, p. 97) in which users now track and log a plethora of data about themselves.

5.5 Conclusion

Research participants, both from the survey and in-depth interviews, were highly invested in Spotify, evidenced via their daily use of the platform and the development of personal practices for streaming music. Because of high levels of user investment, Spotify offers a viable resource for identity work, which can be crafted through the use of user-facilitated and platform-facilitated features. Access through various features to a large catalogue of music allowed research participants the freedom to stream a diverse range of music, some in keeping with existing tastes

and others allowing them risk-free exploration of potential new preferences. Music discovery was a strong impetus for using Spotify. Although interviewees considered themselves as being open-minded about exploring new music, most had developed unique, and at times strict, processes that allowed them to carefully consider whether individual songs were self-representative of current identities. Being able to stream a range of music also facilitated the performance of context-dependent identities. This was most apparent when interviewees discussed consciously selecting music to listen to when at work. They had to ensure that their streaming was reflective of professional identities and typically avoided aggressive, crude music and songs containing expletives.

Research participants frequently streamed Spotify-generated playlists that were personalised for them. Not only were these considered a less demanding means to stream music that individuals already enjoyed, but they also suggest that, in collecting and employing user data, Spotify successfully reflects individual user identity. Research participants conveyed an awareness that the system does have the ability to shape music consumption by serving personalised content, displaying some music choices and not others. The enjoyment and desire for even more personalised content revealed the interviewees' interest in their datafied self, calling for more personalised playlists akin to the End of Year collection that makes their data observable.

Personally curated playlists, however, still offered more advantages and possibilities overall and so were the preferred means to collect, store and stream music. Non-curated Spotify-generated content was also streamed; however, interviewees were aware that these music choices were not personalised to their tastes and so were less invested in their use, often employing them as background in social settings. Research participants also disliked the non-personalised advertisements that disrupted their home screen and music streaming, with some suggesting that it was an attempt to enforce more popular, mainstream music choices on them. This was the most frequently voiced negative perception of Spotify and suggests that their business model does not always align with providing personalised music recommendations. Despite both user-facilitated and platform-facilitated features emerging as means to perform identities, interviewees were unsure whether the platform enabled active identity work. This was partly due to differing assumptions about identity, founded on some fixed inner core that is publicly performed. All interviewees did agree that personal playlists, however, allowed them to perform multifaceted identities. Those who had used Spotify for over three years demonstrated a stronger awareness of the different types of identity work that could be performed on the platform, with

one interviewee describing his Spotify account as an extension of himself. Interpreting interviewees' narratives through the lenses of identity theories discussed in chapter 2 demonstrates that music tastes and streaming sessions are still examples of identity work facilitated by Spotify. The technologised identities crafted through Spotify obscure the boundaries between human and non-human actors, with each shaping constructions of identity.

Chapter 6 Following the Connections: Presence of and Engagement in Networks on Spotify

6.1 Introduction

Engagement on Spotify culminates in the formation of temporary and long-term online networks, both of which have the potential to influence individual music streaming practices as well as the construction and performance of online identities. Expanding on the user-centred approach outlined in chapters 4 and 5, which addressed the possibilities for personal and group identity work on Spotify, chapter 6 explores the different types of networks constructed when streaming music on Spotify. Most offline peer-to-peer networks have seemingly translated into this online context, depending on whether peers use Spotify to stream music. No longer being confined by geography or even the pre-requisite of an offline friendship, online peer networks also greatly expand the number of human actors who can be included.

This change in the criteria for inclusion in online peer-to-peer networks is discussed below using Granovetter's typology of network ties (Granovetter 1973), which although dated still enables analysis of the relationships between different human actors online. More recent research conducted on social streaming by Hagen and Lüders (2016) is also utilised to review engagement in online networks. This discussion therefore seeks to extend previous research on the potential of music to be used as a resource for the formation of friendship groups and group identity. Networks crafted on Spotify, however, do not only incorporate human actors. Much of the existing literature on music streaming platforms fails to take into account forms of reciprocal interaction between the user and the platform's technologies. Thus, by employing theoretical perspectives from posthumanism, Actor Network Theory and data studies, this chapter also addresses the formation and management of networks that amalgamate human and machine actors. These human-technology networks can shape user experience on Spotify as they seek to elicit user data to subsequently filter and then reflect perceived musical identities. I describe this phenomenon as 'active profile construction'. Tracing the relations between the human and non-human actors in these networks allows me to assess the role each perform in crafting user identities and whether both types of actors are valued equally in identity work, music consumption practices and online streaming contexts.

6.2 Understanding Online Networks Using Actor Network Theory

Actor Network Theory (ANT) asserts that in order to understand networks we must trace the associations between heterogeneous elements, which can include both human and non-human actors (Latour, 2005). Scholars of ANT describe these associations as relations and/or patterns that serve as shifting points of reference and are unstable (Latour, 2005), meaning that ties between actors in a network are fragile and prone to change. Having associations that are shifting and unstable also suggests that network ties are performative, only visible when they are performed and can be traced. This performativity is akin to Goffman's dramaturgical perspective on identity where individuals adopt temporary, and often incoherent, masks to perform a particular role, allowing them to be perceived in a certain manner by their peers (Goffman, 1959). Without this performance, the mask does not exist. Networks, as defined by ANT, also echo Butler's (1990) scholarship on gender performativity, in which she asserts that the body has no ontological status. Gender identity is therefore merely produced via the repeated stylisation and enactment of socially established meanings that have come to constitute gender over time (Butler, 1990). As such, there exists no pre-existing gender identity without performativity in the same manner that network ties do not exist without the ties being performed. Similar to ANT's definition of a network, data studies perceive networks as assemblages that consist of a multitude of heterogeneous actors working together as a single functional entity (Patton, 1994). These assemblages consist of systems, data points and human actors. Despite a desire for these structures to have permanence, for the purposes of control, surveillance and profit, they remain emergent and unstable (Haggerty and Ericson, 2000). Surveillant assemblages are common for monitoring market consumption and therefore exist in recommendation systems, which rely on machines to observe and record user behaviours.

Employing theoretical perspectives from ANT and data studies facilitates the tracing of associations in both temporary and long-term networks that are constructed during instances of user engagement on Spotify. Latour's (2005) conception of networks that integrate human and non-human actors can be witnessed in this context; however, these heterogeneous actors are not always visible, often being concealed behind the platform's interface. Visible human actors on Spotify include the user, their connected friends and music artists; however, behind the interface there are also human music curators, advertisers, music labels and music publishers. Most non-human actors integrated within networks on Spotify-notably the algorithms that transform collected user data into

personalised music recommendations-operate opaquely. It is not within the scope of this chapter to discuss all actors and networks present when streaming music on Spotify. Some of the most prominent ties encountered by the user on Spotify, which are also pivotal to the construction, management and performance of identities, have been selected for research and discussion: offline and online peers, the platform and the recommendations it generates. Despite the focus of this present chapter being on online networks, offline peers have been included here as these friendships are often translated into an online context and can shape the online identities of others. It also enables for a comparison to be drawn between the affordances and influences of offline and online peer networks in the context of music consumption.

6.3 Social Music Streaming: The Presence of Peer-to-Peer Networks on Spotify

6.3.1 The Shaping of Music Taste

Music is a significant bonding material, pivotal to the formation of friendship groups, particularly during adolescence (MacDonald, Hargreaves and Miell, 2002). Levels of agreement in the online survey about shared music tastes within friendship groups, specifically those between the younger demographic groups, were more diverse than had previously been suggested in the existing literature (Bennett, 2000). The continued significance of peer-to-peer networks in music consumption was more evident during interviews. All interviewees mentioned a variety of offline and online human actors that have either previously or currently influence their music consumption. These human actors were most notably individual friends or friendship groups. Some also discussed the role of family members in shaping their music tastes. These human networks are not only influential in the development and management of music tastes, and their associated identities, but also had a significant role in music discovery. This section therefore explores the peer-to-peer networks that interviewees cited as being relevant to both their online music consumption and identities.

All interviewees recognised that they use music to convey who they are to others. Comments made by interviewees mirror the theoretical perspectives discussed in chapter 2 that perceive music as a resource for identity work. As in symbolic interactionism, music served as a symbol that enabled interviewees to interpret the world, define situations and develop perspectives (Charon, 1989), all of which are important actions for identity work. Music also provided a tool for the production and

reception of assumptions. Through interaction and awareness of music preferences, interviewees were able to interpret others. Numerous researchers have explored the importance of music in establishing and maintaining friendships, particularly within adolescent friendship groups (North, Hargreaves and O'Neil, 2000). Focus on adolescents in existing research was directly related to the amount of time this demographic group spend consuming music both publicly and privately, being omnipresent in their daily lives (Bennett, 2000). Amongst adolescents, music serves as a social and cultural source of presentation and identification (MacDonald, Hargreaves and Miell, 2002). Using music as a tool for determining friendships was noted amongst adolescents in the interview sample. However, it also extended beyond the younger demographic and was discussed by several participants from other age groups:

when you meet somebody and you say, 'Oh what kind of music are you into?' and they say 'Oh a bit of everything' like I always think oh maybe we're not the sort of people that are going to get on because music is something that's so, so important to me and I think just generally when you meet someone and you find you have that in common generally it means you've got a lot of other things in common

(In-07-F, aged 26-35 years)

Music is frequently used as a device to determine in and out-group membership, most notably during adolescence (Shuker, 2013) and many interviewees recall using music to characterise and make assumptions about others. Music has also been used to assess the likelihood of friendships, with interviewees claiming that they have actively sought out those who share similar music preferences. Some interviewees believed that they too had been labelled as a result of their music preferences and its association with particular stereotypes:

...a lot of people – because of the stereotype they're, "You dress black, you listen to this" so it's already there...they're, "Oh you listen to Metallica or you listen to Slipknot"

(In-08-M)

Several interviewees recall forming or being integrated within friendship groups when younger based on particular musical tastes. At that time in their lives music associated with the group was frequently discussed, played and shared in social settings, which in turn reaffirmed group membership. Performing membership to those outside the group was achieved via the adoption of and identification with particular labels, such as 'goth' or 'emo', as well as the visible display of

identity through badges, tattoos and clothing. During adolescence, three interviewees recalled forcing themselves into liking certain types of music to fit in with a particular friendship group. Here, they adopted Goffman's (1959) impression management strategies, intentionally masking their true music preferences to be perceived favourably and maintain a positive social identity amongst their peers (MacDonald, Hargreaves and Miell, 2002). In a manner described by Mead, interviewees engaged in symbolic interaction, internally conversing with the self, analysing surrounding stimuli from friendship groups and then responding to them in an appropriate manner (Morris, 1967). In the following one interviewee talks about listening to EDM because of its popularity rather than its appeal to his own music preferences:

I guess once you attain a certain maturity, to me it happened when I felt like I don't really make any difference just by joining to people. Now I think I never really enjoyed EDM or dubstep and I was just listening to it because others used to, but now I don't really care whether people like the music I like

(In-15-M)

Adopting a mask to conceal true music preferences, an example of Mead's concept of the performed 'me' (Morris, 1967), was only performed for short durations as interviewees realised they could not feasibly maintain it. Interviewees felt they were ostracised or felt obliged to abandon the friendship group as a result of revealing their true music tastes. Interviewees then discovered others who shared similar tastes:

I tried to force myself to like that because everybody liked it, so I forced it and I did not enjoy it at all and I was sometimes an outcast...I found this little niche of people who appreciated the same music as me and it was really different

(In-08-M)

Although most interviewees were within younger demographic groups, participants recognised that as they have grown up music has become less significant to the construction and management of new friendships. One interviewee stated that it is now rare for him to find and connect with people who share his taste and passion for music, meaning shared music preferences were not significant to his current friendships. Some participants disclosed during interviews that they now had young families and this greatly affected their music consumption and group memberships. As well as being age-related, friendships strongly associated with music tastes tended to deteriorate when interviewees changed location, for instance when they moved to university. This was somewhat surprising as the ability to converse online regardless of geographical location would suggest

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friendships based on similar music preferences could be maintained; however, when probed further, it seemed that new geographical locations facilitated exposure to different types of music and so preferences changed. Interviewees therefore described current friendship groups as being less homogenous and cohesive in terms of music tastes, with some friends having similar tastes and others dissimilar. Heterogeneous music tastes were also addressed by several interviewees who had multiple friendship groups, each with particular, and somewhat disparate, music preferences. In social settings with long-term friends, however, interviewees typically reverted to former group preferences when playing music publicly. Reverting to former music tastes was made more feasible through Spotify's music catalogue that spans a plethora of genres and time periods, allowing users to revisit music tied to their group identities.

Despite the reduction in cohesive music tastes, friendship networks continued to be influential to online streaming, with friends often recommending music that was unlikely to be suggested by Spotify or discovered independently. Rather than replacing offline peer networks, online networks worked in tandem with those that had been established offline. Online networks were therefore characterised as collaborators and/or supplements to existing forms of music discovery. During the online observation, an interviewee had streamed a song by Pendulum on ten occasions, making it his most streamed track of the observation period. When asked about this track in his interview, the participant revealed that a friend had recently recommended the song and that this had encouraged repeated listening during the observation. Prior to his friend's recommendation, the interviewee was unaware of the song, as it had not been suggested by Spotify, but he had since been inspired to explore the band's back catalogue. One interviewee had extended his human network by asking strangers for music recommendations. To date, this had mostly occurred on public transport where he had been able to view or hear what others were listening to. If he found the music of interest, he would then ask for song suggestions or for their Spotify account name in order to follow them on the platform. In doing this the interviewee increased his exposure to new music beyond Spotify's filter bubble.

Four interviewees were eager to identify themselves as the music lover within their friendship group. For example, in the following an interviewee expresses her desire for others to have the same experiences with music as she does:

I want people to know not only that this is what I listen to but I want you to listen to this because I think it sounds good. Like I want everyone to experience what I'm experiencing. And yeah, like I said, people know that music's a big part of my life. I'm always listening, and sharing is part of that, and I feel that says a lot about me.

(In-19-F)

In cases where interviewees were known for being music enthusiasts within their friendship groups, they continued to perform the role of Spotify by frequently recommending and/or sharing music with friends. Performing the role of Spotify, however, is something human actors can only partly fulfil as their recommendations are limited to music they are aware of, which could be relatively narrow, and are not founded on mathematical-based models of similarity. Music enthusiasts were often unconcerned about how their personal music tastes were perceived by others and were open about what they were listening to at all times.

By tracing relations, peer-to-peer networks were also found to refer to ties between family members. Family networks were more significant to some interviewees than friendship groups. This is surprising given that most research on the transmission of music tastes has tended to focus on the influence of friendship groups. These groups are particularly influential during adolescence where, as has been addressed above, music is used to determine group memberships (Shuker, 2013). In comparison, relatively scant attention has been paid to the potential of intergenerational transmission of music taste, such as that between parents and children. Ter Bogt et al (2011) have examined the influence of parents in the music preferences of children. Their research discovered that it is possible for parents to pass on their affinity with broadly defined music styles through conscious or unconscious socialisation (Ter Bogt et al, 2011). For example, parents may consciously impart music tastes onto their children in a similar manner to the way they teach their children other attitudes and behaviours. Some interviewees discussed the notable influence of parents on music tastes when growing up, performing a role akin to music mentors. It seemed that interviewees then internalised these music tastes as their own, with two having since inherited the family's record collection. As an example of less conscious socialisation (Ter Bogt et al, 2011), interviewees' parents often controlled available resources and managed family environments. Parents typically played their preferred music in family social settings, becoming part of everyday routines, and seemingly imparted their tastes onto their children. Parents also performed the role of gatekeepers for attending live music performances. For example, one interviewee discussed attending live music

events with his father when growing up, which were significant to the formation and development of his music tastes as well as their familial relationship. Largely, however, family networks exhibited very little coherence in terms of music taste, spanning different generations and genres of music:

My family they're into all different music. So, my uncle plays bluegrass and it's something that I might not particularly like but it is still entertaining. I can see why he likes it.

(In-01-F)

Despite these notable differences, interviewees were still able to appreciate the music on some level because it was associated with family members. Translated into an online context, several interviewees reported sharing music online with siblings, regardless of differences in tastes. Interviewees generally seemed more willing to listen to music incongruent with their personal tastes because of the family connection. In contrast, they would have been less likely to listen to this music if it had been recommended solely by Spotify.

Offline networks were likely to be translated into an online environment, depending on the online platforms that friends used. Although many interviewees were disappointed with the limited social features currently on Spotify, which they felt had substantially diminished in recent years, they were still able to connect with their offline friends. Connecting with peers on Spotify was more likely if interviewees had automatically linked their account to Facebook friends who also use Spotify. One interviewee had also purposely created a Last.fm account to connect with a friend who he believed had 'good music taste' (In-15-M). In doing this he had discovered a plethora of new and more diverse music, which has been added to his Spotify library. It was less likely, however, for friendships initiated online to then become offline. For instance, many interviewees followed individuals on Spotify that they did not personally know. These were often people who they followed on other online platforms, such as YouTube, Instagram and/or Reddit, as well as musicians and other celebrities. The basis of these online friendships, however, still relied on perceived similarities in music tastes. In the following, one interviewee discusses the process of determining whether to follow unknown individuals on Spotify:

I have a couple of actual friends, like, people that I know. And then people that I have just started following because they have an interesting playlist or there was a suggestion through Reddit and I sort of found their profile through there and was like, "Oh, cool, okay." And there's a couple of celebrities...so I have used that as sort of an introduction or

a way to get more exposure to music and artists and stuff that I wouldn't necessarily find on my own.

(In-18-M)

This interviewee carefully considers the alignment of his musical identity with others before choosing whether to follow particular individuals on Spotify. He does this by reviewing their public Spotify profile and personally curated playlists. Despite the perceived similarities in music tastes, many credited these online-only friendships with broadening their exposure to music as they revealed music choices that Spotify might not recommend to them.

It was evident during interviews that both online and offline human-to-human interaction continues to be vital in the formation, development and management of music taste and the associated individual and collective identities. The importance of these interactions seems to be based on human trust networks. Online interactions, particularly on Spotify, related mostly to music sharing and human recommendations. Interviewees believed that human recommendations allowed for more diverse music discovery than that offered by Spotify. Many interviewees also expressed that human beings are able to understand others in a way that machines cannot replicate:

I think sometimes a human being's input that maybe knows how you're feeling or knows what you enjoy and what they enjoy as well can sometimes be more helpful than just whatever the algorithm is recommending.

(In-02-F)

Interviewees asserted that human beings were able to suggest music based on fine-grained factors that machines could not sufficiently understand, most notably music to express or be congruent to emotions. Interviewees therefore held human-to-human music sharing and recommendations in higher esteem than those generated by the platform.

6.3.2 Public Music Listening: Appropriating Music as a Social Object

Human networks were notably constructed and managed during public music listening. Public listening refers to instances where individuals have streamed music with others present. In these contexts, music is used as a social object. Acts of public listening were mostly discussed in reference

to the public streaming setting on Spotify. This setting allows individuals to view what their connected friends are streaming in real time. It also allows connected friends to view what the individual is streaming. Many interviewees initially opened a Spotify account to use this social feature. Other forms of public listening took place when following people online, when engaging in alternative platforms for music consumption and when streaming music in social settings. Interviewees streamed music publicly for a variety of reasons, including to intentionally showcase music tastes, express emotions and create atmosphere. The presence of online and offline human networks had interesting effects on their public music consumption practices.

For interviewees, online public listening took place on Spotify as well as on other Web-based platforms, most of which were not specifically dedicated to music streaming. As some interviewees were recruited from Reddit, it was unsurprising that many engaged in forms of public listening on the platform. This mostly related to sharing personally created playlists within their online communities, allowing interviewees to showcase their curatorial activities and have access to those generated by others. Discord also emerged as a popular platform for social listening amongst those who were interested in gaming. Discord was originally created as a platform to allow for text, voice, and video chat when gaming online (Discord, 2019). Over time it has developed additional social features and now allows users to create places for people to meet, find other gamers and socialise (Discord, 2019). Increased functionalities have also led to its integration with Spotify. This integration has made it possible for those with Spotify premium accounts to see what other Discord gamers are listening to as well as offering the opportunity to listen to music together (Spotify, 2019b). These social listening contexts on Discord enable interviewees to interact and make music choices in real time with others, who may or may not be known to the user. One interviewee believed that these features partially recreate some of Spotify's original social functionalities, which he felt had severely diminished over time. Discord therefore enables the creation of temporary online networks, amalgamating both human and machine actors that foster a sense of community. These instances of public streaming also facilitated the public performance of online identities through music and gaming and the discovery of more diverse music than that recommended by Spotify:

on Discord, I'm on a few servers with friends, so I like keeping it streaming and everything connected so they just can join in and they're, "I've discovered this new band, listen to it" and stuff like that, I really enjoyed having it open because everybody can just join in and show me something and vice versa.

(In-08-M)

Online public listening on Spotify is facilitated by the public streaming setting and by the ability to follow other users. Following others is a feature commonly found on online social networks, such as Facebook, Twitter, and Instagram. Therefore, it is a mechanism well recognised by Spotify users, providing them with notifications, updates and visible streaming activity. As on Twitter, following users on Spotify is currently asymmetrical, meaning users can follow an individual/account without the individual/account having to follow them back. This asymmetrical connection often results in users following more people than they have followers. Interviewees follow a variety of people on Spotify, including musicians, celebrities, online friends and offline friends. There was therefore a variety of network ties present during online streaming sessions. Tracing these associations revealed strong, weak and absent ties as have been researched by Granovetter (1973). Although Granovetter's research dates from well before the advent of online networks, the ties he describes continue to be relevant in this new online context where technology has enabled individuals to construct and navigate multiple networks that include a variety of ties. According to Granovetter (1973), network ties vary in strength as a result of the duration of the relationship, emotional intensity, intimacy between actors and reciprocation. Offline friendships between actors that have been translated into an online context typically represent strong ties, having been established over a long duration with higher levels of emotional intensity, intimacy and reciprocation. The ability to follow offline friends, however, does depend on whether they use Spotify as a music streaming platform. At the other end of the continuum, Granovetter characterises absent ties as negligible, with a lack of relationship and being relatively insignificant (Granovetter, 1973). More removed than weak ties, which act as bridges between networks of strong ties and therefore aid in the dissemination of information beyond group preferences, absent ties describe some solely online friendships or connections made with celebrity figures, which are asymmetrical. Choosing who to follow on Spotify is dictated by perceived similarities in music tastes. Some interviewees followed a significant number of people on Spotify whereas others were more select, keeping it within existing friend and/or family networks. One interviewee mentioned that he regularly manages the number of people he follows on Spotify, removing those who are relatively inactive or whose music tastes have progressively diverged from his own. All interviewees asserted that their network of Spotify users has allowed them to explore and discover music that broadly aligns with their own tastes but perhaps has not been previously recommended to them by the platform itself.

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Following people on Spotify not only provides notifications and updates but also the ability to see what other users are streaming in real time via the friend feed, displayed on the right-hand side of Spotify's desktop version. This feature enables the visible display of certain online actors within the music streaming network and, at the time this research was conducted, was the closest thing to music sharing on Spotify. Of those surveyed, 60% mainly set their Spotify accounts to public. All interviewees had used the public setting on their Spotify account to enable the friend feed feature and most perceived it positively. Many used the friend feed to be what they described as 'nosey' (In-02-F), providing them with access to information that they otherwise would not see. People who described themselves in this way tended to be constantly aware of who was online and what they were listening to during streaming sessions. By using this feature interviewees asserted that they had discovered a range of music. Over time, some had even come to depend on particular, visible users on their friend feed as reliable sources for music discovery as well as music rediscovery. One interviewee described how he perpetually queues songs a particular friend is listening to when he appears online. This friend was selected amongst all others because of the respect, similar values and music tastes the interviewee believed they shared. The friend feed was also used to stream music when interviewees were unsure of what to listen to, aiding with what one interviewee described as 'music boredom' (In-15-M).

Despite the interviewees' enjoyment of this feature, many wanted more social features or greater functionalities from the friend feed:

I think it's one of those things that the friend activity is cool. You can see what people are doing but I don't think it necessarily rallies you behind the music quite as much as something like MySpace used to do.

(In-05-F)

This interviewee believes that Spotify lacks a sense of community and so music streaming continues to be a very solitary activity. For her, Spotify did not support engagement with any of Granovetter's ties (1973), meaning she was inhibited in performing individual identities to others as well as constructing and performing group identities. Three interviewees also felt that the feature was insignificant to their music streaming and so it was rarely noticed. They perceived the feature as a very abstract means to connect with people and had no bearing on real life. Use of the friend feed was also greatly dependent on the device interviewees used to stream music on Spotify. Most used

the Spotify application on their mobile phone, which currently does not support the friend feed feature.

When engaged in public streaming, interviewees adopted different practices that were largely associated with what they were or were not willing to share with their online networks. These practices successfully map on to the typology created by Hagen and Lüders (2016) in their research on social streaming which distinguishes between the social awareness of users who are non-sharers, selective-sharers and all-sharers. Most interviewees stated that they adopt the 'share-all' mentality and used public settings as their default. These interviewees did not feel any need to restrict their public streaming practices and were keen to assert that they were unconcerned about the opinion of others. As one interviewee put it 'there's no value in misrepresenting myself' (In-06-M). These interviewees believed that their music choices were a true reflection of who they are when the platform is set to public. As in previous research on music streaming platforms, for some, sharing music related to cultural capital and opinion leadership within friendship groups (Hagen and Lüders, 2016). Hagen and Lüders described individuals who used music in this way as 'music missionaries' (Hagen and Lüders, p.6). Those I interviewed who wanted others to be able to access their highly regarded music choices are examples of music missionaries. One interviewee stated that she is 'always quite keen to show off whatever I'm listening to' (In-02-F) and another specifically tells others to follow his playlists on Spotify. In these cases, followers and feedback motivated sharing. Six interviewees expressed their enjoyment of receiving positive feedback from others about their online music streaming, which made them aware of their network, provided validation of their music choices and boosted their egos.

Other interviewees shared music more selectively, carefully considering the type of music and who to share it with. One interviewee, who enjoys hardcore punk, is conscious of the music he shows to his friends, intentionally selecting more melodic songs within the genre. Some of his friends, however, request more extreme examples of the genre, which the interviewee assumes they will not enjoy. Individuals who share selectively were also discovered in research conducted by Hagen and Lüders (2016). They found that this group tended to directly share music with friends who had similar music tastes (Hagen and Lüders, 2016). This was true of certain interviewees in the present research who shared music as a thoughtful gift rather than to impress others or express who they through music. Amongst interviewees, selective sharers were often reluctant and only shared music

with those who they had a strong, personal relationship with, such as family and/or offline friends. After sharing music, however, many selective sharers received positive feedback and so felt validated in their music tastes. They also expressed greater confidence about sharing music in the future.

6.3.3 Adopting Impression Management Strategies for Public Listening Contexts

Half of those interviewed admitted to manipulating their music choices in some way when others could view or hear what they were listening to, often making conscious choices about the appropriateness of music streamed. Within their music libraries interviewees possessed different collections of music deemed appropriate for their different networks, enabling them to stream different music in accordance with who could view or hear the music. Three interviewees, for instance, avoided streaming aggressive or explicit music while at work as they did not want to offend colleagues who were on the outskirts of friendship networks, being what Granovetter (1973) would describe as weak ties, and damage their professional identities. Manipulating public music choices also occurred around family, particularly amongst parents and children. One interviewee also expressed that her choice of music was highly context dependent. It became apparent during the interview that she constructed, managed and performed multifaceted identities, which her Christian identity did not always align with. She therefore made conscious decisions not to publicly stream controversial, popular music when in Church or around fellow churchgoers because of their reaction and, in turn, how they would then perceive her.

Identities performed during public streaming also suggest that the self is staged and shaped according to particular online contexts (Hagen and Lüders, 2016). This was more common amongst younger interviewees in the sample. Four interviewees reported instances where they have intentionally manipulated their online music choices as an impression management strategy (Goffman, 1959). These interviewees were highly conscious of how they were perceived by others, including the researcher during the online observation period, and so often avoided public streaming altogether:

I'm kind of shy about letting people know what I'm listening to, because it really feels like a part of myself and showing what I listen to to other people, it's like, you know revealing

who I am in a sense...I don't want people to think, like, 'Oh my gosh, he's weird listening to that kind of music, it's pretty bad,' you know.

(In-17-M)

Paradoxically, eight interviewees who previously expressed a lack of concern about how their network perceived them and their music choices revealed instances where they had intentionally adopted impression management strategies. For example, an interviewee who always has Spotify set to public because he has 'nothing to hide' (In-15-M) later disclosed that he had chosen not to share his current, favourite song. As the song has lyrics detailing a mass shooting in America, the interviewee was concerned about the negative judgement he could receive from friends if he revealed that he liked it. Feeling concerned that their networks would derive an inaccurate or negative impression of them because of the music they streamed, many interviewees adopted impression management strategies in public settings by only sharing 'appropriate taste statements' (Hagen and Lüders, 2016, p. 8). Appropriate music was determined by who was visible online at the time of streaming, meaning that choices were part of ongoing streams of action (Charon, 1989) and could rapidly change to gain acceptance. One interviewee felt pressured into listening to the same music as his peers when they appeared online and was extremely conscious of leaving 'weird music' (In-03-M) visible to online friends, expressing concerns about the opinions they would then have of him. Music self-labelled as 'guilty pleasures' or too personal was also intentionally kept private from online networks.

Concern over of the appropriateness of music and attempts to manage impressions caused several interviewees to curate specific collections of music for social contexts. The need to curate music for social occasions was described by one interviewee in the following:

And then I have another list I haven't told you about. This is basically my party list. But the interesting thing about a party is like you can never play tracks that are so you, you can never like show off yourself at a party because the most important thing at a party is to make the guests or those that you are showing music have a good time. That's the point of a party.

(In-12-M)

Playlists for social settings typically included what one interviewee termed as 'universal music' (In-04-M), seemingly describing a range of popular genres that were widely considered to be easy

listening. These playlists rarely included any personal music preferences, as interviewees constructed them aiming to please others rather than reflect themselves.

6.3.4 Curating Playlists via Collaboration

The ability to create collaborative playlists on Spotify also facilitated instances of social streaming, although this feature was only available for Spotify Premium users in 2019. Collaborative playlists enable individuals to add, delete and reorder tracks in a playlist shared amongst a human network. Considering the number of research participants who had created personal playlists and the significant desire for social listening, it was surprising that relatively few of the interviewees had curated a collaborative playlist on the platform. This viewpoint is similarly expressed by Hagen (2015a), who found that playlist creation was more akin to personal activity, organisation and priorities rather than social ones. For those participants who had, these shared playlists were usually co-created with strong ties in their network (Granovetter, 1973), most notably friendships established offline and family members. The success of collaborative playlists relied on particular network dynamics, some of which will be discussed below.

Eight interviewees discussed the creation of collaborative playlists on Spotify, with one other discussing the intention of co-creating a playlist with her partner in the future. Most of these collaborative playlists were created with immediate friends and/or family members and relied on perceived commonalities in music tastes of the different actors involved. Interviewees tended to possess only one collaborative playlist in their music collection that was typically themed around a particular genre of music enjoyed by all in the network. In contrast, one interviewee had curated six collaborative playlists on Spotify, each with a different friend and containing a different style of music. This interviewee felt that neither his friends nor their tastes in music were sufficiently cohesive to create a singular collaborative collection. These playlists were an evident display of multiple self and group identities constructed, managed, and performed by one individual through Spotify. Of the collaborative playlists discussed by interviewees, many were no longer active, simply having deteriorated over time or considered complete.

Collaborative playlists were mostly created as a means to share music with specific individuals. It was, in some ways, used to replicate the previous means of directly sharing music on Spotify. To be

successful, collaborative playlists relied on an equal contribution from all actors, which most interviewees asserted had occurred. One interviewee had previously co-created a playlist for an event that involved herself, her partner and two sisters, which are examples of Granovetter's (1973) strong ties. Each participant added a roughly equal proportion of music, based on both their own personal and group music preferences. The collaborative playlist was deemed a success and has become the music collection of choice for other events. Interviewees who participated in collaborative playlists presented little consciousness about the music they added, suggesting perhaps that relationships exclusively between strong network ties eclipsed consciousness often felt in forms of public streaming that involve other types of social ties.

Although tracks added by friends and/or family were usually in keeping with the interviewees' existing music preferences, collaborative playlists also emerged as sources for music discovery. One interviewee stated that the collaborative playlist he shares with a friend was his most reliable source of new music, leading him to rapidly listen to new tracks that have been added. The addition of music to collaborative playlists was typically welcomed. Interviewees' responses varied, however, when asked about the addition of music that they did not like. Disliked music was typically considered as incongruent with personal identity, pertaining to Banister and Hogg's (2001) description of the avoidance self. As an example of the negative self, the avoidance self is linked to feelings of aversion. Although the avoidance self is viewed negatively in relation to the individual it can be viewed positively when applied to others (Banister and Hogg, 2001). Thus, despite not always appealing to interviewees' personal preferences, music added to collaborative playlists was still viewed in a positive manner because it related to their friends. Many interviewees also described feeling awkward about removing music others had added to the collaborative playlist and so often retained disliked music, skipping it if necessary when streaming.

Collaborative playlists created through ties that Granovetter (1973) would describe as weak were rare. Some interviewees had co-constructed playlists on Spotify with other members of the Reddit community. Such collaborative playlists were typically based on themes of sub-reddits that participants were members of, subsequently informing the style of music added. Playlists co-created with members of Reddit, however, resulted in very large collections of music that became challenging to manage and listen to in their entirety. To allow for equal contribution, one interviewee reported that his community had established a strict two-song limit per Redditor for

their collaborative playlist. One member, however, had added a large number of tracks that were perceived as not in keeping with the theme of the playlist. In the interviewee's words, the individual had 'destroyed it' (In-12-M), prompting the group to create a back-up copy of the playlist for others to add to instead. Although not directly facilitated by Spotify's collaborative playlists feature, one interviewee has curated a collaborative playlist with her students. The interviewee regularly streams playlists on Spotify when teaching to foster a particular atmosphere and encourage productivity amongst her students. Over time, students have started to suggest songs to add to these personally curated playlists, making them more collaborative in nature. In this particular case, the interviewee has become the gatekeeper of these collections of music by selecting which of the suggested songs to add. These decisions tend to be based on the appropriateness of the music as well as whether they are in keeping with the already-established style of the playlist.

Most interviewees did not have collaborative playlists with others on Spotify. Some had tried the feature but found that, for them, it had not worked in the manner they intended. In these cases, it seemed that actors had added differing amounts of music or had different ideas about what the playlist should or should not include. Collaborative playlists were also challenging to maintain, requiring sustained effort from all actors involved to be successful. Many interviewees also considered playlist curation to be a very personal practice, relating to a personal vision, and so preferred to create them individually and privately.

6.3.5 Avoiding the Network: Private Music Listening on Spotify

Individuals who follow others on Spotify can view streamed music choices in real time via the 'Friend Activity' panel. If users do not want their network, comprised of both human and machine actors, to view the music that they are listening to then it is possible to temporarily create a 'Private Session'. Approximately 40% of survey participants stated that they regularly listen to music on Spotify using the private streaming settings. Despite interviewees' enjoyment of social listening, several admitted to instances where they have utilised this private streaming feature. These responses often contradicted previous remarks about their general lack of consciousness and concern about public streaming as well as their share-all mentalities. Interviewees typically used private sessions to either keep music private from their connected Spotify friends or the platform itself.

Most interviewees had used the private setting on Spotify to conceal particular music choices from their Spotify friends. Personal accounts therefore became temporarily private for the duration of individual songs or entire playlists. Private listening served as an online impression management strategy whereby interviewees concealed music they believed would be perceived unfavourably by peers. This mostly consisted of music labelled as 'obscure' (In-09-M), songs with inappropriate titles and/or mainstream popular music, all of which seemed to lie outside stated music preferences. Mainstream popular music was the genre most frequently streamed via the private setting, described by interviewees as commercial, lacking originality and unredeemable. One interviewee expressed that it was fear of liking something others do not that encourages private streaming, wanting to be part of the group and share music experiences with friends. Although negative opinions were rarely explicitly expressed by peers, the consciousness interviewees felt about listening to these kinds of music were rooted in their own preconceived notions about songs or artists. Interviewees were generally embarrassed when they admitted that they occasionally conceal particular music choices online. This was particularly the case with those who had previously expressed that they were share-all music listeners, sharing everything with everyone and having Spotify accounts set to public as their default.

Most interviewees consciously streamed particular music choices privately to manage how they were perceived by peers; however, one interviewee intentionally uses the private streaming setting to conceal music choices that reveal his current emotional state. This interviewee has curated several personal playlists on Spotify that align with particular moods. The playlist he tends to stream when his mood is very low is automatically set to play via Spotify's private mode. Rather than feelings of embarrassment discussed above, this interviewee perceived the music contained within his private mood-based playlists as special and highly personal. In addition, he was reluctant to share his lowest emotional states with his friends:

I'm not embarrassed at all by the music I listen to but I don't know, it's almost like – it's a playlist for when things are really bad and it's almost like I don't want to – if a follower or a friend saw that I was listening to that playlist, and they went on the playlist and they saw a description and stuff and the songs, they would be able to pretty much gather my emotional state and I guess I just wouldn't want to show that state, the lowest state.

(In-09-M)

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He also revealed that he listens to particular mood-based playlists curated by Spotify via the private setting, again mostly those aligned with his negative moods. It seems therefore that he would rather work through these negative emotions privately rather than publicly, using music as a resource for self-to-self reflection rather than as a public performance.

Aside from using Spotify's private streaming setting to conceal certain music from online friends, it was also used to hide streaming sessions from the platform. Five interviewees, who all expressed awareness about the platform's recommendation system, have streamed music privately to maintain their Spotify profile and not affect future recommendations. Although Spotify state on their community pages that anything an individual listens to via a Private Session 'may not influence personal music recommendations' (Spotify, 2019d), the use of the word 'may' creates some ambiguity. Fear of affecting profiles and subsequent recommendations was particularly pertinent when interviewees were trialling music outside current preferences. Interviewees were concerned that it would take a substantial amount of time to re-train the algorithm into generating recommendations in keeping with their actual music tastes after streaming something new that they then disliked. Interviewees were also conscious when others temporarily used their account, such as friends or family in social settings. As a result, many temporarily changed their account to private so any music streamed during these sessions would not be collected by the platform and used to generate future recommendations.

Some interviewees were unaware of the private streaming feature on Spotify but did recall times when they had intentionally listened to music privately in offline contexts. Here, many considered music as a personal object and so were reluctant to listen with others. Solitary listening was therefore part of self-to-self identity work (DeNora, 1999). This was particularly true if the music related to particular moods or they considered themselves as shy. Music outside the predominant tastes of their friendship group was also listened to when the network was not physically or virtually present. Furthermore, because interviewees mostly listened to Spotify via the mobile application, many were not able to view the friend feed and so their streaming inadvertently felt private even if it was still visible to those using the desktop version. Others had friends who did not use Spotify and so were unable to integrate their offline human network into their streaming activity.

6.4 Connections between Human and Machine Actors: Forms of User Input on Spotify

Collected user data is stored and maintained within electronic representations of the individual, known as user-profiles (Jawaheer, Szomszor and Kostkova, 2010) or, within the field of data studies, data doubles (Haggerty and Ericson, 2000). Individual user profiles are intended to represent one coherent identity, which is then reflected back to users in the form of recommendations. Through frequent engagement and longevity of use, the platform creates and refines a theory of who users are as well as the music they see and do not see on their Spotify home screen. This amalgamation of human and machine actors on Spotify culminates in the creation of new posthuman identities foreseen in Donna Haraway's *Cyborg Manifesto* (Haraway, 1991). As outlined in posthumanist theory, human identity has become technologically reconstructed by being imbricated in the online platform and its underlying technologies (Herbrechter 2013). It remains unclear, however, whether these technologised identities exist in a truly post-gender cyborg world depicted by Haraway (1991). Eriksson and Johansson (2017) investigated whether Spotify may be complicit in reproducing hegemonic gender relations online by recommending particular types of music to male and female users. By using bots, Eriksson and Johansson (2017) explored the similarities and differences in music recommendations served to Spotify users registered as male or female. Over four days of streaming, 288 bots were recommended 492 different artists. Their research found that some specific artists were recommended to slightly more male than female registered users and vice versa. Gender skewed recommendations were most common in the rock genre and some were also found in R&B, hip hop and dance/electronic. Overall analysis indicated that Spotify's algorithms had not treated male and female registered bots differently, with 78-93% served nearly identical recommendations in each genre (Eriksson and Johansson, 2017). As of April 2022, there is still a requirement to register gender (male, female or non-binary) when signing up to Spotify, suggesting that either profiling based on gender is central to the system and its recommendation algorithm or the platform's monetisation strategy. As Bivens (2017) states, gender is becoming an increasingly valuable data point that is embraced by advertising and marketing institutions.

The single user identity constructed, managed and reflected by the platform is problematic in light of current research in the field of identity work, which perceives identity as multifaceted and prone to change (DeNora 1999). Crafting and reflecting individual user identities is also difficult if an individual shares their Spotify account with others. In such cases the platform will amalgamate these

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multiple tastes into one user profile, which is then reflected back to all those who share the account via recommendations. Processes relating to data collection and music recommendations on Spotify are useful when considering both user-to-system and system-to-user interactions. Both types of interaction are discussed in this chapter. The present section discusses input provided by the user directly to the system, including perceptions of data collection and adopted approaches for active profile construction.

Human-data assemblages and their relationships to identities are yet to be thoroughly theorised. Therefore, interviewees were asked about their view of data collection on Spotify. Consciousness and concern of data collection on Spotify seemed to vary amongst interviewees. As described by Gopinath and Stanyek, 'awareness of data tracking ranges from ignorance to tacit acceptance to unqualified embrace' (Gopinath and Stanyek, 2019, p. 97). All but two interviewees were aware that data collection takes place whenever music is streamed on Spotify; however, most were unsure about the types of data that were being collected, assuming it included their listening activity as well as music connected friends listened to on Spotify. Although they were initially aware that data collection was taking place, users' awareness tended to fade into the background as searching and streaming became the main focus.

Most interviewees revealed that they were unconcerned about the platform's data collection, revealing that the practice had become normalised and expected when they engaged in any online platforms:

sadly it's something I have accepted as a reality and a fact of the world I live in...it was an edge that we jumped off and there's no way to get back up'

(In-04-M)

Kennedy (2018) views online data surveillance as ubiquitous, opaque and speculative, with social media platforms and other types of online data mining making it feasible to track aspects of everyday life once deemed intimate and private. Interviewees did view the collection of data on Spotify differently to that performed by other online platforms, most notably Facebook. Spotify's data collection was described as 'transparent' and 'not creepy' (In-15-M) by one interviewee, whereas it was perceived as harmful and deceptive on Facebook. Interviewees had greater levels of trust in Spotify's data collection than in other platforms. Additionally, most interviewees did not feel

that their streaming habits were particularly personal, when compared to other types of data, and so were happy for the platform to collate it if it meant that they in turn were offered improved features and more accurate recommendations. Interviewees therefore perceived the collection of data as currency for access to music, services and improved recommendations. One interviewee was notably more conscious than others and actively reviews his account settings and unticks options relating to data collection, stating that he does not want the platform 'to collect research on me' (In-08-M). He was resistant to and mistrusted the platform's data collection practices but still continued to use the service.

From a technological deterministic perspective, data collection and active profile construction on Spotify, as discussed above, would regard the platform's processes as opaque and invisible. This viewpoint assumes that technology strictly governs the development of social structure, cultural values and identity (Pinch and Bijker, 1984). It also has a tendency to represent individuals as passive and vulnerable targets of datafication (Lupton, 2021). However, users' online identities determine the data that recommender systems can collect, meaning that their identity shapes how the technology constructs and employs the user profile. The process is therefore better explained by societal co-construction theory, where both the user and the technology have agency and affect each other in reciprocal ways (Sismondo, 2004). Co-construction allows for a reflexive identity that the user has some control of shaping. Reflexive identity work was evident in the ways many interviewees consciously or sub-consciously 'trained the algorithm' as part of active profile construction.

All interviewees expressed some awareness that personalised music recommendations on Spotify were generated by single or multiple algorithms. Some interviewees exhibited more extensive knowledge about how the platform's algorithms potentially operated, having for instance studied computer science at university or conducted their own high-level research. Training the algorithm refers to consciously or sub-consciously providing the platform with more and more data about personal music preferences to tailor recommendations. As a form of data activism (Kennedy, 2018), interviewees appropriated the technology of recommendations systems and used them for their benefit. Many of those interviewed worked to create, repair and reinvent their streaming data. In addition to intentionally streaming more music to weight collected data, interviewees often avoided streaming platform recommendations that did not align with their existing tastes, which would

subsequently distort their data double. Interviewees also used private settings to conceal music choices from Spotify that they did not want integrated into their profile. Training the algorithm had become more readily facilitated by allowing users to explicitly indicate their enjoyment of tracks in certain platform features by giving a thumbs up or thumbs down. This feature was used to confirm perceived music tastes or correct inaccurate judgements made by the platform. In training the algorithm, data and humans learn from each other and co-evolve (Lupton, 2018). In doing this, interviewees asserted that the platform had come to know them and their music tastes better over time. As a result, the platform produced what the interviewees described as 'better' or 'more accurate' recommendations in comparison to those generated when they first began using the system. Other interviewees were aware that, for them, training the algorithm was an ongoing process, requiring more active input or increased longevity of use to enable the platform to really hone in on their music tastes.

Although music recommendations produced by Spotify were mostly perceived positively after having trained the algorithm, two interviewees did express somewhat negative views about their supposed personalised content. One interviewee believed that the algorithm was strongly biased towards mainstream music, generating recommendations that did not align to personal preferences. The interviewee had therefore invested a significant amount of time in training the algorithm:

Their algorithm likes pulling you towards some kind of as it's a model basically. And that, I mean ... I am annoyed about, so I'm trying to feed this algorithm as much variation as possible. Not spending time within the recommendations that they give me because I feel like that would be negative towards the algorithm within itself because I would basically respond positively that I'm choosing to listen to something it came up with.

(In-12-M)

Despite his attempt to train the algorithm, the interviewee did not perceive much improvement in platform recommendations, which were still rooted within mainstream music. The same interviewee also disliked the notion of being compared to other users to generate recommendations, instead wanting both his identity and music tastes to be perceived by Spotify as unique.

6.5 Connections between Human and Machine Actors: Reflecting User Identity on Spotify

Different types of user engagement with Spotify's platform are recorded as data points within user profiles. These data doubles emerge when human bodies are separated and divided into discrete flows of data that are then electronically reassembled (Haggerty and Ericson, 2000). This data is subsequently used to generate personalised recommendations. Despite not initially being a consideration, personalised recommendations are now a fundamental feature on Spotify and are served to users in various guises. As well as having specific questions in the online survey and interview about Spotify's personalised features, interviewees themselves frequently referred to their music recommendations.

Over an extended period of use as well as through processes related to training the algorithm, interviewees recalled progressive improvement in Spotify's personalised music recommendations. Improvement referred to music recommendations becoming more reflective of personal music tastes and, as a result, increased user enjoyment. Most interviewees enjoyed using features that incorporated personalised recommendations, some of which had become fully integrated within their daily streaming routines. Alongside the uses of Discover Weekly, Release Radar, Daily Mixes and Radio, several interviewees acknowledged the success of recommendations that appear when curating personalised playlists as well as songs that continue to play once their playlists have ended. In serving personalised recommendations, Spotify reduces the cognitive effort placed on users to search for music within a vast catalogue. Recommendations therefore successfully and substantially narrow music choices. Interviewees recognised the minimal effort now exerted on their part to be able to listen to music as well as to search and discover music on Spotify. This was mostly considered a positive outcome, although some interviewees expressed concern about the music they could be missing out on.

Survey responses indicated that Spotify aided the discovery of new music, with 46% of respondents strongly agreeing to this statement and a further 43% agreeing. Discovery via Spotify recommendations was most successful when interviewees believed that the platform accurately reflected their existing or current music preferences. Interviewees therefore enjoyed recommendations that they had not previously encountered but resided within the familiar sphere

of their music tastes. Even though these recommendations were rooted in the familiar, interviewees still believed that Spotify was expanding their music choices. Others found the platform's recommendations inconsistent, on occasions liking the music generated but, at other times, feeling the recommendations were poorly suited to their personal tastes. This reflects somewhat mixed responses in the online survey regarding participants' enjoyment of Spotify recommendations. One interviewee described 'jarring' experiences (In-05-F) when recommendations were unexpected and inconsistent. When these experiences occurred, interviewees believed that it was due to a lack of listening data and so aimed to continue training the algorithm to aid active profile construction. Some interviewees, however, did question the responsiveness of Spotify's algorithm. They stated that the algorithm took a substantial amount of time to adjust to new preferences as well as remove former tastes. This was cited as being a reason for engaging in private streaming sessions, as has been discussed elsewhere in this chapter.

Algorithms are ubiquitous on the Web and with this comes the concern of filter bubbles, which describe the potential for online personalisation to isolate people from a diversity of content (Pariser, 2011). Much of the literature from the field of data studies has highlighted the troubling and harmful effects arising from the datafication of society, including concerns of surveillance, privacy and control. Recommender systems are likely to construct filter bubbles as they reinforce existing preferences and reduce instances of serendipity online (Pariser, 2011). Most viewed the similarity of recommendations positively as it easily facilitated access to music they enjoyed. Some wanted even narrower music recommendations, such as recommendations based on a single music sub-genre, similar vocal styles and melodies. Others seemed concerned about what was left unexplored in Spotify's music catalogue. These interviewees described themselves as being more open to diversity in the recommendations they receive and suggested that recommendations could be founded on broader factors, such as shared record labels or featured artists. They expressed that if they received more diverse recommendations that they then did not like they could simply avoid streaming the music or provide explicit feedback via the thumbs up or thumbs down feature. Others were more confused about the direction of their personalised recommendations, with one interviewee wanting recommendations that she described as the 'same same but different' (In-05-F).

The enjoyment of personalised music recommendations served as a way to measure the success of online music streaming platforms. The majority of interviewees had experiences with other services but asserted that Spotify currently generated the most successful, personalised music recommendations. Interviewees only favoured other services when they provided access to music currently unavailable on Spotify, when they had used the service for an extended period of time or when music-based platforms were integrated with other services, such as gaming.

6.6 Conclusion

As has been demonstrated above, streaming music on Spotify cannot be considered a solitary activity. In opening the platform, the user either knowingly or unknowingly becomes an actor imbricated in multiple assemblages that integrate both human and non-human elements. Using ANT some of these performative networks have been revealed and the relations between the actors traced. The most prominent network is that which involves online friends, who are made visible by Spotify's friend feed feature. Friendships continue to be an important influence in the online formation, management and performance of music taste. Inclusion within this online peer-to-peer network does not necessitate offline friendship. Spotify has therefore facilitated online connections featuring ties that Granovetter (1973) would describe as weak and absent. Irrespective of the ties between actors, peer-to-peer networks on Spotify continue to be founded on perceived similarities of music taste and emerged as reliable sources for music discovery. Many interviewees valued music recommendations from friends more than those served by the platform, asserting that an algorithm is unable to produce serendipitous recommendations or music that reflects human emotions. Visibility of an online peer network did cause several interviewees to make conscious choices about the music they streamed on Spotify and, in turn, the identities they performed in certain streaming contexts. These choices related to the appropriacy of the music they streamed as well as how they would be perceived by their online peers. Consequently, some interviewees reported adopting impression management strategies, as outlined in research conducted by Goffman (1959), when particular friends appeared online. As part of these strategies, interviewees quickly changed their music selections to be perceived more favourably by those online or engaged in a private streaming session, meaning their activity was no longer visible on the friend feed panel.

Networks that integrate both human and non-human actors are particularly pivotal to the success of Spotify's recommender system. Within this network, users knowingly or unknowingly provide their streaming data, perpetually adding to their datafied self in the user profile. Representing an individual with a single user profile suggests that the platform perceives identity as cohesive and consistent, opposing current understandings of identities. The co-founder of Facebook, Mark Zuckerberg, has stated 'You have one identity' (Kirkpatrick, 2010, p. 199) and so this view is likely to be ingrained with the platform's technology. This representation of a user's identity is employed to generate personalised recommendations.

The reciprocal relationship between humans and platform technology has not yet been widely researched, possibly due to the largely opaque workings and proprietary nature of recommender system technology. Interviewees were largely aware of data collection taking place on Spotify and, when recommendations failed to meet their preferences, sought to train the algorithm to produce music more in keeping with their tastes. Training the algorithm was an evident example of data activism, as users exerted agency and power over the technology. The co-construction and co-evolution of identity between the user and the system is an example of posthuman identity, having been technologised in and through engagement with the platform. In constructing these posthuman identities, users are likely to receive very similar recommendations, with music standing outside their preferences remaining unexplored. Training the algorithm further narrows potential music resources for identity work, culminating in stable and fixed identity over time. Many interviewees enjoyed the similarity in the recommendations they received from Spotify while others were concerned about the diversity of music they now encountered online. The creation of these 'filter bubbles' (Pariser, 2011) is highly significant at a time when so much social anxiety already exists about the influence of social media on individual and public opinion. This chapter has extended beyond social media to consider the extent to which processes of self-fashioning are being shaped by the technologies of recommender systems.

Chapter 7 Conclusion

To return to the image with which I started this thesis, we can now understand more about the rich complexity of identity work that users like this perform when engaging with music streaming platforms. This thesis has explored whether and how types of identity work can be performed on music streaming services. By adopting a mixed methods research approach and using Spotify as a case study, I have shown how both users and platform technologies are shaping online identities through music consumption. My research demonstrates how musical identities can be crafted online as well as in offline contexts. It reveals the many new possibilities and constraints that make engagement with music streaming platforms a unique and significant resource for users' identity work. It evidences the extent to which process of self-fashioning in these online music contexts are being shaped by technological actors. Below, I return to the literature and respond to the questions that have guided this research. I also elaborate on the contributions that these research findings make.

7.1 Revisiting the Literature

This thesis has brought together diverse bodies of literature, coming from different academic fields and ontological perspectives. These include literature on music consumption, theories on identity and posthumanism. Much of the literature on music consumption and identity work reviewed in chapter 2 was produced prior to the advent of music streaming services; however, this thesis has shown its continued relevance in an online context.

Adding to existing literature on music streaming, this thesis corroborates many of the findings from the Clouds and Concerts Research Project (UiO Department of Musicology, 2016). Both have investigated streaming platforms from a user perspective and found that services such as WIMP and Spotify have become deeply ingrained in everyday music consumption routines. The predominant motivation for using these services remains instant access to a vast catalogue of music for little or no cost. My own research on streaming has also found that music discovery motivates continued user engagement and the use of Spotify curated content. Personally curated content was the most significant form of music streaming conducted by interviewees in the present research and for the participants in the Clouds and Concerts Research Project (UiO Department of Musicology, 2016). These collections of music are organised according to

individual logic and are personalised with unique titles, pictures and descriptions. Taking the research previously conducted by Hagen (2015) further, this thesis has shown that personal playlists serve as meticulously curated containers for multifaceted identities that can be used for public and private performances of identities. Although existing literature investigated the ways in which music streaming experiences were meaningful for users, it did not consider how it provided a resource for online identity work. This thesis therefore extends existing literature on music streaming services and conveys the reciprocal relationships that occur between humans and technologies to construct identities through music.

To understand the diverse assemblages of human and non-human actors in constructions of online identity, this thesis employed literature on music recommender systems, data studies and posthumanism. Actor Network theory also allowed for the tracing of network ties that emerge when users engage in music streaming services. Much of this literature revealed that data doubles constructed by systems and employed in algorithmic models perceive identity as a single and fixed concept (Beck, 2015), which stands in direct opposition to the identity theories reviewed in chapter 2. Perspectives from data studies also provided a technological deterministic view of the datafied self and presented individuals as passive and powerless against technologies. With this comes the concern of filter bubbles, described by Pariser (2011) as having the potential to isolate people from a diversity of online content. These filter bubbles are in existence on Spotify as its recommendation algorithms present users with increasingly similar content. In their research, Lupton (2018, 2020 and 2021) and Kennedy (2018) espoused a more positive view of the datafication of society, evidencing how individuals harness the power of personal analytics to inform everyday routines. Lupton's research (2018, 2020 and 2021) has largely focused on the measuring and monitoring of cycling data through smart devices and has not yet fully explored concepts of selfhood crafted through data. This thesis has therefore extended existing research in data studies by focusing on the user themselves and evidencing how they are harnessing the power of streaming data to train the algorithm, with both the user and technology exerting agency in the reciprocal constructions of online identity.

Along with data studies, posthumanism has served as a critical theory through which to consider the interweaving of human and non-human actors in the construction of online identities. The theory addresses the very precariousness of traditional body-related identities amidst contemporary scientific and technological advancements. It is therefore highly relevant to the modern work of music streaming. Posthumanism has thus far tended to focus on the forms of

embodiment made available to individuals through, for instance, prosthetics and genetic engineering (Braidotti, 2013). Translating this research into the context of music streaming, this thesis has used the theory to explore Haraway's (1991) cyborg identities as crafted through the human-technology interactions on Spotify. Haraway's utopian vision of cyborg identities existing in a post-gender world is enacted on the platform by users themselves. Without the presence of a physical body, users can craft and perform identities free from the confines of gender. The system, however, still asks users to specify their gender (male, female or non-binary) when signing up to the platform. In a world of cyborgs, gender remains a valuable marketing data point, key to Spotify's business model founded on advertising, and it is likely to be ingrained within recommendation models.

Because this thesis has focused on the uses of music as a resource for identity, it was pertinent to employ theoretical perspectives on identity from the field of musicology. MacDonald, Hargreaves and Miell's (2002) research on music in identities and identities in music continues to be relevant in an online context. Both types of music-based identities could be found on Spotify and were privately negotiated and publicly performed in particular streaming contexts. Music in identities were more prominent amongst interviewees, with the lack of social features on Spotify making the performance of identities in music challenging to discover. Identities in music are notably constructed, managed and performed through the disclosure of music likes and dislikes, being forms of symbolic consumption as outlined by Larsen, Lawson and Todd (2010). Symbolic consumption remains relevant to music streaming experiences, with users assessing levels of congruency between songs and their identities. In an online context, deciding what not to stream was also as important as choosing what music to stream. Interviewees shared their music preferences with others when streaming music via the public setting or when playing music in social contexts. Music tastes were also negotiated through what DeNora (2000) describes as forms introjection, which craft a coherent image of the individual through backstage self-to-self interaction. Unlike previous research where music is considered as a resource that either is or is not important to individuals, this thesis has discovered a continuum of musical identities. Narratives revealed different levels of engagement with music for identity work. Some interviewees had peak musical experiences, perceiving music, and even specific songs, as integral to who they are, whereas others considered it as a less important resource for their identity work.

Existing literature has focused on the materiality of music as being fundamental to feelings of ownership, which is understood as being an integral factor in identity work through music (Sinclair

and Tinson, 2017). Thus, previous research has focused on the materiality and tangibility of CDs and vinyl, which serve as artefacts that can be collected and displayed. The absence of tangible products in the online world has led some to argue that we are moving towards a post-ownership economy (Sinclair and Tinson, 2017). This literature therefore constructs a binary opposition between the ownership of physical music and carefree music renting on streaming services. Without forging feelings of ownership through physicality, digitised music was not considered as a viable resource for identity work (Cills, 2015). This thesis strongly contests this literature and has addressed and evidenced how users show ownership over their online music collections. Therefore, collections of digitised music on streaming services can and are used as resources for identity.

To interpret types of online identity work, it was also necessary to consider the theoretical underpinnings of the term 'identity'. The social psychological framework of symbolic interactionism addresses how identity work can be achieved through interaction with self and others. This theory perceives individuals as being active in shaping their world, focusing on the interaction as the object of study to craft an active image of the human being (Charon, 1989). Through interaction, individuals must interpret the situation, consider the view of others and partake in on-going streams of action. It therefore means that identities are continuously constructed and reconstructed through interaction with the self and others (Charon, 1989). By updating this literature and applying it to an online context, symbolic interactionism has provided a lens through which to interpret how users interact with themselves, other human actors and the music streaming platform to construct identities through music. Goffman's dramaturgical perspective (Goffman, 1959) built on the work of symbolic interactionism by presenting identity as a staged performance that is prepared backstage and performed in front stage arenas of life. Despite this theory being introduced prior the advent of the Web, Goffman's dramaturgical metaphor has been utilised to discern public streaming performances of online identities as well as backstage preparations and impression management strategies individuals adopt to be perceived in a certain manner by peers. This theory therefore continues to be highly relevant in an online context.

7.2 Revisiting the Research Questions

At the outset, this thesis posed and was guided by three particular research questions. The empirical data I have presented in chapters 4, 5 and 6 has sought to address and respond to these questions.

How do users actively engage in music streaming practices and how does this relate to the construction of identities (RQ1)? Data from the three research phases demonstrate high levels of user investment in the platform, with many having their Spotify account for a substantial amount of time and using it multiple times a day. As a result, Spotify was a tool to stream musical accompaniment to their everyday lives. Despite exhibiting low levels of user loyalty towards Spotify, many interviewees were fearful about losing their online collections of music, which they had invested a significant amount of their self and time in meticulously curating. Interviewees were proud of these unique lists of music. Engagement in the platform related to the use of service-facilitated and user-facilitated features for music streaming. Participants tended to prefer content that was tailored to their individual preferences and so playlists, such as Daily Mixes, were the most frequently used service features. Engagement was also driven by new music discovery and so Discover Weekly and Release Radar were also utilised. These personalised Spotify playlists allowed interviewees to remain within their music comfort zones, provided a level of assurance that the music would be enjoyed and reduced cognitive effort in finding music to listen to. They allowed interviewees to negotiate a number of their identities through music associated with their current and long-term selves.

Personal playlists curated by users were, however, the most dominant forms of music streaming amongst participants. This finding corroborates previous research conducted by the Clouds and Concerts Research Project (UiO Department of Musicology, 2016). Interviewees were more likely to stream their own lists rather than those curated and served to them by the recommender system. Personal playlists were organised in highly personal ways, were assigned unique names and most were dynamic collections of music. Participants felt a strong sense of attachment to these collections of music, describing feelings and practices associated with psychological ownership. These music collections were strongly aligned with identity formation, life history, completism and connoisseurship. As prominent examples of online musicking (Small, 1998), playlists allowed individuals to negotiate a variety of music-related activities that included emotional, cognitive, psychological and physical processes. Users encounters with their curated

music, the platform, contextual surrounds and themselves enabled meaningful music streaming experiences.

What types of active identity work can be witnessed on Spotify (RQ2)? Personal playlists enabled the performance of music in identities and identities in music (Macdonald, Hargreaves and Miell, 2002). They were also the most prominent resources for identity work performed on the platform. Individual playlists were consciously prepared and curated in Goffman's (1959) back-stage area of social life to be context-dependent and tailored to different identities. Thus, playlists contained music that revealed long-term, current, former and aspirational identities. Biographic affiliations with music were often structured and stored in these personal lists, serving as accessible containers for the negotiation of current identities through a retelling of the past. This internal act was part of DeNora's (1999) care of self. The interviewee who was a DJ and another who viewed himself as a music historian and collector both used playlists to structure and compartmentalise their different identities, which they would then stream when required. The construction, management and performance of fan and subcultural identities, however, were challenging to evaluate in this thesis due to the absence of social features that allow for collective identity work on Spotify.

Active identity work on Spotify could be performed publicly or privately depending on streaming settings. Public music consumption on Spotify is very different to public displays of CDs and vinyl that one may showcase in their home. The online public context expands the possibilities for inclusion. No longer restricted to who is physically present, public assemblages on Spotify include human actors, who may or may not be known to the user, non-human actors and data. Public streaming allows identities to be performed to these diverse actors in the online network. In these contexts, interviewees often made conscious streaming choices and adopted impression management strategies to be perceived in a certain way by their peers. Some interviewees questioned the extent to which they could perform their identities on Spotify due to the absence of social features that allow you to share music openly and directly with others. This viewpoint related to interviewees' assumptions about identity being a coherent inner core that is publicly performed.

Although most interviewees had their account set to public streaming by default, there were several occasions where they engaged in private streaming. Most of these instances related to

network perceptions of their music. For example, individuals streamed music privately when it was not in keeping with the preferences of their peer group and they were fearful of how they would be perceived by others. Music that was deemed too personal was also less likely to be shared with others and, as part of care of self, was streamed privately. Some interviewees had streamed music privately to intentionally conceal it from the platform. In protecting this streaming from the algorithm, they believed that the music was not recorded within their user profile. This occurred when participants listened to music outside their existing preferences or it was newly discovered. Interviewees were keen to assess whether the music was tenable to their identities before it was recorded in their user profiles and could influence subsequent recommendations. Additionally, music streamed in certain social settings to appeal to a variety of music tastes was often streamed via the private mode.

How does the user perceive the ways in which the system constructs their profile (RQ3)? Most participants were aware that data collection was taking place during interaction with Spotify. These practices were viewed differently to those of other platforms, with greater levels of trust placed in Spotify's data collection and music choices seeming less personal than other forms of data. Interviewees exhibited great interest in their datafied self, with some recording their streaming activity on platforms outside of Spotify, and many looked forward to Spotify's end of year playlists that made some of their streaming data more observable. The datafication of society has become a major phenomenon, arising from the growth in always-on mobile internet connection and portable, smart devices. Individuals are increasingly measuring and monitoring their personal analytics. Wanting to engage with and discover more about their data double contained within Spotify's database reflects the keen interest users have in how data constructs their online identity. Despite not knowing the data that was being collected and how it was being used, interviewees were willing to trade their data in exchange for more personalised content. This, in turn, encouraged further narrowing of identities through music and the construction of filter bubbles, which some interviewees were acutely aware and concerned of.

Although the platform does take into account changes to music consumption over time, Spotify fails to recognise that people have different strands to their identity. User profiles on Spotify are currently unable to take into account the instability and fluidity of identities and instead reflect a single and coherent identity back to the user via personalised music recommendations. Because the platform stores historical streaming data, it is challenging to alter the long-term identity inferred by the platform and so rarely are current, transitional, aspirational and context-

dependent identities recognised and realised by the platform. Interviewees, however, were keen to assert their agency in data collection practices by essentially ‘gaming’ the system and adopting conscious streaming habits that seek to train the algorithm to produce more tailored recommendations. In a form of data activism, users make active and conscious decisions when streaming music that ultimately determines the data Spotify collects and subsequently employs as input for recommendation models. Both the user and system have power and agency.

7.3 Key Contributions

This thesis contributes to current understandings of contemporary music consumption practices by exploring how Spotify has become imbricated in everyday music listening. Despite music streaming services becoming sites of increasing scholarly interest, little research has been conducted on users’ practices and perspectives. Much of the existing literature in this field has instead focused on the technical underpinnings of particular recommendation algorithms, as well as the impact of music streaming services on the music industry. In recent years, the Clouds and Concerts Research Project (UiO Department of Musicology, 2016) has provided some empirical accounts of users’ motivations for using streaming services. From that project Hagen’s work (2015a, 2015b, 2016) has, in particular, provided detailed accounts of user engagement with music on WIMP (now known as Tidal), exploring the metaphors users employ to make sense of their music streaming as well as the heterogeneous management of static and dynamic personal playlists. My own research corroborates many of the findings from the Clouds and Concerts Research project (UiO Department of Musicology, 2016) but is also extends their research by considering how users engage in streaming platforms to craft meaningful experiences that relate to identity work. It has therefore considered the extent to which these online music streaming services serve as arenas for online identity work in ways not previously researched. It has shown that Spotify users engage in active and conscious thinking processes in deciding what to do online. This connects them to their sense of selves and how they want to be perceived by others. Platform affordances also seem to have allowed for more varied identities than in offline contexts, where one’s music was restricted as a result of financial, spatial and temporal factors and individuals tended to be labelled by others in particular ways.

Research conducted in this thesis has shown that Spotify does not only reflect our identity. Human-data assemblages and their relationships to identity have not yet been thoroughly theorised. Thus, this thesis contributes new research to understandings of selfhood in the age of datafication. Online technologies, such as Spotify, are providing new and important ways in which

identities can be constructed and shaped. Both machines and human users have agency and power in this online identity work. Recognising the reciprocal relationship between the two is important considering the modern world we now live in, where smart devices, always-on internet access and interactions with non-human actors are commonplace in everyday life. Previous research in the field of data studies has argued that technologies and datafication have transformed society, having many troubling effects that culminate in an array of new harms. These harms include increased surveillance, threats to privacy and algorithmic control. Little in this field has, however, focused on people's thoughts and feelings about their datafied self. Research conducted in this thesis argues against the view that people are passive and powerless against technologies, particularly algorithms. Interviewees were keen to assert themselves as data activist who appropriate platform affordances and adapt them to their benefit. The relationship between humans and non-humans is therefore far more complex than previous research has suggested. By streaming particular content, avoiding certain styles of music, using platform features in highly personal ways and utilising private and public streaming settings, users exert their power and agency. Spotify does continue to perceive one's data double as a single and coherent profile, failing to account for the multifaceted identities within an individual. It does, however, recognise change over time and its curated content and has started to take into account the fluidity of music tastes and music for different purposes, contexts and moods.

This thesis contests existing literature on the post-ownership economy of digital music by evidencing participants' strong investment in their Spotify accounts and the online music they have accrued. A large part of the debate on physical and online formats focusses on the ephemeral nature of digital music and the lack of ownership individuals might feel towards their online collections. Although many were concerned about losing their music collections as it was not physically owned, participants still reflected on feelings of psychological ownership towards their digital collections. Permanence of physical collections is therefore not the same as feelings of ownership. Active engagement on Spotify revealed markers of psychological ownership. Interviewees organised their online music libraries in highly personal ways, searched for music to add to their collections, expressed a strong sense of attachment to their online libraries and proudly displayed their music choices when publicly streamed. Psychological ownership was most notable in personal playlists, which participants had invested a significant amount of time, effort and, in some cases, emotion to curate. These playlists were prominent resources for dynamic and multifaceted identity work on Spotify.

This thesis also contributes to discussions on the relationship between Spotify and existing forms of music consumption, such as CDs and vinyl. This is particularly pertinent as a result of the resurgence in the purchase of vinyl in recent years (Copsey, 2020) and some participants discussed listening to and collecting vinyl alongside their uses of Spotify. Other participants stated that they still own and collect CDs. I have demonstrated that Spotify is often used alongside existing music consumption formats and that listening habits from existing formats have frequently been translated into an online context. For example, participants who habitually listened to CDs in sequential order were likely to translate this mode of listening into their online streaming habits

Despite music discovery being a primary motivation in the uses of Spotify, this thesis has found that interviewees still placed greater levels of trust in human beings. Participants expressed that they were more likely to trust music recommendations from those in their human network, including their offline and online peers and family members. Recommendations from human actors were considered more authentic and driven by an integral understanding of fellow human beings. Consequently, interviewees were more likely to stream music outside their existing tastes if it had been recommended by someone in their human trust network, increasing chances of serendipity. This same level of trust was not awarded to computationally driven recommendations. Spotify was recognised as being a tool that had the potential to expand music horizons, with some interviewees expressing concerns about how they could possibly explore and discover all the music the platform has to offer. For others, it offered a convenient and immediate way to listen to music tailored to existing preferences. A tension did appear, however, between the human and technological actors on Spotify. Participants were acutely aware of the potential for Spotify to create 'filter bubbles' (Pariser, 2011) by confirming their existing music preferences and isolating them from a diversity of content

Innovative digital research methods have been used in this thesis to trace the multiple actors involved in shaping consumption and identity on music streaming platforms. The methodological approach I have adopted conveys the importance of engaging with interdisciplinary and mixed methods research. Triangulating data from this mixed methods approach has provided illuminating insights in ways that interviews alone could not. This thesis contributes to attempts made within the humanities and social sciences to utilise theoretical and methodological perspectives from Science and Technologies Studies (Sismondo, 2004) and the use of qualitative research methods in digital settings. The inclusion of online streaming observation, for example,

offered a means to collect data in real time about personalised music streaming experiences on Spotify. This non-biased music listening data is not something researchers would previously have access to. It revealed the ubiquity of music streaming in everyday life, listening habits and how users negotiate their different identities through music choices. It also helped participants to elaborate on experiences, habits, features and uses of Spotify in subsequent semi-structured interviews, producing richer and more detailed narratives. The research methods have allowed for a variety of user perspectives on online music consumption to be shared. Identity work performed during interaction with music streaming platforms involves an assemblage of human and technical actors. Of equal importance was to recognise the role technologies have in crafting current and future identities. By utilising Spotify as an exemplifying case of a music streaming service with an integrated recommender system, chapters 4, 5 and 6 have the platform as a prominent actor in the construction, performance, and management of online identities.

7.4 Limitations of this Research

This research was designed to reveal users' diverse experiences and perspectives of Spotify. The user became the primary research focus after numerous attempts were made to contact Spotify. The intended aim of initiating contact was to scope out interest in this research and request support in the form of anonymised user data and/or more detailed information on their recommendation models. Having no immediate contacts within Spotify myself, I made several attempts early in the research process to contact Spotify's public email addresses and social media accounts. I also applied for a summer internship with the company and attended conferences that were likely to expand my contact network. Contact with the platform was unsuccessful, after which the decision was made to focus solely on the users themselves. Having data and information directly from Spotify would have allowed this thesis to be more comprehensive, providing insight into precisely how recommendations are generated and presented rather than only how they were perceived by users.

Despite having a high non-completion rate, the number of respondents who completed the online survey far surpassed what had been anticipated. Early demographic data revealed that respondents were mostly male and aged between eighteen and twenty-five. Repeated attempts were made to diversify these demographics, such as advertising the survey in different settings and online forums. Although these methods did improve response rates from different groups, data from the online survey remains skewed. The sample size of subsequent online observation

and semi-structured interviews is also limited. As outlined in the methodology, I initially aimed to recruit between forty and sixty participants for phase two and three of the research. From those who left contact details at the end of the survey, seventy individuals were selected to safeguard against non-response. Interest from those initially contacted was very high but many did not respond to later communication. Repeated attempts were made to communicate with participants, including a second round of participant selection that entailed contacting a further twenty-two individuals. In doing this, an additional nine participants took part in the online observation and interview; however, the number and diversity of the sample was not as large or representative as had been hoped for. Sampling therefore limits the findings and generalisability of the present research.

Finally, as with other online platforms, Spotify is continuously updating and redesigning its platform and features. This has at times resulted in a removal of features from its service, as was discussed by some interviewees. The constantly changing nature of its system does have implications for this research. The findings and narratives of online identity work are reflective of Spotify's platform features, music library and recommendation models at the time of interviews (2019). It is therefore very timely research. Since interviews were conducted Spotify has, for example, introduced 'Group Sessions' that allow premium users to simultaneously stream music with others in their networks. This increased sociality may have an impact on how those interviewed now view the platform and perform identity work through their streaming.

7.5 Considerations for Future Research

During interviews, participants were able to reflect on music consumption in existing physical formats as well as on Spotify. Both forms of music consumption enabled participants to perform identity work. Spotify, unlike physical formats, offers users the ability to explore and trial different types of music without any form of financial or spatial commitment. This thesis did not reveal any significant differences in the symbolic value imbued in physical and online music formats by age group or gender. All participants had grown up in a pre-streaming era, having had many experiences of purchasing music from bricks-and-mortar retailers. Most had experienced music consumption via CDs, peer-to-peer file sharing, downloading and, most recently, on music streaming services. Some were also able to recall the use of cassettes and LPs. Possessing these subjective histories was useful as it allowed participants to reflect on past and present

experiences with music, including changing levels of access to different music genres. Future research could focus on participants who are 'streaming natives' (Webster, 2019, p.217) to ascertain whether music is viewed differently by these groups and if this changes types of identity work performed through music. For example, in an age of instant access to a copious amount of music, what symbolic value does music hold? Are identities constructed solely through these online catalogues more transient and diverse? Do streaming 'natives' exhibit greater or less ownership over their digital collections?

This thesis has focused on users and their perspectives of Spotify to ascertain instances of active identity work on the platform. There are, however, many more actors present when users engage in music streaming platforms such as Spotify, including artists, music labels and advertisers. These actors all have the potential to shape potential identities through the availability of content as well as the decisions they make about how content is presented to particular users at particular times. Thus, future research on identity work performed in these online contexts could explore the influence of other actors on the construction, performances and management of online identities.

One of the claims made about music streaming services is that they have the potential to democratise access to music (Webster, 2019). This democratisation allows for individuals to consume music that they might not previously had access to due to a variety of economic, social, and cultural factors. Having a vast amount of music instantly accessible, however, does not necessarily result in individuals engaging with it all. I would also argue that this democratising potential is strongly managed by the recommender technologies integrated in music streaming platforms. As discussed in chapter 2, these technologies influence what users are and are not presented. This therefore questions the democratising potential of music streaming. Future research should investigate the supposed democratisation of music streaming platforms. For example, how do demographics factor into calculations made by recommendation algorithms? When initially setting up a Spotify account, users are asked to provide a valid email address, their gender and age. It is therefore not implausible to assume that these factors serve as input for recommendation models. To address this, even greater attention needs to be given to the experiences and perspectives of particular groups on music streaming services. It also requires access and engagement with the recommendation technologies underpinning streaming services.

7.6 Closing Remarks

It is evident that music streaming services, such as Spotify, offer arenas for individuals to construct, manage and perform online identities. This thesis has demonstrated the ways users publicly and privately perform identity work through the platform's user-facilitated and service-facilitated features. Identity work was most apparent in the personalised practices of playlist curation, where music catalogues often possessed biographical affiliations, as well as in the music participants consciously or sub-consciously shared or did not share with the human and machine actors in their network. Spotify's ability to shape potential identities was perceptible, with participants becoming increasingly aware of data collection taking place whenever they engage with online platforms. Participants acknowledged that the music they were recommended was tailored to meet their inferred preferences, with some hoping for increasing levels of personalisation in the future and others expressing concern about the volume of music they were being isolated from. The power dynamics between the human and machine actors were, however, not as straightforward as one might assume. Despite the recommendation technologies having a level of control over the music that users were and were not presented with, participants were keen to assert their agency during interviews. Many had intentionally adopted music consumption practices to train the algorithm into producing music they want to listen to, whether that music is more akin to their existing preferences or more diverse. These narratives conveyed the levels of control participants exerted in providing particular input, in the form of particular types of user data, for Spotify's recommendation system. These methods therefore evidenced the co-construction of user identities in these online contexts.

The amount of data music streaming services have access to, as well as the complexity and sophistication of the computation techniques used to power recommendation systems, is steadily increasing. Thus, how these platforms generate music recommendations is likely to change in the future, culminating in recommendations becoming even more personalised in more pervasive ways. Having acquired The Echo Nest it seems likely that music recommendations on Spotify could eventually be generated based on preferences for particular instruments, sounds and rhythms. The platform is also exploiting non-music data to inform recommendations, most notably the use of spatial data from mobile phones and smart home devices. This will allow the platform to serve contextually aware music recommendations. As the level of personalisation increases, further research will be necessary to comprehend how music streaming services are shaping the dynamics of music consumption and how this relates to the types of identities users have available to them and can occupy when using digital music as a resource for identity work.

Appendix A Confirmation of Ethics Approval

ERGO II

Ethics and Research Governance Online

UNIVERSITY OF
Southampton

[Home](#) [Submissions](#)

40150 - Streaming Identity: Constructions of User Identity on Spotify

Submission Overview

Submission Questionnaire

Attachments


History

Details

Status

Approved

Category

Category 

Submitter's Faculty

Faculty of Arts and Humanities (FAH)

The end date for this study is currently 24 September 2021

 Request extension

If you are making any other changes to your study please create an amendment using the button below.

Appendix B Ethics Submission

Ethics application form - Humanities

All mandatory fields are marked (M*). Applications without mandatory fields completed are likely to be rejected by reviewers. Other fields are marked “if applicable”. Help text is provided, where appropriate, in italics after each question.

1. APPLICANT DETAILS

1.1 (M*) Applicant name:	Clarissa Brough
1.2 Supervisor (if applicable):	Dr Silke Roth
1.3 Other researchers/collaborators (if applicable): Name, address, email, telephone	<p>Professor Laurie Stras</p> <p>Room 2029, Building 2</p> <p>Highfield Campus</p> <p>University of Southampton</p> <p>Southampton</p> <p>SO17 1BJ</p> <p>L.A.Stras@soton.ac.uk</p> <p>023 8059 2858</p> <p>Dr Silke Roth</p> <p>Room 4041, Building 58</p> <p>University of Southampton</p> <p>Southampton</p> <p>SO17 1BJ</p> <p>Silke.Roth@soton.ac.uk</p> <p>023 8059 4859</p> <p>Professor Christophe Mues</p> <p>Room 3009, Building 2</p>

	Southampton Business School, Highfield Campus University of Southampton, Southampton SO17 1BJ C.Mues@soton.ac.uk 023 8059 2561
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2. STUDY DETAILS

2.1 (M*) Title of study:	Streaming Identity: Constructions of User Identity on Spotify
2.2 (M*) Type of study (<i>e.g.</i> , <i>Undergraduate, Doctorate,</i> <i>Masters, Staff</i>):	Doctorate
2.3 i) (M*) Proposed start date:	23rd April 2018
2.3 ii) (M*) Proposed end date:	24 th September 2021

2.4 (M*) What are the aims and objectives of this study?
Aims and objectives of all phases of research are: <ul style="list-style-type: none"> • To understand the reasons, purposes and contexts for using Spotify. • To ascertain the frequency of music streaming and typical weekly streaming patterns. • To understating whether and how people use service-facilitated and user-facilitated features on Spotify. • To ascertain users' perceptions of platform recommendations. • To understand how and why users curate their music on Spotify. • To investigate the creation, purpose and maintenance of personal playlists. • To identify whether users are interested in discovering new music on the platform and, if so, how they find new music on Spotify. • To ascertain whether there is a difference between private and public listening sessions.

2.5 (M*) Background to study (<i>a brief rationale for conducting the study</i>):

For some, the emergence of interactive music technologies during the twenty-first century has transformed the dissemination and consumption of music. Today individuals frequently engage in interactive online music networks. These networks provide open forums for listening, sharing, rating and recommending music. They also enable users to form groups dedicated to specific music genres or artists. These platforms also seek to reduce the volume of possible song choices by employing user data to generate personalised recommendations. Because of their ever-increasing use, online music networks are emerging as arenas for the construction of individual and collective identities. These identities are then reflected back to users in the form of recommendations generated by either machines or other individuals. Accordingly, I am researching how music accumulated on a particular platform, Spotify, can provide users with an effective means to construct and perform a composite of their online identities. Additionally, I am studying the user's perception of how Spotify reflects this online identity.

2.6 (M*) Key research question (*Specify hypothesis if applicable*):

I have three key research questions I want to address. These are:

- How do users actively engage in music streaming practices and how does this relate to the construction of identities?
- What types of active identity work can be witnessed on Spotify?
- How does the user perceive the ways in which the system constructs their profile?

2.7 (M*) Study design (*Give a brief outline of basic study design*)

Outline what approach is being used, why certain methods have been chosen.

Spotify will serve as the case study for my research on online identity work, allowing me to conduct an in-depth inquiry into a single music-streaming platform. My study will be divided into three phases of data collection, which I will refer to as A, B and C throughout this document. Part D, an additional online survey, may take place following the semi-structured interviews as a way to obtain specific data that can be analysed quantitatively. This survey will not involve participants from parts A, B or C. If this phase of data collection takes place, information regarding part D will be provided as an addendum to the current application.

A- Online Survey

The first phase of data collection explores broad research areas relating to online music streaming. Questions in the survey address the frequency and context of music streaming, playlists, curation of online music, use of recommendation features and the construction and management of online music streaming accounts. The online survey will be generated and hosted by iSurvey. Closed questions will mostly be used in the online survey, with filtering being employed to make it concise and to avoid participant fatigue. Demographic questions will be included at the end of the survey as well as the option to register interest for the second and third phases of data collection.

Survey questions will solely relate to a particular music-streaming platform; Spotify. Therefore, participants need to be current, active Spotify users but can include those who have free, family and premium accounts. Participants will also need to be over 18 years old.

B- Online Observation

The second phase of data collection relies on recruiting participants from phase one. This phase involves the online observation of streamed music choices for a week prior to individual participant interviews. This observation will provide an insight into everyday engagement and instances of active identity work as they occur, experiences which researchers would otherwise not have access to. This online observation will seek to gain information about the frequency of music streaming and the types of music being streamed.

Online observation will form a cross-sectional type of study, providing a series of accounts about the use of Spotify within a short timeframe. The specified sampling period will last for one week. Sampling periods will be staggered for each participant, being conducted one week prior to a pre-arranged interview. This will allow the researcher to pose questions about specific instances of streaming that participants should be able to recall.

Observations will be achieved by activating the 'scrobble log' function on Spotify accounts. This may require participants to set up a Last.fm account in order to link Spotify to the scrobble function. If the participant already possesses a Last.fm account they will then just need to activate the feature within Spotify. This can be found under Spotify's account settings, with participants clicking 'connect' below the Last.fm heading. Participants will then need to provide their Last.fm log in details so I can obtain the data. The data, including song titles, artists and timestamps, will be screenshot throughout the sampling period. By providing accurate timestamps and information about track titles, artists and albums, scrobble logs will provide information about music listening as it happens as well as prompts for subsequent interview questions. Once the sampling period has concluded and the subsequent interview conducted, participants will be advised to change their Last.fm password or, if not wanted, delete their account.

Depending on the response to the online observation phase, participation may not be mandatory. Therefore, participants can still take part in the semi-structured interviews without being involved in the online observation.

C- Semi-Structured Interviews

Following the completion of online observation, semi-structured interviews will be conducted with the same participants to obtain greater insight into their streaming experiences. Additionally, the interviews will explore the user's perception of how Spotify constructs, manages and reflects their identity. These interviews should last approximately one hour, with the aim of being conducted face-to-face. If this is not possible, participants will be contacted by online video calling or on the telephone.

The interview schedule employs a list of themes and key questions to be discussed, which will reflect and inquire about the data obtained in phase one and two of my research. Thus, the interview schedule includes some generalised questions, which will be asked to all participants. Alongside these, personalised questions will be included to encourage

participants to elaborate on specific narratives. I will also ask participants to bring the device they mostly use for Spotify streaming to more thoroughly view their music collections and to prompt questions and answers. Following their completion, each interview will be transcribed verbatim ready for subsequent analysis.

3. SAMPLE AND SETTING

3.1 (M*) How are participants to be *approached*? Give details of what you will do if recruitment is insufficient. If participants will be accessed through a third party (e.g. children accessed via a school) state if you have permission to contact them and **upload any letters of agreement to your submission in ERGO.**

The survey will be circulated using online fan group pages, my personal contacts and social media. My personal contacts will also be encouraged to share the survey online as a way to ensure a large sample and participant diversity. The dispersal of the survey will not be fully controlled by myself but will greatly depend upon how the Facebook algorithm spreads the survey through friendship networks. Participants for parts B and C of my study will be recruited from the original sample by advertising the subsequent phases at the end of the survey. If recruitment is insufficient when using the above method, I will advertise the survey on campus by using posters that include the web link.

3.2 (M*) Who are the proposed sample and where are they from (e.g. fellow students, club members)? List inclusion/exclusion criteria if applicable. NB The University does not condone the use of 'blanket emails' for contacting potential participants (i.e. fellow staff and/or students).

It is usually advised to ensure groups of students/staff have given prior permission to be contacted in this way, or to use of a third party to pass on these requests. This is because there is a potential to take advantage of the access to 'group emails' and the relationship with colleagues and subordinates; we therefore generally do not support this method of approach.

If this is the only way to access a chosen cohort, a reasonable compromise is to obtain explicit approval from the Faculty Ethics Committee (FEC) and also from a senior member of the Faculty in case of complaint.

NB. If work with children within the UK is planned, the researcher **MUST** obtain a **Disclosure and Barring Service (DBS) check** (formerly Criminal Records Bureau (CRB) check). If work with children overseas is planned, clearance in line with national guidelines must be obtained.

A- Participation in the survey will be based upon self-selection, which will be principally determined by the use of Spotify. The link to the survey will be shared on Facebook and via social networking groups to elicit a large number of responses from a diverse population. My personal contacts are approximately aged between 19 and 60 years old, with the majority being 20 to 30 years old. They include both students and professionals from various locations across the UK. My personal contacts will also be encouraged to share the survey online as a way to ensure participant diversity. I will also approach online fan groups, including Lady Gaga's Little Monsters, posting messages on their fan pages to advertise my survey. The online fan groups that I am approaching do not require permission to post content.

Participants need to be current, active Spotify users, having either free or premium accounts. Those who share an account will not be included in the sample since it will distort the data. An ideal sample would include an equal proportion of males and females as well as an equal number of free and premium account holders. Ideally, the sample would also include a wide-range of age groups. If this does not occur, the sample should aim for maximum diversity in terms of age group.

Participants will be required to confirm that they are 18 years of age or older by ticking a box on the survey homepage. Participants will not be able to continue to the survey without checking this box. Here, participants also need to confirm that they are current users of Spotify. Those who are interested in partaking in the subsequent phases of research will also be asked to leave their contact details at the end of the survey.

B- Participants for online observation will be a non-probability sample, recruited via self-selection during phase one of data collection. Here, participants who have taken part in the online survey will be asked to leave their contact details if they would like to be a part of subsequent research. The self-selected sample should ensure diversity in the types of Spotify users, including free and premium account holders. Having a diverse group of users will reveal varied music streaming practices and patterns related to active identity work. The ideal sample would be the same as that specified in part A, with the same action being taken if this does not occur. I aim to recruit between forty to sixty participants for this part of the study. This number should safeguard my research against non-completion rates.

C-Participants will be the same as those in phase B. However, if recruitment for online observation is insufficient it will not be a mandatory phase of research. Therefore, participants could still partake in an interview without being involved in online observation.

Apart from the age and Spotify-user restrictions, people from varied backgrounds would be greatly welcomed in each phase of my study. Therefore, participants may include those from outside the UK.

3.3 (M*) Describe the relationship between researcher and sample (*Describe any relationship e.g. teacher, friend, boss, clinician, etc.*)

Because participants will mostly be recruited by using my personal contacts on social media and those of my friends, it will be likely that some included in my research will be friends.

3.4 (M*) Describe how you will ensure that fully informed consent is being given: *(Include how long participants have to decide whether to take part and how – if necessary – you will obtain the consent of participant’s parents or guardians. If there is any reason to believe participants may not be able to give full informed consent, what steps do you propose to take to safeguard their interests?)*

A- Participants will be introduced to the study by a post on social media or a poster displayed around the University campus. This will provide the general outline and purpose of my research. People who are interested in participating will be invited to click on a link that will direct them to the iSurvey welcome page. This page will provide further information about the study and data handling. Participants will be asked to confirm that they are current Spotify users and are aged 18 years or over. Here, there will also be a box to confirm that they consent to being part of the study. Only once this box has been ticked will they be able to continue to the study.

B- Participants will be fully briefed about what is entailed in online observation. At this point, they will be asked to sign a form to state their consent to be included in the study. They will also be provided with assistance about how to activate the scrobble log feature on their Spotify account.

Participants will have already agreed to the terms and conditions of use, including the data and privacy policy, when signing up to Spotify. In setting up a Last.fm account, participants will also be responsible to adhering to their terms of use. These platforms will also be collecting data on the individuals during the study but this is not relevant to my research.

C- Prior to commencement, participants will be briefed about the semi-structured interviews. These briefings may be done in person, by online video chat or on the telephone, depending on the location and preference of the participant. Briefings will include the expectations of the interview, how they will be conducted and an approximate timeframe. Once participants have been briefed they will then be asked to complete a consent form, without which the interview cannot take place.

4. RESEARCH PROCEDURES, INTERVENTIONS AND MEASUREMENTS

4.1 (M*) Give a brief account of the procedure as experienced by the participant *(Make clear who does what, how many times and in what order. Make clear the role of all assistants and collaborators. Make clear total demands made on participants, including time and travel). Upload any copies of questionnaires and interview schedules to your submission in ERGO.*

A- The online survey will take participants through a series of questions. Questions mostly require ticking boxes. A box is provided at the end of the survey if participants would like to leave any comments, feedback or expand on their responses. Answering the whole

survey is expected to take between 10-15 minutes. My contact details are available on each survey page in case participants have any questions or concerns. Participants are asked to leave their contact details at the end of the survey if they are interested in partaking in subsequent phases of data collection.

- B- Participants will initially be briefed about the study and the procedure. After providing their consent, participants will be guided through how to activate the scrobble log feature on their Spotify account. This will require them to create a Last.fm account, which records the scrobble data. Participants will need to provide their Last.fm log in details so I can access their accounts over the sampling period. Participants will then stream music as they would in a typical week and will not be required to do anything in addition to this. After the observation period and interview (part C) has been completed, participants will then be advised to deactivate the scrobble log feature as well as either change their Last.fm log in details or delete their accounts.
- C- Interviews may take place either face-to-face, by online video calling or on the telephone. Participants will initially be briefed about the interviews and its procedure. After this, participants will provide their consent to being interviewed and having it recorded. During the interview, participants will be asked questions about particular aspects of their streaming activity, which is guided by an interview schedule. The interview schedule will be used flexibly according to how respondents answer questions, allowing them to discuss and expand on particular areas. When answering questions, participants will not be interrupted but the interviewer may record notes for follow up questions. Participants can stop the interview at any time.

Participants will be able to request a copy of study results if they wish.

5. STUDY MANAGEMENT

5.1 (M*) Detail any psychological or physical discomfort or distress and/or any other adverse effects that the participants may experience arising from the study.

Participants are not expected to suffer from any psychological or physical discomfort or distress during any phases of my study.

5.2 (M*) Explain how you intend to alleviate any such discomfort, distress or adverse effects that may arise? (if applicable)

N/A

5.3 Explain how you will care for any participants in ‘special groups’ (i.e. those in a dependent relationship, vulnerable or lacking in mental capacity) (if applicable)?

N/A

5.4 Please give details of any payments or incentives being used to recruit participants (if applicable)?

No payments or incentives will be offered to recruit participants.

5.5 i) How will participant anonymity and/or data anonymity be maintained (if applicable)?

Two definitions of anonymity exist:

- i) Unlinked anonymity - Complete anonymity can only be promised if questionnaires or other requests for information are not targeted to, or received from, individuals using their name or address or any other identifiable characteristics. For example if questionnaires are sent out with no possible identifiers when returned, or if they are picked up by respondents in a public place, then anonymity can be claimed. Research methods using interviews cannot usually claim anonymity – unless using telephone interviews when participants dial in.*
- ii) Linked anonymity - Using this method, complete anonymity cannot be promised because participants can be identified; their data may be coded so that participants are not identified by researchers, but the information provided to participants should indicate that they could be linked to their data.*

- A- Research data, consent data, demographic information and IP addresses will be recorded while completing the survey. Because this data can be linked back to individuals, anonymity cannot be guaranteed at the point of data collection. This data will be stored within the iSurvey facilities on the University of Southampton servers. The security measures taken by iSurvey ensure that data is encrypted and is inaccessible to a third party. Demographic data will be linked to the answers provided as a way to analyse patterns in the data. Only if participants chose to leave their contact details for subsequent research will they be identifiable. Once the survey has been submitted, individual questionnaires can be removed if participants provide their participant number given at the end of the survey.
- B- In order to be recruited for this phase of research, participants will have left their contact details at the end of the survey. Therefore, participants will be known to the researcher. During online observation, participants will need to allow access to a Last.fm account that is linked to their Spotify. This will allow me to track the music that they listen to for the one week sampling period. Again, anonymity will not be promised at data collection.
- C- Interviews will take place with those who have taken part in the survey and online observation. Information from previous phases of data collection will be linked to individual participants as a way to obtain and expand upon information about particular

streaming practises and experiences. In addition to this, most interviews are likely to be conducted face to face. Therefore, anonymity will not occur at data collection.

At all phases of data collection anonymity cannot be guaranteed. However, subsequent material may report and publish individual responses and aggregated data. This will involve quotations from individual responses and so data will be anonymised once collected. Here, respondents will be referred to by code names, accompanied by their actual ages.

5.5 ii) How will participant confidentiality be maintained (if applicable)?

Confidentiality is defined as the non-disclosure of research information except to another authorised person. Confidential information can be shared with those who are already party to it, and may also be disclosed where the person providing the information provides explicit consent.

Participants will be guaranteed confidentiality at each phase of the study. Research material will not be disclosed to others unless they are an authorised person, such as the collaborators specified above and, if requested, my funding body.

5.6 (M*) How will personal data and study results be stored securely during and after the study? Researchers should be aware of, and compliant with, the Data Protection policy of the University. You must be able to demonstrate this in respect of handling, storage and retention of data.

Data will be anonymised and stored securely (initially on a password protected computer), backed up regularly and deposited in the University of Southampton's data repository, making the university the data controller. Once the data has been deposited it will be provided with a DOI and made accessible via open access. Because my research is funded by the EPSRC, certain aspects of data management are governed by the funding body. Consequently, all data I obtain will be securely preserved for a minimum of ten years from the completion date of my PhD.

5.7 (M*) Who will have access to these data?

The anonymised data will be made available by open access as a way for subsequent researchers to be able to reuse the data. The EPSRC, as my funding council, may also choose to access the data.

N.B. – Before you upload this document to your ERGO submission remember to:

1. Complete ALL mandatory sections in this form
2. Upload any letters of agreement referred to in question 3.1 to your ERGO submission
3. Upload any interview schedules and copies of questionnaires referred to in question 4.

Appendix C Online Survey

Ergo Number: 40150

Please read this information carefully before deciding whether to take part in this research. You will need to indicate that you have understood this information before you can continue. You must be aged 18 years or over to participate. By ticking the box at the bottom of this page and clicking 'Continue', you are indicating that you are aged 18 years or over and consenting to participate in this survey.

I am an iPhD Web Science and Music student studying how online music streaming platforms have the potential to significantly alter the ways we manage, consume and discover music. With a 500% increase in music streams since 2013, music streaming platforms, such as Spotify, Pandora and Apple Music, have emerged as significant sites for new and novel research from a variety of fields. My own research explores music streaming platforms from a unique perspective, investigating how music accumulated on Spotify could provide users with a means to construct, manage and perform particular types of online identities. This research is externally funded by the Engineering and Physical Sciences Research Council (EPSRC) and will contribute towards my doctorate. Your answers to the survey questions will be vital in informing my research.

The survey is expected to last approximately 10-15 minutes.

You have the right to withdraw from the survey at any point, which you can do by closing the web page. Once you have submitted your responses you may contact the researcher to withdraw your data for up to one month after the survey has been closed. Here, you will need to provide your participant number assigned to you at the end of the survey. Please make a note of this number as otherwise you cannot be withdrawn from the research once you have submitted your survey.

All data collected will remain confidential and will be anonymised when written up. Data collected will be stored in the secured system of the University of Southampton.

Statement of Consent

I have read and understood the information about this study. In consenting, I understand that my legal rights are not affected. I also understand that data collected as part of this research will be kept confidential and that published results will maintain that confidentiality. I finally understand that if I have any questions about my rights as a participant in this research, or if I feel that I have been placed at risk, I may contact Doctor Silke Roth, who is the researcher's supervisor, in the Faculty of Social Sciences, University of Southampton, SO17 1BJ, UK. Email: Silke.Roth@soton.ac.uk

I certify that I am 18 years or older. I have read the above consent form and I give consent to participate in the research described above.

If you give your consent, please tick the box

☐

Part 1- Spotify Music Streaming Practices

Approximately how long have you been using Spotify?

☐ Less than one month ☐ 1-6 months ☐ 7-12 months ☐ Between 1-3 years

☐ Between 3-5 years ☐ Over 5 years

Do you pay for your Spotify account?

☐ Yes ☐ No

Do you share your Spotify account with anyone else?

☐ Yes ☐ No

On average, how many times a week do you use Spotify to stream music?

☐ Once a week ☐ Twice a week ☐ 3-5 times a week ☐ Once a day

☐ More than once a day

When using Spotify, what service features do you most often use?

Please rank the options from most used (1) to least used (5).

☐ Charts ☐ Genres & Moods ☐ Discover Weekly ☐ Personal Playlists

☐ Search for artists or songs

Please specify if you tend to use other service features that are not listed above:

.....

How do you mostly stream your music choices on Spotify?

Please rank the options from most used (1) to least used (5).

☐ Complete albums ☐ Individual tracks ☐ Shuffle ☐ Queued tracks

☐ Repeat

Is your Spotify account mainly set to:

☐ Public ☐ Private

Part 2- Spotify Playlists

Do you create your own music playlists on Spotify?

☐ Yes ☐ No

On average, how often do you create a new personal playlist on Spotify?

☐ More than one a day ☐ Once a day ☐ Once every 2-3 days

☐ Once every 4-6 days ☐ Once a week ☐ Once a month ☐ Once a year

☐ Never

Once you have created a playlists, do you then add or delete tracks?

☐ Yes ☐ No

Do you tend to listen to different playlists at different times of the day?

☐ Yes ☐ No

b. Do you have Spotify playlists for:

Please tick all that apply to you.

☐ Gym ☐ Travel ☐ Party ☐ Date ☐ Dinner Party ☐ Night Out

☐ School ☐ Work ☐ Exercise ☐ Studying ☐ Chill Out ☐ Holiday

☐ Gardening ☐ Remembering People ☐ Remembering Places

☐ Remembering Events ☐ Moods ☐ Housework

☐ Other please specify

Part 3- Discovering New Music

Please indicate the extent to which you agree or disagree with the following statement:

I like to discover new music.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

Please indicate the extent to which you agree or disagree with the following statement:

Spotify helps me to discover new music.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

Which features do you use on Spotify to discover new music?

☐ Catalogue Search ☐ Discover Weekly ☐ Related Artists ☐ Radio

☐ Music recommendations from other users ☐ Other please specify.....

Do you tend to listen to the music that Spotify recommends to you?

☐ Yes ☐ Sometimes ☐ No

Please indicate the extent to which you agree or disagree with the following statement:

I like the music that Spotify recommends to me.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

Please indicate the extent to which you agree or disagree with the following statement:

Using Spotify has diversified my music tastes.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

Please indicate the extent to which you agree or disagree with the following statement:

I would like Spotify to recommend more diverse music choices for me.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

Part 4- Music and Identity

1. Please indicate the extent to which you agree or disagree with the following statement:

Music is an important part of who I am.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

2. Please indicate the extent to which you agree or disagree with the following statement:

Music allows me to express who I am.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

3. Please indicate the extent to which you agree or disagree with the following statement:

My music tastes are shaped by my life experiences.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

4. Please indicate the extent to which you agree or disagree with the following statement:

My music tastes are similar to those of my main friendship group.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

5. Please indicate the extent to which you agree or disagree with the following statement:

My music tastes are similar to those of my connected friends on Spotify.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

6. Please indicate the extent to which you agree or disagree with the following statement:

The songs in my Spotify music library reflect who I am.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

7. Please indicate the extent to which you agree or disagree with the following statement:

Spotify allows me to express who I am through music.

☐ Strongly agree ☐ Agree ☐ Neither agree nor disagree ☐ Disagree ☐ Strongly disagree

Part 5- Demographics

In the following questions we would like to know a little bit more about you.

What is your gender?

☐ Male ☐ Female Other :

☐ Prefer not to say

What is your age?

☐ 18-25yrs ☐ 26-35yrs ☐ 36- 45yrs ☐ 46-55yrs ☐ 56 – 65yrs ☐ Over 65yrs

☐ Prefer not to say

Thank you for taking the time to participate in this survey. Your responses will be extremely valuable to my on-going doctoral research.

If you wish to add any comments about the survey or elaborate on any of the answers that you have provided then please feel free to do so in the box below.

Appendix C

If you are really interested in my research and feel that Spotify is crucial in reflecting who you are as well as your music tastes online then please leave the following information so I may contact you about further phases of data collection:

Name:.....

Email Address:.....

Contact Telephone Number:.....

Appendix D Poster Advert for the Online Survey

**Study Title: Streaming Identity:
Constructions of User Identity on Spotify**

Researcher: Clarissa Brough

UNIVERSITY OF
Southampton

PARTICIPANTS NEEDED

**Do you use Spotify for
your music streaming?**



With a 500% increase in music streams since 2013, music streaming platforms are significant areas for new and novel research. My research aims to investigate how Spotify has the potential to significantly alter how we manage, consume and discover music.

I am looking for participants aged 18 years and over to participate in my study.

Participation involves completing a 10-15 minute online survey about your use of Spotify for music streaming. You can then decide whether you would like to participate in any further research.

This study has been approved by the University of Southampton's ethics committee.

<https://www.isurvey.soton.ac.uk/27877>

Ergo Number: 40150

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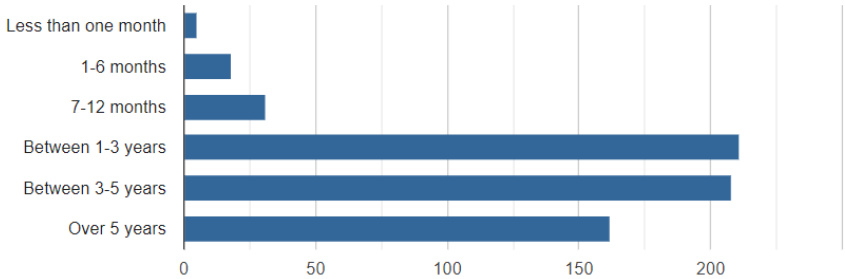
Ergo Number: 40150

Appendix E Online Survey Data

1 : Spotify Music Streaming Practices

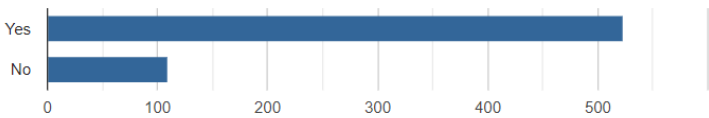
Question 1.1

Approximately how long have you been using Spotify?



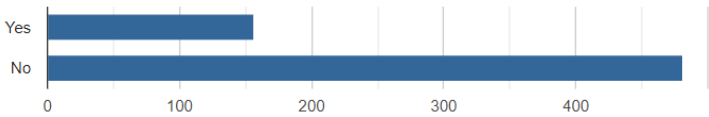
Question 1.2

Do you pay for your Spotify account?



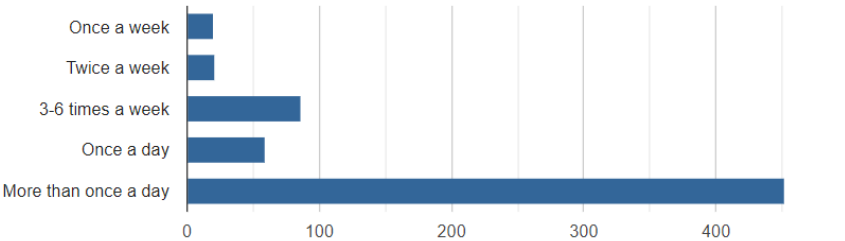
Question 1.3

Do you share your Spotify account with anyone else?



Question 1.4

On average, how many times a week do you use Spotify to stream music?



Appendix E

Question 1.5

When using Spotify, what service features do you most often use?

Please rank the options from most used (1) to least used (5).

	1st	2nd	3rd	4th	5th
Charts	42	21	38	81	429
Genres & Moods	29	71	173	293	55
Discover Weekly	38	102	260	143	82
Personal Playlists	391	125	40	40	33
Search for artists or songs	133	304	114	61	23

Ranking data is only shown tabular format

Question 1.6

Please specify if you tend to use other service features that are not listed in question 5:

Daily play list

Daily Mix (more than Discover Weekly)

Playlists others have made

Not sure if it's covered but the playlists Spotify generate for like 'songs to sing to in the shower etc.

song radio station

Daily Mix

Song/artist radio

Daily Mix

Radio daily mix

Often use the "create radio" function.

Actually I don't use anything beyond search I find most recommends not very good

Suggested playlists

I only use the last two

Made for you playlists

Playlist Radio Artist Radio

Music for dance teaching

Playing with their API

The 'Your daily Mix' and similar playlists generated by Spotify.

Recommended artists based on listening habits

Radio of a song

Your Daily Mix

Daily Mix

The daily playlists created for me by Spotify

Other's playlists

Genre radio

Artist radio

Radio

Daily Mixes

Other people's playlists

Album search

most of them have been removed by now...

I listen to a lot of playlists from friends and family using the social features

Daily Mix and Podcasts

Release Radar

Personal Library

Release Radar suggestions via "Browse"

Appendix E

Radio friends' playlists

Release radar

Release radar playlist

Throwback Thursday

Yes looking at what my friends are listening to and then looking up those songs/artists.

The Daily Mix playlists

I use my friend's playlist and playlists like "60's Rock songs" from someone (I searched that in app)

I use the ability to scrobble my songs to Last.fm which is the main reason why I use Spotify. The other main reason why I use it is because of the family plan which really cuts down the price of the service.

Friend's playlists podcasts

Release Radar

release radar

The Last.fm connectivity

Daily Mix (Not really Genres or moods)

Artist Radio

New music section

Release radar My Mix

song radio

Friend Activity Fans Also Like

New Music Friday Release Radar playlist artist radios

Also use the Release Radar playlist weekly

Seeing what Friends listen to on the sidebar

Yes follow others lists and stalk friends habits :)

related artists

curated playlists (i.e. RapCaviar)

Podcast

I mostly just listen to albums I've saved. That by far is my most used service as I rarely make or listen to playlists.

Radios

Daily Mixes

"Your Daily Mix" and the Radio feature

Shuffle

I use the daily mixes often

Podcast

Daily Mixes and Radios. I use those the most.

Suggested songs when creating a playlist.

Radio

Release Radar

other peoples' playlists

Daily Mixes

Release Radar

When visiting an artist's/band's "page" there's a feature that shows you other musicians that are similar to the one you're looking at. I've discovered a good portion of music through this feature.

Concerts

Release radar looking for new releases

Appendix E

Release Radar

Recently played daily mixes

Podcasts User created Playlists

Daily mix

Release Radar is amazing!

Spotify for Artists

Daily mix library

Daily mix and radio linked to artists or playlists

Release Radar

Daily mix

Your Daily Mixes

Radio

Daily Mixes

Radio stations similar artists

Also Daily Mix playlists

Daily mix

public playlists

Release Radar Browse: Discover About: Discovered on

Daily Mix playlists artist radio

Your Daily Mix

Daily Mixes

Recently Played Friend's playlists

Shared Playlists by other users

Radio based on song/playlist

Daily Mix & Release Radar

Daily Mix

Release Radar podcasts

Podcasts

artist radio

Crossfade

Daily Mix Friend activity feed

Daily Mix

Playlists from other users

Release Radar and Others' Playlists

Recommendations in the Discover Tab

I check out my friends' playlists to find new music

my personal library is where I store music I like so I often look there to find listening material. I also heavily use the recently played section.

Sometimes I just click a bunch of stuff and find music I like

[View this participant](#)

Radio

I often use the artist or song radio feature when I'm looking for a quick new playlist.

Song radio search public playlists

friends' playlists

Appendix E

I use the daily mix service as well

Release Radar Radio

Daily Mixes and Recommended Artists on home screen

Radio

soundhound and shazam to identify songs into Spotify playlists

Release Radar

I've connected my Spotify to Last.fm to see what I've been listening to.

Song Radio/Artist Radio

Podcasts

Other users' public playlists

YouTube (lots of obscure metal isn't on Spotify)

I use my personal collection when I'm not around Wi-Fi or haven't downloaded enough

podcasts

Daily Mixes

This is..... insert the artist

"Go to radio"

Yes album playlist or artist radios

Daily mixes and the friend music feed

Daily mix

Release Radar

I use the daily mix a lot

Saved songs

Saved songs - I use that the most

I like seeing what my friends are listening to

Shuffling all of my songs; Release radar; occasional other Spotify-curated playlists very occasionally
playlists from other users

overview new releases

podcasts

Other created playlists

JQBX

Following Peoples playlists

Radio

The running feature that was removed

[View this participant](#)

New Releases Discover Radio

My song library itself and release radar.

Daily Mix

Recommended playlists

browsing related artists

podcasts

Public Playlists

Radio and podcasts

Podcasts

Daily Mix

Appendix E

Song radio

Saved albums

radio and this is

Playlist radio

Daily mixes

Saved library of songs

New Releases Fans Also Like

popular songs in your region today

Release Radar

Radio from songs or playlists; Collaborative playlists; Discover albums; Podcasts

Friends feed

Album/Artist's radio

Made for me

API

"Release Radar" to keep up with new releases from musicians I follow. Also the "Friend Activity" tab to see what my friends are listening to

Other playlists friend feed

Other persons/labs playlists

Release Radar

Radio

Similar artists

Podcasts

new releases

Song radio/ playlist radio

Your daily mix

Community Playlists

Subscribed playlists

Podcasts

What /r/popheads told me to listen to

Artist radio

New Releases

Daily mix.

Daily Mix

Podcasts (4)

Release Radar

Used to use lyrics feature but they took it away :(

Friends playlists

Other listeners playlists

My Library

recently played

New Releases

Browsing friends playlists related artists Spotify radio

other users playlists

Podcast

Podcasts

Podcasts

Question 1.7

How do you mostly stream your music choices on Spotify?

Please rank the options from most used (1) to least used (5).

	1st	2nd	3rd	4th	5th
Complete albums	121	129	138	148	87
Individual tracks	121	204	162	116	22
Shuffle	291	105	91	83	50
Queued tracks	64	157	169	153	74
Repeat	35	32	60	109	375

Ranking data is only shown tabular format

Question 1.8

Is your Spotify account mainly set to:

Setting	Count
Public	385
Private	255

2 : Spotify Playlists

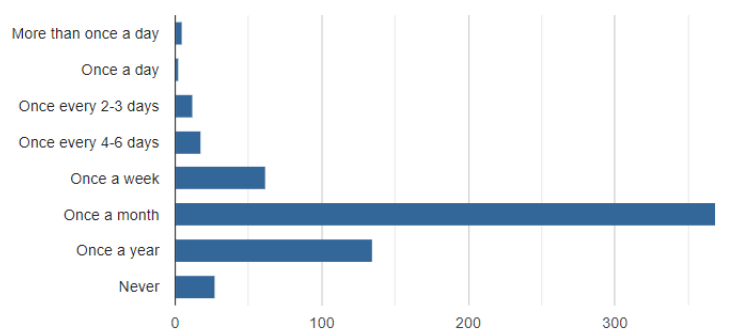
Question 2.1

Do you create your own playlists on Spotify?

Response	Count
Yes	580
No	30

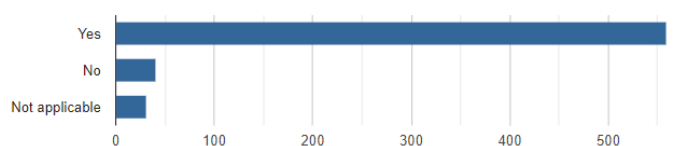
Question 2.2

On average, how often do you create a new personal playlist on Spotify?



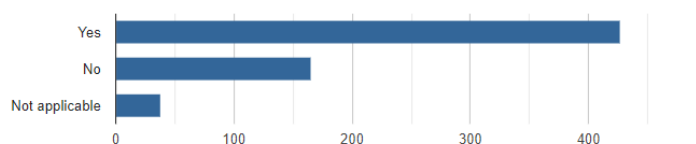
Question 2.3

Once you have created a playlist, do you then add or delete tracks?



Question 2.4

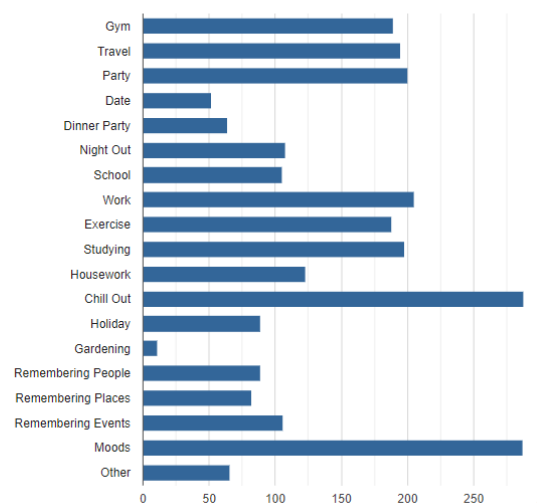
Do you tend to listen to different playlists at different times of the day?



Question 2.4

If you have answered yes to the question above, do you have Spotify playlists for:

Please tick all that apply to you



Appendix E

Question 2.4b

Please specify:

Seasons books

Have playlist diary where I catalogue songs associated with specific memories

Sleep and singing along to

Genre e.g.: Riot Grrl

Writing about a particular thing

Bands seen live

I create playlists for work teaching and researching music history

Lovemaking

Gaming

All my songs are in one playlist

Sleep

Playlist of a specific artist songs to sing artists I have seen perform live

Night cruise

Relaxing

Sharing w/ friends

Different genres

new tracks to check out new bands to listen to

decades

Gaming

I make playlists for different genres. I was studying to be a music major so I love all kinds of music and for that reason I don't consider going by specifically-made event playlists. Just creating subgenre playlists that correlate with each other well.

genres

Driving

Gaming Driving

driving

Showering and driving

Gaming

sex

planning a holiday Christmas

My playlists tend to be categorized by genres rather than activities but there are exceptions

They aren't all like specific. They have general moods that could be used in most situations.

Genre Atmosphere building

I have playlists for different genres (example: rock rap edm kpop etc))

To create a narrative experience.

Homework for live shows like pre- and post-gaming but metal shows

by genre loosely

Specific genres

TV Shows/Movies

Love-making

Appendix E

Concepts WIPs

day and night time playlists

Weather

Sleep

Sing along songs

Weather

Gaming

Genres

Collections of Songs that have similarities e.g., genre specific or utilising certain instrument

Very specific genre/song types i.e., "radio friendly indie pop"

Sleep/Relax specific genre playlists and I also make one for each season.

Remembering music

Monthly playlists.. i.e., Jun 2018

One to go to sleep to a few collaborative playlists with friends some general genre-playlists and one for when I'm back home after a night out and want to listen to music

playlist choice is not necessarily indexed by mood or activity but by state of mind.

Genres

Taking a walk Gaming

Updated weekly other songs similar to artist

Getting ready

I have playlists for different moods themes and more

friends favorites

Driving

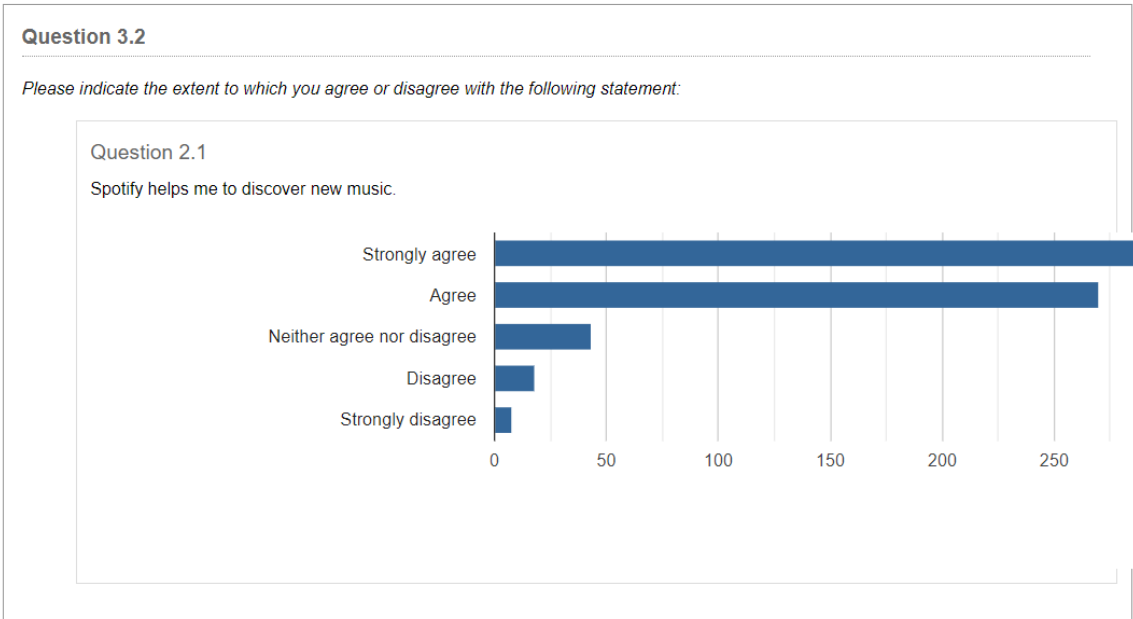
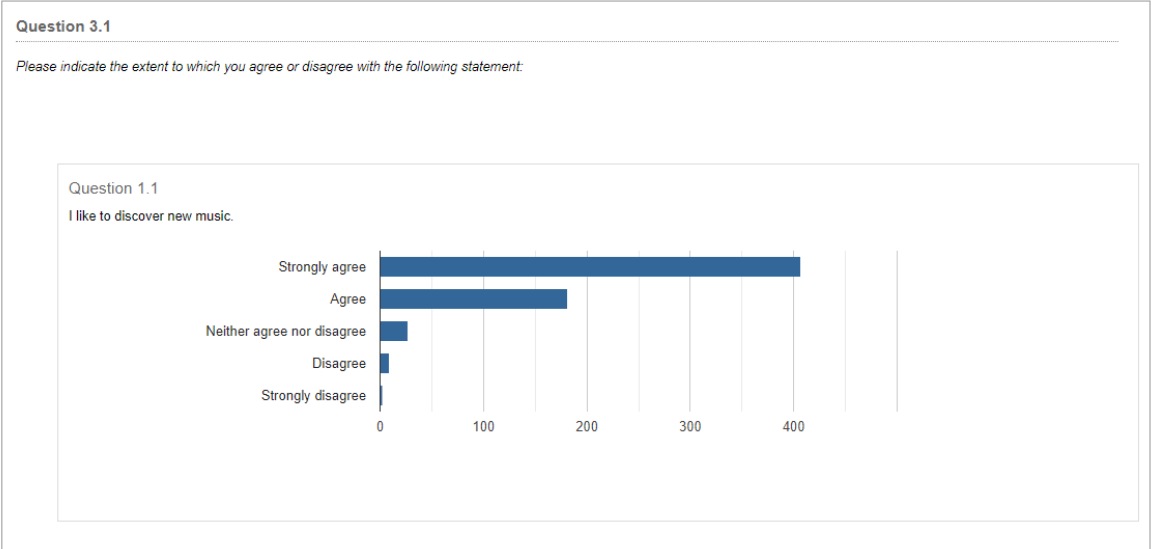
Seasons (fall winter spring summer)

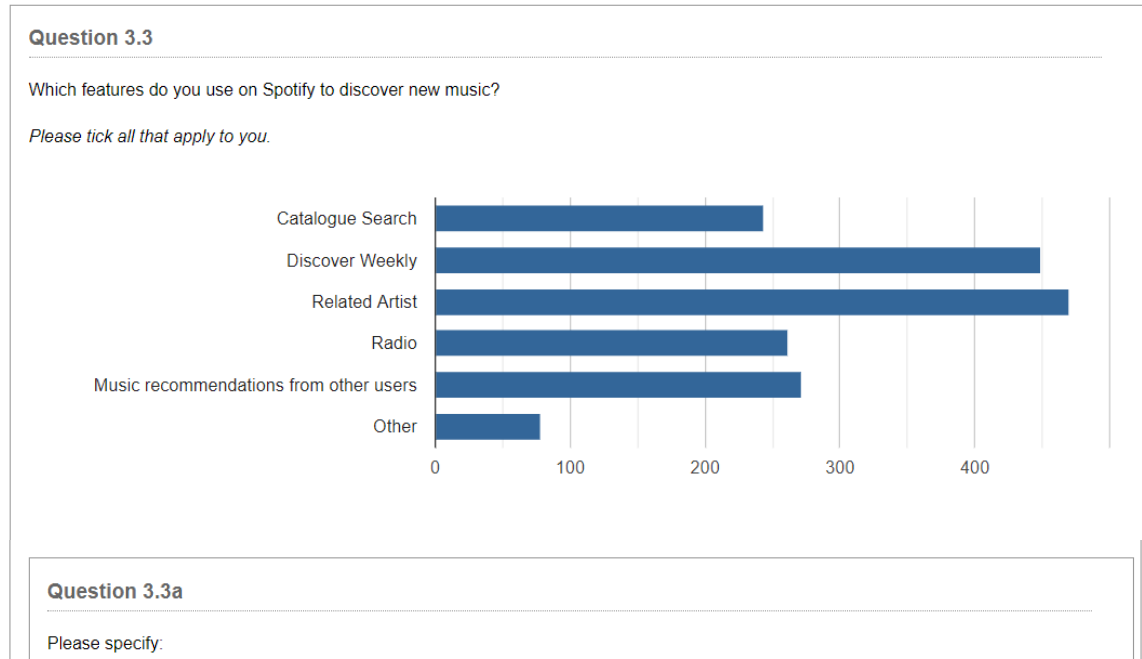
by genre

Getting really zooted

Night time

3 : Discovering New Music





If there is a song I like I add it to a new playlist. Then I look at the recommended songs that are suggested.

Daily Mix

Genre search or playlist

Browse genre/ mood

Suggested playlist

Shuffle

my children

Things like 'Nick Cave Radio' where Spotify suggests similar artists

Searching for songs to fit with playlist themes

Using the recommended function at the end of a playlist.

Radio non users

Search for artists I have read about

I find a band I like in Last.fm and look it up in Spotify

New music playlists

Discover section of the Browse tab Spotify curated playlists

rateyourmusic.com

playlists

Playlist-based recommended tracks

recommended playlists recommended songs on playlists daily mix

New Releases

Daily Mix

Lists on websites

Appears On

Release Radar

Daily mix

LastFM

Daily Mix

/r/spotify about:discovered on

Release Radar

Spotify playlists that update regularly

Usually if I feel like listening to new music I use other sites such as Rate Your Music

Links from artists

Appendix E

recommended songs for playlists

last.fm integration

Playlist recommendations

Strangers' playlists I find on /r/spotify

Browse feature in Discover subcategory

Spotify playlists (example: rapcaviar)

Release Radar

Release Radar

New Releases

Friends and their playlist

A song that been played randomly after a son that I choose

Similar songs when finishing a playlist

Daily mixes

Release radar search for things I hear of elsewhere outside Spotify

fans of this artist also like

Release Radar

Release radar

Playlists including artists I like

artist friends tell me about

I read the artist bio and sometimes see what other artists they have played with or what bands they previously were with/if they had solo careers.

Discover Albums; Playlists that come from search results

Spying on friends' feeds

API.

/r/spotify

Release Radar

New Release and Fresh Finds Playlist

Playlists by others

none

Similar songs to those in your playlist

New Music Friday Playlist

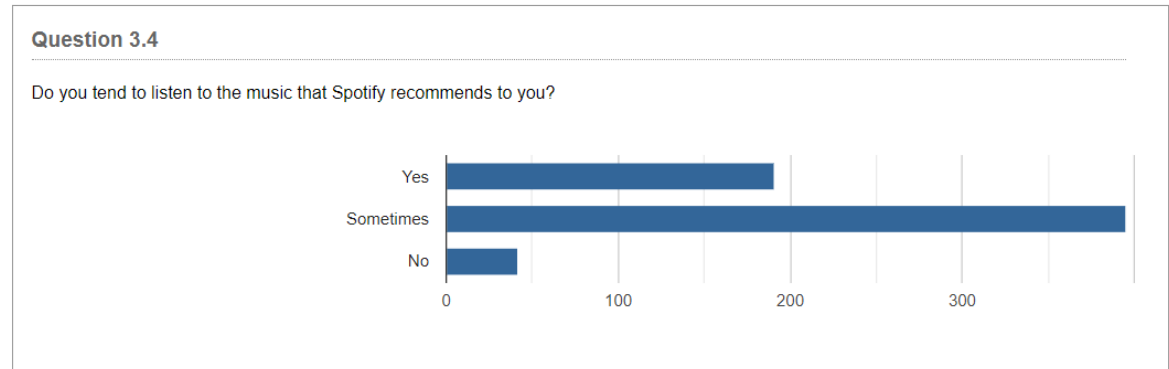
New Releases

Recommended Songs in playlists Create Similar Playlist function

Spotify playlists

Searching for new albums that artists I follow have put out. Or just randomly on playlists

When I finish an album and it automatically plays related songs



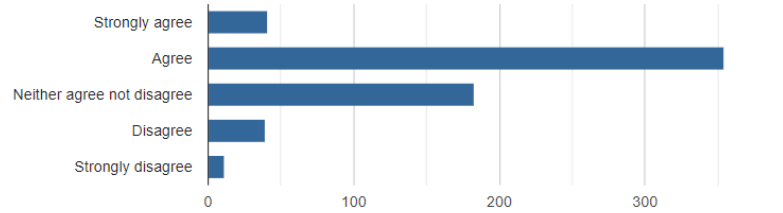
Appendix E

Question 3.5

Please indicate the extent to which you agree or disagree with the following statement:

Question 5.1

I like the music that Spotify recommends to me.

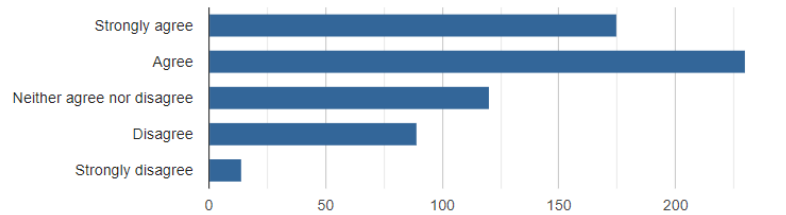


Question 3.6

Please indicate the extent to which you agree or disagree with the following statement:

Question 6.1

Using Spotify has diversified my music tastes.

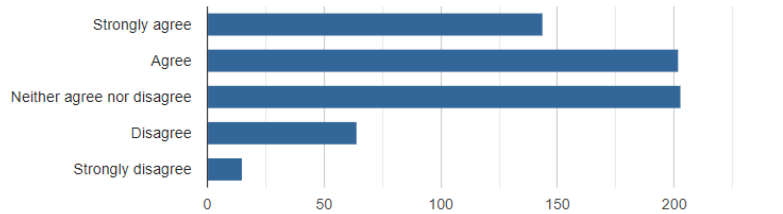


Question 3.7

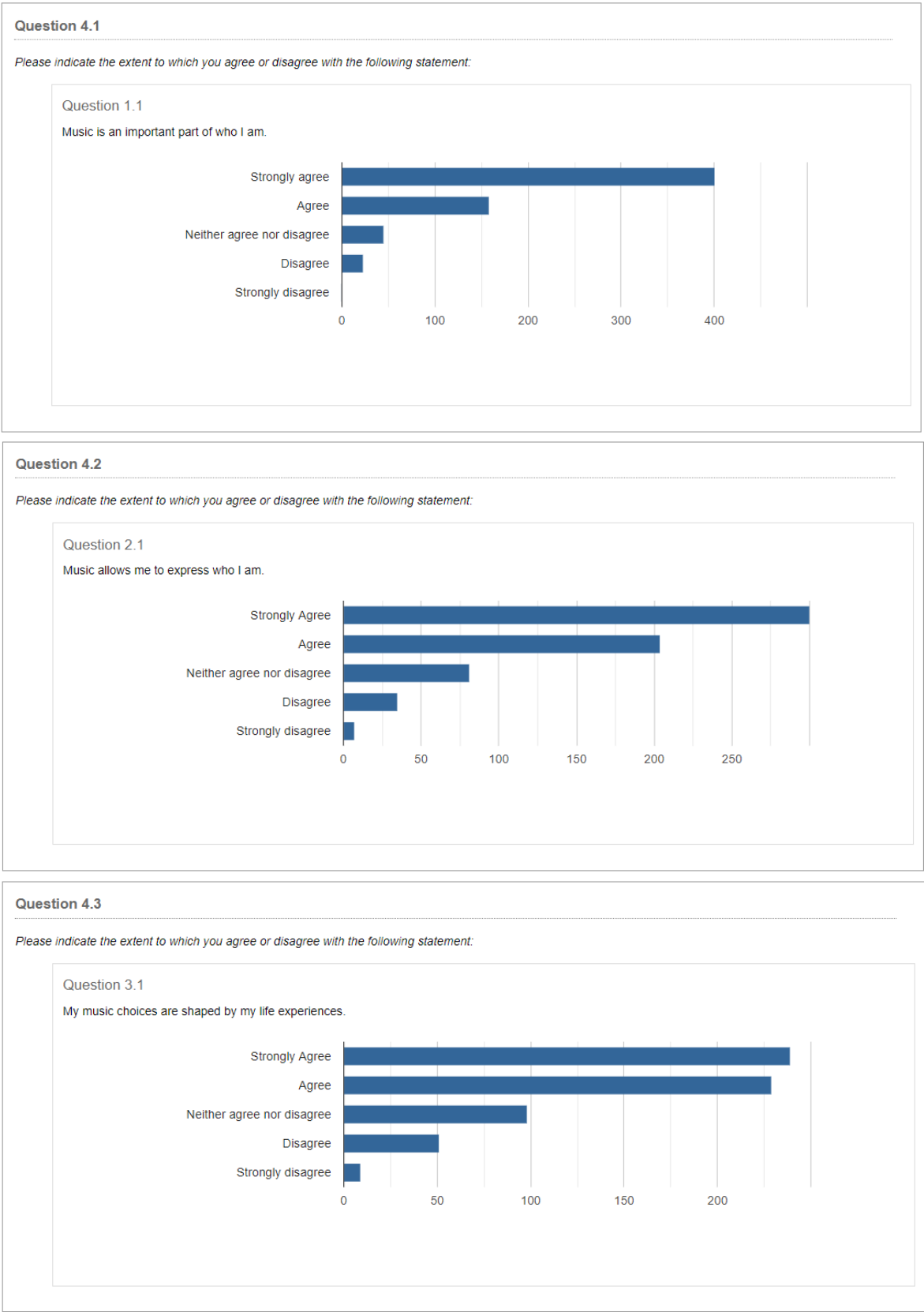
Please indicate the extent to which you agree or disagree with the following statement:

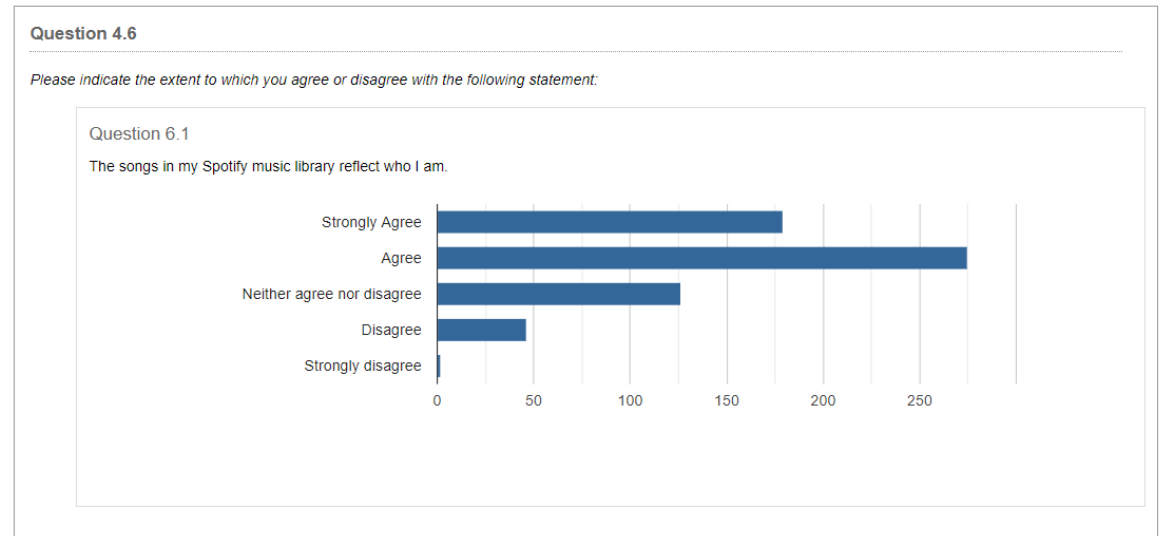
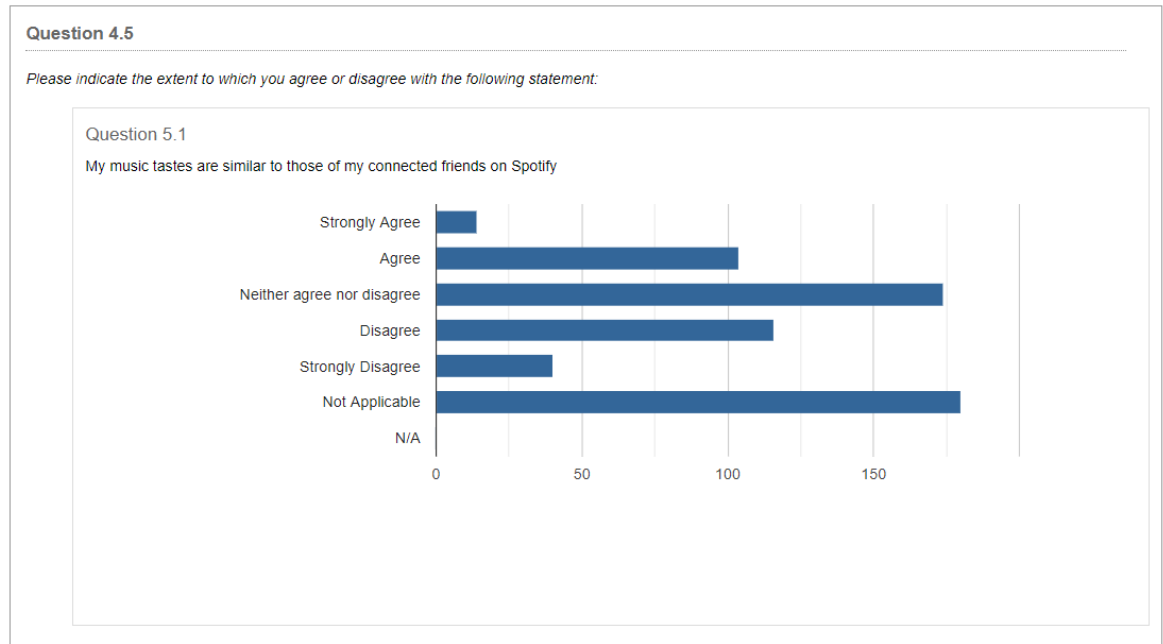
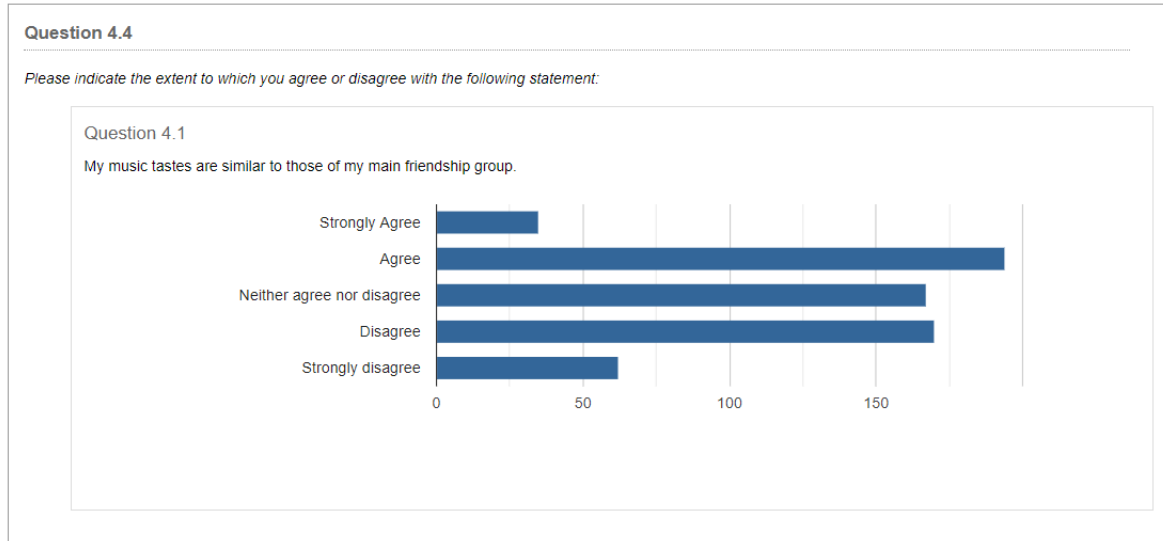
Question 7.1

I would like Spotify to recommend more diverse music choices for me.



4 : Music and Identity



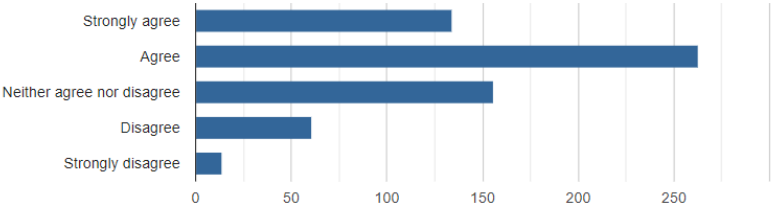


Question 4.7

Please indicate the extent to which you agree or disagree with the following statement:

Question 7.1

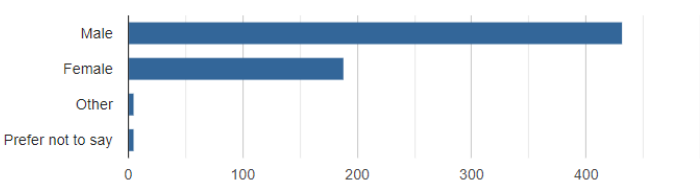
Spotify allows me to express who I am through music.



5 : Demographics

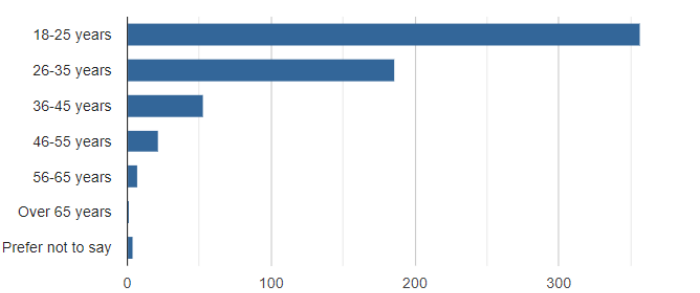
Question 5.1

What is your gender?



Question 5.2

What is your age?



6 : Thank You!

Question 6.1

If you wish to add any comments about the survey or elaborate on any of the answers that you have provided then please feel free to do so in the box below.

Though I do not share my Spotify account if I am creating a playlist it usually on my partners account we have a family membership this is because we do it together. Maybe it's for an event or a trip and then I just follow the playlist from my account.

Appendix E

With regard to diversification of tastes and Spotify providing more diverse genres/music: It appears easy for Spotify to make a strange assumption about your music tastes and stick with it (mine has decided I'm into Christian Rock which... I'm not) and greater diversity would hopefully stop this

I generally use Spotify too listen to music I remember but don't want to own. Recommendations are poor as they are narrow and based in the mainstream (or are niche completist i.e. all things in X rather than interesting or good things in X). Once you look outside the mainstream the catalogue is very thin. I've been using digital music since the late 90s but don't do piracy (just personal choice as the son of a creative).

I wonder if Spotify had actually lessened my music diversity as you tend to look up the same things or those that you remember the name of. By contrast with CDs and physical media you choose what to play by visually scanning the shelf and colours and album art stand out instead of just a list of text on Spotify. Spotify stops me playing an old album that I may have forgotten about or something eclectic that I had forgotten. On the other hand if I use social media or musical news reviews I can then look up the music straight away rather than wait to find it in the shops. I think Spotify takes away the emotional connection to albums but replaces it with a broader spectrum of possibilities. Whilst Spotify increases the reach of musical artists it also makes it harder for them to enhance their story or history. For example no longer do we read the album notes or gain a deeper understanding from having the lyrics printed. Also Spotify changes the marketing tactics of record labels for example: placing a pretty lady with no clothes on the album won't stand out in a list of names.

Using the 'related artist' feature is the most interesting part of Spotify (in finding new music) since playlists are often more closely tailored in a way the suggestions for additional songs for a playlist cannot really catch and the discover charts and things are much too general.

I don't pay per se Spotify is included in my mobile phone contract. I would probably pay if I didn't have that though. I don't really use the social features of Spotify beyond the sidebar on desktop that shows who's listening to what I don't really know that the social features are. I don't really think about other people seeing my playlists except the very rare times that I've created them specifically to share. If I put together a playlist for an event or party then I might think about it more carefully but more to make sure it's balanced and will appeal to lots of people rather than because of what it says about me.

Usually use BBC DJs to find new music and add them to new play lists. Spotify's suggested music is usually very vanilla and I get the impression it's more how much they have been paid to put a song in a playlist rather than how good the music is

I think it's also fair to say that my music choices have had an impact on life experiences.

Only intermittently use Spotify for finding more info on artists and songs that I have heard and can't track down any other way.

It would be interesting to have some questions on shared accounts. I share with my family including young kids who have STRONG opinions on music! Our different tastes influence each other in some ways but I am not sure how.

I find listening to music is less about expressing who I am and more about how I feel at any given time.

I still buy CDs as I feel it is important to have physical copies of albums but Spotify has enabled me to 'try out' new music in a way I never could before. I've found so many new artists and reconnected with bands I loved in my teens through it.

I know many of the songs that I added to my playlist before installing Spotify. I added more songs that Spotify played automatically for me whenever I shuffle my like list.

Spotify is something that I use to share music with my son. Listening to a few tracks after school is part of our routine - my Spotify lists therefore reflect our relationship as much as it does my personal taste choice and memories.

Some of the questions I didn't know the answer to such as is my Spotify set to public or private I even opened Spotify and couldn't work out the answer! So you might want to add don't know? Also I don't listen to music often I don't connect it to my identity I prefer to listen to wordy things such as radio 4. I

have Spotify as it's quick and easy to whack on when people come over and I can stick a mood on.

I use Spotify as my main way to listen to music and mainly as a way to enhance concentration (e.g., while writing). I deliberately don't connect with any of my friends through Spotify. To me the music that I listen to is quite a private matter. As such it is important to my identity but not to the public performance of my identity. That's why I wasn't sure how to answer the questions on 'expressing my identity' because I am not 'expressing' it TO anyone other than myself. Initially I found that Spotify made great new recommendations but over the last couple of years haven't really made any exciting new discoveries. I feel that its algorithms rely too much genre types (i.e., it recommends anything that qualifies as 'indie' without recognising distinctions).

Streaming music on Spotify (and music in general) used to be a much bigger part of my life but podcasts and audiobooks have increasingly taken over. I now listen to podcasts whenever I'm doing an activity that doesn't require much concentration (e.g., housework commuting gym) and listen to music when I need to focus.

I usually use Spotify for the gym.

I've been with Spotify since I was 16. At different points in my life I have used it very differently. When I was younger it was really important as a representation of my musical identity I used the share playlist feature more and connected more on it. Now I use it to study or work to with general mood playlists and background music. And the occasional playlist I can download to listen on the go.

Your survey seems to assume I have a single homogeneous group of friends. In reality I have different circles.

I hate algorithms. I'm tired of being forced to listen to one genre at a time or having to make new playlists. Would love BPM search function that spans multiple genres. Would prefer not to be facially profiled because of music preferences. Spotify can be stifling.

Spotify for discovery of new music - I have discovered lots of things but it is rarely a revelation - generally more of the same. Experience with other things in the past - e.g., lastFM felt much more likely to come across something 'revelatory' but that may be an illusion based on the sense that those services were more 'niche' rather than mainstream in the first place...And "If you are really interested in my research and feel that Spotify is crucial in reflecting who you are ..." I am really interested in your research but no Spotify is not crucial in reflecting my identity or personal tastes... You might want to look at that in case you don't really require an endorsement of all three in such strong terms...

I had to rate things 1-5 that I don't use in order to be able to continue with survey so it doesn't entirely reflect my usage & my later answers (n/a) will contradict as a result.

I mostly use music to vicariously understand experiences. I don't really believe the music I listen to reflects who I am.

Making playlists that conform to certain mood length and progression restrictions is a fun challenge and the results are often a condensed look at how I see life in general.

Very interesting work! I'd love to read more

I like the music suggestions from Spotify that play after a playlist ends and use that to discover new music

I put strongly agree to Spotify helping me find new music while disagreeing on tending to like the music Spotify recommends. This is because I don't like most of the music I'm recommended (I would say that's due to me being picky more than a bad algorithm) but every now and then find a hidden gem in my recommendations. There are many songs and artists in my library who accurately reflect who I am which is a part of me liking said songs and artists. But there are also many songs and artists who do not reflect me at all and I enjoy the music for other reasons. This is why I put neither agree nor disagree because my library as a whole is a mixed bag.

Appendix E

I like to create playlists that explore music history e.g., dance music of the 60's and 70's cutting edge music from the 40's to the 80's. Nearly all my listening is part of this research.

Spotify did a huge mistake when they tried pushing EVERYONE to listen to Drakes new album. In that sense Spotify diverted from the path of recommending diverse music to each person's taste. Additionally they have an algorithm that slightly nudge their music suggestions in discover weekly towards the most selling artists that are relatable to said personal taste. This is a sad occurrence. :(Don't know where it fits but thought it might be relevant.

I really do think that my taste in music and Spotify playlists are an integral part of who I am. I love dragging songs and order them so the album covers go well together when you see the playlist cover. I love making playlists for personal enjoyment but also for my friends. I keep all my playlists and listening to old playlists evoke such a wonderful feeling of nostalgia.

I prefer to have my account private I do not wish for anyone to know what I'm listening to.

This was great. Not too hard but also made me think a bit about my usage. Good luck from one researcher to another. And rock on!!

I really liked the questions you had in this survey and wish you the best of luck with your research! :) Music and research is a great topic and I love how the two can intersect in so many ways.

Thanks for creating this survey! It has made me reflect on how Spotify has changed my taste and interest in music.

The music "expresses" who I am questions was weird. It doesn't define me its just something I like to listen to. Do you mean like how goth people listen to metal or whatever. Spotify allows me to listen to all genres and music from many centuries. I don't feel like I belong to a certain group of people. If I like a song I like there's not more to it.

While I wouldn't consider music to be a key part of my identity I do listen to music on Spotify many times every day and I do feel that Spotify has helped me to form more opinions on the music I enjoy and stay more engaged with recent releases from artist I enjoy. Music has definitely become a bigger part of my life since I bought a Spotify subscription.

good luck with your research! by the way I answered no to the question asking if I pay for Spotify because I do not personally pay the bill but my account is a part of a family plan.

I didn't like how some of the questions asked for ranking. It felt like it didn't really apply. I was trying to rate each feature 1-5 instead of rank them I think rating makes more sense.

I think some of the 1-5 questions lack the option of 'don't use' or the like of it. as I personally put '1' as something I don't use ever. I am interested in your research though so please contact me for the later phases. I also feel the pain of doing a research :). Good luck.

I am a big fan of Spotify and am happy to see someone using it in such a capacity for research. Great job on the survey and good luck with your doctorate.

I have a single playlist that I have been building since 2012 and it has over 4000 songs in it

Interested in where you're going with this; I can see a lot of angles that this sort of research could lead down.

Music allows me to express who I am. Spotify is neutral there but it is the music that's important. Spotify itself isn't an expression of identity expect that it is marginally better than iTunes amazon and pandora at allowing me to access music I like when I want to play it. But Spotify isn't part of that identity and if something better comes along I'd move my playlists and not feel a loss.

It is a shame to see a lack of change with how much Spotify has grown in the past few years. I feel the desktop and mobile interface could be improved further although they are different now.

On the section to rank topics 1 to 51 found that I don't use multiple examples. I forgot the exact words but I don't use recommended or discover weekly

I use a service called Tidal to listen to entire albums as it's lossless so the music quality is higher. See when I listen to an entire album I sit down and focus on the music so I require a higher sound quality which is why I use Tidal for albums but when I'm just gardening or what not I'll throw on my playlists on shuffle

I am a musician

I miss last.fm data and recommendations from when it had a sprawling community. Spotify is in many ways more limited sadly.

In some ways Spotify's current model attempts to engage the user into similar songs and tries not to diversify the genres they listen to. Not that it's a bad thing but I feel it feeds into more anti-social which contrasts to the social aspect of their platform (linking to Facebook etc.) it's a very personal experience to me listening to Spotify and that's what I desire mainly.

For the first 2 years after the feature was released in 2015 I didn't miss a single discover weekly track. When I had been through each week's playlist I would mostly shuffle my entire library of songs. This exposed me to a lot of new music I love and focused my taste on a narrower set of genres.

I personally love the Friend Activity feature. If I see a friend has similar taste in music I go to their profile and hope their profile is mostly public so I can see what else they like and find new music that way. It's a major bummer when people put all their Spotify accounts on private.

The weather affects a lot of my music choice more than anything. I find it hard to listen for example bon iver in summer.

Spotify has helped me learn about and listen to a lot of interesting popular and indie music but it's not great for listening to art music. That is I also listen to a lot of classical music (and if anything this is a larger part of my identity than indie rock/pop) and while Spotify has an excellent library it's discovery and management features are not well suited to classical music *at all*.

Spotify is pretty good I wouldn't pay for it without discounts though. Came here from /r/spotify

As another Ph.D. who loves data this is very interesting to me. Feel free to contact.

I would like to use Spotify more like an iTunes library - adding all of my songs to my Spotify library but it limits the amount of songs you can add. This is the biggest downside in my opinion. I also use Last.fm - so Spotify's integration with that is also a big reason I use it. Lately I've been using Spotify for podcasts even more than music but perhaps this is just a phase :)

I hear a lot of different music and I cannot be the person because I can hear Mexican Traditional music and then German Trapp and then techno is music I like. But can't define me

I use Spotify as more of a music discovery tool than anything else. I don't make my own playlists but that's partially because I haven't explored Spotify's music collection enough or developed my music taste enough to create my own.

Spotify does not allow me to express who I am through music but rather through curation through sharing playlists. The music that you like does not define your identity but curation of any media is expression and expression is inherently of identity if authentic.

I love Spotify and could not live without it. it's a crucial part of who I am

100% on music defining who I am and being a major part of my life! I would love for you to contact me for further questions!

Hope this helped always happy to help a Lady Gaga fan good luck with your studies!!

Appendix E

The more ways Spotify can recommend new music to me the better! I found something on Spotify Insights called Musical Map: Cities of the World that helps a ton. I know some people who are published artists on Spotify and I could ask them some questions if need be.

If I could choose 1 question that I would value very much it would be the one about Spotify diversifying my music taste because it did really do and I also notice that my friends` music taste has diversified a lot since they use Spotify.

Playlists are critical!! They're the best part of Spotify- curating playlists around a specific identity/aesthetic. But playlists limit discovery of new songs. Also the Spotify-curated playlists are a whole lot of sponsored songs. The songs are just what everyone's already listening to or talking about. I have to get on YouTube to get the deep cuts. lol.

I'd love to go into further detail about Spotify if you have any more questions about it. Preferably through email but text can work if needed.

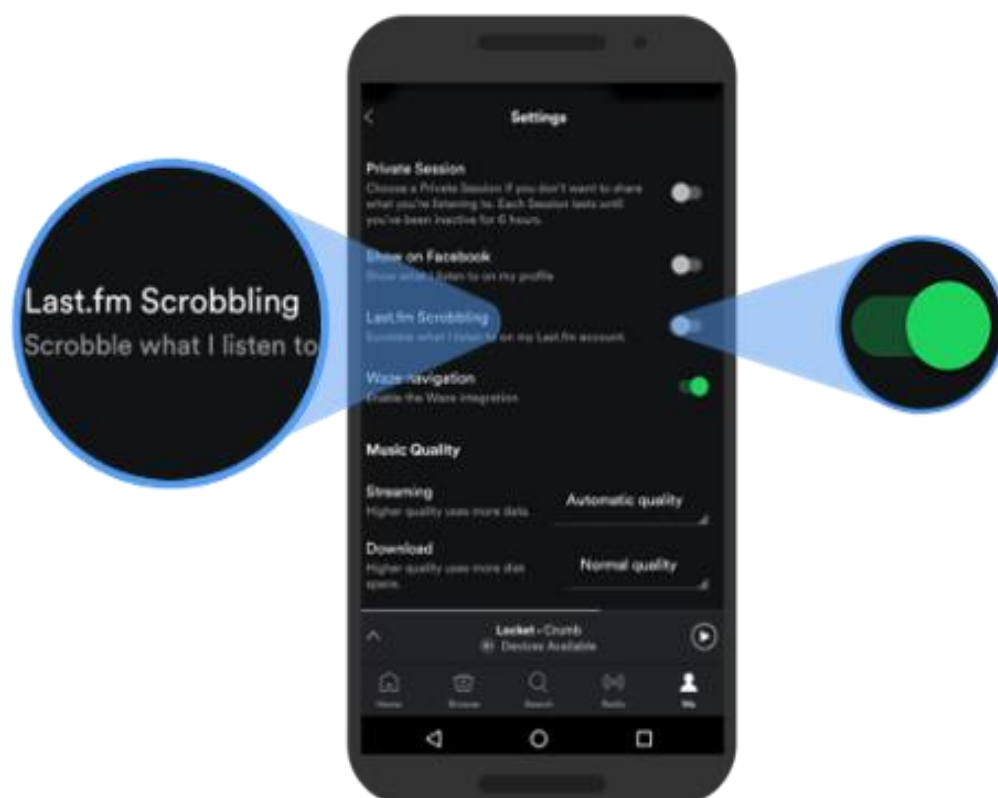
Appendix F Step-by-Step Guide for Setting Up Scrobble on Spotify

First, you need to set up a Last.fm account with a new username and password for this study. To do this, please visit <https://www.last.fm/join> and follow the instructions. Make sure you read the site's terms and conditions before setting up an account.

Scrobble on Android

To connect:

- Tap **'Your Library'** in the menu at the bottom of the screen.
- Click on the **'Settings'** icon- .
- Next to **'Last.fm Scrobbling'**, tap the slider to switch it on (this will turn it green).
- Enter your Last.fm username and password.
- Tap **'OK'**.



To disconnect:

1. Head to **'Settings'** and switch **'Last.fm Scrobbling'** off (this will turn the slider grey).


Scrobble on an iPhone

To connect:

1. Click on '**Your Library**' in the menu at the bottom of the screen.
2. Tap on the settings icon- 
3. Select '**Social**'.
4. Under '**Last.fm**', next to '**Scrobble**', tap the slider to switch it on (this will turn the slider green).
5. Enter your Last.fm username and password.




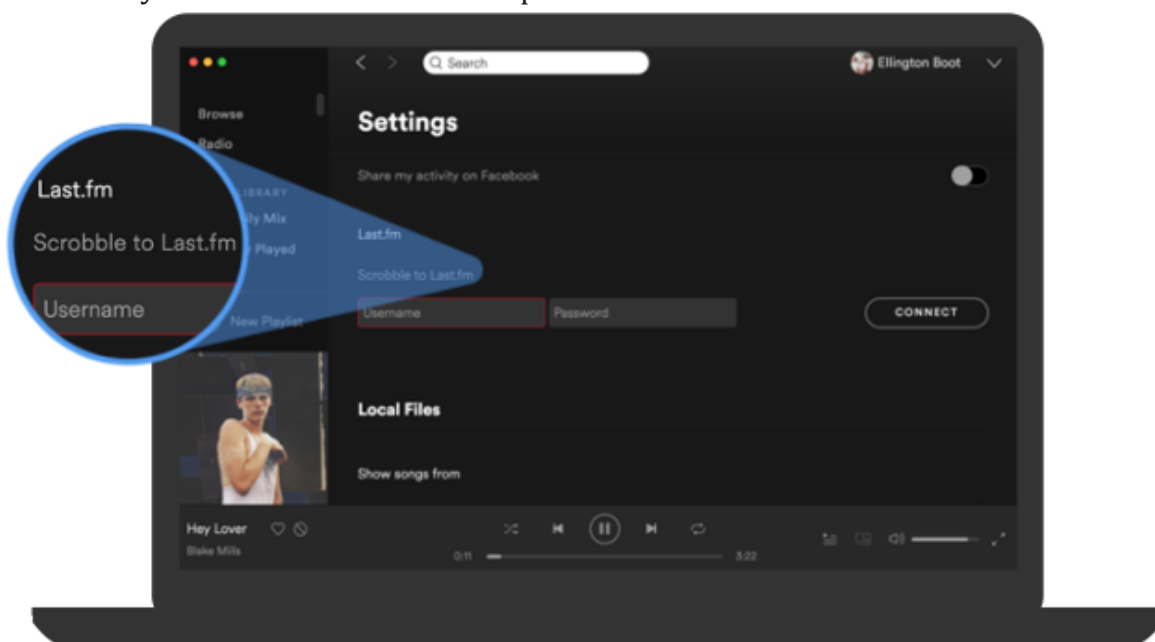
To disconnect:

1. Click on '**Your Library**' in the menu at the bottom of the screen.
2. Tap on the settings icon- 
3. Select '**Social**'.
4. Next to '**Scrobble**', tap the slider to switch it off (this will turn the slider grey).


Scrobble on a Desktop

To connect:

1. In the top-right corner of the app, click  and go to '**Settings**'.
2. Under the '**Social**' heading, click '**Connect to Last.fm**'.
3. Enter your Last.fm username and password and then click '**CONNECT**'.



To disconnect:

1. In the top-right corner of the app, click  and go to '**Settings**'.
2. Under the '**Social**' heading, click '**DISCONNECT**' under '**Last.fm**'.

Scrobble on an iPad

To connect:



1. Tap on the '**Settings**' icon-
2. Select '**Social**'.
3. Under '**Last.fm**', next to '**Scrobble**', tap the slider to switch it on (this will turn the icon green).
4. Enter your Last.fm username and password.



To disconnect:



1. Click on the '**Settings**' icon-
2. Select '**Social**'.
3. Under '**Last.fm**', next to '**Scrobble**', tap the slider to switch it off (this will turn the icon grey).

You are advised after the observation period and subsequent interview to either change your Last.fm username and password or delete your account

Appendix G Participant Information Sheet for Online

Observation

Study Title: Streaming Identity: Constructions of User Identity on Spotify

Researcher: Clarissa Brough

ERGO number: 40150

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 then be asked to sign a consent form.

What is the research about?

I am an iPhD Web Science and Music student studying how online music streaming platforms have the potential to significantly alter the ways we manage, consume and discover music. With a 500% increase in music streams since 2013, music streaming platforms, such as Spotify, Pandora and Apple Music, have emerged as significant sites for new and novel research from a variety of fields. My own research explores music streaming platforms from a unique perspective, investigating how music accumulated on Spotify could provide users with a means to construct, manage and perform particular types of online identities. This research is externally funded by the Engineering and Physical Sciences Research Council (EPSRC) and will contribute towards my doctorate. The online observation, which is one phase of my research, specifically aims to ascertain the frequency of music streaming, the types of music being streamed and typical weekly streaming patterns.

Why have I been asked to participate?

You have been asked to participate in this study as you are a current and active Spotify user. Additionally, in a previous phase of research, you also indicated that you use music on Spotify as a way to express parts of your identity.

What will happen to me if I take part?

To take part in this study you will need to create a new Last.fm account, even if you currently have one. In setting this up, you will have to agree to Last.fm's terms and conditions of use. Following this, you will be required to activate the scrobble log function on Spotify. This will connect your Spotify account to your Last.fm account, meaning that any music streamed on

Spotify will be logged on Last.fm. In order to do this, go to your Spotify account settings and click the 'connect' button under the Last.fm option. I will need access to your Last.fm account during the one-week observation period. While online observation is taking place, stream music through Spotify as you typically would in a week. I will sporadically check your Last.fm scrobble logs during this time and take screenshots of the information. After the sampling period and subsequent semi-structured interview has ended, you are advised to either change the log in details for your Last.fm account or deactivate it.

Are there any benefits in my taking part?

By participating in this research, you will be adding to new knowledge about the uses of Spotify and assisting in research that will contribute towards a doctorate.

Are there any risks involved?

There are no risks involved in taking part in this study.

Will my participation be confidential?

To signal your interest in this study you provided your contact details. Therefore, you will be known to me. During online observation, I will need access to your Last.fm account, which is linked to Spotify. This allows me to see the music you stream during a one-week sampling period. Therefore, anonymity cannot be promised at data collection. Subsequent material may report and publish individual examples and aggregated data. At this point data will be anonymised and code names will be used to refer an account of an individual's music streaming.

Participants will be guaranteed confidentiality at each phase of the study. Passwords for Last.fm accounts will be stored on a password-protected computer and will not be duplicated or shared. Other than your streamed music, no personal information can be obtained from your Last.fm account. Research material will not be disclosed to others unless they are an authorised person, such as my research council.

What should I do if I want to take part?

If you would like to take part in this study, please carefully read and complete the consent form.

What happens if I change my mind?

You have the right to withdraw up to one month after the completion of all phases of research (online survey, online observation and interviews) without your rights being affected. You will need to indicate whether you wish to withdraw from only the online observation or all phases of

data collection that you have been involved in. If you decide to withdraw, data collected about you will be destroyed and will not be included in any future written material.

What will happen to the results of the research?

Individual participant responses may be included in future written material, including my thesis and possible publications. Participants will also be able to request and obtain a copy of the results if desired.

All research data will be anonymised and stored securely, backed up regularly and deposited in the University of Southampton's data repository. This makes the university the data controller. Once the anonymous data has been deposited it will be made accessible via open access. This will allow future researchers to be able to reuse the data. Because my research is funded by the EPSRC, certain aspects of data management are governed by the funding body, who may also choose to access the data. Consequently, all data I obtain will be securely preserved for a minimum of ten years from the completion date of my PhD.

Where can I get more information?

If you require more information or have any questions about this study then please feel free to email me (Clarissa Brough) at Spotifyresearch2018@outlook.com or my PhD supervisor, Dr Silke Roth at Silke.Roth@soton.ac.uk.

What happens if something goes wrong?

In the unlikely case of concern or complaint then please contact the Research Integrity and Governance Manager on 023 8059 5058 or email rgoinfo@soton.ac.uk.

Thank you for taking the time to read the information sheet and for considering being part of my doctoral research. Your participation will be greatly appreciated.

Appendix H Online Observation Consent Form

Study title: Streaming Identity: Constructions of User Identity on Spotify

Name of Researcher: Clarissa Brough

Ergo Number: 40150

Please initial box

1. I confirm that I have read the information sheet for online observation dated 19.03.2018 (version 1) for the above study.
2. I confirm that I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
3. I confirm that I am over 18 years old.
4. I confirm that I am happy to set up a Last.fm account and provide access to that account during the specified sampling period.
5. I agree to the researcher recording scrobble log information held on my Last.fm account.
6. I confirm that I have agreed to Spotify's terms and conditions of use and will consent to the terms and conditions of Last.fm.
7. I understand that my participation is voluntary and that I am free to withdraw up to one month after all phases of research has been completed without giving any reason and without my rights being affected.
8. I understand that my participation will be confidential.
9. I understand that information collected about me will be anonymised and stored in the University of Southampton's data repository for a minimum of ten years and be made available via open access.
10. I understand that anonymised data will be published in a doctoral thesis and could be used in future publications.
11. I agree to take part in the above study.

Data Protection. *I understand that information collected about me during my participation in this study will be stored on a password-protected computer and deposited in the University of Southampton's data repository. All files containing any personal data will be made anonymous.*

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person	Date	Signature

taking consent

Appendix I Online Observation Participant Information

Interviewee ID	Gender	Age	Duration of Spotify Account	Account Type	Sharing of Spotify Account	Frequency of Streaming	Most used service feature	Least used service feature	Most used way to stream on Spotify	Least used way to stream on Spotify	Spotify Account Setting	Creation of own playlists	Frequency of playlist creation	Playlist modification after creation	Level of agreement to 'Music is an important part of who I am'	Level of agreement to 'Music allows me to express who I am'	Level of agreement to 'Spotify allows me to express who I am through music'
In-01-F	Female	26-35 years	Between 3-5 years	Free	No	More than once a day	Discover Weekly	Charts	Shuffle	Repeat	Private	Yes	Once a year	Yes	Agree	Agree	Neither agree nor disagree
In-02-F	Female	18-25 years	Between 1-3 years	Paid	No	More than once a day	Personal Playlists	Charts	Shuffle	Repeat	Public	Yes	Once a week	Yes	Strongly agree	Strongly agree	Agree
In-03-M	Male	18-25 years	Between 1-3 years	Free	No	More than once a day	Genres & Moods	Personal Playlists	Repeat	Queued tracks	Public	Yes	Once a month	Yes	Strongly agree	Agree	Agree
In-04-M	Male	18-25 years	Between 3-5 years	Paid	No	More than once a day	Search for artists or songs	Charts	Complete albums	Shuffle	Public	Yes	Once a year	Yes	Strongly agree	Strongly agree	Strongly agree
In-05-F	Female	26-35 years	Between 1-3 years	Paid	No	More than once a day	Search for artists or songs	Charts	Shuffle	Repeat	Public	Yes	Once a month	Yes	Strongly agree	Agree	Neither agree nor disagree
In-06-M	Male	36-45 years	Between 1-3 years	Paid	No	More than once a day	Personal Playlists	Discover Weekly	Individual tracks	Shuffle	Public	Yes	Once a month	Yes	Strongly agree	Disagree	Strongly disagree
In-07-F	Female	26-35 years	Between 1-3 years	Paid	Yes	More than once a day	Personal Playlists	Charts	Individual tracks	Repeat	Public	Yes	Once a month	Yes	Strongly agree	Strongly agree	Strongly agree
In-08-M	Male	18-25 years	Between 1-3 years	Paid	Yes	More than once a day	Search for artists or songs	Genres & Moods	Complete albums	Queued tracks	Public	Yes	Once a month	No	Strongly agree	Strongly agree	Strongly agree
In-09-M	Male	18-25 years	Between 3-5 years	Paid	No	More than once a day	Personal Playlists	Charts	Shuffle	Repeat	Public	Yes	Once a year	Yes	Strongly agree	Strongly agree	Strongly agree
In-10-F	Female	18-25 years	Between 3-5 years	Paid	No	3-6 times a week	Charts	Discover Weekly	Shuffle	Repeat	Public	Yes	Once a year	Yes	Strongly agree	Strongly agree	Disagree
In-11-M	Male	56-65 years	Over 5 years	Paid	Yes	More than once a day	Personal Playlists	Charts	Individual tracks	Repeat	Public	Yes	Once a month	Yes	Agree	Agree	Agree
In-12-M	Male	18-25 years	Over 5 years	Paid	No	More than once a day	Personal Playlists	Charts	Shuffle	Queued tracks	Public	Yes	Once a year	Yes	Strongly agree	Strongly agree	Strongly agree
In-13-F	Female	18-25 years	Between 3-5 years	Paid	No	More than once a day	Charts	Search for artists or songs	Shuffle	Complete album	Public	Yes	Once a year	Yes	Strongly agree	Strongly agree	Strongly agree
In-14-M	Male	26-35 years	Over 5 years	Paid	No	More than once a day	Personal Playlists	Charts	Complete albums	Repeat	Public	Yes	Once a month	Yes	Strongly agree	Strongly agree	Agree
In-15-M	Male	18-25 years	Between 1-3 years	Paid	No	3-6 times a week	Personal Playlists	Genres & Moods	Shuffle	Repeat	Public	Yes	Once a month	Yes	Agree	Neither agree nor disagree	Strongly agree
In-16-F	Female	26-35 years	Between 3-5 years	Paid	Yes	More than once a day	Personal Playlists	Genres & Moods	Shuffle	Repeat	Private	Yes	Once every 4-6 c	Yes	Strongly agree	Strongly agree	Strongly agree
In-17-M	Male	18-25 years	Between 3-5 years	Paid	No	More than once a day	Personal Playlists	Charts	Shuffle	Repeat	Public	Yes	Once a month	Yes	Strongly agree	Strongly agree	Agree
In-18-M	Male	26-35 years	Between 3-5 years	Paid	Yes	More than once a day	Personal Playlists	Charts	Shuffle	Repeat	Public	Yes	Once a month	Yes	Strongly agree	Agree	Agree
In-19-F	Female	18-25 years	Between 3-5 years	Paid	Yes	More than once a day	Personal Playlists	Charts	Shuffle	Individual tracks	Public	Yes	Once a month	Yes	Strongly agree	Strongly agree	Strongly agree
In-20-M	Male	Over 65 years	Between 1-3 years	Free	No	More than once a day	Personal Playlists	Charts	Individual tracks	Repeat	Public	Yes	Once every 4-6 c	Yes	Strongly agree	Neither agree nor disagree	Disagree
In-21-M	Male	26-35 years	Between 1-3 years	Free	No	Once a week	Genres & Moods	Discover Weekly	Shuffle	Repeat	Private	No	Not Applicable	Not Applicable	Agree	Agree	Agree

Appendix J Interview Schedule

Follow-Up Interviews

Clarissa Brough, University of Southampton

Ethics No: 40150

Thank you very much for agreeing to this interview, I very much appreciate that you are taking the time to talk to me today.

1.

a) Stimulus

Firstly, I would like to know about how music relates to your identity. I will not interrupt you, just listen and take some notes in case I do not understand and want to ask you a question later on.

So, how would you describe yourself as a music listener?

b) Check-list for Follow Up Questions

(These questions will only be asked if the subject has not been addressed during the narration or if it has been covered in an ambiguous way)

Music Choices

- What role does music play for your identity? Is it important?
- Can you describe a time when you have used music to reflect who you are?
- Do you have any particular types of music that you dislike?
- How would you describe your musical identity? Has this always been the case?
- Have your musical choices changed over time? Can you give me an example of how they have changed?
- Do you feel like your music choices have been shaped by your life experiences? How so?
- Are your music choices the same as your friendship group? What about your Spotify friendship group?

Spotify

- Do you feel that Spotify allows you to express your identity? How/why not?
- How do you use Spotify to reflect your musical identity?
- Do you feel that this identity has become more diverse on the platform or more fixed?
- How do connected friends on Spotify influence your music choices? Can you give me an example?

2.

a) Stimulus

I want to understand your music streaming practices on Spotify. Therefore, I would like you to tell me how you use Spotify to stream music online throughout the week.

Think about your everyday streaming practices. I am interested in hearing about the music you tend to listen to, how you select music and to learn about the service features you use in your streaming sessions. How do you use Spotify to listen to music and what types of music do you listen to?

b) Check-list for Follow Up Questions

(These questions will only be asked if the subject has not been addressed during the narration or if it has been covered in an ambiguous way)

Spotify

- Why do you use Spotify to stream music? Do you use any other online music streaming platforms?
- How do you use Spotify to stream music?
- Can you give me an example of when you have used the Radio/shuffle/discover weekly/related artists feature? Why did you stream music in this way?

Music Choices and Listening Contexts

- How many tracks do you have in your Spotify music library? Are these all the same artist/genre or are they quite eclectic?
- Do you usually know what music you want to listen to before you start a streaming session on Spotify?
- What type of music do you typically listen to during the week? (Refer to online observation)
- Do your music choices change at any particular time of the day or in different environments? How do they change? Why do they change?
- Have your music choices changed since using Spotify?
- How many connected friends do you have on Spotify? Does knowing that they can see your music choices effect your music listening decisions?
- Can you give me an example when you have consciously chosen to listen to music publicly/private? Why was this?
- Do you feel that your listening choices change when on public? Why do you think this?

Curation of Music

- How often do you add music to your library?
- Do you ever remove songs from your music library? Why/Why not?
- How do you organise your music on Spotify? (playlists, likes etc)

Playlists

- How many playlists do you have on your Spotify account?
- Can you give me an example of one of your most-played playlists? What is the purpose of this playlist?
- Are your playlists situation or time dependent? How do these playlists change?
- How do you choose to name your playlists? Can you give me an example of one of your named playlists?
- What is it about playlists that you like?

Discovering new music

- Do you like to discover new music? Why/why not?
- How do you discover new music? Is discovery purely on Spotify or does it come from elsewhere?
- How do the service features help you to discover new music?
- Does Spotify help you to find new music on the platform? Why/why not?

- Can you give me an example of when you have discovered new music on Spotify?
- Do you prefer to discover music similar to your current tastes or something novel? Why/why not?
- How do you think Spotify provides you with new music choices?

3.

a) Stimulus

I would like to know whether you think Spotify reflects who you are. Do you feel that Spotify allows you to construct and manage your music tastes?

b) Check-list for Follow Up Questions

(These questions will only be asked if the subject has not been addressed during the narration or if it has been covered in an ambiguous way)

Interface

- Does Spotify's interface influence your music choices? How?
- Do you feel like the music on Spotify is a reflection of who you are?
- Are you aware that Spotify collects data on your music listening? How does that make you feel?

Recommendations

- Where do you get your music recommendations from?
- What do you think about the music Spotify recommends for you? Is there a particular recommendation that you have loved/hated?
- Which recommendation features do you tend to use? What is it about that feature that makes you use it? Can you give an example of when this feature has given you a good recommendation?
- Do you think Spotify's recommendations influence your music listening?
- Do you feel that these recommendations are similar to your music likes?
- Would you prefer greater similarity or diversity in the music?

Thank you very much for taking the time to share your experiences with me today. Is there anything else that you would like to add that I have not touched upon?

Appendix K Participant Information for Semi-Structured Interviews

Study Title: Streaming Identity: Constructions of User Identity on Spotify

Researcher: Clarissa Brough

ERGO number: 40150

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 then be asked to sign a consent form.

What is the research about?

I am an iPhD Web Science and Music student studying how online music streaming platforms have the potential to significantly alter the ways we manage, consume and discover music. With a 500% increase in music streams since 2013, music streaming platforms, such as Spotify, Pandora and Apple Music, have emerged as significant sites for new and novel research from a variety of fields. My own research explores music streaming platforms from a unique perspective, investigating how music accumulated on Spotify could provide users with a means to construct, manage and perform particular types of online identities. This research is externally funded by the Engineering and Physical Sciences Research Council (EPSRC) and will contribute towards my doctorate. The semi-structured interviews, which are one phase of my research, seek to explore in greater detail the use and perception of Spotify for music listening and identity work.

Why have I been asked to participate?

You have been asked to participate in this study as you are a current and active Spotify user. Additionally, in a previous phase of research, you also indicated that you use music on Spotify as a way to express parts of your identity.

What will happen to me if I take part?

If you decide to take part in this study, you will be interviewed one-to-one by the researcher. Ideally this will be conducted in person but can, if necessary, be done via Skype or on the telephone. You will be asked to bring the device you mostly use for Spotify listening to prompt questions and responses. Questions will focus on your music streaming, some of which will refer to the online observation period, as well as particular streaming contexts and experiences. You can choose to elaborate on your answers as much as you wish and you will not be interrupted.

The interview will be recorded using audio technology and I may take notes. This interview should approximately last for one hour.

Are there any benefits in my taking part?

By participating in this research, you will be adding to new knowledge about the uses of Spotify and assisting in research that will contribute towards a doctorate.

Are there any risks involved?

There are no risks involved in taking part in this study.

Will my participation be confidential?

To signal your interest in this study you provided your contact details. Therefore, you will be known to me, meaning anonymity cannot be promised at data collection. Subsequent material may report and publish individual examples and aggregated data. At this point data will be anonymised and code names will be used to refer to individual responses.

Participants will be guaranteed confidentiality at each phase of the study. Research material will not be disclosed to others unless they are an authorised person, such as my research council.

What should I do if I want to take part?

If you would like to take part in an interview, please carefully read and complete the consent form.

What happens if I change my mind?

You have the right to withdraw up to one month after the completion of all phases of research (online survey, online observation and interviews) without your rights being affected. You will need to indicate whether you wish to withdraw from only the interview or all phases of data collection that you have been involved in. If you decide to withdraw, data collected about you will be destroyed and will not be included in any future written material.

What will happen to the results of the research?

Individual participant responses may be included in future written material, including my thesis and possible publications. Participants are also able to request and obtain a copy of the results if desired.

All research data will be anonymised and stored securely, backed up regularly and deposited in the University of Southampton's data repository. This makes the university the data controller. Once the anonymous data has been deposited it will be made accessible via open access. This will allow future researchers to be able to reuse the data. Because my research is funded by the EPSRC, certain aspects of data management are governed by the funding body, who may also choose to access the data. Consequently, all data I obtain will be securely preserved for a minimum of ten years from the completion date of my PhD.

Where can I get more information?

If you require more information or have any questions about this study then please feel free to email me (Clarissa Brough) at Spotifyresearch2018@outlook.com or my PhD supervisor, Dr Silke Roth, at Silke.Roth@soton.ac.uk.

What happens if something goes wrong?

In the unlikely case of concern or complaint then please contact the Research Integrity and Governance Manager on 023 8059 5058 or email rgoinfo@soton.ac.uk.

Thank you for taking the time to read the information sheet and considering being part of my doctoral research. Your participation will be greatly appreciated.

Appendix L Semi-Structured Interview Consent Form

Study title: Streaming Identity: Constructions of User Identity on Spotify

Name of Researcher: Clarissa Brough

Ergo Number: 40150

Please initial box

1. I confirm that I have read the information sheet for semi structured interviews dated 19.03.2018 (version 1) for the above study.
2. I confirm that I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
3. I confirm that I am over 18 years old.
4. I confirm that I am happy for this interview to be recorded.
5. I understand that my participation is voluntary and that I am free to withdraw up to one month after all phases of research has been completed without giving any reason and without my rights being affected.
6. I understand that my participation will be confidential.
7. I understand that information collected about me will be anonymised and stored in the University of Southampton's data repository for a minimum of ten years and be made available via open access.
8. I understand anonymised data will be published in a doctoral thesis and could be used in future publications.
9. I agree to take part in the above study.

Data Protection. *I understand that information collected about me during my participation in this study will be stored on a password-protected computer and deposited in the University of Southampton's data repository. All files containing any personal data will be made anonymous.*

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person	Date	Signature
taking consent		

Appendix M **Example of Interview Summary**

In-18-M was initially contacted in September to participate in further research but did not respond until the second round of participant recruitment in January 2019. Initial contact revealed that he was very willing to take part and interested in the research. This interview was rescheduled on two separate occasions prior to today due to illness and other work commitments. The interview was finally conducted on 02.04.2019 via Skype. The interview was somewhat time-pressured as In-18-M had an appointment to attend. Therefore, I had to carefully consider when to ask him to elaborate on his responses in order to complete the interview in a timely manner.

Music is very important to In-18-M. He listens to music regularly throughout his day and, if he is not actively listening to music on Spotify, In-18-M states that he always has a song going around in his head. As well as being in marketing, In-18-M is a part-time DJ for weddings and other events and so music plays a key role in his professional identity. He also studied music at college and, as a student, was a radio broadcaster. He therefore reflected on a variety of music-related roles as part of his present and former identities. In-18-M often uses music to manage his moods, helping him to concentrate at work and feel energised. He also mentions listening to music for nostalgic purposes, using it to relive particular times in his life. For instance, he states that every time he hears a Nelly song it instantly reminds him of starting college in the early 2000s.

In-18-M tends to listen to particular types of music dependent on his mood. When he needs a boost of energy, he plays heavy metal music. There is a perceived synergy between the music and the mood he is trying to provoke. He also uses some of Spotify's non-personalised 'morning' playlists when waking up. Currently, In-18-M is listening to lot of soul music that is of mid-tempo. He states that he feels this music in his body, helping him to feel calm and relaxed. His enjoyment of music is therefore related to both the physical and emotional factors it conjures up within him.

When asked about using music to reflect his identity, In-18-M recounts sharing music with his wife. Shared music tends to be structured as playlists consisting of romantic music or music from a particular time in their relationship, having particular biographical affiliations. He therefore considers the taste of his partner when creating playlists to share. In-18-M mostly shares artist

pages with his friends. He shares them in the hope that his friends will love the music as much as he does but often this is not the case. This is not wholly unexpected as he realises the music is reflective of his personal tastes rather than the preferences of others.

When asked about music preferences, the interviewee discusses his enjoyment of soul music. He likes the genre's lyrical content and slower tempo, stating that the music is reflective of where he is in his life right now. In his scrobble logs, Haley Reinhart was the artist he listened to the most followed by Long Beach Dub All Stars. In-18-M describes Haley Reinhart's music as having an old-school soul sound that is warm and comforting. She has released a new album this week, being a significant reason for its prevalence in In-18-M's streaming. It is likely that this artist would not have featured so prominently in other weeks. Long Beach Dub All Stars are described as having a punk and ska sound, taking In-18-M back to his teenage years. He describes them as having a 'warm beachy sound' and so they are in keeping with the weather and moods experienced during the observation period. Later in the interview, In-18-M also mentions that Thrice, who play a mixture of rock and more mellow music with occasional Christian undertones, are self-representative of his music tastes. Previously, he has enjoyed indie music with female vocals as well as heavy/hard rock when in high school and college. He does revisit these genres on occasion, mainly when feeling nostalgic. When returning to these genres, he tends to listen to songs he enjoyed at the time rather than new music. This music therefore reflects his former identities as opposed to his current self. In terms of music dislikes, In-18-M does not enjoy rap due to its lyrical content and slow tempo. He states that although he has to be aware of trends in music for his job, which is currently dominated by rap, he does not necessarily enjoy it.

In-18-M considers himself as the outlier in his friendship group. He believes that he listens to more music than his friends and is also aware of current music trends. He therefore represents a 'music missionary'. He follows people on Spotify, some of which are in his friendship group and others he does not know. His online network comprises of both strong and absent ties. When asked about how he makes decisions on who to follow, he states that he looks through people's playlists to see if they are 'worth following'. I probed a little more about what he meant by 'worth following'. He states that if playlists have a good balance of unfamiliar and familiar music it sparks his curiosity. Deciding who to follow was based on the perceived similarity of music tastes and the potential for them to be sources of music discovery.

For In-18-M, Spotify is a 'teammate' and asset in his job as a DJ. He uses it to research music and keep up to date with current trends. He perceives Spotify as a portable music collection and source for music discovery, which he finds useful as a DJ. He did refer, however, to the loss in physicality of music when using streaming services. He feels that music has become more disposable as we casually listen to it and decide whether we like it. In-18-M does, on occasion, purchase CDs to support particular artists but this happens very rarely.

In-18-M tends to listen to music on Spotify via the public mode, feeling unconcerned about the opinion of his friends. He states that he plays music for events publicly through his own profile, which surprises me. His multifaceted identities are contained within a single Spotify account. When asked how this shapes his recommendations, In-18-M believes that it is not too noticeable. He also enjoys being exposed to different types of music and so enjoys the often incoherent recommendations produced by Spotify. He does, however, consciously switch to private mode when playing music for his young son, in particular when streaming music for white noise, as he does not want this 'unusual' music to be integrated in his user profile and subsequently affect future recommendations.

Discover Weekly and Release Radar were features that In-18-M most regularly uses for streaming. He finds them helpful in exposing him to new music. He also enjoys the playlists specifically curated for him, such as the Daily Mixes. Due to their genre-specific nature, he finds that the Daily Mixes break him out of the routine of listening to the same artists and songs. Additionally, he likes the Spotify suggestions at the end of playlists, which he finds useful for event-related research. In-18-M states that these features help to reduce the cognitive effort required on his part to find music he enjoys. Instead, he can 'just get on with the act of listening'.

Prior to using Spotify, In-18-M streamed music via Rdio. This was a more social platform, allowing users to send music to each other through individual inboxes. When this platform shut down, he searched for alternatives and found Spotify. He felt that Spotify offered good variety, was reasonably priced and served a greater number of recommendations than other platforms. He does miss, however, the explicit in-service sharing between users as found on Rdio. When on Spotify, In-18-M tends to browse by genre or playlist. He also actively searches for albums or artists, not relying solely on the curated content created for and served to him. Sometimes In-18-

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M is aware of the music he needs to listen to but then at other times 'is open to whatever' before he makes a narrower selection based on his mood.

In-18-M listens to music for work, mood regulation and to create a particular atmosphere at home. He rarely listens to music when travelling in his car, instead choosing podcasts from another service. At work he listens to music on his desktop computer via headphones, listening to a more diverse selection of music throughout his working day. He also listens more regularly and consistently, which helps him to remain focused. In-18-M does listen to music at home but, in this setting, he is more aware of others and so selects music appropriate for particular family members.

Surprisingly, In-18-M does not save songs to his library. If he enjoys songs, he will either save them to a particular playlist or try to recall them at a later time. He often finds reminders of the songs he likes within his Daily Mixes. It is therefore Spotify that prompts acts of remembrance. Playlists are important to his music streaming. A third of playlists saved in his library are personally curated and the other two thirds have come from other users or Spotify. He has playlists for specific moods, situations and memories, a playlist containing music that his son enjoys and several relating to his job as a DJ. He states that most of his playlists are static. His son's playlist is the most dynamic collection of music as it reflects changing preferences as he grows up. In-18-M is currently in the process of creating a professional Spotify profile to advertise as a DJ. In addition to this, he is curating personal playlists as examples of the types of music he has available to play at events.

In-18-M enjoys music discovery, but he does struggle to welcome new music into his tastes. He likes music recommendations from trusted sources as well as being able to understand the reasons why they have been suggested. Most of his new music comes from Spotify, podcasts or subreddits.

For In-18-M, Spotify is easy to use but the slow search and display of certain features have, on occasion, disrupted his listening. In-18-M listens to Spotify on both his desktop computer and mobile. He finds that the mobile interface influences his listening due to the prominence of the Daily Mixes, making him more likely to listen to them. He cannot foresee leaving Spotify any time

soon, especially as it is currently introducing more podcast content. This safeguards his continued, future use of Spotify.

In-18-M is aware of data collection when streaming music but is happy for the platform to collect data, especially since it improves their service. He feels that this data collection is very different to that performed by Facebook, which he feels is more concerning.

Today's interview went well. I created a good rapport with the interviewee, who was very forthcoming in sharing his narrative about music. I attempted to use mainly open-ended questions where possible. However, due to time pressure, I chose not to elaborate on certain questions to move through the interview schedule.

Appendix N Example of Interview Transcript

[0:00:00]

[Dialling tone]

In-09-M: Hello?

Interviewer: Hi. It's Clarissa.

In-09-M: How are you? Can you see me?

Interviewer: No, I can't see you actually.

In-09-M: Oh, I think it's coming up here. I can see you now.

Interviewer: That's good, I still can't see – oh, there we go, perfect.

In-09-M: I'm using my roommate's laptop but – you're frozen but is it going to be fine do you think?

Interviewer: Yes, I think so. Can you hear me alright?

In-09-M: Yes, I can hear you; can you hear me?

Interviewer: Yes, I can hear you perfectly. If the video doesn't end up working it's alright, we can just switch it to a normal call if that's easier.

In-09-M: Yes, whatever works so we'll keep it on here and then if not – yes.

Interviewer: Perfect, well thank you for making time to speak to me this morning, I really appreciate it.

In-09-M: Yes, I think this is great. So, what are you researching exactly?

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Interviewer: So, I'm over here at the minute doing a PhD and the field I'm in is Web Science but within that, you study different areas. So, I'm actually based in the Faculty of Music and looking at how people are using Spotify.

In-09-M: Great, okay, that sounds cool.

Interviewer: So, this is the final stage almost of my research because obviously you guys have done the questionnaire, you've done the online observation and then obviously today is the last part.

In-09-M: You've been working on that for months then?

Interviewer: Yes, it feels like it (laughs).

In-09-M: Oh my god! That's cool.

Interviewer: Thanks. So, the way it's going to work today is the interview will last roughly around an hour and it's very much based on your responses, so I'll give you plenty of time to talk about things as you wish and expand on things where you want to. I have some questions here for you as well that I would like to ask. It might be a case that while you're talking I'm writing down some notes but that's mainly for me to check back with you about things I've either not understood or want to know a little bit more about and then also I've got a little recording device here which is just by the side of my laptop which is recording our audio, if that's okay with you?

In-09-M: Yes, that's definitely okay.

Interviewer: Perfect, so do you have any questions before we get started?

In-09-M: No, I'm ready to go.

[0:03:11]

Interviewer: So, the first bit is I would like to know how music relates to your identity. So, how would you describe yourself as a music listener?

In-09-M: Well, I wouldn't say music is – I'd say the music I listen to is an expression of myself (inaudible 0:03:30) but I listen to a lot of different music. I listen to rap and also indie; I don't listen to country and anything like that but I listen to a big variety and I'm a very open person, so that reflects in that sense that I'm very – I'll take whatever, I don't get offended or disgusted or anything like that and that shows in my music tastes – also there's certain artists that I relate to a tonne and it feels like listening to music is more like a – it's a self-reflection sort of thing.

Interviewer: So, when you say that you relate to artists, what do you mean by that?

In-09-M: For example, there's an artist, I don't know if you saw him that I listened to who – this song called "Heavenly Father" and his name is Isaiah Rashad, he's a rapper and that song in particular and therefore the artist, I just – I feel that song in a sense, I feel like that song is me. If I were to show someone through a song how I feel about things, or myself, that would be that song.

Interviewer: So, what is it about then that song that makes it your song? Is it the lyrics that you can relate to? Is it the artist's back history or is it the sound in general? What is it about it?

In-09-M: It's all three but it would be lyrics first and then the artist and then the music itself but it's... it goes, "Everybody telling me a lie, Lord you gave me something for my soul" and so I'm, "Yes, that's so true, I feel that way" but I – so, the song is called "Heavenly Father" and from what I gather he's not just talking about – he's talking about not having a father basically and he's talking both in a spiritual sense, I guess about God or whatever, but also his own father. And, I myself, I had a dad growing up but he was very abusive and things like that and so the lyrics are like that. But, also, I'm not a Christian, I'm an atheist, agnostic or whatever, but the idea of – because I was Catholic and then I did feel a loss, a spiritual loss of a father but – and he's also, it seems to me he's looking for truth or meaning in the world and then it seems like everyone is not about that or not really caring and so I relate to that and that's in the lyrics and then also with his own history similar to mine, with his father and then it sounds great.

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Interviewer: Is this – because I've not heard of this song; is this quite a recent release or has this been a song that's been out for a while?

In-09-M: It's been out for about three years, so three or four years, so it's pretty recent.

Interviewer: Has there been songs before this one then that you've experienced as your song or is this just very particular to this song and this artist that you're feeling that synergy between them?

In-09-M: No, I feel that for a tonne of songs. The song I've listened to most, because I've tracked my Last FM stats for four years now, three and a half years, and there's a song by – have you heard of Travis Scott, the rapper?

Interviewer: Yes.

In-09-M: So, his second mix tape, he had a song called "Days Before Rodeo, The Prayer" and that's another song where I'm, "Yes, I feel that way". And, that's almost – that one I would say even more the music than the lyrics, the way the music is, the atmosphere of the music, it's anxious... (demonstrating), "I'm still not satisfied; I'm doing well but why am I not fulfilled yet?" and I get that from the music itself and so that's – there's tonnes of songs where it's, "Yes, that's me!" Right now I'm feeling the Heavenly Father song the most but definitely there's a lot more.

[0:08:23]

Interviewer: So, would you say that music is important to you?

In-09-M: Oh yes. One time we had – some stuff happened at my house and we had to go to my mum's friend's house and I didn't have my phone with me. Anyway, I basically didn't have a chance to listen to music for a couple of days and when we came back home finally, the first thing I did was listen to music because I can't imagine a day without listening to a song.

Interviewer: And, has music always been important to you or is it something you've experienced quite recently?

- In-09-M: Since about maybe 11 years old, yes. Since growing up, when that big brain change happens at 11/12 years old, you know?
- Interviewer: I was just going to say, that's really interesting that you pinpointed the age of 11 as being a significant time for you; was that just because you experienced a sense of growing up?
- In-09-M: Yes, well it's a lot of things. It is completely having to do with the self, because like I told you, I had an abusive father and I started listening to Eminem which actually (laughs) – it seems like a common thing like that but – so, basically I discovered for myself Eminem and I think everyone goes through an Eminem phase it seems, but that's when I... so, I don't know, it's like coming out of – as a child, I didn't – I wasn't going to go on YouTube or anything and listen to music but around that age things started to change for me. I really don't know, I really don't know what it is exactly but it was around that age. I think it has to do with access to the internet.
- Interviewer: Okay, so do you feel then that your music tastes have changed over time or have they been consistent?
- In-09-M: No, they've changed a tonne over time.
- Interviewer: How do you feel that they've changed?
- In-09-M: Well, like I said, I went through an Eminem phase.
- Interviewer: Would you say right now you're out of that Eminem phase? Would you say then now you're not in an Eminem phase? Because obviously he's just recently released an album, so would you say that music is very much in your past?
- In-09-M: Yes, it's very much in my past. So, I'm out of that phase where – it's, when I listen to his albums that I used to listen to, it's like going back in time for me. So, I don't think I can appreciate them as much as what I did then.

Interviewer: So, do you feel that your music tastes have changed in any other way?

In-09-M: Oh yes, so I'll continue, so going in to high school, freshman year, I went through another phase of – where I'd listen to exclusively classic rock, Pink Floyd and Led Zeppelin, Queen, all those guys, 60s, 70s music and I shunned rap for a little bit and basically only listened to that sort of music, the Beatles, just classic rock and so it changed in that sense and then it changed again in tenth grade and there's been tonnes of changes but the next big one was in tenth grade when I told myself, "Okay, I'm going to listen to rap again" and at that time, Yeezus by Kanye was the big controversial rave review album and so I'm, "Okay I'm going to pick that one to get in to" which – it was a great choice in the end but I couldn't have picked a less rappy rap album. So, it changed in that sense and then it changed again when I started listening to female artists, whereas before there's this weird notion that I didn't want to seem effeminate, so I started listening to Lana del Rey and stuff the next year and then twelfth grade, more of the same, but then freshman year at college it changed again because I took a "History of Popular Music" class and we went over everything and that's everything and that's when I started listening to some punk even, soul music, and that's when I was, "Okay I could literally listen to anything" and I listened to pop and everything, whereas before I would have felt weird about it, but now I just really don't care and I just listen to whatever I like.

[0:13:40]

Interviewer: So, it's interesting that you're able to pinpoint specific times when you feel that your music tastes have changed. Has that do you feel been something that's happened organically or has that been a change of environment, a change of friendship groups or some kind of influence coming from elsewhere?

In-09-M: No, it definitely has to do with – for example, I changed to listening to female artists, because I took a bunch of history classes, I'm a History Major now and I took a bunch of history classes in high school and all those forced me to challenge my own thinking and assertions and so I did a lot of self-reflection in high school and I realised, "Well why shouldn't I – why do I feel weird about listening to strictly female artists?" the idea that, "Oh, that's gay". So, it was

the influence of my schooling, I would say, and also for the change from listening to Eminem to listening to only classic rock was a peer change because I didn't like my peers who were listening to rap, not because of the rap but I didn't like them and so I was almost, "Okay I'm going to listen to music that's not like that at all", a whole new type thing.

Interviewer: That's really interesting, so do you think then that you specifically chose to listen to classic rock to fit in with a new friendship group or was it that you actually liked the music?

In-09-M: It was that I actually liked the music because I didn't really know anyone else that was listening to that music.

Interviewer: And then the other thing I'd like to go back to is when you say you made a conscious choice to listen to female artists, was that a choice to listen to female artists in the genre that you were interested in at the time or was that an excuse to explore whole new genres of music for you?

In-09-M: I hadn't thought about that but I think more listening to different genres because I don't listen to a lot of, if any, female rappers; there's really not that many. So, more listening to a different genre.

Interviewer: So, going back to your friendships, do you feel that your music tastes are quite similar to your friendship group's?

In-09-M: Yes, well music tastes, okay... yes, they're definitely similar, yes.

Interviewer: Because I found what was interesting, looking at what you listen to, is that your music tastes are actually very eclectic. So, are your friends' music tastes also very eclectic?

In-09-M: Eclectic meaning...?

Interviewer: So, there was lots of different genres, lots of different periods of time that were covered, current artists, older artists, bands, individuals, there was quite a range in there.

In-09-M: Well, I'm thinking of one friend who has also very eclectic... but other friends, they – I'm similar in their rap music taste but I don't know that they listen to the other stuff that I listen to. So, I would say one of my friends who I value highly, I'm close to, he's like that but most of them are not.

Interviewer: And, so have you ever used music as a way to express who you are to somebody else, whether that's a friend or a family member, you've specifically chosen to share music with them in an act of self-expression?

In-09-M: Oh yes, 100% (laughs). So, I was in a relationship with a girl for a couple of years and that first dating, getting to know each other stages, I – do you know Bon Iver? I played Bon Iver to her and told her, "This is how I feel", so yes, definitely.

[0:18:05]

Interviewer: So, in that sense then, it sounds like you chose music based on your emotion, so you wanted to express your emotion; is that often the case when you share music with other people?

In-09-M: Oh yes, it's always the case – well, 95% the case. It always feels like what I'm playing now, whatever I'm listening to, is how I'm feeling.

Interviewer: So, when you're sharing this music with somebody else, are you quite conscious of the song that you're choosing? So, taking into consideration what they like and what they might not like and then also what they might think of you when they listen to that music or is it very much, "This is how I'm feeling right now and I'm going to share it with you"?

In-09-M: No, I consider their taste. Sometimes – because my ex-girlfriend didn't listen to a lot of rap and she had a negative view of it, so I was cautious to show her those songs because she didn't like the sexism in it. But the primary concern I think is showing them whatever the song, how I feel, but I do consider, "Well are they going to – how will they feel about it?" I wouldn't show my mum a rap song because she's not going to get it.

- Interviewer: And, what about – because obviously the song Heavenly Father, that seems quite personal to you; would you also be willing to share something – a song so personal to you with other people or is that very much for your own private listening?
- In-09-M: No, I share it – I share everything, that’s – another big song that I like is called – it’s by Mac DeMarco and another song that I feel like it’s one of those songs and it’s called “Passing Out Pieces” and the whole song is about how he’s just an open book and so if you’re asking if I’m private about that or personal about it, no.
- Interviewer: So, obviously I’ve seen what you’ve streamed in the last seven days from your Last FM Scrobble logs. For you, what kind of music do you consider music that you like and music that you dislike?
- In-09-M: Yes, so it’s clichéd but the music has to be meaningful in some sense because I’ll listen to “hype” music but most of that music I choose to listen to, it has to be – I have to feel it, you know what I mean, an intuitive... so, it has to have a lot of emotion.
- Interviewer: So, is that then cross-genre? So, you would be willing to listen to say a song that reflected your emotions from pop, from rock, from rap or is it very much based on one specific genre for you?
- In-09-M: No, not at all, if the song – it can be any genre if it makes me feel...
- Interviewer: And what would you never choose to listen to? Is there any genre or any type of music that you would never choose to listen to because you absolutely hate it?
- In-09-M: (Laughs) Well, I’d always give it a chance, but I’ve found it very – I have a hard time listening to country music and I think it’s just because I don’t have similar values to – I haven’t listened to a lot of country music, but I find it very – I find it difficult to relate to the values and thoughts etc. of country music. So, it’s a genre I’m...

Interviewer: You're just not in to! (Both laugh)

In-09-M: Yes, not at all. Yes, I don't like it.

Interviewer: That's fair enough. So, looking at your Scrobble logs, from the last seven days anyway, the most – the first artist that you streamed the most is Vampire Weekend and then the second one was Smashing Pumpkins; do you feel that's quite reflective of your taste?

[0:23:00]

In-09-M: No, actually, that was a weird week because I listened to this one Vampire album a tonne and then the Smashing Pumpkins, that's just one song, so it's not... so, usually it's a rapper up top, so it is different.

Interviewer: You have got quite varied artists because you're also listening to obviously Kanye West like you've said, Harry Styles and Blink 182, so would you say you do listen to a great variety of artists?

In-09-M: Yes, I would say that 100%.

Interviewer: So, talking about Vampire Weekend, I was going to ask you, because it did look like you were streaming an album's worth of music each time they came up. So, was that the case then last week?

In-09-M: Yes.

Interviewer: And was there something about that album that made you want to listen to it?

In-09-M: Yes... the whole album sounds really pretty to me, pretty, you know? And I don't know what it is exactly, there's a song called "Step" on there that I love and a song called "Hannah Hunt" that is emotionally weird for me, but yes, I don't know why I listened to the album so much, it was just pleasing and also some of the emotions are – I got I think.

- Interviewer: So, since then listening to this album, have you been tempted to listen to any of their previous stuff or is it very much just this album of music is currently appealing to you?
- In-09-M: No, I've listened to some of their other – I've listened to whole albums, but I've listened to some songs on their other album, they have a song called A-Punk and Oxford Common (laughs).
- Interviewer: So, I'd like to move on then to talking a little bit more about your Spotify account. So, for a start, do you have connected friends on your Spotify account?
- In-09-M: I do, yes.
- Interviewer: So, you've mentioned that broadly your music tastes are very similar to your friendship group; are they very similar to those people that you're connected with on Spotify?
- In-09-M: Yes, so I follow four people, I follow my good friend, I follow another friend only because I know I like the songs he listens to and then I follow my sisters just because – whatever, but my one sister and I have very similar tastes and so do the – only on one of those do I not have very similar tastes with, with one of my sisters but they're mostly very similar tastes.
- Interviewer: So, do you feel that you intentionally use Spotify as a way to express your music taste?
- In-09-M: Yes, because I have a tonne of playlists, probably 10 or 15, for different genres and moods and stuff and I put a little picture of it... for example my main playlist has [playlist information] and I have a little write-up for each one of my playlists and so if I know someone's on Spotify, I tell them to follow my playlist.
- [0:26:45]

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Interviewer: So, then when you tell them to follow your playlist, are you quite conscious of what's on there or are you very willing to share that with other people no matter what their music taste is?

In-09-M: I'm very willing, no matter what their taste is.

Interviewer: So, obviously playlists sound important to you but what about your music library? Is that something that you feel if I looked at, I would get a very good idea of who you are as a person?

In-09-M: Oh yes, 100%. If you looked at my main playlist which is where I have every song that I like, you would get a good idea and some of the stuff you get is that there's varied stuff, like you've noticed, and then you also see some big artists that are on there a tonne. So, you get a good idea. I think you can tell a lot by someone's music taste, more than a lot of stuff, I think.

Interviewer: So, from your perspective then, what do you feel that you can ascertain from somebody's music taste?

In-09-M: Well, for one, it's, "Okay, do they listen to "popular" music or do they listen to obscure music or somewhere in the middle?" Because you can tell – not that it's good or bad that they listen to either type but if someone listens to obscure music, that would tell you that they're either individualistic or they're saying "no" to what's popular, they're saying "no" to the mainstream – so, that tells you that. And, if they like a lot of popular songs and that's mostly it, there's nothing wrong with that but it does tell me that, "Well, okay well what makes you unique?"

Interviewer: Yes, that's really interesting. But where then would you put yourself on that spectrum?

In-09-M: And then (laughs) this is where I'm, "Yes, I like both!" (both laugh) I'm "Ooh I'm special".

- Interviewer: So, then going back to Spotify, since then you've used that platform, do you feel that your music listening has become more diverse in what you listen to or actually more fixed?
- In-09-M: No, definitely more diverse because – okay, so before, my primary music listening was – before Spotify, was either pirating it or YouTube. With YouTube, the algorithm shows you music similar to what you're listening to, so you stay in that zone. But, with Spotify, they have all the different playlists and occasionally I'll venture in to one and I like it and so that'll open up an entire genre. So, Spotify has 100% made it where I listen to more varied music.
- Interviewer: So, do you think that diversity then has come from your own exploration of what's out there or is it from the music that's been recommended to you from Spotify?
- In-09-M: I think it's more of my own exploration, because – but without Spotify I wouldn't be as tempted or as – no, I think it's still my own curiosity in the end, but Spotify makes that easy, it's "Oh, it's right there, why not?" I get into a comfort zone with music. I listen to a lot of different types of music, but I rarely listen to new music because it's – well, with the music I know I like, I don't have to – there's no risk in it, I'm going to get that reward. But, when I go and listen to new music of whatever genre, I do that much less often because there's the risk that – and even then I know it's going to take – I guess I'm lazy with it because I know it's going to take me more than one listen to figure out if I like it or not and so I just – I choose not to do that work.
- Interviewer: So, then how do your connected friends on Spotify potentially influence that music listening or don't they influence it at all?
- In-09-M: Oh, they influence it – like I said, I have that one friend I respect a tonne and I love him, and I see he's listening to a song on Spotify, and I'll add it to the queue to check it out and so I've discovered some artists because of him. There's this one song called – there's this one artist called Rex Orange County that I discovered through doing that. He, in a way, in a sense showed me and I'm forgetting the name, but Rainbow Kitten Surprise also is another one, I don't know if you've heard of those two guys but yes, so they do influence

because I'm, "Oh, well what's he listening to?" because I know he has similar values as me.

[0:32:40]

Interviewer: So, obviously it's this – because he's a particular friend of yours, you share similar music tastes, what about anybody else? Is there anybody else that you will automatically add songs to your queue of music listening or is it just specifically that one friend that you trust?

In-09-M: It's specifically that friend, yes. Because I have another friend that – in person, we listen to a lot of music together and he'd show me all the time and I'd, "Yes, man!" but we have different – we have similar values and stuff, we definitely – I like him a lot, who he is, but we have way different tastes and so a lot of the times, I just – I don't get it, the stuff he listens to, even though it's similar.

Interviewer: That's really interesting. So, I'd like to understand a little bit more about your music streaming practises on Spotify specifically. So, how – thinking about how you stream music throughout the week, how you select this music and what features you tend to use. So, how do you then choose – how do you listen to music on Spotify and what types of music do you tend to listen to on there?

In-09-M: Yes, okay, so like I said, I have a big playlist with about 1,000 songs in it that I call "Daily" and that's what I play throughout the day, but I've noticed that at different times of the day, I find it hard to listen to some genres. If it's really late at night, I don't like listening to rap, I like listening more to indie music, Bon Iver, indie – whatever that means but Lana del Rey, Feist, slow music like that, raw music. But what I do is mostly I just play songs off that playlist which I've made and that's pretty much it and other times, if I'm doing a certain genre or depending on what time of day it is, I'll go to my other playlists.

Interviewer: So, you've then said that you listened to certain types of music more in the evening, slower music. So, is that very much a conscious choice on your part,

that you get to a stage in the night, and you know that that – you need to listen to slower music?

In-09-M: Yes, yes... I don't know what it is but... a lot of rap is the doing – trying to overcome your stuff, your issues or preparing to overcome or whatever and then, I feel like at the end of the day, when the day is over and it's – now it's time to reflect on what's happened or how you feel.

Interviewer: Is there any other particular times of the day that you feel that there are certain styles of music you either want to listen to or can't listen to?

In-09-M: Yes, and if it's very early morning, 6am, 5am and I'm awake, then I'd also feel – because that feels like a holy hour, not necessarily a religious thing but it feels sacred, very calm and – you know? So, then I also find it difficult to listen to rap and I listen to – the stuff I listen to late at night too.

Interviewer: And, what about days of the week; are there patterns in the days of the week? So, for example, something that you would listen to on Monday versus something you would listen to on Friday and then something you would listen to over the weekend?

In-09-M: No, there's not, no. No, it has more to do with – it also has to do with the weather and stuff like that, but not so much the days of the week.

Interviewer: Okay, so what do you mean then by it has to do with the weather? Would you be able to expand on that a little bit more for me?

In-09-M: Yes, so it's been raining a tonne here in Grand Junction Colorado where I live and it rarely rains but then I also listen to more introspective music and maybe mellower type stuff, whereas say it's the summer and it's sunny, I listen to more bravado – yes, type rap, I don't know why but... and if it's winter – oh, that's another thing; there's music I listen to that depends on the seasons. Winter... for example I listened to a tonne of Kanye and an album I listened to a lot in the winter is 808s and Heartbreak. So... but yes, the weather and the season has a lot to do with it.

[0:38:20]

Interviewer: So, then what other music would you listen to, dependent on the season?

In-09-M: Well again, it's fall now and it's calmer, gloomier, so I listen to a tonne of Bon Iver, Kid Cudi, darker music, moodier music, whereas in the summer I listen to happier music, more upbeat music, ASAP Rocky songs that are, "Woo, yeah!" or happy songs – yes, confident songs, whereas the fall, winter, it's gloomier and it's sadder music.

Interviewer: So, do you feel then the change in the seasons in your types of music, is that related to the kind of context of your environment of it obviously being darker and colder and then warmer and sunnier in summer, or is that related to your emotion and mood at that current part of the year?

In-09-M: I think it's a little bit of both. The summer has been a happy time for me throughout my life; school is out, you're with your friends and for me personally, my dad would be working during that time so he wouldn't be home during the week and so that was nice. So, there's that, there's the, I guess memories maybe, but then also it isn't – the weather allows you to do more so I feel happier, but then during the winter, you don't have to be inside all day but there's more of a wall to going outside; you can't just go outside, you have to consider the weather. But, it's not really a big physical thing, we have all the modern technology but it's a psychological block, "It's so cold outside" and that has been a time where I've – it seems like every winter I get – I don't know if it's seasonal affective disorder, something like that, SAD, but I've been sad or depressed during those times a lot and I think that has to do with the weather, lack of sun, but also winter break happens and I don't have – I reflect on my own person and my family relationships and my own relationships. Like I said, I had a girlfriend, and we broke up and so it's a sad time because during the winter it's supposed to be – you're with your family, your relationships and it's all cosy and warm and I feel lonely and I don't really have that, and so then that reflects in what I listen to which is sadder, "Oh I'm so lonely" type music (laughs).

Interviewer: So, do you prepare for this change in the seasons? Do you have playlists specifically for the seasons to almost – so, you’ve got something immediate to listen to, or is it that you then go and search for music that fits that time of year from either a more main playlist or just through the browse feature of Spotify?

In-09-M: No, I – well, I do use the browse feature for that sort of thing a lot but no, I mostly – I don’t have any seasonal playlists, but I’ll definitely just go through my main playlist and I’ll shuffle a lot depending on the season. So, but then also on the Spotify homepage, it has the moods things like that or the playlists it recommends, and they do a seasonal type thing, so I might listen to that for example.

Interviewer: So, we’ve obviously talked about your changes of music for season, weather and then times of the day. What about for things like going to the gym or doing your studies or work or do you have specific music tastes for those contexts and situations?

In-09-M: Yes, so I run a lot, so I have a running playlist and it has up tempo. I have a playlist called *[playlist name]* because I go to a school – so one time I made a playlist for a friend who – he was a taxi for the school for drunk kids and I made that playlist and it’s party dance music, but if I’m in the car and I’m “hype” with my friends or whatever, or if I’m just feeling good, super-confident or whatever, then I’ll play that. So, yes, I have genres for running, being in the car, that playlist and then I don’t listen to music when I study because I get distracted but yes, I do have – at least those two playlists for certain activities.

[0:44:00]

Interviewer: And do you feel that those playlists for those activities are very different to the music in your main playlists?

In-09-M: They’re not different but I don’t listen to them as much usually. I also have a playlist for road trips.

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Interviewer: Okay, so when you go on to Spotify, do you immediately know what you want to listen to or is it a case of you go on there and do a bit of searching around and eventually pick something?

In-09-M: Usually I just go – usually I know, if I'm not doing a specific way, then I just go to the daily and then whatever, skip, skip, skip until, "Yes, okay, I like that" but so usually I just go straight to the daily but if I am feeling a certain emotion, then I'll go to different playlists.

Interviewer: So, would you say then the playlists and the music that you have in your Spotify library, they are quite eclectic or are they very samey?

In-09-M: No, they're definitely eclectic.

Interviewer: And do you have your Spotify set to public or private?

In-09-M: It's set to public, yes, but okay yes, that's another thing; it's set to public but a few playlists or maybe just the one is set to private, and I have this playlist called *[playlist name]* and it's just – it's a safety one, if shit is really bad, I go to that one and that one is private.

Interviewer: What makes you specifically keep that one private out of all your music choices?

In-09-M: It's – the music is very special to me, it's – I'm not embarrassed at all by the music I listen to but I don't know, it's almost like – it's a playlist for when things are really bad and it's almost like I don't want to – if a follower or a friend saw that I was listening to that playlist, and they went on the playlist and they saw a description and stuff and the songs, they would be able to pretty much gather my emotional state and I guess I just wouldn't want to show that state, the lowest state.

Interviewer: So, you've spoken quite a lot about how you use music for emotion. Is that – do you use it in that way to get you out of a particular emotion? So, say you're feeling sad, do you pick something happy to then make you feel better or do

you pick something that very much reflects your current emotion that you're experiencing at that time?

In-09-M: No, it's always something that – I never try to – it's almost more like I'm exploring how I feel. So, it's never about changing it, it's always about, "Okay who else...?" in whatever million artists, "Yes, me too" and so it's about feeling, "Oh okay, you're not the only one who's felt this way or feels this way", which – that in itself makes me feel better. So, I guess in a sense it is about making myself feel better but not – but through feeling it and through knowing that other human beings have felt that but not through playing happy music, because I feel like that would be trying to deny how I feel and forcibly trying to change it, instead of just accepting I have that emotion and then letting myself feel it.

Interviewer: So, obviously you've said that you have a particular playlist that you keep private. Other than that, is all your other music listening public?

[0:48:20]

In-09-M: Yes, that's the only private one; everything else is public.

Interviewer: Is there a reason that you've decided to make your music listening public?

In-09-M: Yes, well for one, it's a default but I'm aware that I've never felt like changing it (laughs). It's an egotistical thing, but I want other people to know about my music tastes and it's, "Hey, what's up? This is me" and I want to show the world, "Oh, this is me".

Interviewer: So, when people or particular people are online, it doesn't necessarily make you feel conscious or feel like you need to change the current song you're listening to?

In-09-M: Well... not anymore, but I'd sometimes keep in mind, when my girlfriend and I were together, she's going to see I'm listening to this song and I wonder what she'd think about it. I wouldn't change it ever but... if I was listening to a song

that's pretty degrading towards women, maybe not as the main point but you know how rap is, and I would be, "Hmm I don't know what she'd feel about that" but I'd still never change it but it would make me think – just with her really, I can't think of anyone else I'd care about what they think about what I listen to.

Interviewer: So, we've talked about playlists, are there any other service features that you use on Spotify, so do you use the "Discover" tabs for instance or the radio function, the Daily Mixes, Release Radar, anything like that at all?

In-09-M: Yes, I've used them all, but I don't really use them a tonne. I've used Discover Weekly but that's very rare that I'm feeling the courage to go out of my comfort zone with new songs and then I use the radio, it comes on after every song in the playlist is done, so sometimes I let it go but I've found the radio services pretty bland and not very good and then sometimes I use the Daily Mixes but also rarely because I don't want to go out of my – it's, I know what I like and there's a risk in playing something I'm not sure if I'm going to like it and then I don't know what the Release Radar – I know if an artist that I like a lot has new music and for artists that I know I like and they have new music, I let it – whatever, maybe I'll come around to listening to it but I don't feel, "Ah, he just came out with this album, I'm going to listen to it".

Interviewer: Okay, so it's really interesting because you talked about the idea of risk -

In-09-M: What's that?

Interviewer: You talked about the idea of risk when you're using Spotify's own features-

In-09-M: Well, theoretically Discover Weekly and from what I've read by other people, it's, "Oh it's really good" but I don't know if it's so much that Spotify doesn't know me or my music taste, but I just know that very particular – if I like a song or not but I'm not, but in a sense I am... and I know I'm very picky with the music and even to myself...

Interviewer: So, has there then been some kind of past instances on Spotify that they've given you lots of music that you don't like and that's why you are a bit reluctant to use them?

In-09-M: Yes, yes, because especially with the radio, it's – the radio, say if I put Nas Radio, it's completely inferior to Pandora for example. If I put on Nas Radio, it'll play these weird – not weird but obscure Nas songs that aren't very good and if it does that sort of thing over and over, or it'll just play songs I like or I think it's got to be some algorithm with that. What am I answering here again? (Laughs)

[0:53:25]

Interviewer: So, the idea of risk and has there been lots of times that you've not liked the things that the features have given to you and is that a reason for not using them?

In-09-M: I think it's part of it, yes; I think it's part of it. Because I know it's recommending me some artist that I know I already – I've listened to them before, a long time before and I know I don't like him and so it's, "Hmm..." it's a computer can only come so close to knowing that sort of thing, if ever, it's...

Interviewer: So, in a previous answer, you mentioned Pandora, so are there other streaming platforms you use for your music listening aside from Spotify?

In-09-M: Not really, but that's the thing though, if I do feel like listening to new music, I'll often go on Pandora because I know – because I have a history of liked and disliked songs, and I know that they're better at recommending songs.

Interviewer: What gives you that impression? Why do you feel that?

In-09-M: Because in my experience when I've used it, it has recommended better songs.

Interviewer: So, when you say "better", in what sense do you mean better?

In-09-M: Songs that I like! (Both laugh) Yes, that's what I mean, not better songs but if I go to the Beatles playlist or whatever and I go up and down songs I like and don't like, it's learned what I like or what I might like, it's done a better job from my experience in choosing songs that I'll like.

Interviewer: So, do you feel that Spotify hasn't quite got that right yet, for you?

In-09-M: Exactly, yes I feel that way completely, I think that's – Spotify is great, it can't do everything – it could do everything but that's – those little things are just bonus things with Spotify, the radio, it's terrible I think but it's there and that's nice.

Interviewer: So, it's really interesting because a lot of people that I've spoken to so far, cite the features that Spotify has, like the Release Radar and the Daily Mixes as being a particular reason that they've chosen Spotify as their music streaming platform, but for you that doesn't sound like it's the case. So, what is it then that leads you to Spotify for your music streaming as opposed to just being on Pandora the whole time?

In-09-M: Yes, okay well I think the biggest thing and it's completely important to me is that Spotify looks pretty or it looks good, it's aesthetically pleasing, the UI – the UI I think is great and all I really want is the ability to stream and download any song and anything else is just neat but – and then to be able to play that and it looks good and in Pandora, they don't really – it's ugly I think. Google Play, I don't like the UI, I don't like the UI of Apple Music when I had an iPhone, so it's a matter – the big thing is how it looks.

Interviewer: So, what is it then specifically about Spotify's user interface that you find appealing?

In-09-M: I like the black, I don't know it's clean, it's consistent. I love – I guess it's everything but, on my android, I love the album artwork when it's locked, it's nice, that's everything. I don't know, it's – I don't know why but it just looks better to me.

Interviewer: Do you feel then that the user interface influences your listening at all?

In-09-M: Well, for one it starts off at home and if it didn't start off at home, when you open the app or open the desktop app, then I don't think I would ever or rarely have cared to go listen to those playlists they have, so yes.

[0:58:16]

Interviewer: How do you feel about the artists that are promoted on the user interface? Does that influence your music listening? What did you think about the promotion of Drake's new album?

In-09-M: I wasn't irritated, but I also didn't care for it – whatever! I like Drake but I – I wasn't irritated, nor was I, "Oh I'll go listen to some Drake" it was, whatever, because they always have some artist that I don't care about on there, which is fine.

Interviewer: Because yes, some people have some very strong opinions about Drake being featured on there – (both laugh)

In-09-M: Yes, I saw because they're always so angry about it!

Interviewer: Yes, so in terms of then your Spotify Music Library, how often do you add new stuff in there?

In-09-M: Maybe – I think the most I go with not adding anything is two or three weeks maybe, so – but pretty occasionally, not every day but...

Interviewer: And where are those new songs coming from? Are they things that you found yourself or songs that you've read about or are they coming from friends or -?

In-09-M: The biggest one has been friends. For example, if we're hanging out or something and there's a song or we're at some place and there's a song playing and then I get – or they show me a song, then I might add it if I like it, but for example I have a friend, she's in the army now, but I asked her, "Hey, play me a song" we were hanging out and then so she put a song and I listened to it and I added it and the song is pretty good. It's "Chocolate" by 1975 but

just more of the memory of her showing it to me and it was a time when we were all hanging out every day and that makes me happy to think about that, so it's almost I like that more. So, much of the songs that I add to my playlist, that I like, it has to do with an experience with that song.

Interviewer: So, a memory of a person or an experience?

In-09-M: Yes, exactly.

Interviewer: Okay, and then what about removing stuff, do you ever delete songs from your library?

In-09-M: Yes, yes... and that's a self-expression thing because there was a song on Grand Theft Auto 5 that I had saved three or four years ago and I never really listened to it but at one point I did listen to it and it's called – it's vulgar and it's, "Oh fuck this bitch, wash my dick" something like that (laughs) but I don't like the song anymore and I also – I don't like it when it plays on shuffle, I'm, "Yikes!" but I also don't want people to think that I'm misogynistic, so I deleted that song off the playlist eventually.

Interviewer: So, would you say then your library is quite current?

In-09-M: Well, let me take that back for a second. That one in particular was, "No, I'm shunning that" but I'll skip a tonne of songs, but I'll leave them – because it's also nice, part of it, I keep most songs up, although I do delete songs like that one, but I also do enjoy the – it's a history of it, so I keep it because it shows where I was at or...

[1:02:16]

Interviewer: So, do you often go back and re-live that history?

In-09-M: It depends on what happened. There's certain – I'll look through my playlist and I'll remember what was happening during that time and if it's now a

bittersweet memory and I'm, "Ugh, I don't want to listen to that because I don't want to be reminded of that time".

Interviewer: The other thing I found interesting is that from your Scrobble logs, it looks like that you use the love heart to mark which songs you particularly love. Is there a reason that you started doing that?

In-09-M: No, not really because I don't – it's, what's the word? Arbitrary but no, I just – whatever!

Interviewer: So, is there a reason that you choose to like those particular songs in that way? What makes them different from the other songs that are in your music library?

In-09-M: Well... if I get curious and look, "What's my most played song?" or something and then I think the fact that it's my most played song is already the heart itself and then so it's just colouring it in in a sense.

Interviewer: Okay, so I'd like to move on to talking a bit about your playlists. So, would you say that playlists are important to you?

In-09-M: Yes because it makes it – so, if I'm feeling a certain way or doing a certain thing or whatever, the season or whatever, however that is, it makes it so – it's like meal prepping, Sunday meal prep, you know? So, I have it ready to go, I don't have to go and buy ingredients and stuff and list everything. I know I like to eat that or listen to that at that time or whatever and that way it's ready to go.

Interviewer: That is a really interesting metaphor! (Both laugh) So, then how often are you creating these playlists?

In-09-M: Not that often. I'm always adding to the daily one, but I think the last time I created a playlist was six months ago.

Interviewer: Okay, so it's more then that you add to existing playlists rather than creating new ones entirely.

Appendix N

In-09-M: Yes, exactly that.

Interviewer: So, the daily playlist you've mentioned quite a few times, so is that your main playlist that you most often listen to?

In-09-M: Yes, that is the one.

Interviewer: So, how did that get started? What sort of stuff is on there?

In-09-M: Well, originally I just had one playlist and I'd add songs to it and that's how it started. Later on did I make different playlists for whatever, but that's the OG one.

Interviewer: So, what makes it then that you chose to create your – a playlist, rather than just completely running the songs off your Spotify library?

In-09-M: (Laughs) Well, I don't know, it was more just not really being aware even that – not knowing too much about the library feature of Spotify and... (Call disconnects and reconnects)

Interviewer: Hello?

In-09-M: My phone died; can you still hear me?

Interviewer: Yes, I can hear you.

[1:06:45]

In-09-M: My laptop died but this is better because I can actually see you this time so – (both laugh). I didn't know how you were responding but – what was the question again?

Interviewer: So, what makes you – why did you put all your songs in to one playlist, rather than just playing it straight from the library?

In-09-M: Yes, well I don't know, I don't have an answer, I don't know.

Interviewer: So, when you're listening then to your daily one, do you listen to it sequentially or is it on shuffle?

In-09-M: It's on shuffle but – most of the time it's on shuffle but sometimes it's on – it's not on shuffle, it's I'll add songs, there's ten or 15 songs that I've added over the course of the two or three weeks or months and I still have these same beliefs and emotions most of the time and I know that I'll probably like those songs and so then I'll let it just play, but most of the time I play on shuffle.

Interviewer: So, what kind of music then do you most often listen to on your daily playlist? Is there a particular – because Smashing Pumpkins one song came up quite a lot; is that because it's on your playlist or is that just because you particularly love that song?

In-09-M: I particularly love that song; I didn't know it existed until a week ago but no, well it's – it is on my playlist and it is up there, so a lot of times, when I go to my playlist and I'll hit "daily" and I'll scroll through the top ones to start it off and that one has been a favourite of hitting that one and then either hitting shuffle or letting it go after, but then I just – I like that song a tonne. Have you heard that song?

Interviewer: Yes, it's a classic.

In-09-M: I didn't know about it, it's so great, it's awesome!

Interviewer: (Laughs) So, aside from then your daily playlist, how many other playlists do you have on your Spotify account?

In-09-M: I think ten maybe?

Interviewer: And what are those playlists for? Are they for specific things?

In-09-M: Well, I'm using – the mic doesn't work on my... my microphone doesn't work on my laptop so – but I can show you... there it is... okay, there's one called

[playlist name] which I made for a friend. *[Playlist name]*, *[playlist name]*, there's 60s, 70s, 80s because – there's one for The Beatles, there's one for Beck, soul, modern folk, there's one called *[playlist name]* (both laugh), there's one *[playlist name]*, I stole that name but – *[playlist name]* is one. I could have answered that, basketball, there's one for basketball so that's an activity and there's one called *[playlist name]*, there's one called *[playlist name]*, there's one called *[playlist name]*, one called *[playlist name]*, so yes.

[1:10:41]

Interviewer: Okay, so a lot of them then seem to be quite genre based or artist based; is there a reason that you've decided then to create these yourself rather than using the genre-based ones that Spotify has?

In-09-M: Yes, well – okay, well the Beck one, these are just songs recommended from a friend for Beck and sometimes Spotify, those are – they have those “This is” and then the artist, yes, sometimes they have good songs, but they also have, “Why is this still in this playlist?” so, yes, that's why.

Interviewer: Okay, fair enough, so do you actually ever listen to Spotify's own playlist at all?

In-09-M: Yes, so if I'm new to the artist I might listen to that playlist, but most of the time, when I'm new to the artist or I want to check out the artist, I just go to their top songs and that's how I tend to find what songs people like from these artists.

Interviewer: So, then you would never use – you would never use Spotify's own one for – say if you're feeling sad or if you're feeling happy, you would more go to your own music.

In-09-M: No, I've used those. Yes, I don't subscribe to any of them but – oh, you know what, another thing, sometimes I listen to those on all private, the sad ones. I guess thinking about it – it's kind of sad but yes, so I do listen to those a lot, or not a lot but a good amount.

- Interviewer: Just going back then, so when you say you listen to those on private, do you mean the Spotify based playlists or the sad playlists?
- In-09-M: Both the sad for my own or the sad Spotify – I don't want people to know.
- Interviewer: Okay, so those are the only circumstances then that you would have it on private though still?
- In-09-M: Yes.
- Interviewer: That's really interesting. So, we talked about playlists, I'd now like to go on to how you discover new music, so are you a person that enjoys discovering new music?
- In-09-M: Like I said, I'm cautious to do it but when I do discover new music it's – yes, I enjoy it a tonne but then I'll overplay the song or something like that.
- Interviewer: Yes, well you see because I find it really interesting because obviously looking at what you listened to for the last seven days on Scrobble, you have quite a diverse range of music that you've obviously come across somehow and that you've discovered and yet, you talk about having this comfort zone of music and obviously being conscious about the risk. So, how have you then been able to discover such a diverse range of music but still been concerned about risk?
- In-09-M: Well, so there's no risk in the type of song, there's that. How did I come to discover it? Well for one, by Reddit. I like looking up "Top Ten Albums Ever" things like that, looking up very revered albums and artists, so that and Reddit, so the internet.
- Interviewer: So, it tends to then come from your own exploration, that you discover these things.
- In-09-M: Yes.

[1:14:42]

Interviewer: So, what is it that -?

In-09-M: There is a little bit from Spotify.

Interviewer: So, what do you tend to discover from Spotify, versus what do you discover from Reddit? Is there a difference in those discoveries?

In-09-M: Yes, most of the songs that I've added from Spotify playlist have been the one – when you go to browse or whatever and you go by mood or activity, let me look... it says "mood" here... most of the songs that I've added from Spotify have come from those types of playlists.

Interviewer: So then rather than from their specific discovery features like Release Radar, you've actually just come across them from when you've been listening to playlists?

In-09-M: Exactly, yes.

Interviewer: That's really interesting. So, then what do you discover through Reddit? What kind of things have you discovered through there?

In-09-M: Well, not so much anymore but I used to go on – have you heard of Hip Hop Heads on there?

Interviewer: Yes.

In-09-M: I used to go a lot on that and so, Kanye West, everyone – I'm sure you have an opinion on Kanye because everyone does but the – it was everyone hated Kanye, everyone hates Kanye in a sense, but when I started going on Hip Hop Heads, they liked Kanye and I was, "Hmm..." and that was very attractive because I actually liked being part of the – we're on the "in", you know? So, their praise of Kanye meant that – made it to me, to where I'm, "Okay I'll give them a shot" and then now I get it and then artists like Danny Brown who's an obscure-ish rapper; I would have never across if it wasn't – if they weren't, "Oh yes, this guy is great".

Interviewer: So, you've discovered those kinds of artists from Reddit. Is there anything or any artist or song that you credit Spotify, just Spotify, for having discovered for you?

In-09-M: Well, I'm pretty sure Bon Iver, I didn't get that from Reddit and I don't know where I got it from, but I think Bon Iver... I think that was Spotify.

Interviewer: So then, do you feel like there's a difference – so, as well sorry, do you get any new music from your friendship groups or particular friends online or anything like that?

In-09-M: Yes, my friend [name], he's a guy I listen to a lot of music with, and we have very different taste but occasionally there'll be a song and it'll be, "Yes..." and then my friend [name], so there are a lot of the songs I get are – listening to in the car with friends and be, "Oh whoa!"

Interviewer: So, do you feel for you then there's a difference in the new music discoveries that you make through people, so the people that post on Reddit, your friends, the people – the connected friends that you have on Spotify, versus Spotify as the platform?

In-09-M: Say that again, I'm sorry?

Interviewer: Do you feel for you there's a difference in the way that you feel about the music that you can discover from actual people, so people on Reddit, versus what you can discover on an algorithm-based platform?

[1:18:42]

In-09-M: Yes, because like I said, when it's a friend, then maybe a little bit with a community on Reddit maybe, but when it's a friend and they recommend it, it's more significant because then they're also saying, "You would like this" and it's a social thing, they're saying something about themselves and about you, they're communicating to you and that's more meaningful to me so I'm more inclined to...

Interviewer: Do you feel like there's an element of trust there as well? Would you say that you trust people more than perhaps you trust the technical underpinnings of Spotify?

In-09-M: Yes, 100% because I think – like I said before, a computer is great but it's one of those things, can a computer or a robot, can they ever really truly get it?

Interviewer: And, as well when you're discovering new music, do you prefer to discover something that's similar to what you already like or something that's really, really different?

In-09-M: More similar but although sometimes I'll be, "What's that?" be curious about way different but mostly similar though, which would – that's everything.

Interviewer: Okay, so going back then to talking a bit more about Spotify, so do you feel that Spotify has allowed you to manage and construct and develop your music tastes?

In-09-M: Yes, yes, because it's so easy, it's so simple to do; you just search it. And then the ability to create playlists allows me also to put stuff on the side, to try out for later and yes, without a platform for that, I guess you could do that on YouTube. I don't know, it's so liberating with music streaming because it used to be you went to the store and bought a CD and there was a much bigger risk there but there's virtually – there's no real physical risk because it's online and it's not really real.

Interviewer: So, then in that sense, do you feel that you've potentially tried out more because there is not that financial or physical investment in – like there is a CD, you can literally just click on a tune, listen to 30 seconds, and decide if it is for you or not?

In-09-M: Yes, and you know what, and even more so because it's easier for me to pay five, ten dollars than to even pirate because otherwise I'd... because I have been pirating since I was 12 too until I got Spotify at 16. So yes, definitely.

Interviewer: It's a good legal alternative.

In-09-M: Yes, and artists get paid something. I'm not really...

Interviewer: So, I don't know about over in America, but at the minute there's a lot in the UK about how platforms are collecting data about us and using it and selling it on, so a prime example being Facebook. But how do you feel about the fact that Spotify is collecting this information about you, when you're using it as a service, does that bother you at all?

In-09-M: I didn't know that, so thank you...No, no thank you, for real... I just, it doesn't bother me in the sense that I don't know enough about that; how – what can they even do with my data? What do they have? My email, phone, all my music stuff, friends, and all that, but I'm just – I'm thinking to myself, "Well, what could they actually do with that?" Ads, right? Personalised ads that get at your little brain, but I don't have ads because of Premium, so it doesn't bother me but it potentially could.

[1:23:33]

Interviewer: So, for example, one of the ways we think that Spotify is potentially using data is it's recording what you're streaming and how many times you're streaming it, to produce these recommendations for you, specifically for you. So, in that sense, if it's doing that, what do you actually feel about the recommendations that it is giving you?

In-09-M: Okay, well in that sense, I think it's great that it does that. Although, and after this conversation I'm going to check out that Discover Weekly and stuff like that to give it another shot, but like I said, so far it's lacklustre and like I tell you, I hypothesise that it just might be that a computer can never truly get that and if it does then yikes!

Interviewer: So, am I right in thinking that, although potentially Spotify is recording what you're streaming and trying to use this to give you recommendations that it thinks you'll like, that actually you don't actually like them that much?

Appendix N

In-09-M: Yes, exactly.

Interviewer: And is there a reason for this? Is it the type of music that they're offering you or the type of artist? What is the reason that you don't feel like you like their recommendations?

In-09-M: Yes, thinking about it now is - I might just not like that they put a lot of obscure stuff there and then a weird social thing... let me think about it for a second but... it's almost like I don't want to like really obscure things because I want to be able to share it with my friends and stuff like that. I don't want to be alone in it, I want to be part of a group (laughs), because it does recommend a lot of obscure stuff.

Interviewer: So, when you say "obscure", in what sense do you mean "obscure"?

In-09-M: In the sense that the songs have very low play counts. Yes, so it's - talking about it out loud, this is going to change now that I realise it, but it's almost being scared to like something that a lot of people don't, which I need to think about that because I strive to not worry about that but, yes.

Interviewer: So, you say you strive but then, so do you feel that maybe you perhaps realise that maybe you do?

In-09-M: Yes, exactly, so now I talk about it, "Hmm, maybe - wow! Maybe I'm not so much that".

Interviewer: That's really interesting because that relates to my final question, so my final question is, obviously you've now been through three of the phases of my research, so you've done the survey, you've done the week of online observation and then you've taken part in the interview today and has that caused you to change or reflect on anything to do with your music streaming?

In-09-M: Yes, the big one being - I'm going to check out the Discover Weekly stuff more, but honestly, I'm ashamed - not ashamed but I'm, "Oh wow, that's not - you're not about that" with - in regard to being afraid to not be part of the herd, you know?

- Interviewer: Well, that's really interesting that that's come out of this discussion with you because it's been a super interesting conversation with you and how you use music and what it means to you, so thank you so much for sharing all that you have with me today. Is there anything from your side that you would like to talk about or expand upon that either we have discussed or not discussed at all?
- In-09-M: Well, I just – I want to just tell you in general that – it must mean a lot to you too. Can I ask you, what does it mean to you, music?
- Interviewer: In terms – oh, music? So, music has always been a huge part of my life, both academically – I've studied music and socially. And it's been quite – I'm very much a person that I enjoy going to gigs and festivals, so I like the social experience of music and sharing that feeling with other people and I'm very much for how the music makes me feel. So, I'd like to think that I like quite a broad range of music but one of my particular favourites is dance music and the feeling that it gives you as the song's heightening and then the drop in the music and everybody just goes crazy. So, yes, it's very much for me based on emotion and social experiences and personal experiences and I did go through an Eminem phase as well (both laugh).
- In-09-M: Who hasn't?
- Interviewer: Yes, but it's also incredibly interesting hearing other people's experiences of music listening because music has been really important to me and maybe I thought that it was just a few people that music was really important to, but actually, speaking to the amount of people that I have, it's important to a lot of people for a lot of reasons and a lot of different reasons as well and it's just been so interesting.
- In-09-M: Hey, one thing too is – I like that music expresses things that people are unwilling to talk about or express and I guess that's true of every type of art, but I enjoy that a lot because it goes to the whole human experience. A lot of the time it's the stuff that your friends don't really talk about or... so, I like

that. Yes, so the results are going to be – are you going to publish them in a few months?

Interviewer: This data could be used for – so for conference papers or journal articles, but ultimately it'll all be contained in my PhD and that's a year, a year and a half in the making before that's all together and one thing. But yes, anything that obviously comes out of it, I will share.

In-09-M: That's great, yes.

Interviewer: Well I'll let you get on with your day because obviously it's still morning time over there but it's night time over here.

In-09-M: Oh, is it?

Interviewer: It's so confusing with the time differences, so I thought when you emailed me, I was, "Oh my gosh, I've got the time difference wrong!" and I was meant to call you two hours ago (laughs).

In-09-M: I was – yes, I was just – I was, "Wait, what time zone are we talking about here?"

Interviewer: Time zones are confusing (laughs) but no, I'll let you get on with the rest of your Sunday.

In-09-M: It was nice talking to you.

Interviewer: Yes, and you, thank you so much.

In-09-M: Okay, bye, have a good day.

Interviewer: Bye.

[End of transcript]

Appendix O Recording of Online Observation

Key:		Start of a new streaming session with a different artist
		Start of a new streaming session with the same artist

Date	Time (24 hour)	Artist	Song
14/09/2018	17:29:00	Brockhampton	Cannon
14/09/2018	17:26:00	Brockhampton	Summer
14/09/2018	17:22:00	Brockhampton	Cotton Hollow
14/09/2018	17:19:00	Brockhampton	Boogie
14/09/2018	17:15:00	Brockhampton	Queer
14/09/2018	17:12:00	Brockhampton	1999 Wildfire
14/09/2018	17:07:00	Brockhampton	Face
14/09/2018	17:05:00	Brockhampton	1997 Diana
14/09/2018	17:02:00	Brockhampton	Hottie
14/09/2018	16:57:00	Brockhampton	Sweet
14/09/2018	16:55:00	Brockhampton	Ben Carson
14/09/2018	16:51:00	Brockhampton	1998 Truman
14/09/2018	16:18:00	Jungle	Heavy, California
14/09/2018	16:15:00	Jungle	Happy Man
14/09/2018	16:10:00	Jungle	House in LA
14/09/2018	16:08:00	Jungle	Home
14/09/2018	16:04:00	Jungle	Cosurmyne
14/09/2018	16:01:00	Jungle	Give Over
14/09/2018	15:57:00	Jungle	Beat 54 (All Good Now)
14/09/2018	15:53:00	Jungle	Mama Oh No

Date	Time (24 hour)	Artist	Song
14/09/2018	15:49:00	Jungle	Pray
14/09/2018	15:42:00	Jungle	(More and More) It Aint Easy
14/09/2018	15:38:00	Jungle	Casio
14/09/2018	15:35:00	Jungle	Smile
14/09/2018	15:28:00	Calvin Harris (with Sam Smith)	Promises
14/09/2018	15:25:00	Still Woozy	Lucy
14/09/2018	15:23:00	Mitski	A Pearl
14/09/2018	15:20:00	They.	Pops
14/09/2018	15:17:00	Caleon Fox	Up North
14/09/2018	15:13:00	Jay Som	The Bus Song
14/09/2018	15:10:00	Thom Yorke	Suspirium
14/09/2018	15:06:00	Jay Som	Everybody Works
14/09/2018	15:03:00	Jay Som	One More Time, Please
14/09/2018	14:58:00	WY	Bathrooms
14/09/2018	14:53:00	Tiesto	Jackie Chan
14/09/2018	14:49:00	Calvin Harris (with Sam Smith)	Promises
14/09/2018	11:54:00	Beach House	Majorette
14/09/2018	11:49:00	Beach House	Wishes
14/09/2018	11:45:00	Beach House	Beyond Love
14/09/2018	11:40:00	Beach House	Wild
14/09/2018	11:36:00	Beach House	Somewhere Tonight
14/09/2018	11:31:00	Beach House	Auburn and Ivory
14/09/2018	11:27:00	Beach House	Heart of Chambers
14/09/2018	11:23:00	Beach House	Myth

Date	Time (24 hour)	Artist	Song
14/09/2018	11:18:00	Beach House	Lazuli
14/09/2018	11:14:00	Beach House	10:37
14/09/2018	11:10:00	Beach House	The Hours
14/09/2018	10:58:00	Beach House	Take Care
14/09/2018	10:54:00	Beach House	Used to Be
14/09/2018	10:49:00	Beach House	Zebra
14/09/2018	10:46:00	Beach House	Equal Mind
14/09/2018	10:41:00	Beach House	Chariot
14/09/2018	10:35:00	Beach House	Levitation
14/09/2018	10:31:00	Beach House	Bluebird
14/09/2018	10:28:00	Beach House	Saltwater
14/09/2018	10:23:00	Beach House	New Year
14/09/2018	10:18:00	Beach House	Space Song
14/09/2018	10:11:00	Beach House	Days of Candy
14/09/2018	10:07:00	Beach House	Silver Soul
14/09/2018	10:03:00	Beach House	Master of None
14/09/2018	09:58:00	Beach House	Sparks
14/09/2018	09:54:00	Beach House	Norway
14/09/2018	09:51:00	Beach House	Pay No Mind
14/09/2018	09:47:00	Beach House	Other People
14/09/2018	09:42:00	Beach House	She's So Lovely
14/09/2018	09:38:00	Beach House	Lose Your Smile
14/09/2018	09:34:00	Beach House	Wildflower
14/09/2018	09:31:00	Beach House	All Your Yeahs

Date	Time (24 hour)	Artist	Song
14/09/2018	09:16:00	Jungle	Smile
14/09/2018	09:09:00	Julee Cruise	The World Spins
14/09/2018	09:04:00	Julee Cruise	I Float Alone
14/09/2018	09:00:00	Julee Cruise	The Nightingale
14/09/2018	08:57:00	Julee Cruise	The Swan
14/09/2018	08:52:00	Julee Cruise	Floating
14/09/2018	08:48:00	Julee Cruise	Mysteries of Love
14/09/2018	08:42:00	Julee Cruise	Rockin' Back Inside My Heart
14/09/2018	08:36:00	Julee Cruise	Falling
14/09/2018	08:32:00	Julee Cruise	I Remember
14/09/2018	08:27:00	Julee Cruise	Into the Night
13/09/2018	19:39:00	Julee Cruise	The World Spins
13/09/2018	19:34:00	Julee Cruise	I Float Alone
13/09/2018	19:29:00	Julee Cruise	The Nightingale
13/09/2018	19:27:00	Julee Cruise	The Swan
13/09/2018	17:13:00	Julee Cruise	Floating
13/09/2018	17:08:00	Julee Cruise	Mysteries of Love
13/09/2018	17:02:00	Julee Cruise	Rockin' Back Inside My Heart
13/09/2018	16:57:00	Julee Cruise	Falling
13/09/2018	16:53:00	Julee Cruise	I Remember
13/09/2018	16:48:00	Julee Cruise	Into the Night
13/09/2018	13:07:00	HAIM	Little of Your Love
13/09/2018	13:04:00	Shawn Mendes	There's Nothing Holdin' Me Back
13/09/2018	13:02:00	Twin Peaks	Making Breakfast

Date	Time (24 hour)	Artist	Song
13/09/2018	12:59:00	Ed Sheeran	Galway Girl
13/09/2018	12:56:00	Ed Sheeran	What Do I Know?
13/09/2018	12:55:00	Mac DeMarco	Baby You're Out
13/09/2018	12:52:00	Rex Orange Country	Loving is Easy
13/09/2018	12:51:00	George Ezra	Don't Matter Now
13/09/2018	12:47:00	Ariana Grande	Be Alright
13/09/2018	12:46:00	Unit 4 + 2	Concrete and Clay
13/09/2018	12:45:00	Ariana Grande	raindrops (an angel cried)
13/09/2018	12:44:00	Ariana Grande	Pete Davidson
13/09/2018	12:40:00	Ariana Grande	R.E.M
13/09/2018	12:37:00	Ariana Grande	Better Off
13/09/2018	12:34:00	Ariana Grande	Everytime
13/09/2018	12:30:00	John Mayer	New Light
13/09/2018	12:27:00	Blood Orange	Best to You
13/09/2018	12:23:00	Jungle	Heavy, California
13/09/2018	11:06:00	Cocteau Twins	Fotzepolitic
13/09/2018	11:03:00	Cocteau Twins	Wolf in the Breast
13/09/2018	10:57:00	Cocteau Twins	Frou-Frou Foxes in Midsummer Fires
13/09/2018	10:54:00	Cocteau Twins	Cherry-Coloured Funk
13/09/2018	10:08:00	Devonte Hynes	Feelin' Lovely
13/09/2018	10:04:00	Post Malone	Better Now
13/09/2018	08:52:00	Milo	Prop Joe's Clock Repair Shop
12/09/2018	18:51:00	Julee Cruise	The World Spins
12/09/2018	18:47:00	Paramore	Feeling Sorry

Date	Time (24 hour)	Artist	Song
12/09/2018	18:45:00	Neutral Milk Hotel	King of Carrot Flowers Pt. 1
12/09/2018	18:43:00	Artic Monkeys	Teddy Picker
12/09/2018	18:39:00	Fall Out Boy	West Coast Smoker
12/09/2018	18:35:00	My Chemical Romance	The End.
12/09/2018	17:02:00	Muse	Supermassive Black Hole
12/09/2018	17:00:00	American Hi-Fi	The Art of Losing
12/09/2018	16:56:00	American Hi-Fi	The Art of Losing
12/09/2018	16:54:00	Fall Out Boy	The Music or the Misery
12/09/2018	16:52:00	Artic Monkeys	Brick by Brick
12/09/2018	16:49:00	My Chemical Romance	Dead!
12/09/2018	16:45:00	Marianas Trench	Decided to Break It
12/09/2018	16:43:00	Fall Out Boy	Headfirst Slide into Cooperstown on a Bad Bet
12/09/2018	16:41:00	Artic Monkeys	Suck It and See
12/09/2018	16:36:00	Rihanna	Bitch Better Have My Money
12/09/2018	16:33:00	Nicky Minaj (feat. Ariana Grande)	Bed
12/09/2018	16:30:00	Ariana Grande	Everyday
12/09/2018	16:26:00	Childish Gambino	IV. Sweatpants
12/09/2018	16:24:00	Harry Styles	Kiwi
12/09/2018	16:17:00	Rex Orange Country	Best Friend
12/09/2018	16:15:00	Rihanna	Consideration
12/09/2018	16:11:00	HAIM	That Don't Impress Me Much-trip j Like A Version
12/09/2018	15:40:00	Milo	Legends of the Hidden Temple
12/09/2018	15:36:00	Milo	Almond Milk Paradise
12/09/2018	15:31:00	Milo	a lazy coon's obiter dictum

Date	Time (24 hour)	Artist	Song
12/09/2018	15:27:00	Milo	The Otherground Pizza Party
12/09/2018	15:23:00	Milo	Monologion
12/09/2018	15:18:00	Milo	The Gus Haynes Cribbage League
12/09/2018	15:14:00	Milo	Almost Cut My Hair (For Crosby)
12/09/2018	15:11:00	Milo	Post Hoc Ergo Propter Hoc (For Schopenhauer)
12/09/2018	15:07:00	Milo	Sweet Chin Music (The Fisher King's Anthem)
12/09/2018	15:03:00	Milo	Folk-Metaphysics
12/09/2018	15:02:00	Michael Seyer	Pineapple Chunks
12/09/2018	14:52:00	Men I Trust	You Deserve This
12/09/2018	14:47:00	Cosmo Pyke	Social Sites
12/09/2018	14:44:00	Homeshake	He's Heating Up!
12/09/2018	13:35:00	Elvis Depressedly	Teeth
12/09/2018	13:31:00	Inner Wave	Balto
12/09/2018	13:28:00	Mild High Club	Homage
12/09/2018	13:25:00	Homeshake	Not U
12/09/2018	13:20:00	Cuco	Lava Lamp
12/09/2018	13:18:00	Puma Blue	Soft Porn
12/09/2018	13:15:00	Mild High Club	Undeniable
12/09/2018	13:13:00	Beach Fossils	This Year
12/09/2018	12:51:00	Triathalon	Plant
12/09/2018	12:51:00	Triathalon	Water
12/09/2018	12:47:00	Triathalon	Sometimes
12/09/2018	12:44:00	Triathalon	Butter
12/09/2018	12:41:00	Triathalon	Couch

Date	Time (24 hour)	Artist	Song
12/09/2018	12:37:00	Triathalon	Deep End
12/09/2018	12:31:00	Triathalon	TRUE
12/09/2018	12:27:00	Triathalon	Bad Mood
12/09/2018	12:22:00	Triathalon	3
12/09/2018	12:17:00	Triathalon	Hard to Move
12/09/2018	12:14:00	Triathalon	Pull Up
12/09/2018	12:10:00	Triathalon	Day One
12/09/2018	12:07:00	Triathalon	Training Day
12/09/2018	11:50:00	Triathalon	Distant
12/09/2018	11:45:00	Dreamers	Misfits T-Shirt
12/09/2018	11:42:00	Dreamers	The Last Love Song
12/09/2018	11:34:00	Unknown Mortal Orchestra	Hunnybee-Baltra Remix
12/09/2018	11:32:00	Peachy!	Falling for U
12/09/2018	11:21:00	David Duchovny	Hell or Highwater
12/09/2018	11:15:00	Friendly Fires	Paris (Aeroplance Remix)
12/09/2018	11:12:00	Jesse Rutherford	Bloom Later
12/09/2018	11:08:00	The Drums	Money
12/09/2018	11:06:00	alt-j	Dancing in the Moonlight (Its Caught Me in its Spotlight)
12/09/2018	11:04:00	The Coral	Dreaming of You
12/09/2018	11:00:00	Foster the People	Pumped Up Kicks
12/09/2018	10:57:00	The Wombats	Lethal Combination
12/09/2018	10:52:00	MGMT	Little Dark Age
12/09/2018	10:47:00	Blossoms	There's a Reason Why (I Never Returned Your Calls)
12/09/2018	10:44:00	Tame Impala	The Less I Know the Better

Date	Time (24 hour)	Artist	Song
12/09/2018	10:37:00	Dr. Dog	Listening In
12/09/2018	10:31:00	Cocteau Twins	Cherry-Coloured Funk
12/09/2018	10:28:00	Cocteau Twins	Wolf in the Breast
12/09/2018	10:24:00	Cocteau Twins	Road, River and Rail
12/09/2018	10:19:00	Cocteau Twins	Frou-Frou Foxes in Midsummer Fires
11/09/2018	19:20:00	Cocteau Twins	Fifty-Fifty Clown
11/09/2018	19:16:00	Cocteau Twins	I Wear Your Ring
11/09/2018	19:12:00	Cocteau Twins	Iceblink Luck
11/09/2018	19:07:00	Cocteau Twins	Heaven or Las Vegas
11/09/2018	19:04:00	Cocteau Twins	Fotzepolitic
11/09/2018	19:01:00	Cocteau Twins	Pitch the Baby
11/09/2018	16:07:00	My Bloody Valentine	Sometimes- Remastered (DAT 2006) Version
11/09/2018	16:03:00	Angelo Badalamenti	Freshly Squeezed-Instrumental
11/09/2018	15:57:00	Julee Cruise	The World Spins
11/09/2018	15:52:00	Brian Eno	An Ending (Ascent)- Remastered 2005
11/09/2018	15:15:00	Yeek	Only in the West
11/09/2018	15:10:00	Unknown Mortal Orchestra	If You're Going to Break Yourself
11/09/2018	15:08:00	Still Woozy	Lucy
11/09/2018	15:03:00	Beach House	Dive
11/09/2018	15:00:00	Cherry Glazerr	Insatgratification
11/09/2018	14:57:00	Whitney	No Woman
11/09/2018	14:53:00	Inner Wave	Song 3
11/09/2018	14:49:00	Peach Pit	Being so Normal
11/09/2018	14:47:00	The walters	Goodbye Baby

Date	Time (24 hour)	Artist	Song
11/09/2018	14:43:00	Craft Spells	After the Moment
11/09/2018	14:41:00	Florist	White Light Doorway
11/09/2018	14:38:00	Cyberbully Mom Club	better than that
11/09/2018	14:35:00	Sugar Candy Mountain	Windows
11/09/2018	14:33:00	No Vacation	Lovefool
11/09/2018	14:29:00	Current Joys	Fear
11/09/2018	14:26:00	SALES	pope is a rockstar
11/09/2018	14:23:00	Summer Salt	Sweet to Me
11/09/2018	14:20:00	Deerhunter	Sleepwalking
11/09/2018	14:16:00	Foxygen	How Can You Really
11/09/2018	14:13:00	Sports	Feels Like Magic
11/09/2018	14:10:00	Vundabar	A Man Loses a Hat
11/09/2018	14:06:00	Yellow Days	The Ways Things Change
11/09/2018	14:01:00	The Growlers	Dope on A Rope
11/09/2018	13:59:00	(Sandy) Alex G	Sarah
11/09/2018	13:55:00	Beach House	Girl of the Year
11/09/2018	13:50:00	Unknown Mortal Orchestra	Everyone Acts Crazy Nowadays
11/09/2018	13:48:00	Twin Peaks	Making Breakfast
11/09/2018	13:46:00	Fox Academy	420
11/09/2018	13:44:00	The Voidz	All Wordz Are Made Up
11/09/2018	13:39:00	Brockhampton	FAKE
11/09/2018	13:36:00	Puzzle	SOARING
11/09/2018	12:47:00	Connan Mockasin	I'm The Man, That Will Find You
11/09/2018	10:10:00	Jay Som	Everybody Works

Date	Time (24 hour)	Artist	Song
11/09/2018	10:06:00	Jay Som	One More Time, Please
11/09/2018	10:02:00	Caleon Fox	Up North
11/09/2018	10:00:00	Thom Yorke	Suspirium
11/09/2018	09:19:00	Homeshake	Home at Last
11/09/2018	09:17:00	Clairo	Flaming Hot Cheetos
11/09/2018	09:14:00	Homeshake	Faded
11/09/2018	09:10:00	Ralph TV	Homebody
11/09/2018	09:06:00	No Vacation	You're Not with Me
11/09/2018	09:03:00	Homeshake	khmlwugh
11/09/2018	08:59:00	Slow Pulp	Preoccupied
11/09/2018	08:56:00	Homeshake	heat
11/09/2018	08:52:00	Brad stank	Flirting in Space
11/09/2018	08:49:00	infinite bisous	brake
11/09/2018	08:46:00	Michael Seyer	The Girl from Georgia
11/09/2018	08:42:00	infinite bisous	Life + You
11/09/2018	08:38:00	Michael Seyer	Breakfast in Bed
11/09/2018	08:34:00	Her's	Dorothy
10/09/2018	19:08:00	Cocteau Twins	Cherry-Coloured Funk
10/09/2018	19:05:00	Connan Mockasin	Do I Make You Feel Shy?
10/09/2018	19:00:00	Michael Seyer	Ugly Boy
10/09/2018	18:57:00	Boys Age	Sour
10/09/2018	18:51:00	Cuco	Amor de Siempre
10/09/2018	18:51:00	Cuco	Lover Is a Day
10/09/2018	18:41:00	Homeshake	Every Single Thing

Date	Time (24 hour)	Artist	Song
10/09/2018	18:38:00	Mild High Club	Elergy
10/09/2018	18:35:00	Michael Seyer	Pretty Girls
10/09/2018	18:28:00	Sunset rollercoaster	My Jinji
10/09/2018	18:21:00	Mac DeMarco	Moonlight on the River
10/09/2018	18:17:00	Jay Som	Everybody Works
10/09/2018	18:14:00	Mitski	A Pearl
10/09/2018	18:12:00	Still Woozy	Lucy
10/09/2018	17:36:00	Thom Yorke	Suspirium
10/09/2018	17:32:00	Caleon Fox	Up North
10/09/2018	17:29:00	Jay Som	The Bus Song
10/09/2018	17:25:00	Jay Som	One More Time, Please
10/09/2018	17:20:00	WY	Bathrooms
10/09/2018	17:18:00	Still Woozy	Lucy
10/09/2018	16:10:00	Nicky Minaj	Nip Tuck
10/09/2018	16:07:00	Nicky Minaj	LLC
10/09/2018	16:06:00	Nicky Minaj	2 Lit 2 Late Interlude
10/09/2018	16:05:00	Nicky Minaj	Inspirations Outro
10/09/2018	16:01:00	Nicky Minaj	Hard White
10/09/2018	15:58:00	Nicky Minaj (feat. Ariana Grande)	Bed
10/09/2018	15:53:00	Nicky Minaj	Ganja Burn
10/09/2018	15:44:00	Caleon Fox	Up North
10/09/2018	15:40:00	Jay Som	The Bus Song
10/09/2018	15:38:00	Still Woozy	Lucy
10/09/2018	15:33:00	WY	Bathrooms

Date	Time (24 hour)	Artist	Song
10/09/2018	15:31:00	They.	Pops
10/09/2018	15:27:00	Jay Som	Everybody Works
10/09/2018	15:23:00	Jay Som	One More Time, Please
10/09/2018	15:21:00	Mitski	A Pearl
10/09/2018	15:17:00	Thom Yorke	Suspirium
10/09/2018	15:09:00	Beach House	Somewhere Tonight
10/09/2018	15:03:00	Beach House	Days of Candy
10/09/2018	14:59:00	Beach House	Wishes
10/09/2018	09:05:00	Beach House	Majorette
10/09/2018	09:02:00	Beach House	Equal Mind
10/09/2018	08:57:00	Beach House	Beyond Love
10/09/2018	08:53:00	Beach House	The Hours
10/09/2019	08:57:00	Beach House	PPP
10/09/2018	00:26:00	Beach House	Somewhere Tonight
10/09/2018	00:20:00	Beach House	Days of Candy
10/09/2018	00:15:00	Beach House	Wishes
10/09/2018	00:11:00	Beach House	Myth
10/09/2018	00:07:00	Beach House	Bluebird
10/09/2018	00:02:00	Beach House	Zebra
09/09/2018	23:59:00	Beach House	Used to Be
09/09/2018	23:54:00	Beach House	Heart of Chambers
09/09/2018	23:49:00	Beach House	New Year
09/09/2018	23:44:00	Beach House	Chariot
09/09/2018	23:39:00	Beach House	Auburn and Ivory

Date	Time (24 hour)	Artist	Song
09/09/2018	23:34:00	Beach House	Wild
09/09/2018	23:29:00	Beach House	Sparks
09/09/2018	23:24:00	Beach House	Space Song
09/09/2018	23:20:00	Beach House	10:37
09/09/2018	23:17:00	Beach House	Saltwater
09/09/2018	23:13:00	Beach House	Lose Your Smile
09/09/2018	23:07:00	Beach House	Levitation
09/09/2018	23:02:00	Beach House	Take Care
09/09/2018	22:57:00	Beach House	She's So Lovely
09/09/2018	22:54:00	Beach House	Wildflower
09/09/2018	22:49:00	Beach House	Other People
09/09/2018	22:45:00	Beach House	Norway
09/09/2018	22:42:00	Beach House	Master of None
09/09/2018	22:39:00	Beach House	Pay No Mind
09/09/2018	22:35:00	Beach House	All Your Yeahs
09/09/2018	22:30:00	Beach House	Silver Soul
09/09/2018	22:25:00	Beach House	Lazuli
09/09/2018	22:21:00	Beach House	Equal Mind
09/09/2018	22:17:00	Beach House	Beyond Love
09/09/2018	22:13:00	Beach House	The Hours
09/09/2018	22:07:00	Beach House	PPP
09/09/2018	17:04:00	Tame Impala	The Less I Know the Better
09/09/2018	17:00:00	Tame Impala	Beverly Laurel
09/09/2018	16:54:00	Tame Impala	Expectation

Date	Time (24 hour)	Artist	Song
09/09/2018	16:51:00	Tame Impala	Feels Like We Only Go Backwards
09/09/2018	16:48:00	Tame Impala	Endors Toi
09/09/2018	16:45:00	Tame Impala	Why Won't You Make Up Your Mind?
09/09/2018	16:41:00	Miguel	waves-Tame Impala Remix
09/09/2018	16:36:00	Tame Impala	Skeleton Tiger
09/09/2018	16:34:00	Tame Impala	Disciples
09/09/2018	16:30:00	Tame Impala	Desire Be Desire Go
09/09/2018	16:25:00	Mark Ronson	Daffodils
09/09/2018	16:19:00	Tame Impala	H.f.g.w (Canyons Drunken Rage)
09/09/2018	16:13:00	Tame Impala	Nothing That Has Happened So Far Has Been Anything We Could Control
09/09/2018	16:10:00	Tame Impala	I Don't Really Mind
09/09/2018	16:06:00	Tame Impala	Be Above It
09/09/2018	16:02:00	Tame Impala	41 Mosquitoes Flying in Formation
09/09/2018	15:56:00	Tame Impala	It Is Not Meant to Be
09/09/2018	15:51:00	Tame Impala	Keep on Lying
09/09/2018	15:46:00	Tame Impala	Yes I'm Changing
09/09/2018	15:39:00	Tame Impala	Lucidity
09/09/2018	15:35:00	Tame Impala	The Moment
09/09/2018	15:30:00	Tame Impala	Wander
09/09/2018	15:25:00	Cigarettes After Sex	Crush
09/09/2018	15:20:00	Cigarettes After Sex	Nothing's Gonna Hurt You Baby
09/09/2018	15:15:00	Cigarettes After Sex	Affection
09/09/2018	15:10:00	Cigarettes After Sex	Each Time You Fall in Love
09/09/2018	15:05:00	Cigarettes After Sex	K

Date	Time (24 hour)	Artist	Song
09/09/2018	15:00:00	Cigarettes After Sex	Young & Dumb
09/09/2018	14:56:00	Cigarettes After Sex	Sunsetz
09/09/2018	14:52:00	Cigarettes After Sex	Flash
09/09/2018	14:46:00	Cigarettes After Sex	Opera House
09/09/2018	14:41:00	Cigarettes After Sex	John Wayne
09/09/2018	14:38:00	Cigarettes After Sex	Keep on Loving You
09/09/2018	14:33:00	Cigarettes After Sex	Truly
09/09/2018	14:29:00	Cigarettes After Sex	I'm A Firefighter
09/09/2018	14:24:00	Cigarettes After Sex	Dreaming of You
09/09/2018	14:19:00	Cigarettes After Sex	Sweet
09/09/2018	14:15:00	Cigarettes After Sex	Starry Eyes
09/09/2018	14:10:00	Cigarettes After Sex	Apocalypse
09/09/2018	14:05:00	Cigarettes After Sex	Sesame Syrup
09/09/2018	14:04:00	(Sandy) Alex G	Kute
09/09/2018	14:01:00	(Sandy) Alex G	Animals
09/09/2018	13:59:00	(Sandy) Alex G	Poison Root
09/09/2018	13:56:00	(Sandy) Alex G	Clouds
09/09/2018	13:54:00	(Sandy) Alex G	Black Hair
09/09/2018	13:51:00	(Sandy) Alex G	So
09/09/2018	13:49:00	(Sandy) Alex G	Change
09/09/2018	13:46:00	(Sandy) Alex G	Station
09/09/2018	13:44:00	(Sandy) Alex G	Big Fish
09/09/2018	13:42:00	(Sandy) Alex G	Mud
09/09/2018	13:39:00	(Sandy) Alex G	Mis

Date	Time (24 hour)	Artist	Song
09/09/2018	13:36:00	(Sandy) Alex G	Wicked Boy
09/09/2018	13:31:00	(Sandy) Alex G	Salt
09/09/2018	13:30:00	(Sandy) Alex G	People
09/09/2018	13:29:00	(Sandy) Alex G	Into
09/09/2018	13:26:00	(Sandy) Alex G	Memory
09/09/2018	13:24:00	(Sandy) Alex g	Judge
09/09/2018	13:22:00	(Sandy) Alex G	Adam
09/09/2018	13:16:00	WY	Bathrooms
09/09/2018	13:12:00	Jay Som	The Bus Song
09/09/2018	13:10:00	Still Woozy	Lucy
09/09/2018	13:06:00	Thom Yorke	Suspirium
09/09/2018	13:04:00	They.	Pops
09/09/2018	13:00:00	Jay Som	Everybody Works
09/09/2018	12:57:00	Jay Som	One More Time, Please
09/09/2018	12:54:00	Mitski	A Pearl
09/09/2018	12:51:00	Caleon Fox	Up North
09/09/2018	12:40:00	Beach House	PPP
09/09/2018	12:35:00	Beach House	Wild
09/09/2018	12:29:00	Beach House	Sparks
09/09/2018	12:25:00	Beach House	Heart of Chambers
09/09/2018	12:19:00	Beach House	Levitation
09/09/2018	12:15:00	Beach House	Other People
09/09/2018	12:09:00	Beach House	Take Care
09/09/2018	12:05:00	Beach House	Norway

Date	Time (24 hour)	Artist	Song
09/09/2018	11:59:00	Beach House	New Year
09/09/2018	11:56:00	Beach House	Wildflower
09/09/2018	11:53:00	Beach House	Saltwater
09/09/2018	11:48:00	Beach House	Zebra
09/09/2018	11:43:00	Beach House	Auburn and Ivory
09/09/2018	11:40:00	Beach House	Master of None
09/09/2018	11:35:00	Beach House	Chariot
09/09/2018	11:31:00	Beach House	10:37
09/09/2018	11:27:00	Beach House	Used to Be
09/09/2018	11:23:00	Beach House	Beyond Love
09/09/2018	11:19:00	Beach House	Bluebird
09/09/2018	11:14:00	Beach House	She's So Lovely
09/09/2018	11:10:00	Beach House	Lose Your Smile
09/09/2018	11:05:00	Beach House	Space Song
09/09/2018	10:58:00	Beach House	Days of Candy
09/09/2018	10:54:00	Beach House	Somewhere Tonight
09/09/2018	10:50:00	Beach House	Myth
09/09/2018	10:45:00	Beach House	Wishes
09/09/2018	10:41:00	Beach House	All Your Yeahs
09/09/2018	10:38:00	Beach House	Pay No Mind
09/09/2018	10:34:00	Beach House	Majorette
09/09/2018	10:30:00	Beach House	The Hours
09/09/2018	10:25:00	Beach House	Silver Soul
09/09/2018	10:21:00	Beach House	Equal Mind











Date	Time (24 hour)	Artist	Song
09/09/2018	10:16:00	Beach House	Lazuli
08/09/2018	17:15:00	WY	Bathrooms
08/09/2018	16:22:00	Brodet	Loser
08/09/2018	16:20:00	Mitski	Old Friend
08/09/2018	16:17:00	Still Woozy	Lucy
08/09/2018	16:15:00	Still Woozy	Lucy
08/09/2018	16:11:00	Inner Wave	Eclipse
08/09/2018	16:08:00	Travis Bretzer	u should know
08/09/2018	16:04:00	WY	Bathrooms
08/09/2018	16:02:00	LOVING	Forgot again
08/09/2018	16:02:00	Tyler, the Creator	435
08/09/2018	16:00:00	Kevin Krauter	Lonely Boogie
08/09/2018	15:55:00	Frank Ocean	Bad Religion
08/09/2018	15:50:00	beabadoobee	Susie May
08/09/2018	15:47:00	Forth Wanderers	Taste
08/09/2018	15:44:00	Tyler Burkhart	Spell it out (First snow)
08/09/2018	15:38:00	Peach Pit	Tommy's Party
08/09/2018	15:33:00	Snail Mail	Heat Wave
08/09/2018	15:30:00	LOVING	The not real lake
08/09/2018	15:27:00	The Symposium	Red River
08/09/2018	14:58:00	Thom Yorke	Suspirium
08/09/2018	14:48:00	Thom Yorke	Suspirium
08/09/2018	14:42:00	Thom Yorke	Suspirium
08/09/2018	14:12:00	Thom Yorke	Suspirium

Date	Time (24 hour)	Artist	Song
08/09/2018	11:31:00	Beach House	PPP
08/09/2018	11:24:00	Beach House	Heart of Chambers
08/09/2018	11:19:00	Beach House	Zebra
08/09/2018	11:14:00	Beach House	Sparks
08/09/2018	11:09:00	Beach House	Wild
08/09/2018	11:03:00	Beach House	Take Care
08/09/2018	10:57:00	Beach House	Levitation
08/09/2018	10:53:00	Beach House	Other People
08/09/2018	10:49:00	Beach House	Norway
08/09/2018	10:45:00	Beach House	Bluebird
08/09/2018	10:40:00	Beach House	Chariot
08/09/2018	10:36:00	Beach House	Master of None
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08/09/2018	10:25:00	Beach House	Wildflower
08/09/2018	10:21:00	Beach House	Beyond Love
08/09/2018	10:16:00	Beach House	New Year
08/09/2018	10:11:00	Beach House	She's So Lovely
08/09/2018	10:08:00	Beach House	10:37
08/09/2018	10:04:00	Beach House	Used to Be
08/09/2018	10:00:00	Beach House	Auburn and Ivory
08/09/2018	09:55:00	Beach House	Space Song
08/09/2018	09:51:00	Mac Miller	My Favorite Part


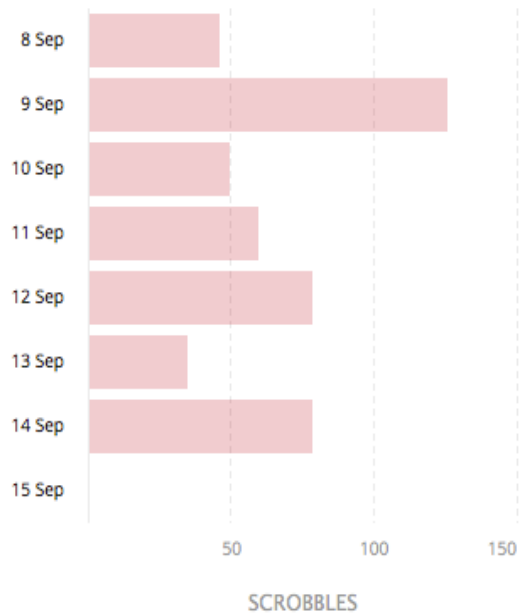
ARTISTS SCROBBLED

116



1		Beach House	129
2		Julee Cruise	22
3		Tame Impala	21
4		(Sandy) Alex G	19
5		Cigarettes After Sex	18
6		Cocteau Twins	15
7		Jay Som	14
8		Jungle	14
9		Triathalon	14
10		BROCKHAMPTON	13

Listening History



Fred. Olsen Cruise Lines

Special reductions on

Appendix P Qualitative Data Coding Scheme

- **Identity**
 - Non-musical identity
 - Musical identity
 - Fandom
 - 'This is me'
 - 'This is not me'
 - Music likes
 - Music dislikes
 - Subcultures and scenes
 - Influence of friendship groups on music taste
 - Online friendship groups
 - Offline friendship groups
 - Types of identities
 - Former identity
 - Temporary identity
 - Long-term identity
 - Future identity
 - Stereotypes
 - Other
- **Music Streaming Practices**
 - Use of Spotify's features
 - Public Listening
 - Private Listening
 - Streaming routines
 - Background music
- **Music Discovery**
 - Friends
 - Online
 - Offline
 - Family
 - Spotify recommendations
 - Discover Weekly
 - Release Radar
 - Related Artists
 - Daily Mixes
 - Other
 - Browsing on Spotify
 - Other forms of media
 - Online
 - Offline
 - Wanting similarity
 - Wanting diversity
- **Music Curation**
 - Collection
 - Dynamic
 - Static
 - Accumulation

- Playlists
 - Other
- **Music and Mood**
 - Music to match mood
 - Music to put into mood
 - Discovering music and mood
- **Playlists**
 - Personal Playlists
 - Monthly
 - Mood
 - Event
 - Artist
 - Time
 - Person
 - Place
 - Purpose
 - Other
 - Collaborative
 - Spotify Playlists
 - Mood
 - End of Year
 - Throwback
 - Time Capsule
 - Other
 - Playlists of Others
 - Other
- **Music and Biographical Affiliation**
 - Person
 - Place
 - Event
 - Time
- **Perception of Spotify**
 - Interface
 - Features
 - Suggested improvements
- **Networks**
 - Peer-to-Peer
 - Friends
 - Family
 - User-to-System
 - System-to-User

List of References

- Amatriain, X., Pujol, J. and Oliver, N. (2009) 'I Like It... I Like It Not: Evaluating User Ratings of Noise in Recommender Systems', *Proceedings of the 17th International Conference on User Modelling, Adaptation, and Personalization*, pp. 247-258.
- Anter, S. et al. (2016) 'Towards a generic model of a user profile', *11th International Conference on Intelligent Systems: Theories and Applications (SITA)*, 19th -20th October 2016, Mohammedia, Morocco. New York: IEEE, pp. 1-6. Available at: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7772265> (Accessed 15th December 2017).
- Banister, E. N. and Hogg, M. K. (2001) 'Mapping the Negative Self: From "So Not Me" ...to "Just Not Me"', *Advances in Consumer Research*, 28, pp. 242-248.
- Beck, E. (2015) 'The Invisible Digital Identity: Assemblages in Digital Networks', *Computers and Composition*, 35, pp. 125-140.
- Bennett, A. (2000) *Popular Music and Youth Culture: Music, Identity and Place*. Basingstoke: Palgrave.
- Bernhardsson, E. (2014) 'Music discovery at Spotify'. Available at: <http://www.slideshare.net/erikbern/music-recommendations-mlconf-2014> (Accessed 13th November 2016).
- Bivens, R. (2017) 'The gender binary will not be deprogrammed: Ten years of coding gender on Facebook', *New Media & Society*, 19(6), pp. 880-898.
- BPI. (2021a) 'BPI publishes its yearbook "All About the Music 2021"', 15 April. Available at: <https://www.bpi.co.uk/news-analysis/bpi-publishes-its-yearbook-all-about-the-music-2021/> (Accessed 22nd April 2021).
- BPI. (2021b) 'Fans turn to music to get through 2020 as a new wave of artists fuel streaming growth', 4 January. Available at: <https://www.bpi.co.uk/news-analysis/fans-turn-to-music-to-get-through-2020-as-a-new-wave-of-artists-fuels-streaming-growth/> (Accessed 10th February 2021).

List of References

- BPI. (2022) '2021 in Music: More artists succeed as streaming drives music growth, fuelled by record label investment', 4 January. Available at: <https://www.bpi.co.uk/news-analysis/2021-in-music-more-artists-succeed-as-streaming-drives-music-growth-fuelled-by-record-label-investment/> (Accessed 14th January 2022).
- Braidotti, R. (2013) *The Posthuman*. Cambridge: Polity Press.
- Bryman, A. (2008) *Social Research Methods*. 3rd edn. Oxford: Oxford University Press.
- Bucher, T. and Helmond, A. (2018) 'The Affordances of Social Media Platforms', in J. Burgess, A. Marwick and T. Poell (eds.) *The SAGE Handbook of Social Media*. London: Sage Publications, pp. 233–253.
- Burns, T. (2002) *Erving Goffman*. London: Routledge.
- Butler, J. (2004) *Undoing Gender*. New York: Routledge.
- Charon, J. M. (1989) *Symbolic Interactionism: An Introduction, An Interpretation, An Integration*. 3rd edn. New Jersey: Prentice Hall.
- Cills, H. (2015) 'Looking For A Connection In An Infinite Jukebox', *npr music*, 4 June. Available at: http://www.npr.org/sections/therecord/2015/06/04/411795140/looking-for-a-connection-in-an-infinite-jukebox?utm_source=twitter.com&utm_medium=social&utm_campaign=nprmusic&utm_term=music&utm_content=20150604 (Accessed 12th July 2017).
- Click, M., Lee, H. and Willson-Holladay, H. (2013) 'Making Monsters: Lady Gaga, Fan Identification, and Social Media', *Popular Music and Society*, 36(3), pp.360-379.
- Copsey, F. (2020) 'Vinyl sales increase year on year in the UK despite pandemic'. Available at: https://www.officialcharts.com/chart-news/vinyl-sales-increase-year-on-year-in-the-uk-despite-pandemic_31023/ (Accessed 10th January 2021).
- Criddle, C. (2020) 'Facebook sued over Cambridge Analytica data scandal', *BBC Technology*, 28 October. Available at: <https://www.bbc.co.uk/news/technology-54722362> (Accessed 15th November 2020).

- Crossley, N. and Bottero, W. (2016) 'Music Worlds and Internal Goods: The Role of Convention', *Cultural Sociology*, 9(1), pp. 38-55.
- Crossley, N. and Emms, R. (2016) 'Mapping the musical universe: A blockmodel of UK music festivals, 2011-2013', *Methodological Innovations*, 9, pp.1-14.
- De Boise, S. (2014) 'Cheer up emo kid: rethinking the "crisis of masculinity" in emo', *Popular Music*, 33(2), pp. 225-242.
- DeNora, T. (1999) 'Music as a technology of the self', *Poetics* 27, pp.31-56.
- DeNora, T. (2000) *Music in Everyday Life*. Cambridge: Cambridge University Press.
- Discord. (2019) 'We built Discord to bring gamers together'. Available at: <https://discordapp.com/company> (Accessed 14th September 2019).
- Duffett, M. (2015) 'Fan Practices', *Popular Music and Society*, 38(1), pp. 1-6.
- Duffett, M. (ed.) (2014) *Popular Music Fandom: Identities, Roles and Practices*. New York: Routledge.
- EPSRC (2020). 'Expectations'. Available at: <https://www.epsrc.ac.uk/about/standards/researchdata/expectations/> (Accessed 17th March 2021).
- Eriksson, M. et al. (2019) *Spotify Teardown: Inside the Black Box of Streaming Music*. Cambridge: MIT Press.
- Eriksson, M. and Johansson, A. (2017) 'Tracking Gendered Streams', *Culture Unbound*, 9(2), pp. 163-183
- Fine, G. and Manning, P. (2003) 'Erving Goffman', in G. Ritzer. (ed.) *The Blackwell Companion to Major Contemporary Social Theorists*. Oxford: Blackwell Publishing, pp. 34-62.

List of References

- Gartenberg, C. (2020) 'Spotify finally removes its 10,000-song library limit', *The Verge*, 26 May. Available at: <https://www.theverge.com/2020/5/26/21270409/spotify-song-library-limit-removed-music-downloads-playlists-feature> (Accessed 15th October 2021).
- Giddens, A. and Sutton, P. W. (2013) *Sociology*. 7th edn. Cambridge: Polity Press.
- Giles, D., Pietrzykowski, S. and Clark, K. (2007) 'The psychological meaning of personal record collections and the impact of changing technological forms', *Journal of Economic Psychology*, 28(4), pp. 429-443.
- Goffman, E. (1959) *The Presentation of Self in Everyday Life*. Available at: <http://www.faculty.fairfield.edu/faculty/hodgson/Courses/so11/No12.pdf> (Accessed 16th November 2016).
- Gopinath, S. and Stanyek, J. (2019) 'Technologies of the Musical Selfie,' in Cook, N., Ingalls, M. N. and Trippett, D. (eds.) *The Cambridge Companion to Music in Digital Culture*. Cambridge: Cambridge University Press, pp. 89-119.
- Granovetter, M. (1973) 'The Strength of Weak Ties', *American Journal of Sociology*, 78(6), pp. 1360-1380.
- Hagen, A. (2015a) 'The Playlist Experience: Personal Playlists in Music Streaming Services', *Popular Music and Society*, 38(5), pp. 625-645.
- Hagen, A. (2015b) *Using Music Streaming Services: Practices, Experiences and the Lifeworld of Musicking*. PhD thesis. University of Oslo. Available at: <https://www.hf.uio.no/imv/forskning/prosjekter/skyogscene/publikasjoner/hagen2015.pdf> (Accessed 18th December 2016).
- Hagen, A. (2016) 'The metaphors we stream by: Making sense of music streaming', *First Monday*, 21(3). Available at: <http://firstmonday.org/ojs/index.php/fm/article/view/6005/5277> (Accessed 5th January 2017).
- Hagen, A. N. and Lüders, M. (2016) 'Social streaming? Navigating music as personal and social', *Convergence: The International Journal of Research into New Media Technologies*, 23(6), pp. 1-17.

- Haggerty, K. D. and Ericson, R. D. (2000) 'The surveillant assemblage', *British Journal of Sociology*, 51(4), pp. 605-622.
- Haraway, D. (1991) 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', in Haraway, D. *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, pp.149-181.
- Hawalah, A. and Faslu, M. (2015) 'Dynamic User Profiles for Web Personalisation', *Expert Systems with Applications*, 42, pp. 2547-2569.
- Herbrechter, S. (2013) *Posthumanism: A Critical Analysis*. London: Bloomsbury.
- Hogg, M. K. and Banister, E. N. (2000) 'The Structure and Transfer of Cultural Meaning: A Study of Young Consumers and Pop Music', *Advances in Consumer Research*, 27, pp. 19-23.
- Hosanager, K. et al. (2014) 'Will the global village fracture into tribes? Recommender systems and their effects on consumer fragmentation', *Management Science*, 60(4), pp. 805-823.
- IFPI. (2022) 'Global Music Report 2022'. Available at: https://www.ifpi.org/wp-content/uploads/2022/04/IFPI_Global_Music_Report_2022-State_of_the_Industry.pdf (Accessed 5th April 2022).
- IFTTT. (2019) 'IFTTT is a free platform that helps you do more with all your apps and devices'. Available at: <https://ifttt.com/about> (Accessed 1st June 2019).
- Im, H. and Jung, J. (2016) 'Impacts of personal characteristics on the choice of music consumption mode: Purchasing CDs, downloading, streaming and piracy', *Journal of Media Business Studies*, 13 (4), pp. 1652-2354.
- Iqbal, M. (2021) 'Spotify Revenue and Usage Statistics (2021)'. Available at: <https://www.businessofapps.com/data/spotify-statistics/#2> (Accessed 6th April 2021).
- Jannach, D. et al. (2010) *Recommender Systems: An Introduction*. Cambridge: Cambridge University Press.

List of References

- Jawaheer, G., Szomszer, M. and Kostkova, P. (2010) 'Comparison of Implicit and Explicit Feedback from an Online Music Recommendation Service', *Proceedings of the 1st International Workshop on Information Heterogeneity and Fusion in Recommender Systems*, 26th September 2010, Barcelona, Spain. New York: ACM, pp. 47-51. Available at: https://www.researchgate.net/profile/Patty_Kostkova/publication/247927239_Comparison_of_implicit_and_explicit_feedback_from_an_online_music_recommendation_service/links/0046351e1593d14676000000/Comparison-of-implicit-and-explicit-feedback-from-an-online-music-recommendation-service.pdf (Accessed 14th November 2016).
- Johnson, C. (2015) 'Interactive Recommender Systems with Netflix and Spotify'. Available at: <http://www.slideshare.net/MrChrisJohnson/interactive-recommender-systems-with-netflix-and-spotify> (Accessed 13th August 2016).
- Kembellec, G., Charton, G. and Saleh, I. (eds.) (2014) *Recommender Systems*. London: ISTE Ltd.
- Kennedy, H. (2018) 'Living with Data: Aligning Data Studies and Data Activism Through a Focus on Everyday Experiences of Datafication', *Krisis: Journal for Contemporary Philosophy*, 2018(1), pp. 18-30.
- Kibby, M. (2009) 'Collect yourself: Negotiating personal music archives', *Information Communication and Society*, 12(3), pp. 428-443.
- Kirkpatrick, D. (2010) *The Facebook Effect: The Inside Story of the Company That is Connecting the World*. New York: Simon & Schuster.
- Krause, A. E. and Hargreaves, D. J. (2012) 'myTunes: Digital music library users and their self-images', *Psychology of Music*, 41(5), pp. 531-544.
- Kumar, V. (2014) 'Making "Freemium" Work', *Harvard Review*, May 2014, pp.27-29.
- Larsen, G., Lawson, R. and Todd, S. (2009) 'The consumption of music as self-representation in social interaction', *Australasian Marketing Journal*, 17, pp. 16-26.
- Larsen, G., Lawson, R. and Todd, S. (2010) 'The symbolic consumption of music', *Journal of Marketing Management*, 26(7-8), pp. 671-685.

- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- Lawler, S. (2008) *Identity: Sociological Perspectives*. Cambridge: Polity Press.
- Levy, S. (2006) *The Perfect Thing: How The iPod Shuffles Commerce, Culture And Coolness*. New York: Simon & Schuster.
- Lonsdale, A. J. and North, A. C. (2011) 'Why do we listen to music? A uses and gratifications analysis', *British Journal of Psychology*, 102, pp. 108-134.
- Lupton, D. (2018) 'How do data come to matter? Living and becoming with personal data', *Big Data & Society*, pp. 1-11.
- Lupton, D. (2020) 'Data mattering and self-tracking: What can personal data do?', *Continuum*, 34(1), pp. 1-13.
- Lupton, D. (2021) "'Not the Real Me": Social Imaginaries of Personal Data Profiling', *Cultural Sociology*, 15(1), pp. 3-21.
- Maasø, A. (2016) 'Music Streaming, Festivals, and the Eventization of Music', *Popular Music and Society*, 2016, pp. 1712-1740.
- MacDonald, R., Hargreaves, D. and Miell, D. (eds.) (2002) *Musical Identities*. Oxford: Oxford University Press.
- Mans, M. (2005) 'Aesthetics and values as core determinants of musical identity formation', *Journal of the Musical Arts in Africa*, 2(1), pp. 1-22.
- Molteni, L. and Ordanini, A. (2003) 'Consumption Patterns, Digital Technology and Music Downloading', *Long Range Planning*, 36, pp. 389-406.
- Morris, C. W. (1967) *Mind, Self, and Society from the Standpoint of a Social Behaviorist: George H. Mead*. Chicago: The University of Chicago Press.

List of References

Morris, J. W. (2015) *Selling Digital Music, Formatting Culture*. California: University of California Press.

MRC Data. (2020) 'Year-End Report U.S 2020'. Available at:

https://www.musicbusinessworldwide.com/files/2021/01/MRC_Billboard_YEAR_END_2020_US-Final.pdf (Accessed 21st February 2021).

Murphy, A. E. (ed.) (1959) *The Philosophy of the Present by George Herbert Mead*. Illinois: The Open Court Publishing Company.

Newsbeat. (2018) 'Brockhampton kick Ameer Vann out of group following allegations', *BBC*, 27 May. Available at: <https://www.bbc.co.uk/news/newsbeat-44272739> (Accessed 9th January 2022).

Norman, D. (1990) *The Design of Everyday Things*. New York: Doubleday Business.

North, A. C. and Hargreaves, D. J. (1999) 'Music and Adolescent Identity', *Music Education Research*, 11(1), pp. 75-92.

North, A. C., Hargreaves, D. J. and O'Neil, S. A. (2000) 'The Importance of Music to Adolescents', *British Journal of Educational Psychology*, 70(2), pp. 255-272.

O'Reilly, D., Larsen, G. and Kubacki, K. (2013) *Music, Markets and Consumption*. Oxford: Goodfellow Publishers Ltd.

Pariser, E. (2011) *The Filter Bubble: What the Internet is Hiding From You*. London: Viking.

Patton, P. (1994) 'MetamorphoLogic: Bodies and Powers in A Thousand Plateaus', *Journal of the British Society for Phenomenology*, 25(2), pp. 157-69.

Perugini, S. et al. (2004) 'A Connection Centric Survey of Recommender Systems Research', *Journal of Intelligent Information Systems*, 23(2), pp. 107-143.

Pinch., T. and Bijker, W. (1984) 'The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other', *Social Studies of Science*, 14(3), pp. 399-441.

- Pink, S. et al (2017) 'Mundane data: The routines, contingencies and accomplishments of digital living', *Big Data & Society*, pp. 1-12.
- Prey, R. (2016) 'Musica Analytica: The Datafication of Listening', in Nowak, R and Whelan, A. (eds.) *Networked Music Cultures*. Basingstoke: Palgrave Macmillan, pp. 31-48.
- Reilly, N. (2017) 'Two more women have accused Brand New's Jesse Lacey of sexual assault', *NME*, 14 November. Available at: <https://www.nme.com/news/music/two-women-accuse-jesse-lacey-of-sexual-assault-2159198> (Accessed 9th January 2022).
- Rentfrow, P. J. (2019) 'Measures'. Available at: <https://sites.google.com/view/pjasonrentfrow/measures> (Accessed 19th May 2019).
- Rentfrow, P. J. and Gosling, S. D. (2003) 'The do re mi's of everyday life: The structure and personality correlates of music preferences', *Journal of Personality and Social Psychology*, 84, pp. 1236-1256.
- Research Councils UK. (2016) 'Concordat on Open Research Data' [pdf]. Available at: <http://www.rcuk.ac.uk/documents/documents/concordatonopenresearchdata-pdf/> (Accessed 16th August 2017).
- Saunders, M., Lewis, P. and Thornhill, A. (2016) *Research Methods for Business Students*. 7th edn. Harlow: Pearson Education Limited.
- Savage, M. (2018) 'Each of us streamed 1,036 songs last year (and most of them were by Ed Sheeran)', *BBC Entertainments & Arts*, 3 January. Available at: <http://www.bbc.co.uk/news/entertainment-arts-42541440> (Accessed 3rd January 2018).
- Savage, M. (2018) 'Spotify users demand refunds over Drake promotion', *BBC Entertainments & Arts*, 3 July. Available at: <https://www.bbc.co.uk/news/entertainment-arts-44695062> (Accessed 17th November 2018).
- Schedl, M. et al. (2015) 'Music Recommender Systems', in Ricci, F., Rokach, L. and Shapira, B. (eds.) *Recommender Systems Handbook*. Boston: Springer, pp. 453-92.

List of References

- Shibutani, T. (1955) 'Reference Groups as Perspectives', *American Journal of Sociology*, 60(6), pp. 562-569.
- Shuker, R. (2013) *Understanding Popular Music Culture*. 4th edn. Abingdon: Routledge.
- Sinclair, G. and Tinson, J. (2017) 'Psychological Ownership and Music Streaming Consumption', *Journal of Business Research*, 27, pp. 1-9.
- Sismondo, S. (2004) *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing.
- Small, C. (1998) *Musicking: The Meanings of Performance and Listening*. Middletown: Wesleyan University Press.
- Spohr, D. (2017) 'Fake news and ideological polarization: Filter bubbles and selective exposure on social media', *Business Information Review*, 34(3), pp. 150-160.
- Spotify. (2018) 'Your 2018 Wrapped'. Available at: <https://community.spotify.com/t5/Spotify-Answers/Your-2018-Wrapped/ta-p/4625642> (Accessed 15th June 2019).
- Spotify. (2019a) 'Daily Mix'. Available at: https://support.spotify.com/uk/using_spotify/playlists/daily-mix/ (Accessed 18th July 2019).
- Spotify. (2019b) 'Discord'. Available at: https://support.spotify.com/us/listen_everywhere/gaming/discord/ (Accessed 14th September 2019).
- Spotify. (2019c) 'Discover Weekly'. Available at: https://support.spotify.com/uk/using_spotify/playlists/discover-weekly/ (Accessed 18th July 2019).
- Spotify. (2019d) 'Private Listening'. Available at: https://support.spotify.com/us/using_spotify/the_basics/how-to-enable-private-listening/ (Accessed 20th September).
- Spotify. (2019e) 'Spotify Radio'. Available at:

https://support.spotify.com/us/using_spotify/features/spotify-radio/ (Accessed 18th July 2019).

Spotify. (2019f) 'Release Radar'. Available at:

https://support.spotify.com/uk/using_spotify/playlists/release-radar/ (Accessed 18th July 2019).

Spotify. (2019g) 'Your Time Capsule'. Available at: <https://timecapsule.spotify.com> (Accessed 18th July 2019).

Spotify. (2020) 'Company Info'. Available at: <https://newsroom.spotify.com/company-info/> (Accessed 30th November 2020).

Statista. (2021) 'Share of music streaming subscribers worldwide in 2019, by company'. Available at: <https://www.statista.com/statistics/653926/music-streaming-service-subscriber-share/> (Accessed 12th February 2021).

Straw, W. (1997) 'Sizing Up Record Collections: Gender and Connoisseurship in Rock Music Culture', in Whitely, S. (ed.) *Sexing the Groove: Popular music and gender*. London: Routledge, pp. 3-16.

Ter Bogt, T. et al. (2011) 'Intergenerational Continuity of Taste: Parental and Adolescent Music Preferences', *Social Forces*, 90(1), pp. 297-319.

The Echo Nest. (2016) 'The Echo Nest'. Available at: <http://the.echonest.com/> (Accessed 12th December 2016).

UiO Department of Musicology. (2016) 'Main Findings', 1 April. Available at:

<http://www.hf.uio.no/imv/english/research/projects/cloudsandconcerts/publications/main-findings.html> (Accessed 23rd November 2016).

University of Southampton. (2020) 'Research Management Policy'. Available at:

<https://www.southampton.ac.uk/~assets/doc/calendar/Research%20Data%20Management%20Policy.pdf> (Accessed 17th March 2020)

van Dijck, J. (2014) 'Datafication, dataism and dataveillance: Big Data between scientific paradigm and ideology', *Surveillance & Society*, 12(2), pp. 197-208.

List of References

Webster, J. (2019) *Taste in the digital age: Music streaming services and the performance of class distinction*. PhD thesis. University of Southampton, UK. Available at: <https://eprints.soton.ac.uk/433131/> (Accessed 15th December 2020).

Whiteley, S. (ed.) (1997) *Sexing the Groove: Popular Music and Gender*. London: Routledge.

Wittkower, D. (ed.) (2008) *iPod and Philosophy: iCon of an ePoch*. Chicago: Open Court.

Bibliography

Aguiar, L. and Martens, B. (2016) 'Digital music consumption on the Internet: Evidence from clickstream data', *Information Economics and Policy*, 34, pp. 27-43.

Amatriain, X., Pujol, J. and Oliver, N. (2009) 'I Like It... I Like It Not: Evaluating User Ratings Noise in Recommender Systems', *Proceedings of the 17th International Conference on User Modelling, Adaptation, and Personalization*, pp. 247-258.

Anter, S. et al. (2016) 'Towards a generic model of a user profile', *11th International Conference on Intelligent Systems: Theories and Applications (SITA)*, 19th -20th October 2016, Mohammedia, Morocco. New York: IEEE, pp. 1-6. Available at: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7772265> (Accessed 15th December 2017).

Arnett, J. (1995) 'Adolescents' Uses of Media for Self-Socialisation', *Journal of Youth and Adolescents*, 24(5), pp. 519-533.

Banister, E. N. and Hogg, M. K. (2001) 'Mapping the Negative Self: From "So Not Me" ...to "Just Not Me"', *Advances in Consumer Research*, 28, pp. 242-248.

Baltazar, M. and Saarikallio, S. (2016) 'Toward a better understanding and conceptualization of affect self-regulation through music: A critical, integrative literature review', *Psychology of Music*, 44(6), pp. 1500-1521.

Beck, E. (2015) 'The Invisible Digital Identity: Assemblages in Digital Networks', *Computers and Composition*, 35, pp. 125-140.

Bennett, A. (2000) *Popular Music and Youth Culture: Music, Identity and Place*. Basingstoke: Palgrave.

Bennett, A., Shank, B. and Toynbee, J. (eds.) (2006) *The Popular Music Studies Reader*. London: Routledge.

Bibliography

Bernhardsson, E. (2014) 'Music discovery at Spotify'. Available at:

<http://www.slideshare.net/erikbern/music-recommendations-mlconf-2014> (Accessed 13th

November 2016).

Bivens, R. (2017) 'The gender binary will not be deprogrammed: Ten years of coding gender on Facebook', *New Media & Society*, 19(6), pp. 880-898.

Bivens, R. and Haimson, O. L. (2016) 'Baking Gender Into Social Media Design: How Platforms Shape Categories for Users and Advertisers', *Social Media & Society*, pp. 1-12.

BPI. (2021a) 'BPI publishes its yearbook "All About the Music 2021"', 15 April. Available at:

<https://www.bpi.co.uk/news-analysis/bpi-publishes-its-yearbook-all-about-the-music-2021/>

(Accessed 22nd April 2021).

BPI. (2021b) 'Fans turn to music to get through 2020 as a new wave of artists fuel streaming

growth', 4 January. Available at: <https://www.bpi.co.uk/news-analysis/fans-turn-to-music-to-get-through-2020-as-a-new-wave-of-artists-fuels-streaming-growth/> (Accessed 10th February 2021).

BPI. (2022) '2021 in Music: More artists succeed as streaming drives music growth, fuelled by

record label investment', 4 January. Available at: <https://www.bpi.co.uk/news-analysis/2021-in-music-more-artists-succeed-as-streaming-drives-music-growth-fuelled-by-record-label-investment/> (Accessed 14th January 2022).

Boer, D. et al. (2011) 'How Shared Preferences in Music Create Bonds Between People: Values and the Missing Link', *Personality and Social Psychology Bulletin*, 37 (9), pp. 1159-1171.

Bonneville-Roussy, A. and Eerola, T. (2008) 'Age trends in musical preferences in adulthood: 3. Perceived musical attributes as intrinsic determinants of preferences', *Musicae Scientiae*, 22(3), pp. 393-414.

Bonneville-Roussy, A. et al. (2017) 'Age trends in musical preferences in adulthood: 1. Conceptualization and empirical investigation', *Musicae Scientiae*, 21(4), pp. 369-389.

Bonneville-Roussy, A. and Rust, J. (2018) 'Age trends in musical preferences in adulthood: 2. Sources of social influences as determinants of preferences', *Musicae Scientiae*, 22(2), pp. 175-195.

Bottero, W. and Gossley, N. (2011) 'Worlds, Fields and Networks: Becker, Bourdieu and the Structures of Social Relations', *Cultural Sociology*, 5(1), pp. 99-119.

Braidotti, R. (2013) *The Posthuman*. Cambridge: Polity Press.

Bryman, A. (2008) *Social Research Methods*. 3rd edn. Oxford: Oxford University Press.

Bucher, T. and Helmond, A. (2018) 'The Affordances of Social Media Platforms', in J. Burgess, A. Marwick and T. Poell (eds.) *The SAGE Handbook of Social Media*. London: Sage Publications, pp. 233–253.

Burns, T. (2002) *Erving Goffman*. London: Routledge.

Butler, J. (1990) *Gender Trouble: Feminism and the Subversion of identity*. New York: Routledge Classics.

Butler, J. (2004) *Undoing Gender*. New York: Routledge.

Carlson, E. et al. (2017) 'Personality and musical preference using social-tagging in excerpt-selection', *Psychomusicology: Music, Mind, and Brain*, 27(3), pp. 203-212.

Charon, J. M. (1989) *Symbolic Interactionism: An Introduction, An Interpretation, An Integration*. 3rd edn. New Jersey: Prentice Hall.

Chen, L. and Pu, P. (2014) 'Experiments on user experiences with recommender interfaces. *Behaviour & Information Technology*', 33(4), pp. 372-394.

Chen, L., Zhou, S. and Bryant, J. (2007) 'Temporal Changes in Mood Repair Through Music Consumption: Effects of Mood, Mood Salience and Individual Differences', *Media Psychology*, 9 (3), pp. 695-713.

Cheney-Lippold, J. (2011) 'A New Algorithmic Identity. Soft Biopolitics and the Modulation of Control', *Theory, Culture & Society*, 28(6), pp. 164-181.

Bibliography

- Cills, H. (2015) Looking For A Connection In An Infinite Jukebox. *npr music*, 4 June. Available at: http://www.npr.org/sections/therecord/2015/06/04/411795140/looking-for-a-connection-in-an-infinite-jukebox?utm_source=twitter.com&utm_medium=social&utm_campaign=nprmusic&utm_term=music&utm_content=20150604 (Accessed 12th July 2017).
- Clarke, E., Dibben, N. and Pitts, S. (2010) *Music and mind in everyday life*. Oxford: Oxford University Press.
- Click, M., Lee, H. and Willson-Holladay, H. (2013) 'Making Monsters: Lady Gaga, Fan Identification, and Social Media', *Popular Music and Society*, 36(3), pp.360-379.
- Cook, N., Ingalls, M. N. and Trippett, D. (eds.) (2019) *The Cambridge Companion to Music in Digital Culture*. Cambridge: Cambridge University Press.
- Connell, M. (2012) 'Talking About Old Records: Generational musical identity among older people', *Popular Music*, 31(2), pp. 261-278.
- Copsey, F. (2020) 'Vinyl sales increase year on year in the UK despite pandemic'. Available at: https://www.officialcharts.com/chart-news/vinyl-sales-increase-year-on-year-in-the-uk-despite-pandemic_31023/ (Accessed 10th January 2021).
- Cloudy, N. and Mejias, U. A (2019) 'Data Colonialism: Rethinking Big Data's Relation to the Contemporary Subject', *Television & New Media*, 20(4), pp. 336-349.
- Criddle, C. (2020) 'Facebook sued over Cambridge Analytica data scandal', *BBC Technology*, 28 October. Available at: <https://www.bbc.co.uk/news/technology-54722362> (Accessed 15th November 2020).
- Crossley, N. and Bottero, W. (2016) 'Music Worlds and Internal Goods: The Role of Convention', *Cultural Sociology*, 9(1), pp. 38-55.
- Crossley, N. and Emms, R. (2016) 'Mapping the musical universe: A blockmodel of UK music festivals, 2011-2013', *Methodological Innovations*, 9, pp.1-14.

- De Boise, S. (2014) 'Cheer up emo kid: rethinking the "crisis of masculinity" in emo', *Popular Music*, 33(2), pp. 225-242.
- DeNora, T. (1999) 'Music as a technology of the self', *Poetics*, 27, pp.31-56.
- DeNora, T. (2000) *Music in Everyday Life*. Cambridge: Cambridge University Press.
- Discord. (2019) 'We built Discord to bring gamers together' Available at: <https://discordapp.com/company> (Accessed 14th September 2019).
- Duffett, M. (2015) 'Fan Practices', *Popular Music and Society*, 38(1), pp. 1-6.
- Duffett, M. (ed.) (2014) *Popular Music Fandom: Identities, Roles and Practices*. New York: Routledge.
- EPSRC (2020). 'Expectations'. Available at: <https://www.epsrc.ac.uk/about/standards/researchdata/expectations/> (Accessed 17th March 2021).
- Eriksson, M. (2019) 'The editorial playlist as container technology: on Spotify and the logistical role of digital music packages', *Journal of Cultural Economy*, 13(4), pp. 415-427.
- Eriksson, M. et al. (2019) *Spotify Teardown: Inside the Black Box of Streaming Music*. Cambridge: MIT Press.
- Eriksson, M. and Johansson, A. (2017) 'Tracking Gendered Streams', *Culture Unbound*, 9(2), pp. 163-183
- Fine, G. and Manning, P. (2003) 'Erving Goffman', in G. Ritzer. (ed.) *The Blackwell Companion to Major Contemporary Social Theorists*. Oxford: Blackwell Publishing, pp. 34-62.
- Frith, S. (2007) 'Towards an Aesthetic of Popular Music', in S. Frith. *Taking Popular Music Seriously: Selected Essays*. Aldershot: Ashgate Publishing Limited, pp. 257-273.

Bibliography

Ganz, J. (2015) 'How Streaming Is Changing Music', *npr music*, 1 June. Available at: <http://www.npr.org/sections/therecord/2015/06/01/411119372/how-streaming-is-changing-music> (Accessed 12th December 2016).

Gardikiotis, A. and Baltzis, A. (2010) "'Rock music for myself and justice to the world!': Musical identity, values and music preferences', *Psychology of Music*, 40(2), pp. 143-163.

Gartenberg, C. (2020) 'Spotify finally removes its 10,000-song library limit', *The Verge*, 26 May. Available at: <https://www.theverge.com/2020/5/26/21270409/spotify-song-library-limit-removed-music-downloads-playlists-feature> (Accessed 15th October 2021).

Giddens, A. and Sutton, P. W. (2013) *Sociology*. 7th edn. Cambridge: Polity Press.

Giles, D., Pietrzykowski, S. and Clark, K. (2007) 'The psychological meaning of personal record collections and the impact of changing technological forms', *Journal of Economic Psychology*, 28, pp. 429-443.

Goffman, E. (1959) *The Presentation of Self in Everyday Life*. Available at: <http://www.faculty.fairfield.edu/faculty/hodgson/Courses/so11/No12.pdf> (Accessed 16th November 2016).

Gopinath, S. and Stanyek, J. (2019) 'Technologies of the Musical Selfie,' in Cook, N., Ingalls, M. N. and Trippett, D. (eds.) *The Cambridge Companion to Music in Digital Culture*. Cambridge: Cambridge University Press, pp. 89-119.

Granovetter, M. (1973) 'The Strength of Weak Ties', *American Journal of Sociology*, 78(6), pp. 1360-1380.

Greenberg, D. M. et al. (2016) 'The Song is You: Preferences for Musical Attribute Dimensions Reflect Personality', *Social Psychological and Personality Science*, 7(6), pp. 597-605.

Hagen, A. (2015a) 'The Playlist Experience: Personal Playlists in Music Streaming Services', *Popular Music and Society*, 38(5), pp. 625-645.

Hagen, A. (2015b) *Using Music Streaming Services: Practices, Experiences and the Lifeworld of Musicking*. PhD thesis. University of Oslo. Available at:

<https://www.hf.uio.no/imv/forskning/prosjekter/skyogscene/publikasjoner/hagen2015.pdf>

(Accessed 18th December 2016).

Hagen, A. (2016) 'The metaphors we stream by: Making sense of music streaming', *First Monday*, 21(3). Available at: <http://firstmonday.org/ojs/index.php/fm/article/view/6005/5277> (Accessed 5th January 2017).

Hagen, A. N. and Lüders, M. (2016) 'Social streaming? Navigating music as personal and social', *Convergence: The International Journal of Research into New Media Technologies*, 23(6), pp. 1-17.

Haggerty, K. D. and Ericson, R. D. (2000) 'The surveillant assemblage', *British Journal of Sociology*, 51(4), pp. 605-622.

Haraway, D. (1991) 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', in Haraway, D. *Simians, Cyborgs and Women: The Reinvention of Nature*. New York: Routledge, pp.149-181.

Hawalah, A. and Faslu, M. (2015) 'Dynamic User Profiles for Web Personalisation', *Expert Systems with Applications*, 42, pp. 2547-2569.

Herbrechter, S. (2013) *Posthumanism: A Critical Analysis*. London: Bloomsbury.

Hesmondhalgh, D. (2005) 'Subcultures, Scenes or Tribes? None of the Above', *Journal of Youth Studies*, 8(1), pp. 21-40.

Hijikata, Y., Okubo, K. and Nishida, S. (2015) 'Displaying User Profiles to Elicit User Awareness in Recommender Systems', *2015 IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT)*, 6th-9th December 2015, Singapore. New York: IEEE, pp. 353-356. Available at: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7396829> (Accessed 19th December 2017).

Hogg, M. K. and Banister, E. N. (2000) 'The Structure and Transfer of Cultural Meaning: A Study of Young Consumers and Pop Music', *Advances in Consumer Research*, 27, pp. 19-23.

Hosanager, K. et al. (2014) 'Will the global village fracture into tribes? Recommender systems and their effects on consumer fragmentation', *Management Science*, 60(4), pp. 805-823.

Bibliography

Hracs, B., Seman, M. and Virani, T.E. (2016) *The Production and Consumption of Music in the Digital Age*. New York: Routledge.

IFPI. (2022) 'Global Music Report 2022'. Available at: https://www.ifpi.org/wp-content/uploads/2022/04/IFPI_Global_Music_Report_2022-State_of_the_Industry.pdf (Accessed 5th April 2022).

IFTTT. (2019) 'IFTTT is a free platform that helps you do more with all your apps and devices'. Available at: <https://ifttt.com/about> (Accessed 1st June 2019).

Im, H. and Jung, J. (2016) 'Impacts of personal characteristics on the choice of music consumption mode: Purchasing CDs, downloading, streaming and piracy', *Journal of Media Business Studies*, 13 (4), pp. 1652-2354.

Iqbal, M. (2021) 'Spotify Revenue and Usage Statistics (2021)'. Available at: <https://www.businessofapps.com/data/spotify-statistics/#2> (Accessed 6th April 2021).

Jannach, D. et al. (2010) *Recommender Systems: An Introduction*. Cambridge: Cambridge University Press.

Jawaheer, G., Szomszer, M. and Kostkova, P. (2010) 'Comparison of Implicit and Explicit Feedback from an Online Music Recommendation Service', *Proceedings of the 1st International Workshop on Information Heterogeneity and Fusion in Recommender Systems*, 26th September 2010, Barcelona, Spain. New York: ACM, pp. 47-51. Available at: https://www.researchgate.net/profile/Patty_Kostkova/publication/247927239_Comparison_of_implicit_and_explicit_feedback_from_an_online_music_recommendation_service/links/0046351e1593d14676000000/Comparison-of-implicit-and-explicit-feedback-from-an-online-music-recommendation-service.pdf (Accessed 14th November 2016).

Jenks, C. (2005) *Subculture: The Fragmentation of the Social*. London: Sage.

Johnson, C. (2015) 'Interactive Recommender Systems with Netflix and Spotify'. Available at: <http://www.slideshare.net/MrChrisJohnson/interactive-recommender-systems-with-netflix-and-spotify> (Accessed 13th August 2016).

- Kang, E. B. (2021) 'On streaming data convergence: Music-mediated self-presentations on Tinder', *New Media and Society*, 0(0), pp.1-16.
- Kant, T. (2020) 'Spotify has added an event to your past: (Re)writing the self through Facebook's autoposting apps', *The Fibreculture Journal*, 25, pp. 30-61.
- Kembellec, G., Charton, G. and Saleh, I. (eds.) (2014) *Recommender Systems*. London: ISTE Ltd.
- Kennedy, H. (2018) 'Living with Data: Aligning Data Studies and Data Activism Through a Focus on Everyday Experiences of Datafication', *Krisis: Journal for Contemporary Philosophy*, 2018(1), pp. 18-30.
- Kibby, M. (2009) 'Collect yourself: Negotiating personal music archives', *Information Communication and Society*, 12(3), pp. 428-443.
- Kim, H. M. et al. (2017) 'Online serendipity: The case for curated recommender systems', *Business Horizons*, 60, pp. 613-620.
- Kirkpatrick, D. (2010) *The Facebook Effect: The Inside Story of the Company That is Connecting the World*. New York: Simon & Schuster.
- Kitchin, R. (2017) 'Thinking critically about and researching algorithms', *Information, Communication & Society*, 20(1), pp. 14-29.
- Kjus, Y. (2016) 'Musical exploration via streaming services: The Norwegian experience', *Popular Communication*, 14(3), pp. 127-136.
- Knobloch, S. and Zillman, D. (2002) 'Mood Management via the Digital Jukebox', *Journal of Communication*, 52(2), pp. 351-366.
- Krause, A. E. and Hargreaves, D. J. (2012) 'myTunes: Digital music library users and their self-images', *Psychology of Music*, 41(5), pp. 531-544.
- Krause, A. E. and North, A. C. (2016) 'Music listening in everyday life: Devices, selection methods and digital technology', *Psychology of Music*, 44(1), pp. 129-147.

Bibliography

- Kumar, V. (2014) 'Making "Freemium" Work', *Harvard Review*, May 2014, pp.27-29.
- Larsen, G., Lawson, R. and Todd, S. (2009) 'The consumption of music as self-representation in social interaction', *Australasian Marketing Journal*, 17, pp. 16-26.
- Larsen, G., Lawson, R. and Todd, S. (2010) 'The symbolic consumption of music', *Journal of Marketing Management*, 26(7-8), pp. 671-685.
- Latour, B. (2005) *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- Laughey, D. (2006) *Music and Youth Culture*. Edinburgh: Edinburgh University Press Ltd.
- Lawler, S. (2008) *Identity: Sociological Perspectives*. Cambridge: Polity Press.
- Lee, J. H. (2011) 'How similar is too similar?: Exploring users' perceptions of similarity in playlist excavation', *ISMIR (The International Society of Music Information Retrieval) 12th International Society for Music Information Retrieval Conference, 24th-28th October 2011 Miami, Florida*. United States: ISMIR, pp. 109-114.
- Legislation.gov.uk. (2005) 'Data Protection Act 1998' [pdf]. Available at: http://www.legislation.gov.uk/ukpga/1998/29/pdfs/ukpga_19980029_en.pdf (Accessed 20th August 2017).
- Levy, S. (2006) *The Perfect Thing: How The iPod Shuffles Commerce, Culture And Coolness*. New York: Simon & Schuster.
- Lonsdale, A. J. and North, A. C. (2011) 'Why do we listen to music? A uses and gratifications analysis', *British Journal of Psychology*, 102, pp. 108-134.
- Lupton, D. (2018) 'How do data come to matter? Living and becoming with personal data', *Big Data & Society*, pp. 1-11.
- Lupton, D. (2020) 'Data mattering and self-tracking: What can personal data do?', *Continuum*, 34(1), pp. 1-13.

Lupton, D. (2021) "'Not the Real Me": Social Imaginaries of Personal Data Profiling', *Cultural Sociology*, 15(1), pp. 3-21.

Maasø, A. (2014) 'U2?! How the push of Steve Jobs' playlist undermines trust in Apple as a future music curator and cloud-based service', *Arnt Maasø's blog*, 11 September. Available at: <https://medium.com/@arnte> (Accessed 23rd November 2016).

Maasø, A. (2016) 'Music Streaming, Festivals, and the Eventization of Music', *Popular Music and Society*, 2016, pp. 1712-1740.

Maasø, A. and Hagen, M. (2020) 'Metrics and decision-making in music streaming,' *Popular Communication*, 18(1), pp. 18-31.

MacDonald, R., Hargreaves, D. and Miell, D. (eds.) (2002) *Musical Identities*. Oxford: Oxford University Press.

Maffesoli, M. (1996) *The Time of the Tribes: The Decline of Individualism in Mass Society*. Translated from French by M. Klincksieck. London: Sage.

Mans, M. (2005) 'Aesthetics and values as core determinants of musical identity formation', *Journal of the Musical Arts in Africa*, 2(1), pp. 1-22.

Mapes, J. (2015) 'Would You Like To Hear A Song, Dave?' *npr music*, 2 June. Available at: <http://www.npr.org/sections/therecord/2015/06/02/411280761/would-you-like-to-hear-a-song-dave> (Accessed 12th December 2016).

Molteni, L. and Ordanini, A. (2003) 'Consumption Patterns, Digital Technology and Music Downloading', *Long Range Planning*, 36, pp. 389-406.

Moore, K. (2017) 'Understanding the Influence of Music on Emotions: A Historical Review,' *Music Therapy Perspectives*, 35, pp. 131-143.

Morris, C. W. (1967) *Mind, Self, and Society from the Standpoint of a Social Behaviorist: George H. Mead*. Chicago: The University of Chicago Press.

Bibliography

Morris, J. W. (2015) 'Curation by code: Infomediaries and the data mining of taste', *European Journal of Cultural Studies*, 18(4-5), pp. 446-463.

Morris, J. W. (2015) *Selling Digital Music, Formatting Culture*. California: University of California Press.

MRC Data. (2020) 'Year-End Report U.S 2020'. Available at:

https://www.musicbusinessworldwide.com/files/2021/01/MRC_Billboard_YEAR_END_2020_US-Final.pdf (Accessed 21st February 2021).

Murphy, A. E. (ed.) (1959) *The Philosophy of the Present by George Herbert Mead*. Illinois: The Open Court Publishing Company.

Newsbeat. (2018) 'Brockhampton kick Ameer Vann out of group following allegations', *BBC*, 27 May. Available at: <https://www.bbc.co.uk/news/newsbeat-44272739> (Accessed 9th January 2022).

Nielsen. (2018) '2017 U.S. Music Year-End Report', *Nielsen Insights*, 3 January. Available at: <http://www.nielsen.com/us/en/insights/reports/2018/2017-music-us-year-end-report.html> (Accessed 14th January 2018).

Nguyen, T. T. et al. (2014) 'Exploring the Filter Bubble: The Effect of Using Recommender Systems on Content Diversity', *WWW14' Proceedings of the 23rd International Conference on World Wide Web*, 7-11 April 2014, Seoul, Korea. New York: ACM, pp. 677-686. Available at: <https://dl.acm.org/citation.cfm?id=2568012> (Accessed 17th December 2017).

Norman, D. (1990) *The Design of Everyday Things*. New York: Doubleday Business.

North, A. C. and Hargreaves, D. J. (1999) 'Music and Adolescent Identity', *Music Education Research*, 11(1), pp. 75-92.

North, A. C., Hargreaves, D. J. and O'Neil, S. A. (2000) 'The Importance of Music to Adolescents', *British Journal of Educational Psychology*, 70(2), pp. 255-272.

O'Reilly, D., Larsen, G. and Kubacki, K. (2013) *Music, Markets and Consumption*. Oxford: Goodfellow Publishers Ltd.

- Ouaftouh, S., Zellou, A. and Idri, A. (2015) 'User profile model: A user dimension-based classification', *10th International Conference on Intelligent Systems: Theories and Applications (SITA), 20th-21st October 2015, Rabat, Morocco*. New York: IEEE, pp. 1-5. Available at: <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7358378> (Accessed 3rd January 2018).
- Pariser, E. (2011) *The Filter Bubble: What the Internet is Hiding From You*. London: Viking.
- Patton, P. (1994) 'MetamorphoLogic: Bodies and Powers in A Thousand Plateaus', *Journal of the British Society for Phenomenology*, 25(2), pp. 157–69.
- Perugini, S. et al. (2004) 'A Connection Centric Survey of Recommender Systems Research', *Journal of Intelligent Information Systems*, 23(2), pp. 107-143.
- Pinch., T. and Bijker, W. (1984) 'The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other', *Social Studies of Science*, 14(3), pp. 399-441.
- Pink, S. et al (2017) 'Mundane data: The routines, contingencies and accomplishments of digital living', *Big Data & Society*, pp. 1-12.
- Prey, R. (2016) 'Musica Analytica: The Datafication of Listening', in Nowak, R and Whelan, A. (eds.) *Networked Music Cultures*. Basingstoke: Palgrave Macmillan, pp. 31–48
- Pu, P., Chen, L. and Hu, R. (2012) 'Evaluating recommender systems from the user's perspective: Survey of state of the art', *Science and Business Media*, 22, pp. 317-355.
- Reddit. (2019) 'The Conversation Starts Here'. Available at: <https://www.redditinc.com> (Accessed 1st July 2019).
- Reilly, N. (2017) 'Two more women have accused Brand New's Jesse Lacey of sexual assault', *NME*, 14 November. Available at: <https://www.nme.com/news/music/two-women-accuse-jesse-lacey-of-sexual-assault-2159198> (Accessed 9th January 2022).

Bibliography

Rentfrow, P. J. (2019) 'Measures'. Available at:

<https://sites.google.com/view/pjasonrentfrow/measures> (Accessed 19th May 2019)

Rentfrow, P. J. and Gosling, S. D. (2003) 'The do re mi's of everyday life: The structure and personality correlates of music preferences', *Journal of Personality and Social Psychology*, 84, pp. 1236-1256.

Research Councils UK. (2015) 'Guidance on best practice in the management of research data'.

Available at: <http://www.rcuk.ac.uk/documents/documents/rcukcommonprinciplesondatapolicy-pdf/> (Accessed 16th August 2017).

Research Councils UK. (2015) 'RCUK Common Principles on Data Policy'. Available at:

<http://www.rcuk.ac.uk/research/datapolicy/> (Accessed 16th August 2017).

Research Councils UK. (2016) 'Concordat on Open Research Data'. Available at:

<http://www.rcuk.ac.uk/documents/documents/concordatonopenresearchdata-pdf/> (Accessed 16th August 2017).

Riviere, J. (1929) 'Womanliness as a masquerade', *International Journal of Psychoanalysis*, 10, pp. 303-313.

Ruckenstein, M. (2014) 'Visualized and Interacted Life: Personal Analytics and Engagements with Data Doubles', *Societies*, 4, pp.68-84.

Saarikallio, S. (2010) 'Music as emotional self-regulation throughout adulthood', *Psychology of Music*, 39(3), pp. 307-327.

Saarikallio, S., Baltazar, M. and Västfjäll, D. (2017) 'Adolescents' musical relaxation: understanding related affective processing', *Nordic Journal of Music Therapy*, 26(4), pp. 376-389.

Saarikallio, S. and Erkkilä, J. (2007) 'The role of music in adolescents' mood regulation', *Society for Education, Music and Psychology Research*, 35(1), pp. 88-109.

Saunders, M., Lewis, P. and Thornhill, A. (2016) *Research Methods for Business Students*. 7th edn. Harlow: Pearson Education Limited.

- Savage, M. (2018) 'Each of us streamed 1,036 songs last year (and most of them were by Ed Sheeran)', *BBC Entertainments & Arts*, 3 January. Available at: <http://www.bbc.co.uk/news/entertainment-arts-42541440> (Accessed 3rd January 2018).
- Savage, M. (2018) 'Spotify users demand refunds over Drake promotion', *BBC Entertainments & Arts*, 3 July. Available at: <https://www.bbc.co.uk/news/entertainment-arts-44695062> (Accessed 17th November 2018).
- Schedl, M. et al. (2015) 'Music Recommender Systems', in Ricci, F., Rokach, L. and Shapira, B. (eds.) *Recommender Systems Handbook*. Boston: Springer, pp. 453–92.
- Sharon, T. and Zandbergen, D. (2017) 'From data fetishism to quantifying selves: Self-tracking practices and the other values of data', *New Media & Society*, 19(11), pp. 1695-1709.
- Shibutani, T. (1955) 'Reference Groups as Perspectives', *American Journal of Sociology*, 60(6), pp. 562-569.
- Shifness, R., Bodner, E. and Palgi, Y. (2015) 'When you're down and troubled: Views on the regulatory power of music', *Psychology of Music*, 43(6), pp. 793-807.
- Shuker, R. (2013) *Understanding Popular Music Culture*. 4th edn. Abingdon: Routledge.
- Sinclair, G. and Tinson, J. (2017) 'Psychological Ownership and Music Streaming Consumption', *Journal of Business Research*, 27, pp. 1-9.
- Sismondo, S. (2004) *An Introduction to Science and Technology Studies*. Oxford: Blackwell Publishing.
- Skageby, J. (2011) 'Slow and fast music media: Comparing values of cassettes and playlists', *Journal of Media and Culture*, 20, pp. 1-12.
- Small, C. (1998) *Musicking: The Meanings of Performance and Listening*. Middletown: Wesleyan University Press.
- Smith, T. W. (1994) 'Generational differences in music preferences', *Popular Music and Society*, 18(2), pp. 43-59.

Spohr, D. (2017) 'Fake news and ideological polarization: Filter bubbles and selective exposure on social media', *Business Information Review*, 34(3), pp. 150-160.

Spotify. (2018) 'Your 2018 Wrapped'. Available at: <https://community.spotify.com/t5/Spotify-Answers/Your-2018-Wrapped/ta-p/4625642> (Accessed 15th June 2019).

Spotify. (2019a) 'Daily Mix'. Available at: https://support.spotify.com/uk/using_spotify/playlists/daily-mix/ (Accessed 18th July 2019).

Spotify. (2019b) 'Discord'. Available at: https://support.spotify.com/us/listen_everywhere/gaming/discord/ (Accessed 14th September 2019).

Spotify. (2019c) 'Discover Weekly'. Available at: https://support.spotify.com/uk/using_spotify/playlists/discover-weekly/ (Accessed 18th July 2019).

Spotify. (2019d) 'Private Listening'. Available at: https://support.spotify.com/us/using_spotify/the_basics/how-to-enable-private-listening/ (Accessed 20th September).

Spotify. (2019e) 'Spotify Radio'. Available at: https://support.spotify.com/us/using_spotify/features/spotify-radio/ (Accessed 18th July 2019).

Spotify. (2019f) 'Release Radar'. Available at: https://support.spotify.com/uk/using_spotify/playlists/release-radar/ (Accessed 18th July 2019).

Spotify. (2019g) 'Your Time Capsule'. Available at: <https://timecapsule.spotify.com> (Accessed 18th July 2019).

Spotify. (2020) 'Company Info'. Available at: <https://newsroom.spotify.com/company-info/> (Accessed 30th November 2020).

- Statista. (2017) 'Spotify: Statistics and Facts'. Available at: <https://www.statista.com/topics/2075/spotify/> (Accessed 6th November 2017).
- Statista. (2021) 'Share of music streaming subscribers worldwide in 2019, by company'. Available at: <https://www.statista.com/statistics/653926/music-streaming-service-subscriber-share/> (Accessed 12th February 2021).
- Straw, W. (1997) 'Sizing Up Record Collections: Gender and Connoisseurship in Rock Music Culture', in Whitely, S. (ed.) *Sexing the Groove: Popular music and gender*. London: Routledge, pp. 3-16.
- Ter Bogt, T. et al. (2011) 'Intergenerational Continuity of Taste: Parental and Adolescent Music Preferences', *Social Forces*, 90(1), pp. 297-319.
- The Echo Nest. (2016) 'The Echo Nest'. Available at: <http://the.echonest.com/> (Accessed 12th December 2016).
- Thomas, L. et al. (2017) 'Understanding social media and identity work in young people transitioning to university', *Computers in Human Behaviour*, 76, pp. 541-553.
- Thornton, S. (1995) *Club Cultures: Music, Media and Subcultural Capital*. Cambridge: Polity Press.
- UiO Department of Musicology. (2016) 'Main Findings', 1 April. Available at: <http://www.hf.uio.no/imv/english/research/projects/cloudsandconcerts/publications/main-findings.html> (Accessed 23rd November 2016).
- University of Southampton. (2020) 'Research Management Policy'. Available at: <https://www.southampton.ac.uk/~assets/doc/calendar/Research%20Data%20Management%20Policy.pdf> (Accessed 17th March 2020)
- van Dijck, J. (2014) 'Datafication, dataism and dataveillance: Big Data between scientific paradigm and ideology', *Surveillance & Society*, 12(2), pp. 197-208.
- Webster, J. (2019) *Taste in the digital age: Music streaming services and the performance of class distinction*. PhD thesis. University of Southampton, UK. Available at: <https://eprints.soton.ac.uk/433131/> (Accessed 15th December 2020).

Bibliography

Whiteley, S. (ed.) (1997) *Sexing the Groove: Popular Music and Gender*. London: Routledge.

Wikstrom, P. (2015) 'Will algorithmic playlist curation be the end of music stardom?', *Journal of Business Anthropology*, 4(2), pp. 278-284.

Wittkower, D. (ed.) (2008) *iPod and Philosophy: iCon of an ePoch*. Chicago: Open Court.