Does Spotify Create Attachment?
Algorithmic Playlists, Intermediation
and the Artist-Fan Relationship

By Adrian Leisewitz & George Musgrave

Abstract

This paper seeks to measure the extent to which algorithmically generated playlists, conceptualised herein as cultural intermediaries (Bourdieu 1984), create 'attachment' between consumers of music and producers of music. This was undertaken following debates in the professional music press problematising the ability of streaming platforms to create relationships between artists and listeners and, in a wider discussion, to generate sustainable income for musicians (Chartmetric 2018, Mulligan 2019 in Griffiths 2019, Music Ally 2019). We develop the idea from cultural and economic scholars that intermediation results in 'attachment' on behalf of consumers (Callon et.al 2002, Smith Maguire & Matthews 2012) by formulating a definition of the term informed by insights from consumer psychology and applying this framework to a 115-question survey completed by listeners to Spotify's 'Discover Weekly' Playlist for a one-week period. The findings suggest that the playlist was able to generate almost no attachment for those who were considered poorly-involved new music consumers, and only minor to mid-levels of attachment for those participants considered heavily-involved new music consumers. We therefore propose that this specific algorithmically curated playlist might influence low-cost audience attachment behaviours while its overall impact on the economic success of artists may be limited. This paper contributes towards academic debates concerning the role and impact of cultural intermediaries and lends early empirical support to discussions within the professional music industries and wider public policy (GOV 2020) concerning the uncertain ability of playlists to influence the artist-fan relationship. In addition, by developing a more methodologically precise definition of 'attachment', it is hoped that the framework provided by this modest study can act as a guide for other researchers to explore the concept of intermediation and attachment with larger sample sizes on alternative playlist types and on other digital platforms.

Keywords: streaming, cultural intermediaries, attachment, playlists, Spotify

Introduction

Understanding the economic impact of streaming on musicians with a focus on issues such as equitability and economic sustainability has risen to prominence not only in academic discussions (Hesmondhalgh 2020, 2021; Hesmondhalgh, et.al 2021) and the professional music industries (Music Ally 2019, Dredge 2020), but in political and public policy circles too. The UK Government's Digital, Media, Culture and Sport (DCMS) Committee recently launched 'The Economics of Music Streaming' (GOV 2020) inquiry, propelled by the #BrokenRecord campaign on social media. As part of this inquiry, the committee sought to move beyond economics alone, and instead engage with questions around the nature of the *relationship* between streaming platforms and consumers, asking: "Have new features associated with streaming platforms, such as algorithmic curation of music or company playlists, influenced consumer habits, tastes, etc?" (ibid). Mulligan (2019, in Griffiths 2019) argues that, indeed, they have influenced consumer habits. He suggests that while music is being consumed more, less music is being discovered 'meaningfully' and criticises the abilities of these new technologies to transform casual listeners into fans; a phenomenon which appears alarming given that these "dedicated aficionados" (Negus 2019: 375) are seen as important income generators to artists, who – especially in a post Covid-19 environment – are likely to be in financially precarious situations (ibid, Musicians' Union 2012: 4, Dredge 2020). In other words, a critique is developing amongst commentators within the professional music industries and beyond that streaming services might not give *context* to songs (Jopling 2019, Mulligan 2019 in Griffiths, 2019), and might therefore fail to generate fans outside of their own realms (Chartmetric 2018, Music Ally 2019). Arguments such as this have particular resonance for artists working in genres such as rap and pop where being embedded within digital methods of promotion such as Spotify playlists or TikTok can be crucial to musical careers[1].

This paper seeks to measure the extent to which algorithmically generated playlists create 'attachment' between consumers of music and producers of music. By conceptualising streaming platforms as cultural intermediaries (Bourdieu 1984), we argue that whilst cultural and economic scholars suggest that intermediation results in attachment on behalf of consumers (Callon et.al 2002: 205, Smith Maguire & Matthews 2012: 554), the term itself has not been robustly defined beyond repeat purchases, nor has the phenomenon been examined empirically in the context of streaming. Drawing on the work of consumer psychologists to formulate a working definition of attachment, and applying this framework to a survey of listeners to Spotify's 'Discover Weekly' Playlist for a one-week period, we present results which suggest that the playlist was able to generate close to no attachment for those considered poorly-involved consumers and only minor

to mid-levels of attachment for those participants considered heavy new music consumers. In this modest study we therefore propose that 'Discover Weekly' – an algorithmically curated playlist – demonstrates an ability to influence only low-cost audience attachment behaviours, suggesting a limited overall impact on the economic success of artists.

By synthesising consumer psychology, economic and cultural studies literature to analyse the influence of algorithmic playlists through the prism of attachment, this paper provides a deeper understanding of the impact of taste-making on consumer behaviour. It also seeks to refine our understanding of the *results* of cultural intermediation, which have been conceptualised with varying levels of precision in existing academic discussions on the topic (Bourdieu 1984, Featherstone 1993, Callon et.al 2002: 205, Negus 2002, Hesmondhalgh 2006, Smith Maguire & Matthews 2012: 554, Powers 2015). Finally, we seek to contribute towards debates concerning streaming services' ability (or lack thereof) to generate sustainable income for artists (Dredge 2020), and thereby highlight the necessity of a holistic music marketing approach which seeks to build long-term artist-fan relationships both within and outside of the playlist realm.

Streaming Platforms as Cultural Intermediaries

In his original conceptualisation, Bourdieu (1984) suggested that cultural intermediaries, stemming from higher social backgrounds, are afforded influence by virtue of their understanding of 'legitimate culture' and control over mass media, enabling them to exert influence over middle class taste. Building on Bourdieu's (1984: 359) notion of cultural intermediaries encompassing all occupations involved in "providing symbolic goods and services", the range of who might be considered as such has included designers (du Gay et al. 1997) or even accountants involved in cultural production (Negus 2002). This approach, however, was critiqued by Hesmondhalgh (2006: 226), who argues that this new definition of cultural intermediaries equates to Bourdieu's (1984: 359) definition of the new petite bourgeoisie, which he had originally defined as a super-group of the former (ibid). Whilst debates over *who* might be classified as a cultural intermediary is thus subject to much debate (Featherstone 1993, du Gay et.al 1997, Negus 2002, Hesmondhalgh 2006, Smith Maguire & Matthews 2010, Prior 2013, Smith Maguire 2014), Smith Maguire & Matthews (2012: 2014), and Powers (2015) suggest that cultural intermediaries today can be defined by their *activities*, rather than social groups or occupations. This appears to unite Bourdieu's (1984) ideas with the interpretations made by Featherstone (1993) and Negus (2002) inter alia, by focussing on "what they do, rather than what they are" (Smith Maguire 2014: 17).

What do cultural intermediaries do, then? A definition which serves to synthesise Bourdieu's ideas with current literature is that; equipped with an understanding of the cultural landscape and expertise, cultural intermediaries select and recognise certain cultural goods as legitimate, thus increasing their value in the form of recognition (symbolic capital) through discourse (Bourdieu 1991: 72, Negus & Pickering 2004: 18-19, Smith Maguire & Matthews 2012: 552, Smith Maguire & Matthews 2014: 3). Indeed, cultural intermediaries have been ascribed a significant role for the success of new music due to their perceived ability to provide culture with value (Fairchild 2014, Musgrave 2017). Smith Maguire (2014: 22) further concludes that cultural intermediaries need a deep understanding of their own audiences (ideally by being part of them themselves) in order to shape their views – a claim supported by Kuipers (2012: 600) and Moor (2008: 424). Callon et al. (2002: 205) argue that the more intermediaries frame a good in accordance with a consumers' values, the more consumers are inclined to become detached from another good and attached to the good in question. This process, referred to by Callon et al. (2002: 205) as "requalification", entails a (re)-positioning of a good to meet the values of a consumer. It is questionable whether the specific process of detachment applies to cultural goods such as music however, given music's status as a club (or toll) good which is non-rivalrous in its consumption (Tschmuck, 2017), the ways in which consumers can hold multiple parasocial relationships with human brands such as musicians in much the same way we can have multiple friends and companions (see Thomson 2006: 105), and, as per Torres (2019: 20) drawing on Latour and Stark (1999: 27): "There is not a way of erasing the mark of that song that we hate now". Nonetheless, the principle of attachment through qualification chimes with the aforementioned processes of providing value through singularisation and presentation. It may therefore be concluded that the more intermediaries understand their audiences, the more they are able to successfully impose their own values. This may not only serve to underline the importance of audience understanding, but also explains one of the *results* of their work. As suggested by Smith Maguire & Matthews (2012: 554) cultural intermediaries' framing of cultural goods results in an 'attachment' on behalf of their audiences, and this attachment could possibly have a sustainable impact on the economic success of goods. However, while Callon et.al (2002) suggest that attachment for consumer goods can result in repeat purchases of the same good, Smith Maguire & Matthews (2012) do not develop the idea of attachment nor define the term. Thus, while 'attachment' has been employed within cultural sociology to describe a sense of "fandom", passion, or the development of taste (Gomart and Hennion, 1999; Hennion, 2010), alongside a phenomenological perspective too in the work of Redman (2008), an *empirical* interrogation of the term in the context of intermediation debates remains

underdeveloped (see Thomson 2006, and Loroz & Braig 2015 on attachment to 'human brands' for notable related examples).

Is it reasonable to categorise streaming services as cultural intermediaries? In the first instance, streaming services play an increasingly important role in new music discovery (Lindsay 2016, Datta et.al 2018). Many have discussed the ability of streaming services (primarily Spotify) to perform an act of presentation through their recommendation systems (Mulligan 2014, Morris 2015, Kjus 2016, Webster et.al 2016, Barna 2017, Eriksson and Johansson 2017, Snickars 2017, Aguiar & Waldfogel 2018, Bonini & Gandini 2019: 8). Most of the streaming services' recommendations appear in the form of playlists, and Mulligan (2014) suggests that playlists have become the most significant method of music consumption. Indeed, as noted by Prey (2020: 2): "Spotify has become the focus of promotional efforts across the recording industry. Much of this focus is on playlists". In addition, Spotify's editorial teams are made of up music professionals with knowledge of local cultures (Fleischer and Snickars 2017) and playlist curators for streaming platforms have music industry backgrounds (Gross and Musgrave 2020: 81) and utilise a network of industry actors to stay informed on current music news (Bonini & Gandini 2019). Editorial teams at Spotify therefore have the knowledge necessary to deem musical goods as legitimate, and with a certain understanding of their audience necessary to exert an influence over their taste, as least in principle (Fleischer & Snickars 2017: 139-140). Algorithmic recommendations are suggested to be based on listeners' taste profiles created by data collected on the platform (Popper 2015, Eriksson & Johannson 2017: 177). Depending on the user's intensity of use on the streaming site, they can thus generate a more or less refined image of what music the listener may like (Popper 2015). Finally, various writers have suggested that algorithms which generate recommendations have a deeper understanding of the cultural field due to their abilities to match similar songs based on similar audiences and playlists that contain the track, skim the internet for discourse on certain artists/releases, and identify tastemakers and analyse their preferences (Morris 2015, Webster et.al 2016, Snickars 2017: 208, Tiffany 2017, Bonini & Gandini 2019: 6). Webster et.al (2016) further argue that in these cases, cultural knowledge is generated by a collaboration of human and algorithmic work i.e., the algorithm makes decisions or recommendations based on human input, such as discourse on online blogs. Algorithms therefore collect and condense the knowledge of various human actors in order to make recommendations. We therefore suggest that, drawing on Smith Maguire's (2014: 17) focus on "what [cultural] intermediaries' do", it is thus reasonable to conclude that algorithmically curated playlists perform the aforementioned activities of cultural intermediaries by: (i) the framing of cultural goods as legitimate, (by selecting relevant music from an abundance of

options), and (ii) seeking to provide goods with symbolic capital on the basis of their knowledge of the cultural field (generated by both humans and algorithms). Indeed, given that they condense knowledge from various (human) sources as well as having an in-depth understanding of their audiences (i.e., due to user data), algorithmically curated playlists might arguably have *superior* abilities to act as cultural intermediaries compared to a singular human actor. Considering this, as well as their aforementioned importance in the contemporary music industries, it may prove particularly insightful to interrogate algorithmically curated playlists' efficacy as cultural intermediaries.

However, to what extent do playlists exert the kind of influence over consumers suggested, but not developed, in the work of Callon et.al (2002) and Smith Maguire & Matthews (2012: 554)? That is, do algorithmically generated playlists engender 'attachment'? The first challenge this presents is that the term does not receive sufficient terminological interrogation in the academic literature. Aguiar and Waldvogel (2018: 25-27), for example, found that being included on a humanly curated playlist resulted in large numbers of streams for songs over a period of 100 days, thus suggesting that these recommendation systems could also lead to increased consumer engagement. However, they further found that being on such a playlist had no effect on song consumption outside of the platform (ibid: 17-18). Additionally, music industry media has critiqued an increased focus on playlists due to an observation of many artists receiving high numbers of streams for those songs that had been included on playlists but failing to generate purchases of their products outside of the platform (Music Ally 2019). In short, given the existing scholastic and media landscape, it is extremely difficult to answer the question as to whether playlists generate 'attachment' i.e., to explore the efficacy of algorithmic playlists at, in the words of the DCMS, "influencing consumer habits, tastes, etc" (GOV 2020). In order to address this, the second step in this paper involves the development of a more systematic working definition of attachment.

Defining 'Attachment'

In the absence of a clear definition of attachment from cultural and economic scholars – particularly in terms of providing an empirical architecture to examine the term in the context of intermediation - the most obvious starting point is the field where the term has enjoyed the most meaningful interrogation: psychology. Developmental and evolutionary psychology scholars have discussed attachment as an emotional bond based on a desire for proximity between individuals and other individuals. As a consequence of feeling distressed when this connection is withdrawn, individuals can demonstrate "attachment behaviours" in order to maintain close proximity (Bowlby 1982: 668, 671, Hazan & Shaver 1994: 4).

Consumer psychology scholars have built on these findings to suggest that these patterns are reflected by consumers with emotional bonds to brands and products too (Thomson et.al 2005: 81, 88, Schifferstein & Zwartkruis-Pelgrim 2008, Park et.al 2010: 10). According to Thomson et.al (2005: 88) this can manifest in a higher willingness to pay premium prices i.e., that the emotional bond is so strong that consumers would rather pay above average prices than lose proximity to a good. Whilst this method of contingent valuation has been widely used – notably in environmental economics (Bateman & Willis 2000) – studies suggest the construct is impacted by factors such as income (Horowirz & McConnell 2003), necessitating some degree of caution.

Park et.al (2010) further argue that strong attachment is reflected by a higher willingness to enact difficult behaviours in order to maintain a relationship with a brand. This entails the willingness to regularly purchase a brands' newest products, promote it at personal expense, and waiting to purchase a product of said brand in the future instead of purchasing a non-brand product immediately (ibid: 11). Given the nature of new music being a product i.e., physically and digitally reproducible sound recordings, and music artists being referred to as brands (Temple 2018), it appears reasonable to apply these theoretical constructs to musical goods and artists. Applied in this way, the 'products' might be concert tickets, merchandise or physical releases (Forde 2018, Music Ally 2019). Furthermore, Park et.al (2010: 10-11) empirically connect brand attachment to actual purchase behaviour, thus corroborating the idea set forth by Callon et al. (2002) that attachment results in consumption. As such, Thomson et al. (2005) and Park et al. (2010) provide us with a series of well-defined *behavioural indicators* of attachment; a higher willingness to pay premium prices, and a higher willingness to enact difficult behaviour in order to maintain a relationship with a brand.

Alongside these behavioural dimensions of attachment, scholars in this area also delineate three *cognitive* dimensions of attachment. Firstly, consumers who show such an intense emotional bond to a product or brand are found to be likely to see these as a part of their own identity (Schultz et.al 1989, Ball & Tasaki 1992: 158, Fournier 1998: 366, Schifferstein & Zwartkruis-Pelgrim 2008: 7, Park et.al 2010: 6). Secondly, Park et.al (2010: 2) suggest that highly attached consumers' thoughts and memories towards attachment objects are likely to come to their mind easily and automatically. Thirdly, Thomson et.al (2005: 79) argue that the aforementioned anxiety of separation (Bowlby 1982: 671) increases with strong attachment to brands, which is corroborated by Schifferstein & Zwartkruis-Pelgrim (2008: 11). Finally, Schifferstein & Zwartkruis-Pelgrim (2008: 7) and Thomson et.al (2005: 88) further suggest that strongly attached consumers are more likely to feel positive emotions, such as enjoyment, affection, connection and passion. However, Park et.al (2010: 3) argue that analysing attachment through the prism

of emotions may not serve to provide an accurate determination of attachment strength, due to these being of an individual nature and thus difficult to conceptualise. As such, this literature provides us additionally with three *cognitive indicators* of strong attachment.

Refining the idea of attachment posed by Smith Maguire & Matthews (2012) and Callon et al. (2002), it thus appears reasonable to assume that if cultural intermediaries are able to influence the above behavioural and cognitive indicators, their work might be described as resulting in attachment, thus arguably influencing the success of new music. The question we seek to answer in this paper is: to what extent are algorithmically generated playlists successful at generating attachment defined in this way?

Methodology

The study of digital streaming services is a new and emerging area of academic inquiry ripe for methodological innovation, as per the work of Snickars (2017) for example. Building on this, we sought to develop a new model to measure the concept of attachment in two stages. Firstly, given that the intensity of music consumption can vary greatly between individuals, a maximum variation sampling approach was adopted in order to find two different kinds of music consumer. The first were those heavily involved in new music discovery who might therefore be likely to show what we call a high willingness to form attachment (HWTFA). This consumer would be similar in some respects to those music consumers described by the BPI (2017: 63) as "heavy spenders" or the IFPI (2019: 13) as "music fanatics", as they already show increased attachment behaviours towards musical goods they like. The second were those who rarely sought to discover new music who might therefore show what we call a low willingness to form attachment (LWTFA). This consumer would be similar in some respects to those described by the IFPI (2019: 13) as considering music an "unimportant" part of their lives. Furthermore, as Popper (2015) suggests, algorithmic recommendations become more refined the more a consumer interacts with them. It is therefore further reasonable to see heavy Discover Weekly users as more likely to form attachment than those who rarely use the playlist. In this respect, music consumers are not homogenous, and the sampling method employed in this study sought to reflect the wide variety of potential engagement styles (and therefore potential attachment strengths), such as those captured in the categorisations provided by the BPI and IFPI.

A small initial sample of nine volunteer participants who self-identified as users of Spotify's algorithmically curated playlist 'Discover Weekly' were drawn from a postgraduate Music Business Masters cohort alongside respondents to an open call on social media (via an Instagram post on the researcher's personal

account) based on purposive sampling methods. These respondents took part in a pre-survey to determine their relative willingness to form attachment based on their responses to a Music Consumption Involvement task based on the aforementioned attributes of consumers with either HWTFA or LWTFA (see Appendix 1). From this, two consumers (one male, one female) were identified as having HWTFA based on a Music Consumption Involvement score of >6. One was drawn from the postgraduate Music Business Masters cohort and one from the open call. A further two consumers drawn from the open call (one male, one female) were identified as having LWTFA based on a Music Consumption Involvement score of <4.[2] The participants were asked to use the 'Discover Weekly' playlist as the only tool for new music discovery for the duration of one week, starting on a Monday given that the playlist is updated each week on this day (Ditto 2018). They were further requested to block out all other ways to discover new music e.g., radio, other streaming playlists, YouTube, Instagram livestreams, etc. in order to increase the validity of their replies and reduce bias through other influences. On the following Monday, participants were sent an online questionnaire aiming to determine their levels of attachment after one week of intermediary interaction.

The questionnaire was devised in order to measure both *behavioural indicators of attachment* i.e., higher willingness to pay premium prices, and higher willingness to enact difficult behaviours, and *cognitive indicators of attachment* i.e., self-connection/identification, memories and thoughts, and separation anxiety. By synthesising and adapting the psychology and consumer psychology literature discussed above, an online survey of 115 questions was created to measure both indicators (see Appendix 2). Questions 1-7 were designed as classification questions. Questions 8-30 aimed to determine the participants' attachment strength toward the most liked and previously unknown *song* on the playlist, and questions 31-61 aimed to determine the extent to which the participants became attached to *musician* performing the song. Our attachment construct was therefore comprised of 54 questions. Finally, these questions were repeated and adapted to measure attachment levels to the participants' favourite songs and artists outside 'Discover Weekly', in order to maximise validity. All replies were coded to fit a 7-point Likert scale and each of the aforementioned five constructs (two behavioural indicators and three cognitive indicators) were analysed by calculating their respective arithmetic means. Attachment indices were calculated over all replies in order to determine the participants' total attachment strength, with a score of 7 suggesting high attachment according to that variable, and a score of 1 indicating an absence of attachment according to that variable. In this sense, our construct sought to measure attachment strength which, according to Thomson (2006: 105), "may provide a parsimonious and unidimensional

indicator of "relationship quality" or strength". Methodological details regarding calculations have been included as endnotes for the purpose of clarification.

Findings

The findings presented below should be interpreted as offering initial data into the relationships between cultural intermediaries, consumption and attachment, and as an exercise in exploring the applicability and utility of our multi-dimensional attachment construct. The small sample size does not provide sufficient strength to make strong statistical inferences, but the differences observed between the two groups of consumers in their attachment index scores suggests the tool is accurately capturing differences in consumer responses and thus highlights interesting and important areas for further research.

Table 1. Overall Attachment Index[3][4]

Indicators	LWTFA	HWFTA
Behavioural Indicators	1.43	3.71
Cognitive Indicators	1.04	3.58
Attachment Index	**1.21**	**3.63**

An analysis of both behavioural and cognitive attachment indicators seen in Table 1 above suggests that the 'Discover Weekly' playlist was able to generate close to no attachment for LWTFA participants. This lack of attachment was observed both towards the individual songs, and the musician performing the song, as will be delineated below. In addition, the playlist was only able to generate minor to mid-levels of attachment for HWTFA participants towards both songs and musicians. Whilst repeat listens of single tracks were relatively likely for these consumers, the chances of repeat purchases were considerably lower.

Consumers with Low Willingness to Form Attachment (LWTFA)

Table 2. LWTFA - Behavioural Indicators[5]

Attachment Object	Willingness to Enact Difficult Behaviours	Willingness to Pay Premium Price	Behavioural Index
Song	1.50	1.00	1.43
Artist	1.40	1.50	1.42
Overall	1.45	1.25	1.43

Table 3. LWTFA - Cognitive Indicators

Attachment Object	Self-Connection	Memories and Automatic Thoughts	Separation Distress	Cognitive Index
Song	1.20	1.00	1.00	1.08
Artist	1.00	1.00	1.00	1.00
Overall	1.10	1.00	1.00	1.04

The consumers we have categorised as having a low willingness to form attachment (LWTFA) demonstrated an average index score of 1.43 for behavioural indicators of attachment, whereby a score of 1 suggests no attachment and a score of 7 suggests deep and meaningful attachment. This suggests that they are very unlikely to demonstrate attachment behaviours in the form of higher willingness to pay a premium price (1.25) or willingness to enact difficult behaviours (1.45) based on their interaction with the 'Discover Weekly' playlist as a tool for new music discovery. These low behavioural indexes were exhibited both towards their favourite song on the 'Discover Weekly' playlist (1.43), and towards that songs' musician (1.42). In addition, LWTFA consumers had an overall index score of 1.04 for cognitive indicators of attachment. This again suggests that they are very unlikely to display emotional signs of attachment in the form of feelings of self-connection (1.10), triggering of memories (1.00), or separation distress (1.00). Again, these low levels were exhibited both towards their favourite song on the 'Discover Weekly' playlist (1.08), and towards the songs' musician (1.00).

These findings suggest that the playlist generated close to no attachment

for those participants who were less-involved music consumers. Whilst repeat listens were not entirely ruled out by respondents, behaviours linked to additional monetary expenditure were extremely unlikely. A cognitive indicator score of close to 1 suggests that almost no formative dimension of attachment could be observed amongst these participants too. Certainly, these results may be linked to the participants' predispositions of not being likely to become attached to new music.

Consumers with High Willingness to Form Attachment (HWTFA)

Table 4. HWTFA - Behavioural Indicators

Attachment Object	Willingness to Enact Difficult Behaviours	Willingness to Pay Premium Price	Behavioural Index
Song	4.00	3.17	3.88
Artist	3.60	3.30	3.53
Overall	3.80	3.23	3.71

Table 5. HWTFA - Cognitive Indicators

Attachment Object	Self-Connection	Memories and Automatic Thoughts	Separation Distress	Cognitive Index
Song	3.90	4.33	1.75	3.77
Artist	2.70	3.92	3.50	3.38
Overall	3.30	4.13	2.63	3.58

The consumers we have categorised as having a high willingness to form attachment (HWTFA) demonstrated an average index score of 3.71 for behavioural indicators of attachment, whereby 4 is a neutral value. This suggests that they demonstrate weak to moderate attachment behaviours in the form of willingness to pay a premium price (3.23) or willingness to enact difficult behaviours (3.80) based on their interaction with the 'Discover Weekly' playlist as a tool for new music discovery. These moderate levels of behavioural attachment were exhibited both towards their favourite song on the playlist (3.88), and towards their favourite

musician from the playlist (3.53). In addition, HWTFA consumers demonstrated an attachment average index score of 3.58 for cognitive indicators of attachment. This again suggests that they display moderate levels of formative signs of attachment in the form of feels of self-connection (3.30), and automatic thoughts and memories (4.13), although they scored much lower regarding separation distress (2.63). Again, these relatively low cognitive indicators for attachment were exhibited both towards their favourite song on the 'Discover Weekly' playlist (3.77), and towards the songs' musician (3.38).

Both HWTFA participants showed slightly increased levels of attachment to both the songs on the playlist as well as their artists. Furthermore, both participants either saved the track and another track of the same artist or stated they would be likely to save the track and another track of the same artist. Whilst this shows certain behaviours to maintain the bond, the connection does not appear to be strong enough for definite purchase intentions outside of the Spotify platform. Whilst initial interest was generated, reflected by a mid-strength emotional bond of sufficient strength for considerations of consumption, sustainable behaviour outside of the playlist remains unlikely. Overall, for these consumers, the playlist was able to generate slightly elevated indicators of attachment which can reasonably be interpreted as an initial interest; that is, the audience likes the song and may listen to more music the artist releases. However, at the current levels of attachment, it appears likely that consumption would be limited to the Spotify platform.

Playlists and Attachment

The findings summarised in tables 1 to 5 above suggest that Spotify's 'Discover Weekly' playlist generated slightly elevated indicators of attachment for consumers who were already highly involved in new music consumption. It may be the case that given the refinement of algorithmic playlists based upon intensity of usage, that the HWTFA group showed more attachment because they had previously shown engagement with Spotify and thus generated more data for the algorithm to analyse and therefore serve them better. However, for those less involved in new music consumption the playlist almost entirely failed to generate attachment. It slightly influenced attachment behaviours for those with a high willingness to form attachment, both in regard to the song they liked most as well as its artist. Whilst saving the track or listening to another song was considered likely, more difficult actions to maintain a bond with the artist (such as regularly purchasing a concert ticket or a vinyl) were unlikely and moderated by price. Thus, amongst our sample, the playlist demonstrated the potential to build a fundament for consumption in the future, but only if their audience is strongly receptive; a key

finding needing further research. However, playlist interaction alone appeared insufficient for definite and sustainable consumption intentions. Furthermore, these findings suggest that interaction with the 'Discover Weekly' playlist for the participants in this study did not necessarily result in attachment at all, cognitively or in behavioural intentions, if consumers are not already engaged in new music seeking behaviours, and thus already likely to become attached to new music.

Discussion

The findings of this study into the ability of an algorithmic playlist to create attachment, and thus influence the relationship between consumers and recorded music itself, are important in two ways. The first relates to scholastic debates concerning intermediation. The finding that Spotify's 'Discover Weekly' playlist might have a generally poor - at best moderate - ability to generate attachment, defined according to the behavioural and cognitive dimensions of the construct provided by consumer psychologists (Schultz et.al 1989, Ball & Tasaki 1992: 158, Fournier 1998: 366, Thomson et.al 2005, Schifferstein & Zwartkruis-Pelgrim 2008: 7, Park et.al 2009, Park et.al 2010) problematises how we understand the *impact* of intermediation. Given our suggestion that algorithmically generated playlists - such as 'Discover Weekly' - *can* be considered cultural intermediaries given their singularising and presenting of both new songs and musicians to audiences, and providing those that are chosen to be shared with symbolic capital, the fact that the specific intermediation presented herein resulted in generally poor levels of attachment can be read in various ways. On the one hand, it may be seen as challenging the idea that intermediation engenders attachment as per Callon et.al (2002) and Smith Maguire & Matthews (2012: 554). On the other, it might provide a mechanism for thinking critically about the effectiveness of Spotify at being an effective intermediary (although, of course, intermediaries do not solely aim to create attachment). That is, intermediaries are effective (at least in part) when consumers trust them to select and present products or brands towards which consumers might (under certain conditions) go on to form attachments. This has been seen to be the case, for example, amongst larger, trusted broadcasters in the competitive television space (Seabright and Weeds 2006) and in the effectiveness of Oprah Winfrey in reducing consumer seeking costs in the crowded book market (Thompson 2010; Loroz and Braig 2015). Interestingly then, intermediation necessitates a relationship – and a form of attachment – with the intermediary itself. The variance of attachment strengths between the two sample groups further suggests that the impact of Discover Weekly is not solely dependent on the work of the intermediary i.e., the content of the playlist, but also on the individual predispositions of consumers. In this respect, attachment as the outcome of

intermediation is achieved via the interaction between the intermediary and their content, alongside the active consumer and their habits, traits and interests (a position perhaps aligned with Gomart and Hennion's (2010) notion of the active listener). That being said, it is not clear to what extent the fact that the playlist was *algorithmically* generated resulted in poor attachment i.e. whether playlists which are curated by influential tastemakers such as those seen on competitor streaming platforms such as Apple Music or Tidal, or even compared to other forms of tastemaker curated playlists on radio stations for example, might be more successful at creating attachment. This is an area for further research in the form of comparative studies and we hope the methodology developed herein might assist in these.

Secondly, the suggestion that algorithms-as-intermediaries might not have the power to create strong artist-fan relationships evidenced in a low likelihood of actions of long-term consumption, has ramifications for how we understand musical careers and might inform professional practice from music marketing to artist management. Our findings lend tentative empirical corroboration to the criticisms of those in the music industry media and beyond who argue that playlists struggle to create meaningful relationships outside of their realm (Aguiar & Waldvogel 2018, Chartmetric 2018, Mulligan 2019 cited in Griffiths 2019, Music Ally 2019). The attachment index scores for highly-involved new music consumers suggest that while the cognitive signs of attachment were not (yet) strong enough for repeat purchases, repeat listens were likely for some consumers. In this sense, our findings suggest that 'Discover Weekly' may generate some attachment behaviours by influencing low-cost consumption when presented to the right audience. However, any long-term behaviours involving monetary expenditure were unlikely amongst our sample, thus making it reasonable to assume that playlist placement alone cannot serve to enable an artists' sustainable financial success. Indeed, the ability of streaming more generally to provide sustainable income to artists is an area currently facing intense scrutiny (Hesmondhalgh et.al, 2021). Further research across a range of algorithmic playlists with a more statistically significant sample size is needed to explore the ability (or not) of playlists of this kind to build relationships strong enough for repeat purchase intentions and strong bonds of cognitive attachment. Weak bonds of attachment would make them a questionable tool for sustainable music marketing, and thus musicians and their teams might want to consider the longer-term benefits of seeking (algorithmic) playlist placement. Of course, playlist placement represents just one element in the matrix of precarious artistic careers, and our findings point towards the necessity of holistic music marketing approaches which aim to build long-term relationships with consumers both within and outside of the streaming realm. Certainly, a wide variety of musicians operating in multiple genres and with

diverse contractual arrangements adopt a range of income diversification strategies beyond playlist placement, from distribution, publishing, live performances, merchandise, and more recently the newly emerging NFT (non-fungible token) market. However, as Prey (2020: 3) notes: "to build and sustain a career in the music industry, musicians and record labels have become increasingly dependent on landing on Spotify-curated playlists". Our findings encourage critical questions about this as a long-term and sustainable method of promotion. Schofield (2019) suggests that dedicated music fans may opt to support artists through platforms considered to provide more artist-friendly monetisation, such as Bandcamp or Patreon. Indeed, in doing so, consumers satisfy both a need for a greater level of engagement with the product and a sense of community that Spotify does not provide, and in fairness does not claim to provide.

Conclusion

This paper has presented a small study to try and further our empirical understanding of the nature of the relationship between consumers of music and playlists on streaming platforms, in the context of public policy discussions in the United Kingdom which have sought to better understand this relationship. Our findings, based on a sample of users of Spotify's 'Discover Weekly' algorithmically generated playlist, suggest that whilst the playlist offered artists a platform and generated a small level of initial interest amongst those consumers actively looking for new music, there was a negligible impact on more passive consumers of music. Following our development of a more terminologically precise and methodologically robust definition of attachment - accounting for both behavioural and cognitive dimensions of the construct by drawing on findings from consumer psychology – our findings suggest that after employing the playlist for one week as a method of new music discovery, there was no attachment demonstrated amongst consumers with a low willingness to form attachment, and only limited to moderate attachment amongst consumers with a high willingness to form attachment.

Certainly, there are a number of limitations to the findings presented herein which are crucial to acknowledge. In the first instance, 'Discover Weekly' is only one algorithmically generated playlist, and therefore it is unclear as to whether these findings would be observed across other similar playlists. Likewise, as suggested, these findings would be enriched by follow-up studies exploring the same concept using curated playlists. Perhaps most saliently, the sample size is small, driven not least in part by the extensive participant involvement required to complete our multi-dimensional survey, and relatively homogenous vis-à-vis its composition. In this respect, our findings cannot meaningfully claim to be

statistically significant, and in order to confidently determine the extent to which algorithmically curated playlists generate attachment, a survey with a more representative sample is therefore recommended. In addition, upon reflection, a qualitative dimension in the form of follow up interviews to better interrogate our respondents' use of Discover Weekly might have been insightful, not least to allow us to explore issues around the quality of the attachment formed, how this was experienced, and how this might change or develop over time. Furthermore, while the sample was carefully chosen to consist of both heavily and poorly involved music consumers, many users exist in between these extremes, and it is important to understand these consumers too. Again, a larger sample size may serve to reduce this risk in further research. In addition, as aforementioned, the contingent valuation approach centred on the concept of 'willingness to pay' can suffer from an income effect in that those with low incomes may express a low 'willingness to pay' despite being lovers and fans of a particular musician or song. It is also key to note that respondents in this study were using Discover Weekly in what might be thought of laboratory settings as opposed to more naturalistic usage where the playlist would form part of a wider media environment. This was done in order to isolate the impact of Discover Weekly but removes the possibility that results might differ with normal day-to-day use. Finally, in order to guarantee consistency within replies, this research and its findings are constrained to a specific case; that is, they depict attachment levels to one song and artist, generated by one playlist, on one streaming platform, after one week of interaction. Whilst all of these factors were carefully chosen to be the most representative and to provide the richest possible information, further research is needed.

That being said, perhaps the most important contribution of this paper after the findings of the study itself, is the methodological approach adopted and its capacity for subsequent adoption by other researchers in this area. That is, whilst the findings of the study have limitations, the methodology offers a new model of how to investigate attachment. We hope further application can be made of our survey – the construction of which can be seen in Appendix 2 - devised in order to measure the concept of attachment which has suffered from relative terminological ambiguity and imprecision in the context of intermediation to date. In developing this toolkit, we hope other scholars might build on the concepts explored herein in order that we might obtain a richer and more rounded picture of how, if at all, streaming services influence the relationship between musicians and music listeners.

Authors

Adrian Leisewitz is a marketing practitioner within the cultural industries with an expertise in music streaming. Having completed an MA in Music Business Management at the University of Westminster, his research interests lie in cultural intermediation, cultural value, and the intersections of/tensions between culture, commerce and technology

George Musgrave FRSA is an academic based at both the University of Westminster and Goldsmiths (University of London). His research concerns the psychological experiences and working conditions of creative careers, with a current focus on mental health and wellbeing in the music industries. He is also a musician who has signed major recording and publishing deals (Sony/EMI/ATV).

Bibliography

Aguiar, Luis and Waldfogel, Joel (2018): "Platforms, Promotion, and Product Discovery: Evidence from Spotify Playlists," *JRC Technical Reports*, JRC Digital Economy Working Paper (2018–04): 1-44.

Ball, Dwayne and Tasaki, Lori (1992): "The Role and Measurement of Attachment in Consumer Behavior," *Journal of Consumer Psychology*, 1:2, 155–172.

Barna, Emilia (2017): "The perfect guide in a crowded musical landscape: Online music platforms and curatorship," *First Monday*. No issue number: No pagination.

Bateman, Ian J. and Willis, Kenneth G. (2001) *Valuing Environmental Preferences: Theory and Practice of the Contingent Valuation Method in the US, EU and developing Countries*, Oxford: Oxford University Press.

Bourdieu, Pierre (1984): *Distinction: A Social Critique of the Judgement of Taste*, London: Routledge.

Bourdieu, Pierre (1990): *Photography: A Middle-brow Art*, Cambridge: Stanford University Press.

Bourdieu, Pierre (1991): *Language and symbolic power*, Cambridge: Polity in association with Basil Blackwell.

Bourdieu, Pierre (1993): *The field of cultural production: essays on art and literature*, Cambridge: Polity Press.

Bowlby, John (1982): "Attachment and loss: Retrospect and prospect," *American Journal of Orthopsychiatry*, 52:4, 664–678.

Bonini, Tiziano and Gandini, Alessandro (2019): "First Week Is Editorial, Second Week Is Algorithmic: Platform Gatekeepers and the Platformization of Music Curation," *Social Media + Society*, 5:4, 1-11.

BPI. (2017): *2017 All about the music: recorded music in the UK: facts, figures and analysis.* London: BPI Limited.

Callon, Michel, Méadel, Cécile and Rabeharisoa, Vololona (2002): "The economy of qualities," *Economy and Society*, 31:2, 194–217.

Chartmetric. (2018): "How Spotify Playlist Curators Turn Listeners Into Followers," *Beats & Bytes*, 31 May 2018:https://blog.chartmetric.com/how-spotifys-gate-keepers-are-turning-listeners-into-fans-or-not/ (accessed 2 August 2020).

Datta, Hannes, Knox, George and Bronnenberg, Bart J. (2018): "Changing Their Tune: How Consumers' Adoption of Online Streaming Affects Music Consumption and Discovery," *Marketing Science*, 37:1, 5–21.

Ditto Music. (2018): "How to get on Spotify's Discover Weekly & Release Radar," *Dittomusic.com*, 9 May 2018: https://www.dittomusic.com/blog/how-to-get-your-music-on-discover-weekly-and-release-radar (accessed 25 July 2020).

Dredge, Stuart (2020): "#BrokenRecord: 'It's about saying we all recognise that this is problematic'," *Music Ally*, 18 May 2018: https://musically.com/2020/05/18/brokenrecord-its-about-saying-we-all-recognise-that-this-is-problematic/ (Accessed 1 August 2020).

Eriksson, Maria and Johansson, Anna (2017): "Tracking Gendered Streams," *Culture Unbound: Journal of Current Cultural Research*, 9:2, 163–183.

du Gay, Paul et al. (1997): *Doing Cultural Studies: The Story of the Sony Walkman.* London: SAGE.

Fairchild, Charles (2014): "Popular Music," Smith Maguire, Jennifer and Matthews, Julian, (eds): *The Cultural Intermediaries Reader*, London: SAGE, 125-133.

Featherstone, M. (1993): *Consumer Culture and Postmodernism.* London: SAGE Publications Ltd.

Fleischer, R. (2017): "If the Song has No Price, is it Still a Commodity? Rethinking the Commodification of Digital Music," *Culture Unbound: Journal of Current Cultural Research*, 9:2, 146–162.

Fleischer, Rasmus and Snickars, Pelle (2017): "Discovering Spotify – A Thematic Introduction," *Culture Unbound: Journal of Current Cultural Research*, 9:2, 130–145.

Forde, Eamonn (2018). "The secrets of successful D2C sales: 'It is about scale and speed'," *Music Ally*, 29 April 2018: https://musically.com/2018/04/29/secrets-successful-d2c-sales/ (accessed 30 July 2020).

Fournier, Susan (1998): "Consumers and Their Brands: Developing Relationship Theory in Consumer Research," *Journal of Consumer Research*, 24:4, 343–373.

Gallhofer, Irmtraud and Saris, Willem (2014): *Design, evaluation, and analysis of questionnaires for survey research*, 2nd ed. Hoboken, New Jersey: Wiley

Griffiths, Emma (2019): "Music Industry Analysts on the Trends to Watch in 2020 – Synchblog," *Synchtank*, 19 December 2019: https://www.synchtank.com/

blog/music-industry-analysts-on-the-trends-to-watch-in-2020/ (accessed 2 August 2020).

Gross, Sally Anne and Musgrave, George (2020): *Can Music Make You Sick? Measuring the Price of Musical Ambition*. London: University of Westminster Press.

Gomart, Emilie and Hennion, Antoine (1999). "A Sociology of Attachment: Music Amateurs, Drug Users," *The Sociological review (Keele)*, 47, 220-247.

GOV (2020): "Call for evidence – Economics of music streaming," *UK Parliament*: https://committees.parliament.uk/call-for-evidence/273/economics-of-music-streaming/ (accessed 5 December 2020).

Hazan, Cindy and Shaver, Philip (1994): "Attachment as an Organizational Framework for Research on Close Relationships," *Psychological Inquiry*, 5:1, 1–22.

Hennion, Antoine (2010): "Loving Music: from a Sociology of Mediation to a Pragmatics of Taste," *Comunicar (Huelva, Spain)*, 17:34, 25-33.

Hesmondhalgh, David (2006): "Bourdieu, the media and cultural production," *Media, Culture & Society*, 28:2, 211–231.

Hesmondhalgh, David (2020). "Is music streaming bad for musicians? Problems of evidence and argument," *New Media & Society*, 00:0, 1–23.

Hesmondhalgh, David (2021): "Streaming's Effects on Music Culture: Old Anxieties and New Simplifications," *Cultural Sociology*, June 2021

Hesmondhalgh, David, Osborne, R, Sun, Hyojung and Barr, Kenny (2021) *Music Creators Earnings in the Digital Era*, London: Intellectual Property Office

Horowitz, John K. and McConnell, Kenneth, E. (2003) Willingness to accept, willingness to pay and the income effect, *Organization*, 51:4, 537-545.

IFPI (2019): *Music Listening 2019*. London: IFPI.

Jopling, Keith (2019): "Playlist innovation. MIDiA Research," 4 March 2019: https://www.midiaresearch.com/blog/whats-next-for-playlist-innovation/ (accessed 22 May 2020).

Kjus, Yngvar (2016): "Musical exploration via streaming services: The Norwegian experience," *Popular Communication*, 14:3, 127–136.

Kuipers, Giselinde (2012): "The cosmopolitan tribe of television buyers: Professional ethos, personal taste and cosmopolitan capital in transnational cultural mediation," *European Journal of Cultural Studies*, 15:5, 581–603.

Latour, Bruno and Stark, Monique Girard (1999) Factures/Fractures: From the Concept of Network to the Concept of Attachment, *RES: Anthropology and Aesthetics*, 36, 20-31.

Lindsay, Charlie (2016): "An Exploration into How the Rise of Curation Within Streaming Services Has Impacted How Music Fans in the UK Discover New Music," *Journal of Promotional Communications*, 4:1, 114-141.

Loroz, Peggy Sue and Braig, Bridgette M. (2015) Consumer Attachments to Human Brands: The "Oprah Effect", *Psychology & Marketing*, 32:7, 751-763

Moor, Liz (2008): "Branding consultants as cultural intermediaries," *The Sociological Review*, 56:3, 408–428.

Morris, Jeremy Wade (2015): "Curation by code: Infomediaries and the data mining of taste," *European Journal of Cultural Studies*, 18:4–5, 446–463.

Mulligan, Mark (2014): "What Future For The Album In The On-Demand Age?," *Music Industry Blog*, 15 July 2014: https://musicindustryblog.wordpress. com/2014/07/15/what-future-for-the-album-in-the-on-demand-age/ (accessed 22 May 2020).

Mulligan, Mark (2019): "Spotify, the Decline of Playlists and the Rise of Podcasts," *MIDiA Research*, 11 April 2019: https://www.midiaresearch.com/blog/spotify-the-decline-of-playlists-and-the-rise-of-podcasts/ (accessed 22 May 2020].

Musgrave, George (2017): "Collaborating to Compete: The Role of Cultural Intermediaries in Hypercompetition," *International Journal of Music Business Research*, 6:2, 41–68.

Music Ally. (2019): "The Dry Streams Paradox," *Music Ally*, 14 April 2019: https:// musically.com/2019/04/24/the-dry-streams-paradox/ (accessed 26 May 2020).

Music Ally. (2021): "Atlantic hails TikTok's rile in first UK drill number one," *Music Ally*, 10 May 2021: https://musically.com/2021/05/10/atlantic-hails-tiktoks-role-in-first-uk-drill-number-one/ (accessed 26 September 2021).

Musicians' Union. (2012): *The Working Musician*. London: Musicians' Union.

Negus, Keith (2019): "From creator to data: the post-record music industry and the digital conglomerates," *Media, Culture & Society*, 41:3, 367–384.

Negus, Keith (2002): "The Work of Cultural Intermediaries and the Enduring Distance Between Production and Consumption," *Cultural Studies*, 16:4, 501–515.

Negus, Keith and Pickering, Michael (2004). "Creativity, Communication and Cultural Value." London: SAGE.

Park, C. Whan et al. (2010): "Brand Attachment and Brand Attitude Strength: Conceptual and Empirical Differentiation of Two Critical Brand Equity Drivers," *Journal of Marketing*, 74:6, 1–17.

Popper, Ben (2015): "Tastemaker: How Spotify's Discover Weekly cracked human curation at internet scale," *The Verge*, 30 September 2015: https://www.theverge. com/2015/9/30/9416579/spotify-discover-weekly-online-music-curation-in-terview (accessed 21 May 2020).

Powers, Devon (2015). "Intermediaries and Intermediation," Bennett, Andy, Waksman, Steve (eds): *The SAGE Handbook of Popular Music*, London: SAGE Publications Ltd, 120–134.

Prey, Robert (2020) Locating Power in Platformization: Music Streaming Playlists and Curatorial Power, *Social Media + Society*, 1-11.

Prior, Nick (2013): "Bourdieu and the Sociology of Music Consumption: A Critical Assessment of Recent Developments," *Sociology Compass*, 7:3, 181–193.

Redman, Peter (2008). *Attachment: Sociology and social worlds*, Manchester: Manchester University Press.

Schifferstein, Hendrik N. J. and Zwartkruis-Pelgrim, Elly P. H. (2008): "Consumer-Product Attachment," *International Journal of Design*, 2:3, 1–13.

Schofield, Jack (2019). "Which is the best streaming service for supporting artists?," *The Guardian*, 31 October 2019: http://www.theguardian.com/technology/ askjack/2019/oct/31/best-streaming-service-mp3-pays-artists (accessed 25 October 2020).

Schultz, Susan E., Kleine, Robert E., and Kernan, Jerome B. (1989): "'These Are a Few of My Favorite Things'; Toward an Explication of Attachment as a Consumer Behavior Construct," *ACR North American Advances*, 16:no issue number, no pagination.

Seabright, Paul and Weeds, Helen (2007) "Competition and market power in broadcasting: where are the rents?" Paul Seabright & Jurgen von Hagen (eds): *The Economic Regulation of Broadcasting Markets: Evolving Technology and Challenges for Policy*, Cambridge: Cambridge University Press, 47-80.

Smith Maguire, Jennifer and Matthews, Julian (2010): "Cultural Intermediaries and the Media," *Sociology Compass*, 4:7, 405–416.

Smith Maguire, Jennifer and Matthews, Julian (2012): "Are we all cultural intermediaries now? An introduction to cultural intermediaries in context," *European Journal of Cultural Studies*, 15:5, 551–562.

Smith Maguire, Jennifer (2014). "Bourdieu on Cultural Intermediaries," Smith Maguire, Jennifer and Matthews, Julian (eds): *The Cultural Intermediaries Reader*, London: SAGE, 15-24.

Snickars, P. (2017): "More of the Same - On Spotify Radio," *Culture Unbound: Journal of Current Cultural Research*, 9:2, 184–211.

Temple, Ian (2018): "Don't Be Boring: A Musician's Guide to Branding," *AWAL. com*, 6 June 2018: https://www.awal.com/blog/musician-branding (accessed 15 April 2020).

Thompson, John B. (2013): *Merchants of Culture: The Publishing Business in the Twenty-First Century*, 2nd ed., Cambridge: Polity Press.

Thomson, Matthew (2006) Human Brands: Investigating Antecedents to Consumers' Strong Attachments to Celebrities, *Journal of Marketing*, 70:3, 104-119.

Thomson, Matthew, MacInnis, Deborah J. and Park, C. Whan (2005): "The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands," *Journal of Consumer Psychology*, 15:1, 77–91.

Tiffany, Kaitlyn (2017): "Following Spotify playlist curators around New York's live music scene," *The Verge*, 13 November 2017: https://www.theverge.com/2017/11/13/16617900/spotify-playlist-curation-nyc-live-shows-fresh-finds-indie-latin-new-music (accessed 21 May 2020).

Torres, Victor Miguel Avila (2019) *How Music Matters: Exploring the Music Experience, its attachments and its technologies*, doctoral dissertation, University of York.

Tschmuck, Peter (2017) *The Economics of Music*, Newcastle: Agenda Publishing.

Verboord, Marc (2014): "The impact of peer-produced criticism on cultural evaluation: A multilevel analysis of discourse employment in online and offline film reviews," *New Media & Society*, 16:6, 921–940.

Webster, Jack et al. (2016): "Towards a theoretical approach for analysing music recommender systems as sociotechnical cultural intermediaries," *Proceedings of the 8th ACM Conference on Web Science - WebSci '16*. 2016. Hannover, Germany: ACM Press, 137–145.

Appendix 1. Music Consumption Involvement task

Table 1: Music Consumption Involvement Task (Replies on a 1-7 Likert Scale)[6]

Participant ID	1. Gender	2. Age	3. Which genres describe your musical taste? Multiple answers possible.	4. How big of a role does music play in your life? (As a consumer)	5. How often do you use Spotify's Discover Weekly?	6. On average, how much money (in £) do you spend on recorded music per year? (excluding streaming subscriptions)	7. To what extent did the songs on the playlist reflect your musical taste?	Average Score Music Consumption Involvement
1	Female	25-34	Indie/Alternative, Other	6	7	4 (£30)	6	5,60
LLP1	Male	25-34	Rock, Indie/Alternative, Other	5	2	2 (£10)	2	2,96
3	Male	25-34	Pop, Rock, Dance/Electronic, Indie/Alternative, R&B	7	5	1 (£0)	5	4,30
4	Male	25-34	Pop, Rock, Oldies, Dance/Electronic, Indie/Alternative, R&B	7	2	1 (£0)	4	3,30
5	Male	25-34	Rock, Hip-hop/Rap, Dance/Electronic	5	7	2 (£10)	5	4,62
LLP2	Female	25-34	Rock, Oldies, Hip-hop/Rap, Dance/Electronic, Indie/Alternative, R&B, Classical	5	3	1 (£0)	5	2,97
MLP1	Male	20-24	Pop, Rock, Oldies, Indie/Alternative	7	6	7 (£100)	5	6,67
MLP2	Female	25-34	Pop, Rock, Indie/Alternative	6	7	7 (£65)	5	6,73
9	Male	25-34	Rock, Dance/Electronic, Indie/Alternative	5	7	6 (£50)	4	5,91

Appendix 2. Attachment Questionnaire[7]

Classification Questions
1. Gender
2. How old are you?
3. Which genres describe your musical taste? Multiple answers possible.
4. How big of a role does music play in your life? (As a consumer)
5. How often do you use Spotify's Discover Weekly?
6. On average, how much money (in £) do you spend on recorded music per year? (excluding streaming subscriptions)
7. To what extent did the songs on the playlist reflect your musical taste?

Attachment to Favourite Song on Playlist
8. This song reminds me of who I am.
9. If I were describing myself, this song would likely be something I would mention.
10. I feel personally connected to this song.
11. If someone ridiculed this song, I would feel irritated.
12. If someone praised this song, I would feel somewhat praised myself.
13. This song gives me the feeling that I am loved and cared for.
14. This song reminds me of persons who are important to me.
15. This song symbolises a bond with friends or family
16. This song reminds me of important things I've done or places I've been.
17. My thoughts and feelings toward the song are often automatic, coming to mind seemingly on their own.
18. My thoughts and feelings toward the song come to my mind naturally and instantly.
19. I would feel distressed if this song was made unavailable on all platforms.
20. I could easily imagine a life without this song
21. How likely are you to listen to this song when you are distressed or fearful?
22. How likely are you to listen to this song to reduce stress?
23. To what extent are you prepared to spend money, time and energy to promote this song?
24. How likely are you to defend this song when others speak poorly of it?
25. Did you save this track to your library in any form?
26. If no, how likely will you save this track to your library in any form?
27. Did you purchase this track outside of Spotify in any form? (this includes as part of an album)
28. If no, how likely will you purchase this track outside of Spotify in any form? (this includes as part of an album)
29. This song is one of many in a digital download store. What do you estimate is the average price (in £) for songs in this store?
30. What price (in £) are you willing to pay for this song?

Attachment to Song's Artist
31. This artist is part of me and who I am.
32. If I were describing myself, this artist would likely be something I would mention.
33. I feel personally connected to this artist.
34. If someone ridiculed this artist, I would feel irritated.
35. If someone praised this artist, I would feel somewhat praised myself.
36. This artist gives me the feeling that I am loved and cared for.
37. This artist reminds me of persons who are important to me.
38. This artist symbolises a bond with friends or family.
39. This artist reminds me of important things I've done or places I've been
40. My thoughts and feelings toward the artist are often automatic, coming to mind seemingly on their own.
41. My thoughts and feelings toward the artist come to my mind naturally and instantly.
42. I would feel distressed if this artist stopped performing.
43. I could easily imagine a life without this artist.
44. How likely are you to listen to this artist when you are distressed or fearful?
45. How likely are you to listen to this artist to reduce stress?
46. Have you saved any other track of this artist to your Spotify library?
47. If no, how likely will you save any other track of this artist to your library?

48. Have you purchased any music of this artist outside of Spotify?
49. If no, how likely will you purchase any music of this artist outside of Spotify?
50. To what extent will you listen to all new music this artist releases?
51. To what extent will you purchase all new music this artist releases?
52. To what extent do you intend to go to all concerts this artist plays in your area?
53. To what extent do you intend to buy all new merchandise this artist releases?
54. To what extent are you prepared to spend money, time and energy to promote this artist?
55. How likely are you to defend this artist when others speak poorly of them?
56. This artist is one of many artists selling a vinyl record. What do you think is the average price (in £) of these records?
57. What price (in £) are you willing to pay for a vinyl record of this artist?
58. This artist is one of many artists playing concerts. What do you think is the average price (in £) of similar sized artists' concerts?
59. What price (in £) are you willing to pay for a concert ticket to see this artist?
60. This artist is one of many artists selling a merchandise t-shirt. What do you think is the average price (in £) of these t-shirts?
61. What price (in £) are you willing to pay for this artist's merchandise t-shirt?

Attachment to Favourite Artist
62. This artist is part of me and who I am.
63. If I were describing myself, this artist would likely be something I would mention.
64. I feel personally connected to this artist.
65. If someone ridiculed this artist, I would feel irritated.
66. If someone praised this artist, I would feel somewhat praised myself.
67. This artist gives me the feeling that I am loved and cared for.
68. This artist reminds me of persons who are important to me.
69. This artist symbolises a bond with friends or family.
70. This artist reminds me of important things I've done or places I've been
71. My thoughts and feelings toward the artist are often automatic, coming to mind seemingly on their own.
72. My thoughts and feelings toward the artist come to my mind naturally and instantly.
73. I would feel distressed if this artists' music got taken off all platforms.
74. I could easily imagine a life without this artist.
75. How likely are you to listen to this artist when you are distressed or fearful?
76. How likely are you to listen to this artist to reduce stress?
77. Have you saved any track of this artist to your Spotify library?
78. If no, how likely will you save any track of this artist to your library?
79. Have you purchased any music of this artist outside of Spotify?
80. If you ticked no, how likely will you purchase any music of this artist outside of Spotify?
81. To what extent will you listen to all new music this artist releases?
82. To what extent will you purchase all new music this artist releases?
83. To what extent do you intend to go to all concerts this artist plays in your area?
84. To what extent do you intend to buy all new merchandise this artist releases?
85. To what extent are you prepared to spend money, time and energy to promote this artist?
86. How likely are you to defend this artist when others speak poorly of them?
87. This artist is one of many artists selling a vinyl record. What do you think is the average price (in £) of these records?
88. What price are you willing to pay for a vinyl record (in £) of this artist?
89. This artist is one of many artists playing a concert. What do you think is the average price (in £) for similarly sized artists' concerts?
90. What price are you willing to pay (in £) for a concert ticket to see this artist?
91. This artist is one of many artists selling a merchandise t-shirt. What do you think is the average price (in £) of these t-shirts?
92. What price (in £) are you willing to pay for this artist's merchandise t-shirt?

Attachment to Favourite Song from Favourite Artist
93. This song reminds me of who I am.
94. If I were describing myself, this song would likely be something I would mention.

95. I feel personally connected to this song.
96. If someone ridiculed this song, I would feel irritated.
97. If someone praised this song, I would feel somewhat praised myself.
98. This song gives me the feeling that I am loved and cared for.
99. This song reminds me of persons who are important to me.
100. This song symbolises a bond with friends or family
101. This song reminds me of important things I've done or places I've been.
102. My thoughts and feelings toward the song are often automatic, coming to mind seemingly on their own.
103. My thoughts and feelings toward the song come to my mind naturally and instantly.
104. I would feel distressed if this song was made unavailable on all platforms.
105. I could easily imagine a life without this song
106. How likely are you to listen to this song when you are distressed or fearful?
107. How likely are you to listen to this song to reduce stress?
108. To what extent are you prepared to spend money, time and energy to promote this song?
109. How likely are you to defend this song when others speak poorly of it?
110. Did you save this track to your library in any form?
111. If no, how likely will you save this track to your library in any form?
112. Did you purchase this track outside of Spotify in any form? (this includes as part of an album)
113. If no, how likely will you purchase this track outside of Spotify in any form? (this includes as part of an album)
114. This song is one of many in a digital download store. What do you estimate is the average price (in £) for songs in this store?
115. What price (in £) are you willing to pay for this song?

---

[1] At the time of writing we note that the track 'Body' by Russ Millions and Tion Wayne recently went to Number 1 in the UK music chart propelled by its performance on TikTok (Music Ally, 2021)

[2] No participant was found to have an average score of 2 or less. Nevertheless, as this research is focussed on Discover Weekly users, it is reasonable to assume that all participants are at least moderately involved in new music consumption. Furthermore, the IFPI (2019: 13) suggests that only 2.5% of consumers consider music as "unimportant" to them, thus decreasing the chances of drawing these in a sample. Therefore, a below centre (i.e. <4) score could reasonably be seen as sufficient. This enabled the inclusion of two participants with scores of 2.96 and 2.97 as those less likely to become attached to previously unknown music.

[3] Each score represents an own calculation based on reply results. Table used for presentation purposes, not for calculation.

[4] Index calculated as the arithmetic mean over all replies (from each participant) and not as arithmetic mean of each construct, hence more weight toward constructs consisting of more questions. This calculation was chosen due to the fact that the *questions* were adapted from previous scholars' results of statistical verification, while the *constructs* were developed as a summary for this examination. For the sake of presentation, both participants of each consumer group were summarized into one indicator for each construct and attachment object.

[5] "Overall" score calculated as: (arithmetic mean results song + arithmetic mean results artist)/2

[6] Question 6 was asked as an open-ended question. The Likert scale for average spend on recorded music per year was indexed according to those consumers considered "heavy spenders" by the BPI (2017: 63), spending more than £62 a year on recorded music. Any participant spending equal to, or more than £62 on recorded music per year was indexed as a 7, with all replies below £62 being proportionally given a value between 1 and 6.

[7] The 54 questions seen in questions 8-61 represent the attachment construct