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Charles Lindsay

An Exploration Into How The Rise of Curation Within Streaming Services Has Impacted How Music Fans in the UK Discover New Music

Digitalisation and the rise of the Internet has wrought havoc upon the music industry, forcing it to frivolously adapt and transform the modes of music production, consumption, distribution and discovery. The act of music discovery has always existed as an integral process for both consumer and industry, yet in an age where music listeners are presented with so many discovery options, which do they perceive to be the most effective? The following study investigates the rapidly growing industry of music streaming services, exploring how UK based service users aged 18-35 are discovering new music, and subsequently, the effect that this has had on traditional music discovery techniques. Findings have been categorised into four research objectives: (1) benefits, limitations and usage of streaming services, (2) leading methods of music discovery, (3) how relevant traditional discovery platforms are in the streaming age and (4) the roles that human and algorithmic curation play within streaming services. The following study locates that subscription-streaming services surpass simply a listening platform and exist today as a leading method of music discovery for users. Additionally, whilst certain traditional methods of music discovery are perceived as archaic, the mediums of Radio and Word of Mouth still exist as leading music discovery platforms for these users. Conclusively, it was discovered that within streaming services, whilst human curated playlists were perceived to offer a more consistent recommendation of music, algorithmic curation exists as the most effective form of music discovery. Identifying streaming services as a leading music discovery method has opened the door for further research to be conducted in this area. Additionally, a number of implications for practitioners can be extracted from the findings within this study.

Keywords: Key words: Music, Streaming Services, Discovery, Generation Y

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INTRODUCTION

It is unanimously agreed that the rise of the Internet and shift online has significantly transformed the landscape of the music industry. Digitalisation has altered the modes of music making, consumption, distribution and discovery, with some academics going as far as to state that there is no industry that has undergone more transformation and suffered more challenges within the last decade (Beer 2008; Trefzger et al. 2015). Whilst many industry experts initially perceived the online shift to be the demise of the industry, as Owsinski (2011, p.42) noted, “the music industry only dies when people stop listening”, viewing the digital transformation as an on-going evolution. Digitalisation created a significant power shift *from* the industry *to* the consumers, placing them at the forefront of the business and demanding that the music industry keep up with *their* needs (Stafford 2010). The internet made it possible to customise music delivery to meet every kind of preference, allowing maximum flexibility in the way that music can be purchased and enjoyed, ultimately creating more than just a *listening* experience for consumers (Lathrop 2003). Emergence of online piracy however posed a serious threat to the industry, particularly the growth of Napster, which had the potential to destroy the traditional recording industry within 5 years had it not been litigated (Weissman and Jermance 2003). Industries combatting this music ‘stealing’, created the opportunity for an acceptable and legal online music distribution systems to emerge, resulting in the development of online music stores such as iTunes and later, music streaming services such as *Spotify*, *Apple Music* and *Amazon Prime* (Stafford 2010).

Streaming service subscriptions are the recorded music industry’s fastest growing revenue source and has been embraced by the industry who recognise the dominant role that it will play in the future of the music business (IFPI 2015). Within the UK, the streaming service industry has seen substantial growth in recent years. Subscription services had a worth of £251 million in 2015, making up 26% of the total music market, yet this figure is expected to grow to reach £786 million in 2020 (Mintel 2016). Due to the similar pricing schemes and music catalogues of these subscription-streaming services, curation has emerged as a leading technique for them to differentiate from one another. Each major streaming service uses a combination of both human and algorithmic curation to not only recommend songs, but to learn users tastes. There is however, an increasing divide in the industry over which half of that equation should lead and which half should follow (Popper 2015). Apple Music’s *Beats* cofounder, Jimmy Iovine, takes the stance that, “algorithms don’t understand the subtlety and the mixing of genres” and Apple Music therefore place heightened focus on their human curation (Famurewa, 2015). In contrast, Google’s Eric Schmidt spoke out against human curated playlists, instead praising the idea of artificially intelligent ‘taste making’ services such as Google Play Music, which algorithmically seek to find the next big thing (Schmidt, 2015).

Academic literature is currently void of a study that explores which method of curation, human or algorithmic, is considered to be more effective by streaming service users. This means that streaming services are currently basing their curation focus on personal preferences, rather than tested literature. Additionally, as streaming services are still gaining widespread popularity, there is limited research into how prominent services are as music discovery platforms and subsequently the effect that their use is having on traditional methods of discovery.

Generation Y have been selected as the integral audience, and the subject of study for this research. Whilst there is no definitive age bracket, this study categorises them between the ages of 18-35. Technological innovations provide more than just information and entertainment for Generation Y, but create an ecosystem for their social lives, with 56% believing that technology helps them to use their time more efficiently (Ordun 2015, p.42). Not only are Generation Y reported to use streaming services more than any other generation, but growing up alongside the creation of the Internet has placed them in a unique position with their consumption habits (Sage Audio, 2014). Unlike their predecessors, Generation X, who have not migrated online nearly as extensively, or the tailing Generation Z, many whom may be devoid of what one would consider 'traditional' music consumption habits, Generation Y, are likely to use a combination of both digital and traditional means of discovery (Inside Radio 2015).

With the current progression of digitalisation and the improvement of streaming service interfaces, in five years many traditional music discovery methods may become redundant. This is why it is a crucial time to undertake this research. Understanding audience insights could help to inform practitioners about the most effective ways to distribute music, highlight key audience discovery preferences, and generally shed new insight into the ever-transforming landscape of the music industry.

LITERATURE REVIEW

Music discovery has always existed as a very important process for both the industry and the consumer. Within their study, Peitz and Waelbroeck (2005, p.364) identify leading *traditional* music discovery methods, placing radio as the main way that consumers obtain information about new songs and artists whilst discussion with friends and family (Word Of Mouth) comes a distant second. Acknowledging that radio faced the danger of becoming a media 'has-been', Owinski (2011, p.47) locates it as the "medium most often used for music discovery", praising its online adaptation as the reason it has remained a key discovery technique. In contrast, Owinski hypothesises that methods that cannot adapt digitally will suffer and subsequently become substituted by new medias, believing YouTube to have become the new Television.

Tepper and Hargittai's (2009) study investigates the effect that digitalisation has had on music discovery in the digital age, using college students as a sample. They acknowledged that whilst industry experts predicted the generation 'born digital'

to shun CD sales and move completely away from traditional media, findings suggest that conventional methods such as word of mouth and mainstream media continue to be the most important means for discovering new music (Tepper and Hargittai 2009, p. 245). They did however stress that new medias, social media in particular, are growing in importance within the music discovery process. Dewan and Ramaprasad (2014) also recognise the growing significance that social medias, including online music blogs, play in music discovery process. They hypothesise that the digitalisation of musical content has made music “more accessible to consumers”, and that the rise of new media has begun to displace traditional methods of discovery (Dewan and Ramaprasad 2014, p.119).

Whilst these academic studies offer insight into current effective music discovery methods, they exclude the role that streaming services play as a discovery tool. Streaming services differ from previous methods of music consumption as they offer users a *stream* of online data, rather than physical or digital copies of music. This allows users to access a vast catalogue of music through individual account subscriptions that can be free or require a monthly fee (Hagen 2016). Increased consumer access to broadband Internet and a multitude of distribution platforms has begun to erode the consumer need for physical or even digital music files (Richardson 2014, p. 74). Therefore, some academics believe that accessing a stream of available music is the logical progression in music consumption and furthermore, that steaming exists as a “key metaphor for the flow of information in the digital age” (Morris and Powers 2015 p.107; Trefzger et al. 2015).

In recent years, music download figures have dropped whilst streaming services are largely on the rise. The streaming model has not only become more appealing to record companies, due to the steady revenues that can be generated, but they have also become a more attractive model for consumers (Trefzger et al. 2015). Owsinski (2009, p.109) indicates the consumer value that streaming services present, compared to digital libraries which offer no discovery options and limited musical content, streaming services offer “all [the music] you can listen to”, *with* additional discovery options. Trefzger et al’s (2015) study investigates the business models of music download shops in comparison to streaming services. The study identifies that whilst many similarities exist between the two forms of listening, because the act of accessing a song and the act of paying are separated in streaming service, this might lead the user to feeling as though the music is free. They assert that the price and a heightened perception of musical freedom within streaming services are the predominate reason for the recent boom in users.

Morris and Powers’ (2015) study however takes a contradictory view. They acknowledge that the growth of streaming is generally viewed as beneficial for music consumers as services *appear* to offer “greater freedom and virtually limitless access to musical content”. However, they ascertain that, in reality, record companies are exuberating control over users by creating, “branded musical experiences”, mediating their experience for commercial gain (Morris and Powers 2015, p.107). With many subscription-streaming services offering similar content, affective cues and features for discovering music have become the main point of differentiation as major services battle to be “more than simply 30million-song

jukeboxes with a search bar attached” (Dredge 2016, p.24; Morris and Powers 2015).

Human Curation

Whilst the term curation is certainly not new, it has become somewhat of a buzzword within the industry in recent years (Dredge, 2016). In the past, a *curator* was a professional that selected objects of art to present in museums or galleries, yet today the term has evolved to encompass almost anyone who collects and organises content (Rosenbaum 2011). The prominent academic view is that the rise of curation can be attributed to the ever-growing amount of information available on the Internet. Curation seeks to dispel what Alvin Toffler (1970) coined ‘information overload’, by helping online users to deal with the “huge amount of potentially interesting content” that is available to them on the web today (Askalidis and Stoddard 2013, p.1; Betts and Anderson 2016). Curation can be divided in two respects, human curation and algorithmic curation. Stephen Rosenbaum, author of *Curation Nation*, highly advocates the benefits of human curation, believing it to add clarity and trustworthiness to content by putting a ‘human filter’ between consumers and the, “overwhelming world of content abundance” (2011, p.5). In contrast, some academics view algorithmic curation to be simply an assortment of data that lacks qualitative organisation and whilst algorithmic tools can help curator’s to do their jobs, they cannot replace the human (Betts and Anderson 2016).

Rosenbaum interviewed Internet analyst, Clay Shirky, about *Curation Nation* to gain Shirky’s insight into the topic. Shirky does not attribute the rise of curation to information overload but rather to filter failure and limitations in algorithmic recommendations, “curation comes up when search stops doing everything people want it to do” (Curation Nation 2011). Shirky also notes that curation has gone beyond simply information seeking, and become a process of synchronising a community. Curation has been recognised by a number of academics as a highly social activity, that allows transformation from a group of people interested in a particular topic, to a “living community of actively engaged members” (Betts and Anderson 2016, p.51; Swanson, 2013). This viewpoint however is contradicted in Zhong et al.’s (2013) study, which reviewed how and why Pinterest and Last.FM users categorise and curate content into collections online. The user studies conducted within the research revealed that the majority of users view curation as a personal activity, rather than a social one, a finding that should be explored in further research. In addition, Zhong et al. (2013) concluded that the process of curation added value by highlighting a different set of items than traditional methods such as search. This is seen as a positive aspect of curation as for many music fans and collectors, the “hunt” is a very important feature of their musical experience. Furthermore, discovery is a powerful force that plays a key role in “facilitating friendships and relationships” (Hagen 2015; Tepper and Hargittai 2009, p. 228).

Although curation exists as an effective tool to help facilitate user discovery of high quality content, issues surrounding curation are also prevalent. Swanson (2013, p.29) recognises that a particular trap curators can fall into, is creating an “echo

chamber” of favored content. An “echo chamber”, effectively offers a somewhat narrow spectrum, thus becoming unhelpful for audiences searching for diverse results. Whilst Swanson praises curation as a tool that has empowered consumers to become *prosumers*, offering their *professional* abilities, this does however produce another potential issue within online curation; the validity of content. Rosenbaum believes that the emergence of amateur curators is not in any way a threat to professionals. However, Swanson indicates that this has the potential to diminish the trustworthiness in a curator’s role, as today, anyone can define themselves as one.

Algorithmic Curation

Whilst professional human curation often provides high quality results, hiring exclusive editors is not only costly but their attention is generally “not scalable to the rising volume of content” (Askalidis and Stoddard 2013). Ralston and Neill (1997) describe algorithms as an alternate word for ‘rule of procedure’ and that their primary focus is to produce a solution to the problem they have been created to solve. A major challenge that Internet users face today is finding “relevant data from reputable sources in an efficient manner”, algorithms therefore are put in place to deliver the most relevant user results (Kamvar 2010, p.1; Gillespie et al. 2014). Shardanand and Maes (1995) conducted a study on *Ringo*, one of the first personalised music recommendation systems. Though their study is today outdated, they located a fundamental finding integral to the progression of recommendations systems, the more that these systems are used, the more accurate results become for users. This is something at the heart of recommendation systems and correlated within future findings. Beer (2009, p.996) for example, asserts that within *Last.FM*’s algorithmic playlists, the greater the information held about the user, the more accurately algorithms can “predict their tastes” (Beer 2009, p.996).

Sep Kamvar (2010) analyses the role that algorithmic code plays in *personalised search*, using Google’s page ranking system as an example. Kamvar praises the vital role that algorithms play in content aggregation, but his study alludes to potential future issues that may arise in personalised search, particularly the issue of user interface design. Kamvar indicates the importance of ensuring that personalisation does not “degrade the quality of the users search experience”, as a users experience should “maintain a consistency even despite their changing interests” (2010, p. 133). Pariser (2012) views this issue as very much a current and pressing one, as algorithms used by search engines, social networking platforms and other online intermediaries are decreasing diversity in information by forming ‘filter bubbles’. These filter bubbles constrict online users to an “informational determinism”, meaning that a users past online history will determine what they see in the future, therefore restricting the variety of information presented to them (Pariser 2012, p.16).

Morris (2015) casts further doubts over the trustworthiness of algorithmic recommending systems, labelling them “far from neutral purveyors of predictions” (2015 p. 447). Morris adopts the viewpoint that the recommendation systems of today, are essential in distributing cultural content, but are wrongly exerting

prejudiced power over the way that audiences “discover, use and experience cultural content” and can alter results for commercial value (2015, p. 447). Bias within algorithmic recommendations are clearly located as a potential issue however Gillepsie et al. (2014) discover a fundamental paradox with the argument of algorithmic trustworthiness. Their study states that whilst providers must claim their algorithms are unbiased, there is commercial value in claiming that the algorithm returns “better” results than its competitors (2014, p. 182).

Literature identified traditional music discovery methods such as radio and word of mouth as the most effective ways for audience to find new music. However, these studies are out-dated as they do not take into account the role that streaming services are playing in discovery process. It has been hypothesised that digitalisation and the rise of new medias are beginning to make traditional discovery methods far less prominent for music consumers. Research should therefore explore the validity of this theory to assess whether conventional, or emerging methods, are the more prominent for audience music discovery. Literature outlines some key benefits and limitations of human and algorithmic curation generally, yet does not focus specifically on the differing roles that these techniques play within music subscription streaming services. Within curation, key topics such as trustworthiness versus efficiency arose throughout the study of academic literature. These themes should be explored in further research to effectively hypothesise which method of curation audiences perceive to be the more effective for discovering new music.

METHODOLOGY

The following chapter explains the methodological approach taken within this study and why this particular approach has been adopted. The study is one of an exploratory nature as the research strives to “seek new insights into phenomena, to ask questions, and to assess the phenomena in a new light” (Saunders et al. 2009, p.592).

The aim of this research study is to gain an understanding into the ways in which UK based music fans are currently discovering music. This is to understand what effect digitalisation and the rise of streaming services have had on traditional music discovery methods and to explore the role that both human and algorithmic curation play within the music discovery process.

Research objectives

1. To explore the perceived benefits / limitations of streaming services within the chosen sample.
2. To identify the leading methods of music discovery within the chosen sample and to explore why they exist as the favoured methods.
3. To explore whether digitalisation and the rise of streaming services have made traditional music discovery methods less prominent and if so, why.

4. To understand the perceived benefits and limitations of both human and algorithmic curation within streaming services and to identify which form of curation is perceived the more effective way to discover new music.

A pragmatic research philosophy was adopted as it combines both interpretivism and positivism. The benefit of taking this approach allows the researcher to avoid engaging in debates about concepts such as truth and reality, rather focusing on which method works best for answering particular questions (Tashakkori and Teddlie 2003). This study assumes an inductive approach, as hypotheses were created by observing generalisable behavioural patterns rather than testing existing theory. Davies and Hughes (2014, p.241) define an inductive approach as employing a “doctrine of curiosity to gather data relevant to a predetermined subject area.” Once the data is analysed, “one or more theoretical conclusions” can be hypothesised from the data.

A Mixed method approach was used as it combines the “rigor and precision of experimental quantitative data with the depth understanding of qualitative methods and data” (Rudestam and Newton 2007, p.51). The researcher perceived mixed methods to generate the most accurate, credible and relevant findings as questions were “less constrained” than by using a single method of research (Tashakkori and Teddlie 2003, p. 195). Limitations are present within a mixed method approach as the researcher must undertake two different sets of standards for assessing data validity, one for qualitative data and one for quantitative data (Tashakkori and Teddlie 2009). The research follows a sequential exploratory mixed method design. This is characterised by the initial collection and analysis of qualitative data, followed by the collection and analysis of quantitative data and conclusively the integration of both methods during the interpretation phase of the study (Tashakkori and Teddlie 2003). This approach was used to gain quantifiable data about the sample’s generalised behaviours that could be expanded upon with in-depth qualitative interviews to gain insight.

Questionnaires were used as they provide an efficient way of collecting qualitative data from a large sample, prior to quantitative analysis (Saunders et al. 2009). The questionnaire used a mixture of close-ended and open-ended questions to help answer research objectives. Close-ended questions, including methods such as the Likert scale, were used to show relationships between variables whilst open-ended questions were used to gain comparable audience insights (Bryman and Bell 2011). The questionnaire was distributed online to maximize reach, minimise cost and increase convenience for participants (Bryman and Bell 2011). However, limitations in validity can arise, as the researcher has no guarantee that the respondent “will not provide false information” (Forrest 1999, p.140). The researcher opted to use interviews to follow questionnaires as their one-to-one interaction is useful in gathering “valid and reliable data that is relevant to research questions and objectives” (Saunders et al. 2009, p.318). Semi-structured interviews were undertaken with a list of themes and open-ended questions to ask interviewees, encouraging them to provide extensive and developmental answers about their beliefs and attitudes (Saunders et al, 2009).

Prior to interviews, weeklong diaries were issued to partakers with their predominate purpose being to help participants “avoid any errors resulting from forgetting or confusing facts” (Bradley 2013, p.222-224). Diaries allowed participants to correctly remember their consumption habits from the week prior to the study and thus helping to maximise the trustworthiness and validity of respondents answers.

Sampling provides a range of methods that enable a researcher to reduce the amount of data needed by only considering data from a sub-group rather than the entire population (Saunders et al 2009). The research sample consisted exclusively of participants from Generation Y (18-35) due to reasons previously stated. In addition to being in this age bracket, participants had to be regular music streaming service users and current UK residents to give more tailored results. Initial questionnaire questions inquired the participants’ age, country of residence and streaming service status, to eliminate those who did not adhere to the sample criteria.

For the initial questionnaire a *purposive sampling* process was used to obtain participants within the sample criteria. Purposive sampling enables a researcher to select particularly informative subjects that will enable research questions and objectives to be best answered (Saunders et al. 2009). The questionnaire was distributed online by being posted on various social media music fan pages and groups, as participants who were active music fans were perceived to offer the most worthy insights. Participants however, were not selected by the researcher from these social media groups to avoid bias, meaning there was an element of random, self-selection from participants.

The concluding statement within the questionnaire asked participants to leave their email addresses if they were willing to participate in a follow-up interview. From the 14 email addresses received, a gender quota based sampling process was undertaken to select 6 interviewees. From the 60 taken questionnaire results, 52% of the respondents were male and 48% were female, thus 3 male participants and 3 female participants were selected for the interviews using a random generator to avoid any bias in selection. The initial sample of study participants was expected to be higher to make data more reliable and generalisable. Regrettably, time constraints played a factor in restricting the amount of final participants in the study and the researcher decided on a revised settlement of 60 questionnaire respondents and 6 interviewees (see Table 1).

Table 1: Respondent Profiles

Questionnaires		Interviews	
Sample criteria	<ul style="list-style-type: none"> • 18-35 • UK resident • Music streaming service user 	Sample criteria	<ul style="list-style-type: none"> • 18-35 • UK resident • Music streaming service user • Completed the questionnaire
Number of participants	60	Number of participants	6
Duration	Avg. 10 minutes	Duration	Avg. 25 minutes

Quantitative research generates “numerical data that [is] analysed statistically” (Tashakkori and Teddlie 2009, p. 204). Questionnaire results were analysed statistically to help detect patterns, relationships and better communicate the results. Additionally, questionnaire data was displayed as descriptive statistics to help the reader understand the nature of the variables and their relationships for ease of understanding and communication (Tashakkori and Teddlie 2009). Within qualitative research there is a search for themes by identifying recurring messages that arise throughout. Recorded interviews were transcribed and subsequently coded using a schedule (Table 2) to categorise data into conceptual units. Coding is a crucial process to help the researcher identify key themes and patterns and to ensure that research data is consistent and comparable through quantitative analysis (Saunders et al. 2009; Davies and Hughes 2014).

Table 2: Coding Schedule

Coding schedule	
Objectives	Themes
1. Streaming services	Price
	Ease / Accessibility
	Control
2. Discovering techniques	Traditional methods (Radio, WOM, TV, Magazines)
	Online methods (Social media, Blogs, YouTube)
	Streaming services (Algorithmic, Human curation)
3/4. Human and Algorithmic curation	Reliability / Trustworthiness

	Efficiency
	Social / Personalisation

To ensure validity, quantitative studies must assess whether the data “represents the constructs they were assumed to capture”, whilst qualitative studies must successfully “understand the social reality experiences by the participants” (Tashakkori and Teddlie 2009, p.209-210). Within the questionnaires, content validity was ensured by thorough academic research prior to the creation of questions and a review prior to distribution to make sure that included questions were “essential” to the study (Saunders et al. 2009, p.373). Throughout the interviews, the researcher consistently remained non-judgemental towards the participants’ responses to ensure that results were as trustworthy and valid as possible by reducing “the potentially biasing effect of the interviewer” (Tashakkori and Teddlie 2003, p.305). Both a pilot questionnaire and semi-structured interview were conducted. This allowed the researcher to remove particular questions that were of a leading nature or were contextually irrelevant from the final study, maximising accuracy and credibility of results (Saunders et al. 2009).

Research is only acceptable if it “ensures the wellbeing of the participants in the study” (Tashakkori and Teddlie 2009, p. 198). To ensure that no harm would come to participants throughout the survey process an ethics checklist was approved prior to research and all research conducted was in compliance with the Bournemouth University ethics code. The opening page of the questionnaire informed participants about the nature of the study Similarly, before conducting interviews both a **participant information sheet** and a **participant consent form** were sent to partakers to provide them with all necessary information.

FINDINGS

The following chapter presents a discussion of the key findings identified throughout the research. Findings have been presented under the 4 research objectives outlined and have been analysed against existing literature, from which, new hypotheses can be found.

Figure 1: Leading Paid-For Music Streaming Services (Mintel 2016)

FIGURE 3: PAID-FOR MUSIC STREAMING, DECEMBER 2015

"Which, if any, of the following paid-for services have you used to stream music online on any device (eg desktop/laptop computer, smart TV, smartphone, tablet etc) in the last 3 months? Please select all that apply."

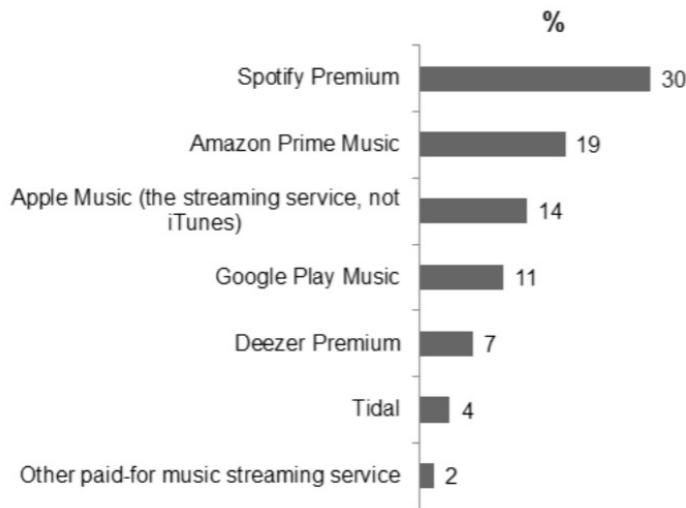


Figure 2: Questionnaire Result- Which Streaming Service(S) Do You Use? (Author: Lindsay 2016)

Which streaming service(s) do you use?

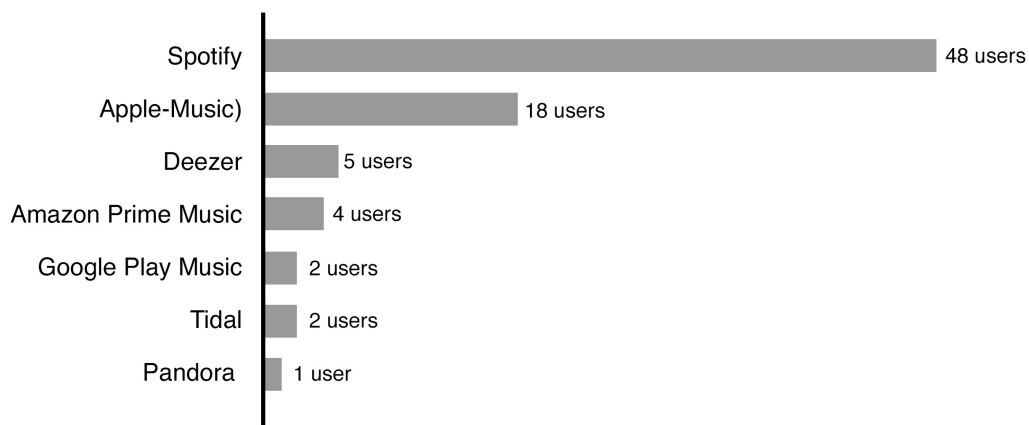


Figure 1 indicates the leading paid-for music streaming services in a study conducted by Mintel (2016). Results from my own findings (Figure 2) also place Spotify as the leading streaming service by amount of users with Apple Music trailing as the next most popular service. Within the interviews, Spotify was again the most popular service, with 5 participants using it as their primary service and only one participant using Apple Music as theirs.

The researcher acknowledges that YouTube and Soundcloud are streaming platforms. To avoid confusion throughout the following chapter however, the phrase streaming service is referring solely to subscription streaming services

(Spotify, Apple Music) and not to stream hosting websites such as YouTube and Soundcloud.

To Explore The Perceived Benefits / Limitations Of Streaming Services Within the Chosen Sample

Questionnaire results placed 'cost' as the leading benefit of streaming services, with results believing them to be cheaper than alternative methods of legal music consumption such as paid downloads or CDs. This finding was reciprocated generally within interviews. Gregory (19, Apple Music user) pays a monthly subscription for his streaming subscription and believes:

"On the whole you spend a lot less money than buying hundreds and hundreds of songs."

Similarly, Franky (22, Spotify user) also pays a monthly premium subscription and believes that listening to her service is, "almost like free music". This complies with the hypothesis of Trefzger et al. (2015), that separating the act of accessing a song from the act of paying for it could lead the user to feeling as if the music would be free.

Additionally, ease of use emerged as primary benefits of streaming services in both questionnaire results and interviews. Tilly (24, Spotify user) describes streaming services as "quick and easy to use" and Mark (21, Spotify user) agrees, "in two clicks you can start listening to music. It's no hassle at all." Aaron (21, Spotify user) summarises this viewpoint, stating that by not having to pay for downloads, streaming services make accessing music "all very quick and instant for us now" Morris and Powers (2015) indicated in their study that streaming services implement levels of control over a users musical experience. This was however contradicted in research findings, with the majority of interviewees implying that their streaming service offered them more freedom than traditional methods of music consumption. Nevertheless, it did become apparent that subscription-streaming services are limited in the amount of music that they archive. A primary weakness that Mark views in his streaming service is that it does not have as much content as other platforms:

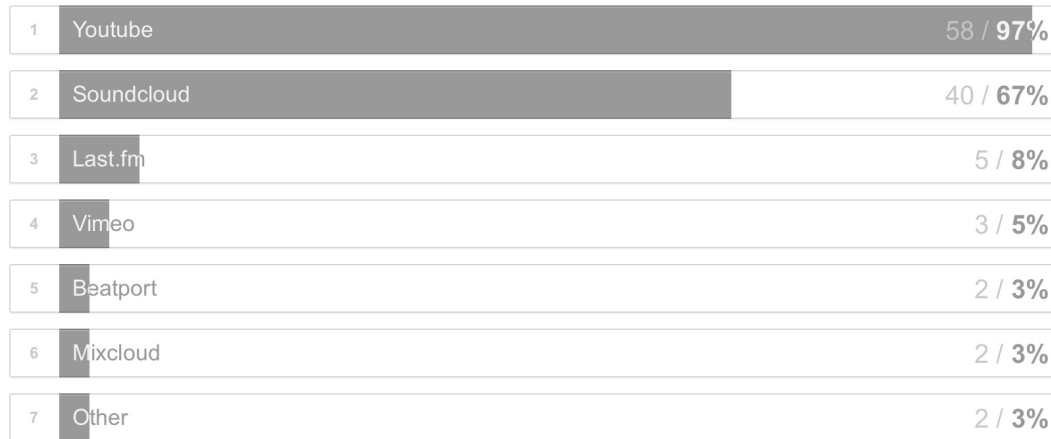
"Spotify hasn't got everything, it hasn't got the smaller artists. It mainly caters for mainstream artists which isn't necessarily what I'm looking for all the time".

Participants praised the "really good catalogue of music" (Aaron) and "the amount of music that is available" (Rachel, 22, Spotify user) as a benefit of Spotify. However, Aaron states that Spotify is "a bit more focused on mainstream", using Soundcloud as a platform for smaller artists. Similarly, Rachel uses YouTube for the music "that is not available on Spotify". Findings conclusively indicated that the vast majority of streaming service subscribers use one or more additional platform to listen to music. 97% of questionnaire participants used YouTube to listen to music and 67% used Soundcloud, amongst other sites (Figure 3). All interviewees cited using YouTube, and most used Soundcloud as additional music listening platforms. Therefore, whilst subscription-streaming services do offer a large amount of musical content, it is clear that they do not completely satisfy a user's needs as additional platforms are used, which can commercially host upcoming or unsigned artists.

Figure 3: Questionnaire Result- Which Platforms Do You Listen To Music On?

Apart from streaming services, select any other online platforms you use to listen to music, if any.

60 out of 60 people answered this question



Results indicated that streaming services play a very important role in music consumption. All interviewees used their services daily and for some it exists as their “main source of music” (Tilly). Additionally, it was found that streaming services exceeded simply a platform to *listen* to music on, but existed for all interviewees as a music discovery technique. The amount of discovery achieved within the services fluctuated depending on the interviewee however for three participants, their service existed as the primary discovery technique: “three quarters of my music discovery is done through Spotify” (Rachel). Likert scales (Figure 4) within the questionnaires indicate that streaming services have not only created a more enjoyable music experience for users but subsequently have made the process of finding new songs significantly easier.

Figure 4: Questionnaire Likert Scales- Streaming Service Perceptions

Streaming services have created a more enjoyable music experience



Streaming services have made the ability to find new songs easier



To Identify The Leading Methods Of Music Discovery Within The Chosen Sample And Explore Why They Exist As The Favoured Methods.

Existing literature identified that leading methods of music discovery include radio and word of mouth (WOM) as well as social medias, which were emerging as a prominent music discovery technique (Peitz and Waelbroeck 2005; Tepper and Hagaratti 2009).

To explore whether the sample’s music discovery preferences reflected those outlined by existing literature, an initial open-ended question enquired which ‘methods’ participants used to discover new music. The prominent keywords within responses were: ‘Streaming services’, ‘Friends or acquaintances’ (WOM), ‘Radio’ and ‘YouTube’ (Figure 5). Additionally, a rating scale was created that asked participants to rank how effective each of the following platforms were in terms of music discovery (Figure 6).

Figure 5: Questionnaire Open-Ended Responses- How Do You Discover New Music?

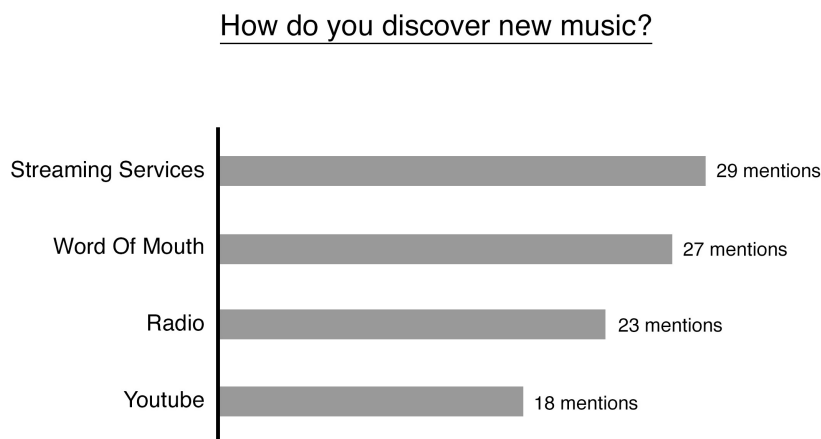


Figure 6: Questionnaire Rating Scale- How Effective Are The Following Discovery Platforms?

Rank how effective each of the following platforms are in terms of discovering new music



As the results show, participants indicated that the most effective discovery methods were 'Recommended by friends or family' (WOM) and 'Radio' which complies with academic findings. Whilst literature indicated social media to be an additional leading method, 'Recommended for you' and 'Professionally made' playlists (i.e. streaming service recommendations) were located as the next most effective music discovery methods. As these findings were generally reflected within interviews, it can therefore be asserted that the three leading methods of

music discovery for this sample are Streaming Services, Radio and WOM, although in no definitive order, as importance differed between findings.

Within interviews, streaming services were predominately perceived to have made the act of discovering music far *easier* for users, as music discovery and consumption could be achieved through the same medium. Tilly admitted to feeling lazy that the majority of her discovery is done through Spotify as it has made her discovery process “so much easier”, concluding:

“It’s cutting time and time is precious now-a-days. It’s cutting the middleman out”.

Similarly, whilst Rachel stated she used to use a wider variety of discovery platforms she believes that, “Spotify takes a lot of the job out of it for you, so that’s where the majority of my discovery comes from”.

The algorithmic recommendations that are present within subscription streaming services are also present in other online platforms and account for the success of YouTube as a discovery tool. Mark explains his main process of music discovery. Firstly, he uses *Undiscovered.com* to initially find music, and subsequently YouTube’s algorithmic patterns to then find alike songs. Other participants described a similar process. When Aaron typed songs he had discovered via alternative platforms into Youtube, the algorithms “picked up some suggestions, some I was really gripped by.” These recommendations have created an *extended process of discovery*, whereby music found via various methods can be run through algorithmic systems and subsequently similar songs can be discovered.

Whilst WOM was attributed as a leading method of discovery, interviews suggested that the usage is very much dependent on the person. Aaron, Gregory and Franky all stated that their friends or family played a large part in their music discovery. In contrast, Mark states, “my family and friends don’t listen to very good music”, so he wouldn’t ask for their musical recommendations. It did emerge that generally WOM was perceived to be a more trustworthy source of musical discovery due to the established relationship interviewees had with friends or family.

“If I get into a conversation with a friend about music and they say you have to listen to this song or this artist I will because I trust their opinion” (Gregory).

Unlike streaming services and other online methods where participants admitted they physically set aside time to *discover* new music, discovery via the Radio appeared to happen more randomly: “you come across it without even meaning to” (Franky). Radio was perceived to be a very versatile medium as participants listened to it in a number of environments including their work places (Tilly), driving in their cars (Mark, Rachel) and generally, outside of the home (Gregory). Despite this, radio was perceived to offer more ‘mainstream’ suggestions with less flexibility than other methods of discovery. Mark stated that Radio is, “great if you want to know what’s in the charts”, which was supported by Gregory who believes:

“The songs you hear on the radio are the songs that you’ll hear pretty much everywhere.”

Additionally, some interviewees perceived Radio as being a more commercialised platform than others. Both Franky and Rachel noticed that *Radio 1* have the same track of the day a lot. This is something that Rachel indicates could be because of the need to generate “revenue income”. She suggests that Radio DJ recommendations may be based on artists that pay them to promote their music and are thus bias in selection.

Conclusively, streaming services, WOM and Radio exist as this samples leading discovery methods, but for differing reasons. Discovering music within streaming services has appeared to have created a much more fluid process of discovery for users. Furthermore, the algorithmic recommendations offered in both subscription-streaming services and sites such as YouTube, create an *extended process of discovery* that is viewed to be highly beneficial to participants. Radio was praised as being a more versatile medium than others as it can be consumed in a number of environments however music was generally perceived to be more ‘mainstream’ than on other platforms, harbouring negative connotations. Finally, whilst the importance of WOM fluctuated depending on interviewee, it was acknowledged to be a trustworthy source of recommendation due to the pre-established relationships that participants had.

To Explore Whether Digitalisation And The Rise Of Streaming Services Have Made Traditional Music Discovery Methods Less Prominent And If So, Why?

Dewan and Ramaprasad (2014) hypothesised that the rise of new medias could be displacing conventional music discovery methods. Therefore, in addition to exploring users preferred music discovery methods, there was a simultaneous investigation into whether the rise of streaming services had decreased the importance of traditional methods. Whilst Likert scales within the questionnaire (Figure 7) indicated that audiences are less reliant on traditional discovery methods, this was contradicted by the findings that placed the traditional discovery methods of radio and WOM, as two prominent discovery techniques. To avoid contradiction in future studies, researchers should avoid generalising the term *traditional methods* but rather test the relevance of each method individually.

Figure 7: Questionnaire Likert Scales- Traditional Discovery Methods

Using streaming services means that I am less reliant on traditional methods of finding music i.e radio, print magazines



I find the majority of my new music from using online platforms



Using traditional offline platforms such as reading print music magazines is still very important for me in discovering new songs



Research did indicate that particular traditional methods were perceived as considerably less effective than others. ‘Print magazines and newspapers’ placed as the lowest scoring method of music discovery (3.8/10) within questionnaire results. Reasons why they were perceived as such an ineffective method were subsequently explored in interviews. Aaron states a limitation he believes traditional offline methods of discovery to have:

“I don’t find music offline, like through reading magazines or something because I like to be able to experience the music when I read about it or see it.”

This viewpoint was furthered by Gregory, who described offline magazines as “useless” due to the fact that:

“You can’t hear any of the music. You can just read what they’re describing to you”.

Despite this, Gregory does follow *GQ* magazine on Apple Music to listen to their recommendations, stating that he was “more inclined to trust their opinion because they are a magazine”. Similarly, Rachel does not buy print magazines, but uses social media to follow magazines including *Q* and *Rolling Stone*, for their “good recommendations”. This indicates that content and recommendations offered by magazines sources are still a trusted and useful, yet print magazines are perceived as ineffective purely because *print* is a limiting and inflexible platform.

All interviewees stated that they are continuing to move away from offline, towards online discovery methods, as they find online to be much *easier* and more *convenient* for discovering music. Some interviewees viewed traditional methods of discovery to be generally more restricting in what they offer, limiting users to “what the music industry wants you to listen to” (Mark). In contrast, online

methods were perceived to offer more content choice in musical discovery. Franky believes that online methods have made music more “accessible” so you can find a wider variety and similarly, Gregory asserts that:

“It’s just so easy to discover new songs rather than having to rely on traditional methods from experts or reviewers.”

From these findings, the researcher draws the hypothesis that online methods, including streaming services, have made discovering music much more convenient for users and offers a wider spectrum of content. In contrast, traditional methods that offer little flexibility or choice are considered to be less effective for discovery purposes. Whilst the recommendations from traditional methods such as print magazines are still perceived to be valuable, the medium of consumption is not and interviewees favored accessing content from online platforms, i.e. via social media or within streaming services.

To Understand The Perceived Benefits and Limitations Of both Human and Algorithmic Curation within Streaming Services and to Identify Which Form of Curation is Perceived the More Effective Way to Discover New Music.

Existing literature indicated that generally, human curation employed a higher level of trust than algorithmic due to the “human filter” that curators can assert over aggregated content (Rosenbaum 2011). This viewpoint was generally supported within questionnaire results as “trust” emerged as a leading benefit of human curated playlists due to the fact that the music “comes from professionals” (Questionnaire respondents). Within interviewees the theme of trust also arose, Franky stated that she trusts playlists from professional DJ’s such as Danny Howard as she feels that “someone has actually listened to the track” rather than it being algorithmically suggested. Similarly, Gregory asserted that he was, “more likely to trust a brand or an actual person” than an algorithm.

It was a conclusive finding that human curated playlists offered greater trust in consistency with their music recommendations over algorithmic ones. Questionnaire results indicated that human curated playlists were, “more likely to be a similar mood” (Questionnaire respondent) and this was seen as a benefit by interviewees as, “you know what you’re going to get” (Rachel). In contrast, interviewees generally perceived algorithms to lack the ability to understand a users mood and make suggestions based on temperament, a significant limitation to these playlists.

“That is something that [algorithms] can’t predict, they don’t know where you are and how you’re feeling” (Tilly).

Human curation was identified as being more of a social process in existing literature (Betts and Anderson 2016). With the exception of Rachel, who stated “there is nothing better than everyone enjoying a common song and sharing things”, participants appeared to view their streaming as more of a personal experience. The personalised recommendations that algorithms offer, was seen as a leading benefit of these playlists. Aaron stated that to enjoy human curated playlists you have to “really appreciate that persons music”, concluding, “I care about what I listen to, not what other people listen to”. Algorithmic playlists were generally perceived to be much more personal, as users have “full control over what you like and what you don’t” (Gregory). Mark believed that suggestions based

on his previous likes were the most effective way to discover the “hidden gems that I am looking for”.

Despite this, it was recognised that these algorithmic formulas are not always accurate. Both Franky and Rachel recalled experiences of algorithms offering poor recommendations, an experience that Rachel took as a “personal insult”, believing that the patterns did not understand her. However, she did acknowledge improvement in her recommendations due to increased usage, correlating with literature that suggested the more these systems are used, the more accurate they become (Beer 2009; Shardanand and Maes 1995). This was something generally understood by interviewees, whilst Mark referred to algorithms as “hit and miss”, he acknowledged that “the more I get into Spotify Discover, the more tailored it will become”. So although some participants believed that these playlists are still progressing and currently might not have, “as much information as they need yet” (Gregory), Gregory, Aaron and Mark predicted that as these systems patterns improve, algorithmic recommendations will become even more prominent in music discovery.

Concluding questions in both the questionnaire and interviews asked participants which they perceived to be the more effective method of discovering new music, algorithmic or human curated playlists. Results from the questionnaire (Figure 8) show that algorithmic playlists are currently the favoured method of discovery. This statistic was reciprocated within the interviews. Whilst it was agreed that human curated playlists were much better for understanding moods and were generally more consistent, algorithmic-curated playlists were decided to be more effective for discovering new music, with 4 participants (Aaron, Mark, Rachel, Tilly) selecting them as the preferred discovery method.

Figure 8: Questionnaire Result- Which Do You Perceive To Be A More Effective Form Of Curation?

Which method, professionally curated playlists or 'recommended for you' playlists, do you consider to be more effective for finding new music?

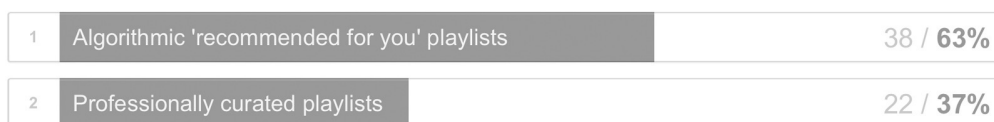


Figure 9: Questionnaire Results- Gender Effect On Curation Preference

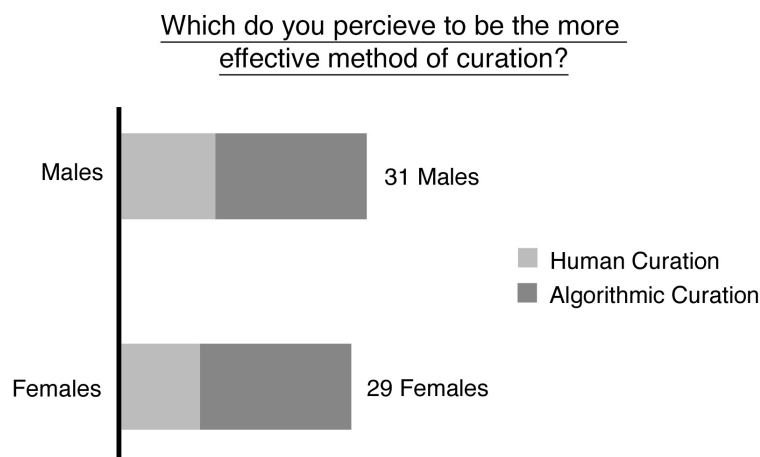
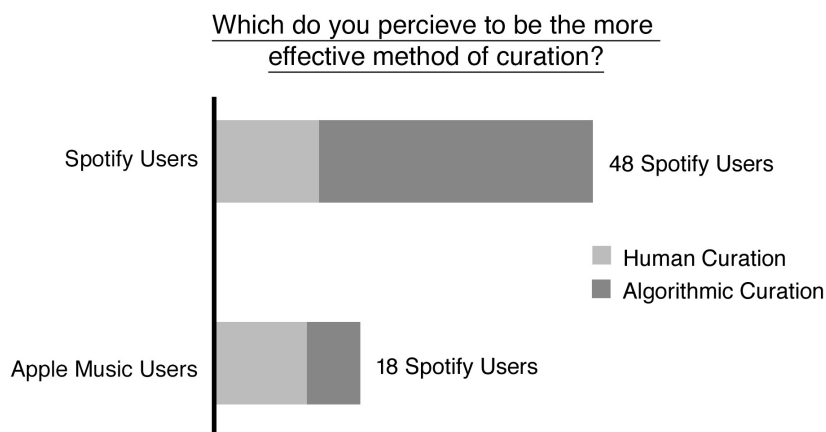


Figure 10: Questionnaire Results- Service Effect On Curation Preference



CONCLUSION

The aim of the study was to gain an understanding into the most effective methods of music discovery within my sample, to assess the role that streaming services played within this process, and furthermore, to explore perceptions towards human and algorithmic curation. On reflection, the study has achieved the initial objectives it set out to explore and subsequently a number of beneficial findings can be extracted from the research.

Primarily, this study has revealed that subscription-streaming services do in fact surpass simply a listening platform and exist today as a leading method of music discovery for users. Despite this, current services are clearly not at the stage where they exist as the sole discovery platform. Rather, users combine a combination of traditional and online discovery methods, for differing reasons. It cannot be asserted that traditional methods of music discovery have become replaced by the rise of streaming services, as Radio and WOM continue to be leading methods of discovery. It can be hypothesised however, that certain conventional methods of

discovery are considered much less effective, as they do not offer the ease or accessibility that streaming services and other online platforms do. Generally, participants indicated that they were continuing to move away from offline methods of music discovery towards online ones, a trend that is likely to progress in the future. Within subscription streaming services, human curated playlists were agreed to be more akin with users moods, offering heightened consistency with their recommendations. However, it was unanimously agreed that algorithmic recommended playlists were the most effective form of curation for music *discovery*, with users appreciating the personalised experiences that algorithms offered them and predicting a more prominent role as the systems improve.

The research conducted has ramifications for both practitioners and academics. For those within the streaming service industry, this research would advocate placing particular focus on utilising algorithmic recommendation systems. Not only do users appreciate the personal experience that these playlists offer them but they also accomplish an *extended method of discovery*, something that conventional methods cannot offer. Furthermore, streaming services are currently perceived to offer more 'mainstream' artists. Whilst this is not necessarily a negative, it would be suggested that expanding libraries to include smaller, up-and-coming artists, could increase user satisfaction with their services. For academics, this study has identified that streaming services do indeed exist as a leading discovery technique. Further research should identify leading methods of discovery for non-streamers and compare findings, thus gaining generalisations that can be applied to all music consumers.

The research sample was small and findings only offer insights from those in Generation Y (aged 18-35) that live within the UK. Therefore, further research must be undertaken outside of this age bracket in order to gain a more general understanding into streaming service users' discovery preferences. Furthermore, as all participants studied were streaming service users this therefore means that results derived from the findings cannot be generalised to encompass all music consumers. However, subscription-streaming services are growing rapidly and are predicted to play a dominant role in the future of the music industry. Research from this study is therefore deemed to become increasingly relevant to the industry as more users adopt these services.

In hindsight, rather than using a *gender-based* quota to select interviewees, the researcher should have used a *streaming service-based* quota. The questionnaire results in Figure (15) indicate the correspondence in opinion between Males and Females, both placing similar preference in algorithmic curation. In contrast, Figure (16) identifies contrasting opinions, Spotify users preferred algorithmic curation whilst Apple Music users preferred human curation. This presents a limitation in my research as Apple Music users were underrepresented in interviews (1 user). Interviewees should have been sampled as 4 Spotify / 2 Apple Music, rather than 3 Male / 3 Female, to generate fairer findings.

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