Creativity is the best class offered at Amherst College

The Darkness

Amherst College

Running Head: Creativity rules!!!

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Abstract

Two experiments were conducted to examine whether manipulating the acoustic properties of music would influence emotional ratings of the melodies. Atonal melodies, composed to express joy, anger, and sadness were manipulated (e.g., by increasing/decreasing note density or raising/lower pitch height) to either intensify or diminish the intended emotions. For each melody, zero, one or two properties were altered such that either one or both either intensified or diminished the intended emotion. Listeners rated both the emotional expression of the piece and the extent to which they experienced an emotional response to the music. The participants’ ratings matched expectations: ratings of emotional expression increased or decreased according to the number of properties and the direction of manipulation. These data suggest that emotional expression in music is tied to musical properties and that familiar cultural forms are not necessary to perceive emotion and experience emotional responses to music.

Across both history and geography, human cultures with any significant historical/archaeological/anthropological record have all demonstrated some evidence of music making (Huron, 2001; Mithen, 200x; Sloboda and Juslin, 2001). Within modern Western culture, the vast majority of people report that they enjoy listening to music, though there are a few notable exceptions (e.g., Sigmund Freud; Roth, 1986; see also, Sacks, 2007). Perhaps because it is so thoroughly enjoyed, music has become difficult to avoid. Music is embedded in many visual media (television, movies, commercials), and subtly (or not) forms the background in many commercial spaces (e.g., stores and restaurants). It is a part of cultural rituals, both secular and sacred. Although music is used as a way to ‘get to know’ someone (Rentfrow & Gowling, 20xx), the reason most frequently given for listening to music is the emotional response it elicits (Panksepp, 1995).

<and so on>

Method

Participants. The participants for this experiment were 51 Amherst College students between the ages of 18 and 22. The participants either received credit for their Introduction to Psychology course, or $5 cash compensation for participating. <and so on>

Stimuli. Four undergraduates who were enrolled in a class on 20th century music with a specific emphasis on non-tonal music instructed to compose four distinct melodies that would elicit a different feeling from listeners. The four feelings were joy, anger, sadness and peace. These emotions were selected because they represent different combinations of valence and arousal (Hunter, Schellenberg, & Griffith, 2011; Russell, 1980): Happiness (+ valence, high arousal); Peacefulness (+ valence, low arousal); Anger (- valence, high arousal); Sadness (- valence, low arousal). <and so on>

Procedure. The participants were tested either individually or in groups of two, three, or four. Upon entering the lab, the subjects read and signed an informed consent document. They next completed a musical experience questionnaire that asked them to list any instruments that they played, including years of formal training and informal play; their years of participation in instrumental groups; and their years of vocal music experience. The participants were also asked to list any courses they completed in music, music theory, or composition. Preliminary analyses indicated that none of the questions on the musical experience questionnaire were correlated with any of the dependent measures collected in the experiment, so musical experience will not be discussed further. <and so on>

Results

Alpha was set = .05 for all reported analyses. When the assumption of sphericity was not met for within subjects analyses, the Greenhouse-Geisser adjustment was made to the degrees of freedom; however, the unadjusted values will be reported. Post-hoc tests were conducted using the Bonferroni adjustment to alpha to control the Type I error rate. <and so on>

Discussion

Two experiments were conducted to determine whether emotional responses to music could be affected by manipulating acoustic properties that are not culturally-determined signifiers of emotional expression. In Experiment 1, listeners rated the intended and experienced emotion of atonal melodies written to express joy, anger, and sadness. Experiment 2 used the same methodology but the stimuli were tonal versions of the melodies used in Experiment 1. Overall, the data confirmed the experimental hypotheses. The subjects recognized the emotional intent of the composers even when they couldn’t rely on culturally-determined signifiers like mode. Moreover, acoustic properties that did not have any clear traditional significance within Western music significantly influenced emotional experience (although these effects were stronger for anger and sadness than they were for joy especially when one considered elicitation of an emotional response rather than recognition of the composer’s intent).

<and so on>

References

Balkwill, L.-L., Thompson, W.F., & Matsunaga, R. (2004). Recognition of emotion in Japanese, Western, and Hindustani music by Japanese listeners. Japanese Psychological Research, 46, 337-349.

<and so on>