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Psychology of Music

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## Music and Emotion

We all have songs that make us feel a certain type of way. Perhaps we have a memory of a time we heard a sad song after hearing bad news or at a funeral. Perhaps it reminds us of someone who is no longer in our lives. Perhaps it is just such a good song that it gives us the chills. One thing is for certain, music evokes emotion in everyone. But why do instruments making a certain noise or people singing lyrics give us an emotional reaction? No one is completely certain about this, but through some research, I have developed an idea of some possible explanations. Music can convey a certain emotional message through its use of certain structures, as well as actually creating an emotional response because certain noises remind us of emotionally expressive humans.

Music can affect how we see visual images. In a study performed by Nidhya Logeswaran and Joydeep Bhattacharya from the University of London, they found that playing music dramatically affected how the subjects saw the emotions of other people [1]. For this experiment, happy or sad musical clips were played for a group of subjects. After they listened to the excerpts, the subjects were shown a photograph of a face. Some were shown a neutral or sad face, and some saw a smiling face, which they called a happy face. These subjects then had to rate how happy or sad the faces they saw were, with a seven being as happy as possible and a

one being extremely sad. When happy music was played, the subjects rated the happy faces higher, and when sad music was played, the subjects rated the sad faces lower than without music. When there was neutral face, the music influenced the rating greatly, with sad music again yielding low scores and happy music with high scores. This experiment showed that the emotions of music are "cross-modal," and can easily spread from sensory system to another. The structural features of these songs determine the happiness or sadness of it.

Different structural features in music help elicit certain emotions. A number of factors, such as mode, loudness, and melody influence the emotional valence of the piece, but tempo is typically regarded as the most important [2]. A song with a fast tempo emotes happiness, excitement, and anger, while a slow tempo emotes sadness or serenity. Major tones give us a sense of joy, while minor tones give us a sense of sadness. If a song is loud it will it give off an air of anger, intensity, or power. When a melody has complimentary harmonies one would feel happiness, relaxation, or serenity, and when the harmonies clash one would feel excitement, anger, or unpleasantness. If the rhythm smooth and consistent, the listener will feel happiness or peace, if it is rough or irregular, the listener will feel amusement or uneasiness, and if it is varied, the listener will feel joy. Structural features are not the only features that influence the emotion of a song.

Performance, listener, and contextual features also influence the emotions radiated in a song. Performance features are how the musician plays the song, which is broken into performer state and performer skills. The performer state is the stage presence, interpretation, and drive of the performer; performer skills

include the appearance, technical skill, and reputation of the person playing the song. While the performer makes the music, the listener's qualities are also very influential on the emotions produced from the song. From the listener's standpoint, personality, age, knowledge of music, and motivation to listen to the music influence the emotions that they produce [3]. The context in which you listen to a song is also important. If one hears a very sad song at a funeral, they are much more likely to be emotionally moved by it, than if they heard it playing at a supermarket. Music not only conveys these emotions, but also can actually produce emotions in people.

New emotions can spring from listening to music. An experiment was performed to see if emotions would actually be produced in the people listening to the song. Participants rated their own emotions with elevated levels of happiness after listening to music with structures that convey happiness and elevated sadness after music with structures that convey sadness [4]. It has also been proved that listening to sad music when already in a melancholy state will intensify the feelings of sadness, and the more familiar one is with the piece of music, the higher the intensity of emotion one feels while listening to the song [5].

We feel the emotions of songs because they mimic the sounds of human body movements. As long ago as ancient Greece, composers have used similar sounds to body movements to stir emotion in listeners. The auditory part of our brain can make sense of sounds we hear from people, such as when we hear stomping we can assume a person is angry about something. When we hear running, the primordial part of our brain assumes danger, as a fellow human is running away from

something [6]. These human noises explain also explain why some music can make us feel fear.

Music can evoke fear in people because it plays off distressful noises that we react to as part of our biology. Playing scary music like the theme from *Jaws* or the high strings in *Psycho* is playing on your deepest biologically engrained emotions. According to Daniel Blumstein, who studied the screams of baby marmots, nonlinear sounds such as a dissonant chord, a child's cry, or a baby animal's scream trigger a biologically engrained response by making us think that our own offspring are being threatened, even if you have not produced any of your own [7]. Humans, and many other animals, react to sudden and harsh noises because they are hardwired to do so as a defense mechanism. These noises trigger our fight or flight response, thus giving us an anxious feeling. Some movies have actually gone as far as putting animal screams into movies, to produce the desired effect of fear. Blumstein also found that musical clips where the melodies suddenly became higher provoked greater emotional stimulation than moments when the notes suddenly went lower.

Music can bring back emotionally fueled memories. Because music is so common in life, especially at occasions such as weddings and funerals, playing a song can bring back these memories into consciousness. Music is impervious to later memory distortion as it is processed by the lower, sensory levels of the brain. It is easier to recall one when prompted by music, as there is a strong connection between emotion and music within memory [4].

Emotion and music have been tied together since the days of early civilizations. Not only can music convey a sense of emotion, so that we feel empathy for the composer, but it can also make new emotions within us.

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