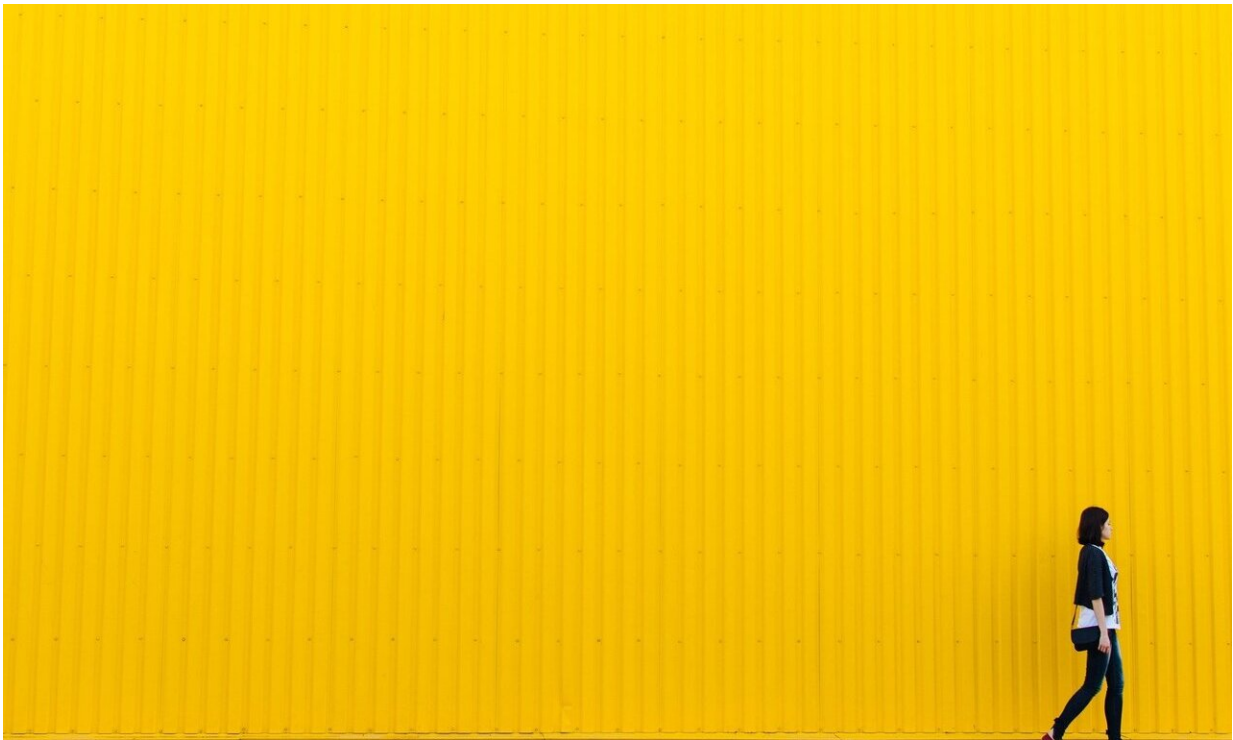


# Musical preferences unite personalities worldwide, new study finds

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Research involving more than 350,000 participants from over 50 countries and 6 continents has found that links between musical preferences and personality are universal. The findings suggest that music could play a greater role in overcoming social division, as well as offering currently untapped therapeutic benefits.

Ed Sheeran's song Shivers is as likely to appeal to extraverts living in the UK as those living in Argentina or India. Those with neurotic traits in the US are as likely to be into Nirvana's Smells like Teen Spirit as people with a similar [personality](#) living in Denmark or South Africa. Agreeable people the world over will tend to like Marvin Gaye's What's Going On, or Lady Gaga and Bradley Cooper's Shallow; while national borders cannot stop open people from replaying David Bowie's Space Oddity or Nina Simone. But it does not matter where a conscientious person lives, they are unlikely to enjoy Rage Against the Machine.

These are the kind of assumptions supported by new research led by Dr. David Greenberg, an Honorary Research Associate at the University of Cambridge and a Postdoctoral Scholar at Bar-Ilan University.

Across the world, without significant variation, the researchers found the same positive correlations between extraversion and contemporary music; between conscientiousness and unpretentious music; between agreeableness and mellow and unpretentious music; and between openness and mellow, contemporary, intense and sophisticated music. They also identified a clear negative correlation between conscientiousness and intense music.

Greenberg, who wears many hats as a musician, neuroscientist, and psychologist, said: "We were surprised at just how much these patterns between music and personality replicated across the globe. People may be divided by geography, language and culture, but if an introvert in one part of the world likes the same music as introverts elsewhere, that suggests that music could be a very powerful bridge. Music helps people to understand one another and find common ground."

The study, published in the *Journal of Personality and Social Psychology*, explains why personality traits are linked to musical styles. The researchers accurately predicted that extraversion, which is defined by

excitement-seeking, sociability, and positive emotions, would be positively associated with contemporary music that has upbeat, positive, and danceable features. Similarly, they were not surprised to find that conscientiousness, which is associated with order and obedience, clashed with intense musical styles, which is characterized by aggressiveness and rebellious themes.

But one finding is proving more puzzling. Greenberg said: "We thought that neuroticism would have likely gone one of two ways, either preferring sad music to express their loneliness or preferring upbeat music to shift their mood. Actually, on average, they seem to prefer more intense musical styles, which perhaps reflects inner angst and frustration.

"That was surprising but people use music in different ways—some might use it for catharsis, others to change their mood. So there may be subgroups who score high on neuroticism who listen to mellow music for one reason and another subgroup which is more frustrated and perhaps prefer intense music to let off steam. We'll be looking into that in more detail."

The researchers also found that the correlation between extraversion and contemporary music was particularly strong around the equator, above all in Central and South America. This could suggest that climatic factors influence musical preferences and that people in warmer climates tend to have personality traits which make them more likely to prefer rhythmic, danceable music.

Greenberg, who continues to perform as a professional saxophonist, has a very diverse playlist which is typical of people who score high on openness. He said: "I've always loved jazz and now I'm also really into the music of different world religions, which makes perfect sense based on my personality traits."

## How the study worked

Greenberg and his colleagues used two different musical preference assessment methods to assess an unprecedented number of participants living in more than 50 countries. The first required people to self-report the extent to which they liked listening to 23 genres of music as well as completing the Ten-Item Personality Inventory (TIPI) and providing demographic information. The second used a more advanced approach and asked participants to listen to short audio clips from 16 genres and subgenres of Western music on the [musicaluniverse.io](https://musicaluniverse.io) website and then give their preferential reactions to each (people can still visit the site to receive their scores).

The researchers focused on Western music primarily because it is the most listened to globally and results based on Western music offer the strongest potential to be applied in real-world and therapeutic settings globally.

The researchers used the MUSIC model, a widely accepted framework for conceptualizing musical preferences, which identifies five key musical styles: '**Mellow**' (featuring romantic, slow, and quiet attributes as heard in soft rock, R&B, and adult contemporary genres), '**Unpretentious**' (uncomplicated, relaxing, and unaggressive attributes as heard in country genres), '**Sophisticated**' (inspiring, complex, and dynamic features as heard in classical, operatic, avant-garde, and traditional jazz genres), '**Intense**' (distorted, loud, and aggressive attributes as heard in classic rock, punk, heavy metal, and power pop genres), and '**Contemporary**' (rhythmic, upbeat, and electronic attributes as heard in the rap, electronica, Latin, and Euro-pop genres).

## Why the findings matter

For thousands of years humans have broadcast sounds to other groups to establish whether they have similar values, whether they could share resources or whether they are about to fight. Today, people are using music as a way to signal their personality and so, the study argues, there is potential to use music to address social division.

Greenberg, who lives in Jerusalem, already employs music as a bridge to work with Israelis and Palestinians. In fact, he recently gave a [TEDx talk](#) expanding on the ways that music can bond people and cultures.

Greenberg also believes that the findings could improve music streaming services and support wellbeing apps but this is not as easy as it might sound.

Greenberg said: "If people who score high for neuroticism, for example, are being fed more intense music and they're already feeling stressed and frustrated, is that helping with their anxiety or is it just reinforcing and perpetuating? These are the questions we now need to answer."

The study does not seek to pigeonhole music-lovers. Greenberg says: "Musical preferences do shift and change, they are not set in stone. And we are not suggesting that someone is just extroverted or just open, we all have combinations of personality traits and combinations of musical preferences of varying strengths. Our findings are based on averages and we have to start somewhere to begin to see and understand connections."

Greenberg thinks that future research could combine streaming data with EEG hyperscanning technologies to establish a more nuanced understanding of the biological and cultural factors that contribute to our [musical preferences](#) and responses. He also says that future research should rigorously test the links between music and personality in real-world settings to see how [music](#) can be a bridge between people from different cultures around the globe.

**More information:** David M. Greenberg et al, Universals and variations in musical preferences: A study of preferential reactions to Western music in 53 countries., *Journal of Personality and Social Psychology* (2022). [DOI: 10.1037/pspp0000397](https://doi.org/10.1037/pspp0000397)

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