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Emotionally-Charged Music Influences Attentional Bias Towards Positive Colors

Abigail Mitchell
abigail.mitchell@pop.belmont.edu

Carole Scherling
Belmont University, carole.scherling@belmont.edu

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Abigail Mitchell & Carole Scherling, PhD.

Abstract

Early-on, humans perceive music as happy or sad, and demonstrate concordant emotional responses (Dalla Bella, 2001). Colors themselves are also intrinsic to emotional experiences. Respectively, bright and dark colors associate with positive and negative emotions, and people are attracted to stimuli matching current mood (Becker & Leinenger, 2011). The current study used a modified Color Dot-Probe task to examined the influence of emotional music on color biases. The task involved looking at the central screen, where 2 color squares would appear to the right and left, followed by the appearance of a target behind one color. Reaction times were recorded from target appearance to location identification through a button press, with shorter reaction times indicating a higher attentional draw. Subjects completed the task three times, first without background music and then randomized with positive and negative music. Pilot data from 32 participants indicates slower reaction times when the probe appeared behind negative colors, during both positive and negative musical trials ($t= -2.17$, $p < 0.05$; $t= -2.13$, $p < 0.05$). No differences in reaction times were shown between musical types when behind positive colors, nor between color-types during the non-musical trials ($p>0.05$). Data collection is ongoing, but preliminary results indicate that background music, regardless of valence, biases attention towards positive colors. Therefore, it suggests that music itself introduces a color biases. These findings may be useful in future affective studies and may have applications in advertising.