Music preference and personality: An examination of how simple or complex music relates to personality
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Abstract

Popular songs tend to have simple, melodic structures, rhythms, and lyrics as well as repetitive lines, making them easy to follow and predict. These songs are also easy for people to synchronize to and coordinate behaviors with, for example, foot tapping and humming. When we are younger we tend to prefer simple, repetitive songs; however, as we grow older our music preference tends to become more complex—to hold our attention and interest. The levels of preference for complexity vary from individual to individual, but there are several factors that may help us predict these variations. Through our research, our results indicated that complex music preference was positively correlated with openness to experience, need for cognition, and working memory span.

Introduction

Is there a step by step process we can follow to result in an ultimately enjoyable pop song? An examination of the pop music industry’s ability to churn out new sensations suggests there may be. Many pop songs seem to have several characteristics in common. For example, they tend to have simple melodic structures, rhythms, and lyrics. Moreover, pop songs tend to be repetitive and their listeners are easily able to synchronize to them. These catchy qualities make them easy to follow and predict. Many listeners even coordinate behaviors to go along with these songs, such as tapping their feet, humming, singing along, and even clapping their hands. These common features provide excellent excuses why certain children’s songs are so popular, such as Happy Birthday, Row, Row Row Your Boat, if your Happy and you Know it, and The Wheels on the bus. However, these songs are not many adults’ top picks. Many of us wouldn’t rush out to buy a CD with these types of songs on them or even listen to them unless a child was present. These songs may no longer appeal to our adult tastes. As we grow older our tastes in music shift from simple songs to those a bit richer in complexity.

There seems to be an optimal level of complexity that an individual prefers in music. This is the reason some people prefer to listen to classical music and jazz while other people prefer to hear artists like Justin Timberlake or Britney Spears. There are several factors that may be able to predict this variation in individual music preference. Previous research has demonstrated that there is a link between cognitive ability and preference for aesthetically complex or simple stimuli (Baron, 1975; Frances, 1976; Kammann, 1966). Therefore, it is possible that measures of cognitive ability, such as need for cognition, and working memory span, are predictive of an individual’s preference for complex or simple music.

Hypotheses

• The preference for complex music was hypothesized to be significantly correlated with measures of cognitive complexity (e.g., openness, need for cognition, and working memory span).

• The preference for complex music was hypothesized to positively correlate with musical genes that on the face appear to have some complexity (classical, jazz, heavy metal) and to negatively correlate with those genes that seem to involve songs that are more simple in composition (country, pop).

• The preference for complex music was hypothesized to positively correlate with openness to experience (r = .275, p < .001), openness to new things (r = .205, p < .001), creativity (r = .35, p < .001), and working memory span (r = .270, p < .001), and experience seeking (r = .283, p < .001).

Methods

In order to examine the relationship between personality and music complexity, the following study employed Rentfrow and Gosling’s (2003) Short Test of Music Preference (STOMP), in addition to several standard personality and cognitive measures. These included a short version of the Big Five Inventory (Gosling, Rentfrow, & Swami, 2003), need for cognition (Cacioppo, Petty, Feinstein, & Jarvis, 1990), and a working memory span test adapted from the work of Whitney, Ritchie, & Clark (1999).

In order to assess an individual’s desired level of music complexity, we developed a 10-item Likert-type scale that included questions such as “I prefer music that is more complex in nature.” “Most of the music I listen to has many different instruments and parts,” and “I prefer music that is rhythmic and uncomplicated.” In our sample of 124 college students attending a small liberal arts college, there was a clear preference for complex music (MeanSTOMP = 4.69, SD = .90; MeanSTOMP = 3.35, SD = .39). After reverse coding the simple music preference items, nine of the ten original items were found to have high intercorrelations, thereby we created a composite score of complex music preference (alpha = .80).

In order to assess an individual’s preference for happy or sad music, we developed a happy relevant statements and sad relevant statements. Participants rated their agreement/disagreement to these statements using a 7-point scale. A composite measure of preference for sad music (r = .69) was created from items such as “I prefer music that is upbeat and happy” and “I prefer music that is light and uplifting,” “I find that I prefer to listen to sad music even when I am in a good mood,” and “I like music that has a darker feel to it.” As one might expect, participants in our study showed a higher preference for happy music (M = 4.10, SD = .85) than their preference for sad music (M = 1.74, SD = 1.05).

Results

In our sample of college students attending a small liberal arts college there was a clear preference for complex music (MeanSTOMP = 4.69, SD = .90; MeanSTOMP = 3.35, SD = .39). After reverse coding the simple music preference items, nine of the ten original items were found to have high intercorrelations, therefore, we created a composite score of complex music preference (alpha = .80).

Demonstrating the link between cognitive ability and music preference, complex music preference was significantly correlated with openness to experience (r = .275, p < .002), need for cognition (r = .464, p < .001), working memory span (r = .270, p < .002), and experience seeking (r = .283, p < .002).

In our sample of college students attending a small liberal arts college there was a clear preference for complex music (MeanSTOMP = 4.69, SD = .90; MeanSTOMP = 3.35, SD = .39). After reverse coding the simple music preference items, nine of the ten original items were found to have high intercorrelations, therefore, we created a composite score of complex music preference (alpha = .80).

Discussion

Overall, the results of this study indicate a strong relationship between a preference for complex music and cognitive ability (working memory span) as well as a need to exercise that cognitive ability (need for cognition and openness to experience). Not only does this research add to our understanding of music preference and cognition, but it also paves the way for future research that may unlock the complex interactions between the human cognitive system and various complex stimuli. Research in complex systems suggests that the human world is a dance between our own complex system (the mind) and various stimuli that exhibit complex patterns (other individuals, music, literature, theatre, etc). Ultimately, This “dance” is regulated and reinforced through emotional feedback. Research examining emotions suggests that emotions are created by change or uncertainty. Furthermore, personality research indicates that there are individual differences in the level of uncertainty one is willing to endure (i.e., need for cognition and openness to experience.). Thus, the emotions we experience are directly tied to the level of predictability we seek in stimuli. In terms of complex system theory, our complex system (the mind) seeks to interact with stimuli that exhibit complex patterns that are optimal for our need for predictability/complexity.

It is possible that what draws us to certain music is the right mix of predictability and novelty. Songs with simple catchy patterns are easy to like, but we just as easily fall out of love with the pop song of the week. The songs that tend to stand the test of time often include some level of complexity that keeps surprising us. We believe that future research will show that this theory can be used to explain our own experience of other complex stimuli such as our appreciation of literature, comedy, theatre, cinema, and a good friend.

References