

Exploring the interplay between rhythm complexity, musical pleasure, and musical hedonia in shaping rhythm perceptual abilities

Monday, September 23, 2024 12:30 PM (20 minutes)

Research consistently shows that rhythm complexity elicits pleasurable responses to music, with medium complexity rhythms eliciting the highest levels of pleasure and wanting to move. However, whether it predicts rhythmic skills and its association with musical pleasure and musical hedonia remains unexplored. So, in Experiment 1, we first quantified the pulse entropy of realistic musical excerpts as a measure of rhythmic complexity, while participants (N=102) rated the pleasure and the wanting to move of these excerpts. Moreover, we explored participants' sensitivity to musical reward (i.e., musical hedonia) with the extended Barcelona Music Reward Questionnaire (eBMRQ). Results showed an inverted U-shaped relationship between pleasure and wanting to move ratings and pulse entropy, especially in participants with higher musical hedonia levels. In Experiment 2, participants (N=210, independent sample re-analysis) completed a Beat Alignment Test (BAT) in which they have to detect misalignments between a superimposed metronome and realistic musical excerpts (the same of Experiment 1) and completed the eBMRQ questionnaire. Results showed that medium pulse entropy (i.e., medium complexity) tracks were perceived as more rhythmically aligned, suggesting that rhythm complexity predicts rhythmic skills. Additionally, higher scores on the eBMRQ questionnaire correlated with better rhythm perception, linking musical hedonia with rhythmic abilities. Overall, our results underscore the complex relationship among intrinsic properties of stimuli, such as pulse entropy, individual reward sensitivity, and musical pleasure, and how all together intertwine to shape rhythmic perception abilities.

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