

The Sweet Spot of Rhythm: How Rhythm Complexity and Individual Sensitivity to Musical Reward Shape Rhythmic Skills and Interpersonal Synchronization

Tuesday, September 24, 2024 4:10 PM (20 minutes)

Rhythm naturally emerges in humans from infancy and significantly impacts various cognitive functions (e.g., memory, attention) and emotional processes (e.g., emotions, sense of connection). Moreover, it is thought to modulate music reward responses through its strong movement-inducing component. Consistent evidence has highlighted the pivotal role of rhythm complexity in eliciting pleasurable responses to music, with medium complexity rhythms eliciting the highest levels of pleasure and wanting to move. Additionally, we know that there are individual differences in how people experience reward in music-related activities (musical hedonia). This research explores the combined effects of interindividual differences in music reward responses and rhythm complexity on rhythmic skills. In different experiments, we demonstrated a strong link between musical hedonia and rhythmic ability, suggesting that participants with higher music reward are more sensitive in the performance of rhythm production and rhythm perception tasks. Furthermore, the study establishes a novel link between rhythm complexity and rhythm perception skills: participants perceived tracks with medium complexity as more rhythmically aligned than those with low or high complexity. This suggests that music's inherent structure interacts with individual reward preferences to influence perception. Finally, the research extends to social interaction by demonstrating that musical hedonia affects not only individual rhythmic skills but also the ability to synchronize motor movements with others. Together these results highlight the role of both intrinsic properties of stimuli (rhythm complexity) and individual reward sensitivity to music in shaping not only individual rhythmic skills but also our ability to temporally coordinate actions with others.

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The Beat and Beyond: Unveiling the Roots, Development, and Applications of Human Musical Rhythm

If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?

No

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Session Classification: Symposia