

Introduction

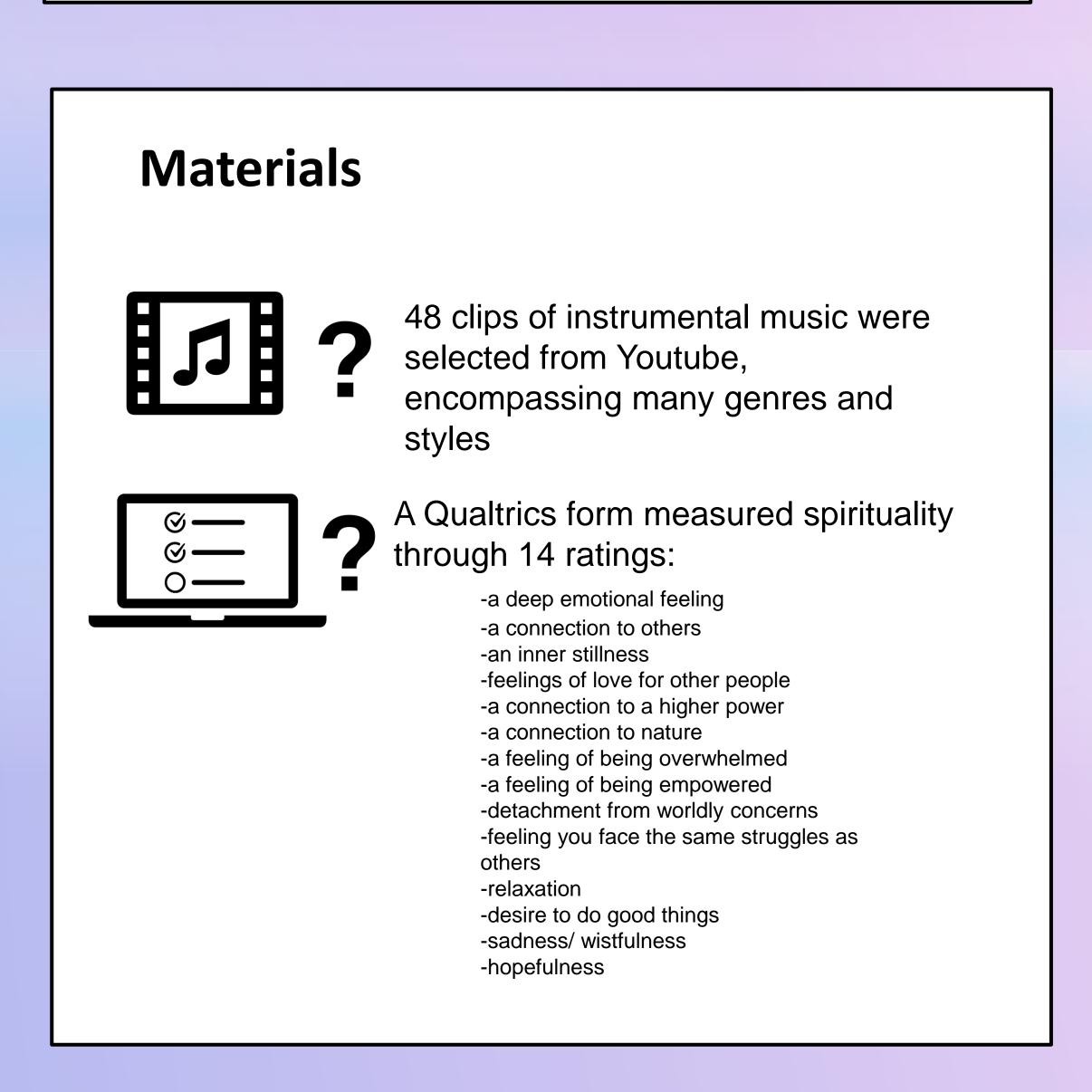
"I was sitting one evening, listening to a Brahms symphony. My eyes were closed and I must have been completely relaxed for I became aware of a feeling of 'expansion', I seemed to be beyond the boundaries of my physical self."

Question: What **intrinsic qualities of music** elicit **feelings of spirituality** in listeners?

a) Intrinsic qualities (IV) - the intensity, valence, and depth of music, fundamental psychological dimensions of music according to Greenberg et al (2016).

b) feelings of spirituality (DV) - measured through questions on connectivity, self-reflection, and transcendence; determined through literature research.

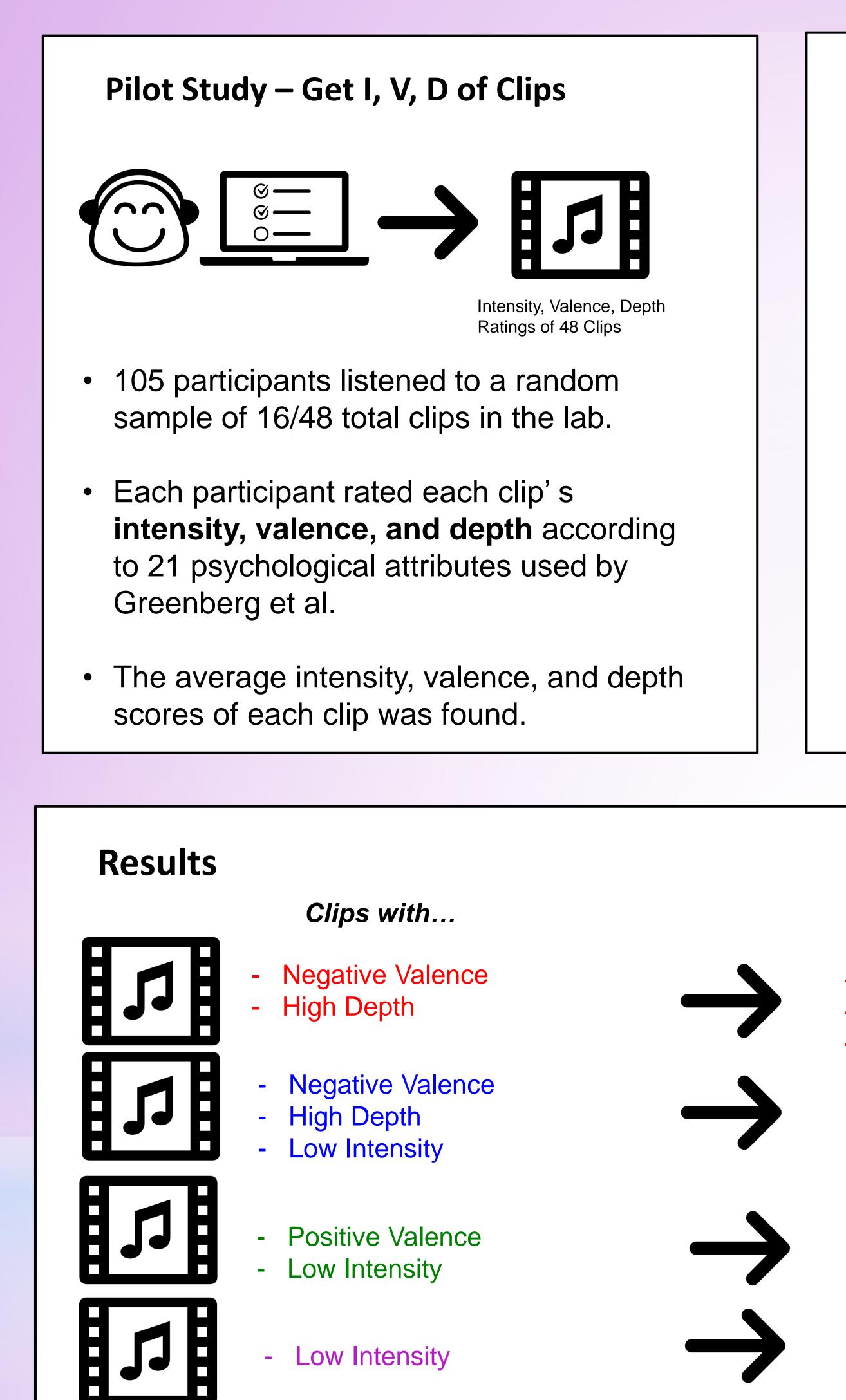
Objective: Study how intensity, valence, and depth differences in instrumental music elicit feelings of spirituality in listeners.



The Power of Notes: The Psychological Impact of Music on Feelings of Spirituality

Qiang Zhang (Dr. Mark Leary) **Duke Department of Psychology and Neuroscience**

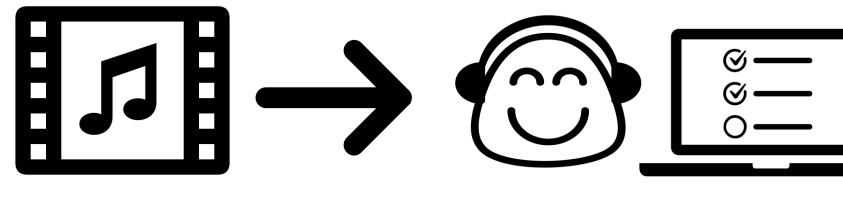
"Music is an outburst of the soul"- Frederick Delius



Acknowledgements

Thanks to Professor Leary, my thesis advisor; Ziyi Yan ('22) for helping me collect data; Professor Pritchard and Professor Love, my music professors; and all my family and friends. This thesis is dedicated to my friend Billy Tidwell (1998-2019), an amazing violist who's music still moves me.

Main Study – Measure Spirituality



Intensity, Valence, Depth Ratings of 48 Clips

Measured Spiritual Responses

- 102 participants listened to a random sample of 16/48 total clips in the lab.
- Each participant rated how 'spiritual' they felt after listening to each clip, according to the list of 14 ratings.
- The average ratings for each clip was found (14 averages for each clip).

Were Significantly Associated with...

- Deep emotional feelings
- Connection to Higher Power
- Feelings of sadness/wistfulness
- Feelings of inner stillness
- Connection to Nature
- Feelings of facing same struggles as others
- Desire to do good things
- Feelings of hopefulness
- Connection to others
- Feelings of love for others
- Detachment from worldly concerns
- Feelings of relaxation

Conclusions

- Spiritual music appear to be associated with:
 - -High Depth
 - -Low Intensity
 - -Both Positive and Negative Valence
- Feelings of connection (to god, nature, and humanity) are associated with different kinds of music.
- Positive valenced music is the only one associated with a pro-social inclination.
- Areas for future research: 1) How personality traits affect spiritual responses (empathy, religiosity) 2) studying spiritual responses using non-instrumental music

Literature Cited

undovist, L., Carlsson, F., Hilmersson, P., & Juslin, P. (2009), Emotional responses to music Experience, expression, and physiology. Psychology of Music, 37(I), 61-90. Retrieved May 4, 2018. Miller, M. M., & Strongman, K. T. (2002). The Emotional Effects of Music on Religious Experience: A Study of the Pentecostal-Charismatic Style of Music and Worship. Psychology of Music Lychner. J. A. (2008). A comparison of non-musicians and musicians aesthetic response to

- music experienced with and without video. International Journal of Music Education, Zentner MR, Grandjean D, Scherer KR (2008) Emotions evoked by the sound of music: characterization classification and measurement. Emotion 8:494–521 Vuoskoski, J. K., & Thompson, W. F. (2012). Who Enjoys Listening to Sad Music and Why? Music Perception: An Interdisciplinary Journal, 29(3), 311-317 Rawlings, D., Ciancarelli, V. (1997), Music preference and the five-factor model of the NEO personality inventory. Psychology of Music, 25 (3), 120-132. Penman, J., & Becker, J. (2009). Religious Ecstatics, "Deep Lis Empirical Musicology Review, 4(2), 49-70. Liljeström, S., Juslin, P. N., & Västfjäll, D. (2012). Experimental evidence of the roles of music choice, social context, and listener personality in emotional reactions to music Psychology of Music, 41(5), 579-599
- Ladinig, O., & Schellenberg, E. G. (2012). Liking unfamiliar music: Effects of felt emotion ar individual differences. Psychology of Aesthetics, Creativity, and the Arts, 6(2), 146-154. Konečni, V. J., Wanic, R. A., & Brown, A. (2007). Emotional and Aesthetic Antecedents and Consequences of Music-Induced Thrills. The American Journal of Psychology, 120(4),
- Kensinger, E. A., & Corkin, S. (2004). Two routes to emotional memory: distinct neural processes for valence and arousal. Proceedings of the National Academy of Sciences of the United States of America, 101(9), 3310-3315.