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Understanding Popular Music: What Makes it Catchy?

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ABSTRACT

Music is an emotional stimulus that reflects important human psychology of the listener based on their taste. It can also reveal the emotional state of humanity by referring to the most played or popular songs. It imprints on listeners a memory, which, if it is pleasing to the brain, tends to get replayed. This replay of a song in the brain is almost always a certain part of the song, known as the hook, and is known as an "earworm." Earworms are generally caused by a piece of music played by the listener that sounds catchy or intriguing to the brain. The purpose of this paper is to understand and analyse what features of a certain music piece influence its catchy quality, whether it is based on the lyrics, the melodies, the synth or acoustic quality, the gender of the artist, or a music video and various other factors. It does so by analysing the number of streams that a particular song has received, which shows the number of times people have listened to it due to its catchy nature.

Keywords: Earworms, Hook, Catchy, Popular Music, Impact of Music on Human Psychology.

INTRODUCTION

Music is a tuneful melody of instruments and voices, all expressing an opinion or a thought that communicates to the listener. Music unites people from all parts of the world due to a variety of reasons, such as its relatability, its ability to console people who feel sad through uplifting tunes, and also its ability to create a lively ambience that raises the spirits of people and energises them. Music has been a part of human life since its very beginning, and it has evolved in so many ways, with different instruments, genres and preferences unique to each country, culture, and person. Music speaks of powerful issues, not only causing considerations of morality or ethics for the listener or of relatable topics such as isolation or joy, but capable of influencing politics and people's way of thinking. Music is known to mirror how people think and feel, for example, during the COVID pandemic from the years 2020 to 2023, statistics provide that music listened to during these times was less happier than before, reflecting the isolation and loneliness felt by those restricted by the pandemic. For these reasons, it can be said that music is an important topic of research when it comes to understanding human psychology.

However, there are numerous genres of music, which differ from each other greatly, for example, classical and popular music, that differ from each other based on social roles. But many people view art music as sophisticated music, and therefore find it hard to understand and take part in. Conversely, popular music is thought to be relatable (Harty 13). This research paper hopes to examine what makes music popular. After an extensive literature review, it was found that a wide variety of factors affect music popularity. This includes its danceability, energy, loudness, emotion, and many more factors. For example, artists like Taylor Swift, Sabrina Carpenter, and many more, that are popularly known in the timeline of this research paper of the year 2000 to 2025, own discographies filled with loud, danceable and energetic songs. The popularity of a song is based on the number of streams, i.e. the listens it attains on a streaming platform. External factors such as whether a song possesses a music video to portray its aural imagery visually may also have an impact on the popularity of a song. "Research suggests that listeners' music preferences are a representation of their personality, cognitive styles, attitudes, and personal values (see Greasley & Lamont, 2016, for a review)." Examination of the features of popular music and characteristics of the artists can provide details of the social and cultural context of the creation of the song (Anglada-Tort et al. 3).

Music and memory are interrelated in many ways. No effort is required in committing a catchy hook to memory, resulting in earworms. Apart from this, listening to music can shift moods entirely. Music is an emotional stimulus, meaning that it can evoke emotions in those that listen to it. The specific emotion, e.g. happiness, sadness, nostalgia, is dependent on the listener. The music may also be able to evoke a memory of the past from the listener (Harty 22). A joyful, uplifting song takes one back to happier times while a sad song can make even a happy person feel nostalgic. Melodies, depending on their being bright, powerful and happy or sad, regretful or hurt, on instruments can truly give the lyrics a deeper and clearer touch that resonates with people further.

Slow-tempo ballads, formed of usually acoustic sounds, usually allow the listener to comprehend and process the lyrics. This provides a verbal-based memory and an experience-based memory to the song. Popular music that is highly synthesised is less intelligible and therefore generally provides only an experience-based memory, which is why acoustic instruments in songs provide more stimulation. Along with this, songs with less happier melodies have grown more popular over the years, based on the current situations and pressures felt by the population, therefore these songs are more popular (Harty 13).

A study on forgetfulness and aging found that the most common reason a memory is forgotten is because the information in the memory is never required or nothing related to the memory is perceived. (Yokota et. al, 2000). Therefore, a challenge is proposed to researchers if the music they play for the participants is of their specific time period but not heard by them recently enough to have any memories tied to the music (Harty 20). The centers for speech production and language recall are not stored along with music and its lyrics in the brain, therefore, music recall is able to take place even when other aspects of recall are not (Melton and Martin, 1972). Though it is not known where the musical centre of the brain is located, this difference in storage place remains significant. The connection of multiple parts of the brain that are stimulated by music form stronger memories. "The separation of the memory storage areas is a partial explanation for the instances that occur when a person who has become non-verbal has a musical stimulation and either sings or talks for a short period following" (Harty 15).

The gender of the artist creating popular music is also known to impact the popularity of their songs. A study was conducted to investigate how the gender representation of the UK's most popular musicians has changed over time and the extent to which these changes could relate to popular song lyrics. "Overall, all-male bands and singers accounted for more than 60% of the data.", showing the significant inequalities in the data. Furthermore, eight of the ten artists at the top of the charts were male, with the Beatles ranking highest, followed by Elvis Presley and Cliff Richard. They were followed by Madonna, the only female artist in the top 10 and ABBA, who were the only mixed-gender artist in the top 5 (Anglada-Tort et al. 25-26). "We also found evidence supporting the hypothesis that the prevalence of female musicians in the single sales charts has increased significantly over time." (Anglada-Tort et al. 26). Another study was conducted to understand the impact of the musician's genre on their music lyrics. (Anglada-Tort et al. 27). "From 1960-1968 female and male singers used approximately the same number of words in their lyrics, but in the following four periods (spanning 1969 to 2015) male and mixed-gender singers used more words in their lyrics than did female singers." (Anglada-Tort et al. 29). Music preferences are a representation of their personality, cognitive styles, attitudes, and personal values: This dimension contains music that emphasizes negative emotions. Individuals who prefer music in this dimension do not appear to display signs of neuroticism or disagreeableness. In general, those who prefer intense and rebellious music tend to be curious about different things, enjoy taking risks, are physically active, and consider themselves intelligent. Our analyses suggest that individuals who enjoy listening to upbeat and conventional music are cheerful, socially outgoing, reliable, enjoy helping others, see themselves as physically attractive, and tend to be relatively conventional. Individuals who enjoy Energetic and Rhythmic music tend to be talkative, full of energy, are forgiving, see themselves as physically attractive, and tend to eschew conservative ideals (Rentfrow and Gosling 1249). Music influences personality, self-views and cognitive abilities, a full theory of music preferences will need to examine many other possible determinants. It seems likely that cultural and environmental influences will influence the music an individual likes. For example, individuals growing up in small rural towns in Texas will probably be exposed to a very different set of music than individuals growing up in metropolitan New York. It also seems likely that the patterns of influences will vary across the life course such that individuals may first adopt the preferences of their parents; later become influenced by their peers; and then, as they develop more autonomy, their personalities may play a larger role. If so, we would expect stronger links between music preferences and personality in older rather than younger participants. Thus, one important direction for future research would be tracking the trajectory of music preferences across the life course (Rentfrow and Gosling 1251). Psychoticism (tough-mindedness) and Extraversion were positively correlated with liking hard rock music and negatively with liking electronic, religious, and soundtrack music (Langmeyer et al. 120).

Earworms

A hook is defined as a short section of a song that grabs the attention of a listener by being the most enjoyable part of the piece. A good hook is about four to eight seconds long, as if it is below four seconds it is unable to capture the attention of the listener, and if it is longer than eight seconds it may lose its memorability and be difficult for the listener to recall easily. The phenomenon of a hook being so memorable to a listener that it seems to be uncontrollably "stuck in their ears" at all times has been termed an "earworm" (Grevler). Containing an earworm is either extremely beneficial or extremely detrimental to a song, for it could either mean the song is considered a catchy song and liked by the listener enough for it to be streamed multiple times, or the listener may tire of constantly remembering the hook and avoid listening to the song once more. More often than not, earworms are considered "annoying" and repetitive, however it has been noted that the catchier a song is, the more likely it is to be replayed by a listener (Music Cognition Group et al.).

Music Recall

"We have argued here that because the notion of catchiness inherently invokes musical memory, a scientific definition of the term must involve ease of recall." (Music Cognition Group et al.) A hook is defined as the fragment of a piece of music that is the easiest to recall, or which is pleasing to the brain. Similarly, catchiness is defined as the degree to which the music fragment stays memorable or pleasing in the brain after long intervals of time. Based on these definitions, it can be said that every piece of music contains a hook, however some hooks are catchier than others, based on how pleasing they are to the human ear. A study has shown that after only 400ms, listeners are able to "identify familiar music with a significantly greater frequency than one would expect from chance" (Music Cognition Group et al.). Therefore, the hook does not usually constitute the whole chorus of the music piece, but only 0.4 seconds of the certain music piece could be pleasing to the brain, which assists in its tendency to be easier to recall.

Gender of the musician

There had always been a disparity between male and female created music, among other things, however, in the later years of the 1900s, a rise in female created music was noted: In the 1985-2008 period, female musicians became mainstream. The top five most popular female artists were Madonna, Kylie Minogue, Whitney Houston, the Spice Girls, and Britney Spears. The prominence of female artists in the United States increased significantly in the years 1985, 1996, and 1999, therefore they can be referred to as the peak years of female musicians. (Wells, 1991, 2001). It is understood that these peak years were caused due to certain events during these time periods, for example, the rise in popularity of the women's rights movements in 1968, the rise in popularity of Margaret Thatcher's prime ministership in 1984, as well as the rise in general punk music around 1976. Therefore, it can be concluded that the rise in popularity of female musicians is attributed to the rise in feminism in the late 1900s. (Anglada-Tort et al. 26-27). Female and male musicians had little differentiating qualities, such as the fact that overall, all-female bands used a higher amount of self reference in the lyrics of their music than mixed gender or all male bands.

The highest usage of self-reference in music was by Millie Small's "My Boy Lollipop" and Nina Simone's "Aint got no/ I got life". Nevertheless, in the 1969-1976 period, female music lyrics had notably decreased their uses of self reference almost till the number of times male musicians did. A survey was conducted to understand preferences of people based on their gender as well as the artist's. After checking the individual choices, each person who chose Taylor Swift was a female. In terms of listeners, female listeners prefer pop music to rap, possibly because there is a significant amount of female pop singers and male listeners prefer rap to pop as a majority of rap artists are male, based on genres. From this it can be concluded that one's gender definitely impacts the music they prefer listening to.

Why catchiness matters in pop music

Catchiness is a major part of music: in fact, it can be noted that catchiness is the most important part of some musical pieces, as they determine the level of easiness to recall to the brain. This means that the catchier a song is, the more the brain tends to want to hear it again, as established earlier. Therefore, based on the catchiness, it gains more streams and eventually more popularity. It is important to understand this to be able to understand human musical memory, and to be able to provide better recommendations, "(all else being equal, the catchier of two tunes is probably the better recommendation)" (Music Cognition Group et al. 1). They assist in understanding the measurement of musical similarity, generating the start of new sections of music after the hooks, "and to some extent, fingerprinting (as hooks are the fingerprints for the brain's retrieval system)" (Music Cognition Group et al.).

Evolution of pop music from the 2000s to the present

Music has evolved significantly throughout the years. Over time, the average value of the acoustic quality in songs has reduced, revealing that the present day's songs display more digital effects and synth than earlier, when they were not fully developed. "New technologies have directly impacted innovation in the arts, particularly music, as digital tools — such as synthesizers, samplers, and audio effects — have enabled new means of musical expression. This has expanded creative boundaries and even led to new musical genres". "Artists gravitate more towards digital aesthetics based on the more contemporary culture of today" (Galvao et al. 125-126).

Using streaming numbers as a metric of popularity

Digital platforms that are used for playing music often count the number of times a song is played, terming these "plays" as "streams". The more a piece of music is replayed, the more streams it possesses. Therefore, a piece of music that has a high amount of streams is popular. Popular streaming platforms are Spotify, Gaana, and Amazon Music. Streaming platforms generate profit by offering monthly plans or premium versions, giving them access to a vast library of digital music. Therefore, streaming has recently grown very popular, overriding other markets, for example downloads or physical media, and generated more than 7 billion dollars in revenue in the first half of 2023 only in the USA. Streaming's main advantage is that it is immensely useful for conducting research on people's music preferences with a number of streams attached to every piece of music on a platform (Galvao et al. 113).

CONCLUSION

Music has multiple functions: it unites people all over the world, provides relief to those in emotional turmoil through relatable lyrics, acts as an emotional stimulus by inducing emotions in the listener. For example, a listener might feel excitement listening to a loud pop song or nostalgia through a slow, soft song. Music also speaks of issues concerning mankind, politics and psychology in a manner capable of altering people's perspectives. The genre of music popular at a certain time reflects the collective feelings of the population at that time. It is therefore a significant part of human psychology - for example, people that prefer upbeat music generally tend to be socially outgoing and talkative. The genres of music which have topped the charts have differed through the years. In the years 2000-2025, popular music has been associated with loud, danceable, and energetic songs, but also slow piano ballads that have become popular due to their relatability with the population due to social isolation during the COVID-19 Pandemic. Present day songs contain larger amounts of digital effects and synths that were not yet developed in previous eras of music, which led to the reduction of acoustic qualities in music. A music video portrays imagery based on the song, which also affects its popularity. Even in recent times, the gender of the musician has affected the popularity: a rise in female musician popularity did occur in 1985-2000 due to a peak in popularity of women's rights movements, however it remains that male listeners prefer male artists to female artists more often than not, possibly because of most female artists being a part of the genre of pop, and overall males preferring the male-dominated genre of rap to pop. However, the biggest factor of a song that makes it popular is the level of "catchiness" it possesses, which refers to the hook or a part of the song that particularly is pleasing to hear to the human ear causing the brain to want to hear the song repeatedly. A hook is a short section of a song, not always the chorus, which specifically grabs the attention of the listener and makes the entire song memorable and pleasing for the listener. It tends to remain playing the brain repeatedly, which is sometimes found "annoying" but overall, the catchier and more memorable the hook, the more popular a song generally is, based on the number of streams, or times the song has been played in on a streaming platform, such as Spotify, Apple Music, etc. Melodies in the music are the ones that influence the music the most, for even if the song has sadder lyrics, the melody keeps the song sounding happy and energetic. Music forms memories in those listening to it, interestingly not stored in the same area as language and speech production, which has been proved as music recall is able to take place despite other aspects of recall not functioning. Songs which are more emotional and lyric-focused have slower tempos and acoustic sounds, which embolden the lyrics used, forming a "verbal-based" memory in the mind of the listener, while songs that are louder and enthusiastic have more synthesised melodies and less focus on the lyrics, which provides an "experience-based" memory to the listener. Therefore, based on this research paper, the conclusions that have been formed about what makes a piece of music the most popular it can be is to possess a music video, loud, danceable energy, with some elements of both rap and pop, causing both a verbal as well as experience-based memory in a person.

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