The texture of musical sounds: Cross-modal associations from musical timbres and intervals to visual textures
Joshua Peterson, Thomas Langlois, & Stephen E. Palmer, Department of Psychology, University of California, Berkeley

BACKGROUND

Previous research has provided evidence that cross-modal music-to-color associations are mediated by emotion, both for classical orchestral music and for a wide range of genres. (Palmer et al., 2011; Whitfield et al., 2011)

Similar results suggesting emotional mediation have been found using lower level musical stimuli, including musical melodies, two-tone intervals, and instrumental timbres. (Palmer et al., 2011; Griscom & Palmer, 2012)

EXPERIMENT 1

Do these findings generalize to another salient visual domain: line-based geometric textures?

STIMULI

16 timbres generated using naturalistic recordings

METHODS

Subjects compared every pair of the 4 textures for fit with each sound.

RESULTS

Texture-Sound Association Task: People chose textures with matching emotional content, and emotional qualities.

PERCEPTUAL & EMOTIONAL DIMENSIONS

CONCLUSION

The results suggest that associations from low-level musical stimuli to visual textures may be mediated by corresponding dimensions in particular perceptual and emotional qualities. 

REFERENCES


