

# The psychological functions of music listening

[Art & Culture](#), [Music](#)



## **Introduction**

Deutsch (2012) describes music as an art that entails thinking with sounds. Music is played all over the world in churches, homes, funerals and many other places. It is part of humanity introduced at birth with lullabies and continues throughout the course of life up to death with the funeral march (Hallam, Cross & Thaut, 2016). It is a language that resembles speech in many aspects and has no borders. Sense of sound and rhythm are essential elements of musical functioning (Gruszka, Matthews, & Szymura, 2010). Music is significantly influenced by culture in terms of content and style. As such it evokes the same emotions within members of the same culture. It has two main components (rhythm and pitch) that it uses to pass the intended message and one has to be able to understand the two in order to appreciate music (Jones, Fay & Popper, 2010). Human beings are born with ability to understand and appreciate music and that is why young children appreciate lullabies. However the music potential and preferences vary from one person to the other. People have different musical preferences and this influences the amount of time and resources that they spend listening to music. This study investigates the individual differences in musical functioning with regard to social and biological influences.

### Individual differences in Musical Functioning

Individual differences in musical functioning or musicality refer to the differences in the strength of music preference (Kern & Humpal, 2012). These differences are among the most intricate psychological issues in music. An individual may be fine without music while another one may need

music so much so that he or she would use huge resources to attend music concerts. The source of such differences is a major concern to psychologists. According to Deutsch (2012), the strength of music preference is a function of the role that music plays in the life of an individual. People use music for different purposes like regulating their mood and emotions, promoting self-awareness, communicating, fostering social relations, distractions, and physiological arousal. Music plays an important role in the lives of many people across the world, and many people depend on music for different purposes. The availability of music on portable devices has increased the use of music with many people making it an ubiquitous companion (Theorell, 2014). Therefore music has a profound effect on the lives of many individuals as it influences their thinking, feelings, behaviour and perception. These factors influence the lives of individuals depending on the level of dependence on music and the specific type of music (Haas & Brandes, 2009). As such it is important to ascertain the factors that influence music preference.

Individual differences in musical functioning belong to an area in psychology that still remains largely unexplored (McPherson, 2016). People like certain artists, tunes, and styles more than the others. The other individuals also have different musical preferences. This is what is termed as style/genre preferences under music preference. In addition to this, individual differences also exist in terms of the extent to which people listen to music. The extent to which people love and enjoy music differs from one individual to the other (Gruszka, Matthews & Szymura, 2010). The knowledge on why people form preferences on certain types of music still remain

fragmented partly because music plays different roles in the lives of people (Theorell, 2014). This is what is termed as the strength of preference under musical preference. The major issue of concern to psychologists is the source of these individual differences in strength and genre/style. Strong music preference is an indication that an individual spends a lot of time listening to music, going to concerts and buying music. The decision to invest time and money to listening to music is a sign that music is useful to the lives of these people. Individual differences in musical functioning are a multifaceted phenomenon that has continuously eluded psychologists, researchers and musicologists (McPherson, 2016). However, some factors that affect musical functioning have been identified and they include exposure, musical characteristics, genre and personality. The factors that affect musical preference can be grouped into two broad categories namely extrinsic and intrinsic factors. The intrinsic factors are inherent and they include melody, structure and timbre. The extrinsic factors on the other hand include social influence, personality and emotions.

### Social influence on Musical Functioning

Social influence is one of the factors that influence the development of individual preferences in music. This starts at the adolescence stage and continues late into adulthood (Zelazo, 2013). Adolescents often have a strong desire to do the same things that their peers are doing in order to belong. They also tend to dislike the things that their peers dislike. As such they will tend to like the same music that their peers like (Theorell, 2014). They listen to music to create an impression, develop self-image and please

their friends. According to McPherson (2016), the teenagers often desire to identify themselves with certain groups that they consider as being “cool” and distance themselves with those that they regard as being “old-fashioned”. Therefore they tend to develop musical preferences that are similar to members of their group and avoid those of the other groups that they regard as “not being cool”. This implies that musical preferences are partly created for the purpose of serving a function of group differentiation (Damon & Lerner, 2006).

According to Juslin & Sloboda (2010), individuals often tend to like the music that was popular during the years that they reached maturity age. The music preference developed at this point is often a function of the songs that are popular among the friends. However, the events that occur in late adolescence and early adulthood often shape the music preference for the rest of adulthood. When individuals first leave home and start being independent, they are often influenced by their peer groups. They spend a lot of time with their peers and tend to like what their peers like and dislike what their peers dislike (Damon & Lerner, 2006). They will like the same songs as they go to concerts together and spend most of their free time doing the same things. For instance the people who fail to acquire higher education tend to like songs that depict a care free attitude to justify their condition. Therefore social perceptions significantly influence the type of music preferred by people. According to the social learning theory, people learn through observation (Lehmann, Sloboda, & Woody, 2007). When people are rewarded for certain behaviours like listening to a certain genre of music, others tend to learn from it and are likely to imitate the behaviour in order to

reap the same benefits. People tend to use music socially as a way of reinforcing their self-image. For instance conservative people are more inclined to listen to music that is conventional. Furthermore, people use music to communicate to the world by expressing their ideal self-image. The preferences of society may increase or inhibit the spread of certain music genres thereby influencing their potential to be preferred by individuals (Feezell, 2008 and Gruszka, Matthews & Szymura, 2010). For instance when it was discovered that Mozart music positively affected spatial IQ, more people started listening to classical music. This exposure increase the preference for classical music as it was considered essential for children (Hallam, Cross & Thaut, 2016). This indicates the power of society to influence music perception and preference. Therefore the influence of society is one of the most significant factors that influence individual music preferences. The type of music that people are exposed to from childhood is highly dependent on what the society considers popular and appropriate. For instance the mainstream media may prefer playing certain music over the others thereby influencing the preference of individuals.

## Biological influence on Musical Functioning

### Music Cognition

A series of processes is often activated when listening to music; these processes include melody recognition, memory of the music, recognising the lyrics and emotional response (Lehmann, Sloboda, & Woody, 2007). These basic processes are often integrated by complex mechanisms in the brain where various neural circuits take part simultaneously and some in

succession. Identifying the specific tasks involved in processing music and the various interactions requires theoretical models. According to the functional architecture model proposed by Peretz and Coltheart, perception of monophonic tunes is organised by two independent systems working simultaneously (Sloboda, 2004). The melodic system aids in processing melody whereas the temporal system processes tempo. The melodic system processes all information on melody and differentiates the two main components (i. e. note and intervals). All the perception mechanisms are required for processing melodic contour. Melodic processing is done in right superior temporal gyrus (Lehmann, Sloboda, & Woody, 2007). Both the melodic and temporal systems work in coordination with each other and as such a damaged brain may lose its ability to perceive music.

Both the melodic and temporal systems relay information to musical lexicon to generate musical repertoire. Musical lexicon includes music repertoire and has a perceptual representation of all the things that an individual has been exposed to (Kern & Humpal, 2012). Furthermore, it also contains a memory that stores new music to aid in the recognition of melodies that are both familiar and non-familiar. As such if damage occurs to the musical lexicon, an individual becomes unable to perceive familiar melodies or even record new ones. Information from the musical lexicon is often relayed extemporaneously or immediately after stimulus reception to different areas depending on the required action (Haas & Brandes, 2009). Phonological lexicon is often activated to aid in the retrieval of lyrics, phonological and articulation prepares an individual for singing, motor functions are responsible for producing music, and the multimodal

associativememoriesare used for retrieving information that is not musical (Jones, Fay & Popper, 2010). The perceptual modules are linked to the memory processes and emotional pathways to aid in music recognition and emotional experience. Non emotional processing and emotional processing are independent and as such damage to one may not damage the other. Any impairment to these connections often leads to difficulties in being able to integrate musical processes.

### Influence of Biological Factors on Individual Differences

According to Sloboda (2004). , music has rarely been studied from the biological perspective as it is mostly perceived as a function of culture. However, biological factors significantly influence musical preferences (Feezell, 2008). The ability of an individual to process and appreciate music is dependent on cognitive functions. Individual differences in self-perception and personality influence musical preference. Therefore people may opt to like music that will allow them to express themselves to the others on how they would like to be perceived. Moreover, individual differences influence the purpose for which people listen to music (Zelazo, 2013). One of the reasons why people listen to music is to regulate their emotions and help them cope with the daily challenges in life. The differences in musical preference and reasons for listening to music are indications that intelligence and personality partly influence how people use music. Personality and intelligence influence the type of music people listen to, how often they listen to it and the reasons for listening to music (Sloboda, 2004). For instance the intellectuals like those with high IQs are more inclined to like



conventional/ reflective music and as such are likely to use it for their intellectual purposes rather than for emotional consumption (Juslin & Sloboda 2010). This is because of their higher cognitive ability. This is clearly noticeable in their preference for jazz or classical music not because they do not elicit emotions but because the complexity of the genre is more inclined to suit the interests of people seeking experiences that are intellectually stimulating. On the other end are extraverts who may rely on music to stimulate their activity level when carrying out monotonous tasks like doing dishes or jogging. This implies that the role music plays in the life of an individual is partly determined by the level of arousal (Lilienfeld, et al 2011). This is particularly evident for those with high or low level of arousal average. The interference caused by background music on cognitive processes is higher in introverts than extraverts (Rickard & McFerran, 2012). Damon & Lerner (2006), claim that the association between musical use and other traits remain largely unexplored although some relationship may be expected. For instance people who suffer from emotional instability and regularly experience negative emotions are more likely to use music to regulate their emotions. Cognitive research has established that these people listen to music more for the purpose of managing their emotions (Rickard & McFerran, 2012). Furthermore, they are more sensitive to the emotions elicited by music and as such find music essential for regulating their emotions. Conscientious people on the other hand react differently to music. Conscientious people are those that have traits which are inversely correlated to psychoticism and creativity (Lilienfeld, et al 2011).

Conscientious people are less likely to use music for regulating their emotions as they are likely to use it for other purposes.

## Conclusion

The aim of this study was to investigate the influence of biological and social factors on individual musical functioning. The findings show that individual musical preferences and use of music is influenced by both social and biological factors. The social factors mostly influence the type of music people prefer to listen to whereas the biological factors influence the reasons for listening to music. The major social factors that influence the choice of music that people listen to are peers and the society as they determine the kind of music that is played regularly. The biological factors on the other hand influence the purpose for which people listen to music. The purpose for which people listen to music is closely associated with the frequency of listening to music than the choice of music (Hallam, Cross & Thaut, 2016). Therefore biological factors are also responsible for the amount of time and resources people spend to listen to music. However, it is important to note that both the biological and social factors significantly contribute to the individual differences in musical functioning.

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