

First Sources Assignment

Primary Sources

1. Ribeiro, F. S., Santos, F. H., Albuquerque, P. B., & Oliveira-Silva, P. (2019). Emotional induction through music: Measuring cardiac and electrodermal responses of emotional states and their persistence. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.00451>

Abstract: This study focused on capturing the curve of emotional states, being monitored with valence and arousal self-report measures, and used musical excerpts to generate these states. The results show that carefully selected positive and negative excerpts can be effective in inducing happy and sad states.

2. Wilson, A. D., & Golonka, S. (2013). Embodied Cognition is not what you think it is. *Frontiers in Psychology*, 4. <https://doi.org/10.3389/fpsyg.2013.00058>

Abstract: This article explains both the standard cognitive approach to explaining behavior and introduces the *replacement hypothesis* of embodied cognition. A research guide is recommended for any work done within the embodied cognition field.

3. Khalfa, S., Isabelle, P., Jean-Pierre, B., & Manon, R. (2002). Event-related skin conductance responses to musical emotions in humans. *Neuroscience Letters*, 328(2), 145–149.
[https://doi.org/10.1016/s0304-3940\(02\)00462-7](https://doi.org/10.1016/s0304-3940(02)00462-7)

Abstract: This study tried to verify whether or not emotional reactions to music would induce autonomic nervous system responses. This article used the Skin Conductance Response (SCR) to measure these responses to four musical emotions: fear, happiness, sadness, and peacefulness. Results show that SCRs can be brought up and changed by musical emotional arousal but aren't sensitive to emotional clarity.

4. Khalfa, S., Roy, M., Rainville, P., Dalla Bella, S., & Peretz, I. (2008). Role of tempo entrainment in psychophysiological differentiation of happy and sad music? *International Journal of Psychophysiology*, 68(1), 17–26. <https://doi.org/10.1016/j.ijpsycho.2007.12.001>

Abstract: This study intended to find out whether fast and slow rhythms or tempo alone are sufficient in inducing different physiological effects like electrodermal, facial muscle activity, blood pressure, and heart/respiration rate. The results found that happy and sad music are significantly differentiated by blood pressure, electrodermal activity, and zygomatic activity, while fast and slow tempo control didn't elicit differentiations.

5. Fuentes-Sánchez, N., Pastor, R., Escrig, M. A., Elipe-Miravet, M., & Pastor, M. C. (2021).

Emotion elicitation during music listening: Subjective self-reports, facial expression, and autonomic reactivity. *Psychophysiology*, 58(9). <https://doi.org/10.1111/psyp.13884>

Abstract: This study investigated subjective and physiological correlates of inducing emotions through music, following the three-dimensional *and* discrete emotion model. Overall, this study found standardized film music excerpts evoked powerful emotions under laboratory settings.

6. Dibben, N. (2004). The role of peripheral feedback in emotional experience with music. *Music Perception*, 22(1), 79–115. <https://doi.org/10.1525/mp.2004.22.1.79>

Abstract: Two experiments were conducted in order to determine the intensity and valence of emotion experienced while listening to music. They found that arousal influences the intensity of emotion experienced with music and that people use their body state as information about the emotion felt while listening to music.

7. Etzel, J. A., Johnsen, E. L., Dickerson, J., Tranel, D., & Adolphs, R. (2006). Cardiovascular and respiratory responses during musical mood induction. *International Journal of Psychophysiology*, 61(1), 57–69. <https://doi.org/10.1016/j.ijpsycho.2005.10.025>

Abstract: This study hypothesized that cardiovascular and respiratory patterns could discriminate moods induced via music. Subjects consistently reported experiencing the targeted mood, and in many cases strong emotions. Median emotional intensity ratings for fear/happiness (on a scale from 0 to 9) is 6 and 4 for the sadness induction scale.

Secondary Sources

8. Cox, A. (2017). *Music and embodied cognition: Listening, moving, feeling, and thinking*. Indiana University Press.

Abstract: This book advances Arnie Cox's theory of the mimetic hypothesis, that a large part of our understanding of music involves embodied *imitation* in the listeners bodily motions and exertions.

9. Bortz, B., Jaimovich, J., & Knapp, R. B. (2019). Cross-cultural comparisons of affect and electrodermal measures while listening to music. *2019 8th International Conference on Affective Computing and Intelligent Interaction (ACII)*.

<https://doi.org/10.1109/acii.2019.8925476>

Abstract: This article looks through the many Emotion in Motion (EiM) self-reported affective responses to musical stimuli within the past decade in order to illustrate “salient

electrodermal responses”, many of which are across disparate cultures and geographic locations, specifically across Europe and Asia.

10. Perlovsky, L. (2015, April 28). *Origin of music and embodied cognition*. Frontiers in psychology. Retrieved September 12, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4411987/>

Abstract: As the title suggests, it goes over the history of music and embodied cognition, but he advocates for a hypothesis that music has a specific cognitive function to embody abstract thoughts. The article talks about Knowledge Instinct (KI), mental hierarchy, language representations, cognitive representations, cognitive dissonance, and the emergence of music.

11. Dell'Anna, A., Leman, M., & Berti, A. (1AD, January 1). *Musical Interaction reveals music as embodied language*. Frontiers. Retrieved September 12, 2022, from <https://doi.org/10.3389/fnins.2021.667838>

Abstract: This specific study aims to suggest that the correct way to capture the social interactive nature of music would be to think of it as an embodied language, rooted in culturally adapted brain structures. Many studies within the embodied music cognition field are referenced, and a framework for music as an embodied language is employed.

12. Shapiro, L. A., Leman, M., & Maes, P.-J. (2017). Music Perception and Embodied Music Cognition. In *The Routledge Handbook of Embodied Cognition* (pp. 81–89). essay, Routledge.

Abstract: This specific chapter within this book is entirely about music perception and embodied music, and lists both evidence and critiques for music perception as embodied cognition. Many studies listed tested music and its interaction with movement, sensorimotor learning, expressions, and emotional states.