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The Evolution of Musical Preference

Music preference in humans could not have evolved without first the development of the mammalian ear. The bones compromising the mammalian ear have evolved in part from the reptilian jaw. This evolution has given mammals a three-bone ear structure and the unique ability to pick up high-frequency vibrations in the air (Shubin 2009). Above and beyond being able to detect these vibrations, humans have also developed abilities to perceive, create, and respond to music. The evolution of musical preference in humans has been a mystery to scientists for some time, however one idea is that musical preference has been positively selected for due to the ability for music to conjure a variety of emotional responses (Snowdon et al., 2015.) Emotion has been communicated through changing the pitch, scale, and tempo. Different emotions (joy, sadness, anger) can also be interpreted through variations in audio frequencies. Humans associate harmonic structures with positive emotional states, while dissonant musical structures are associated with aggression and fear. Because of the narrow range of preferential musical scales, humans are also thought to enjoy music that resembles the range of the human voice (Snowdon et al., 2015.) Because there is such a strong emotional and social component to the musical ranges humans prefer, we might think of there being a positive evolutionary selection for genes that can help humans benefit emotionally from the enjoyment of music. It could likely be a coping mechanism humans have accumulated to deal with a more complex emotional and cognitive system.

Musical genes in humans can help us understand how preference for music has come about. In experiments where the genetics of professional musicians were analyzed, many genes were highlighted. The genes that were upregulated in musicians during a performance were also genes that are linked to parts of our inner ear development, suggesting that musical aptitudes may be a consequence of our evolved, complex ear system. Some highlighted genes were also found to be involved in the dopaminergic pathway, indicating that musical genes in humans may again be selected for due to their positive emotional benefit (Jarvela 2018). Even in studies pertaining to emotional well-being in older adults, exposure to music can improve mood and cognitive performance for a temporary period (Sarkamo, 2018). The fact that music therapy can positively alter emotional and cognitive function could mean that humans with more involvement in music may live longer and happier lives. Evidence of sensitivity to music and sound even dates to hunter-gatherer societies, where sacred spaces were likely chosen based on the echo capability of the surrounding rock landscapes (Valenzuela et al., 2020). This evidence may also indicate that the emotional benefit humans acquire from having musical genes extends to positive social and cultural benefits as well. Musical genes could therefore have helped humans emotionally bond to one another in addition to improving individual mood and well-being.

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