Musical versus Visual Cues to Emotion

Ariana Rivera
Ramapo College of New Jersey, Mahwah, NJ, 07430

Abstract

The purpose of this research was to measure emotional reactions to art and music and determine which one people react to more. I hypothesized that people would react more to music than a visual stimulus based upon previous studies. The same visual stimuli were presented to study participants with different music. Both the visual and musical components were original pieces. Results indicated that individuals reacted differently to the visual stimuli depending on the music being played.

Method

- 37 participants took part in the study
- Each participant watched two short videos, one "happy" and one "sad"
- The happy video depicted a girl reacting to the random appearance of a cup and water dispenser
- The sad video depicted the planets slowly dissolving/ exploding and the sun imploding
- Each video was paired with music – either "happy music" or "sad music"
- After each video, participants indicated on a survey what emotion they felt while watching

Survey

Video 1
Please indicate the emotion that you experienced the most as you watched the first video sequence.
Please circle the word below that best describes your emotional reaction to this video.

Anger Sadness Happiness Fear Disgust

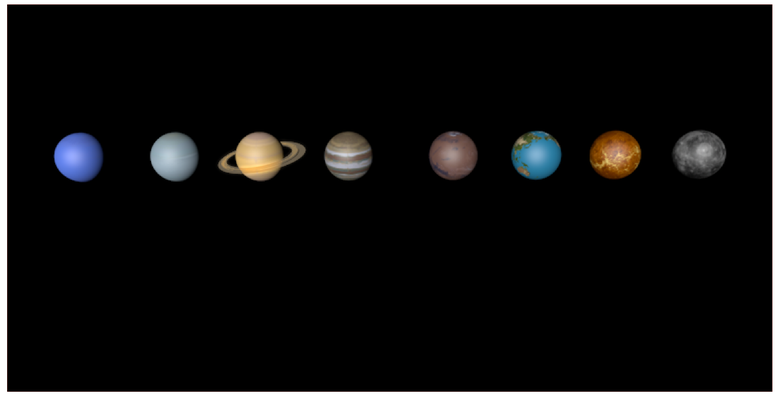

Table 1.

Frequencies of Emotions Expressed by Animation and Music Type

	Happy Animation	
	Happy Music	Sad Music
Emotions		
Anger	8	0
Sadness	1	3
Happiness	10	1
Fear	0	2
Disgust	6	6

	Sad Animation	
	Happy Music	Sad Music
Emotions		
Anger	0	1
Sadness	5	9
Happiness	11	4
Fear	6	1
Disgust	0	0

Results

When the song and animation were both created to be "happy" stimuli, participants were equally likely to experience anger, happiness, and disgust, $\chi 2$ (2, N = 24) = .88, p = .64. It appears that there were individual differences in how this animation and music combination impacted people.

When the song was "happy" but the animation was more solemn, participants were equally likely to experience sadness, happiness, and fear, $\chi 2$ (2, N = 22) = 2.58, p = .28. Once again, the animation and music combination struck people differently.

For the sad song and happy animation combination, the most common emotion experienced was disgust, rather than sadness or happiness, albeit not significantly so, $\chi 2$ (3, N = 12) = 4.67, p = .20. Overall, 11 participants experienced something negative and only 1 experienced happiness, $\chi 2$ (1, N = 12) = 6.76, p = .01, a significant effect. In this case, the music appeared to have more impact than the animation.

Finally, for the sad song with solemn animation, most participants experienced sadness, $\chi 2$ (3, N = 15) = 11.40, p = .01, as was expected.

Conclusion

People reacted more to sad music than a happy video when they were paired, thus reacting to the negative emotional content of the music more than to the visual content of the video. However, in general, the data show strong individual differences in how people reacted to the music and visual art.