The cost of music curiosity and its impact in memory: evidence from laboratory and natural settings

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Résumé

Curiosity is a fundamental motivator of human behavior, driving individuals to seek new experiences and information. This fundamental human drive triggers reward-related dopaminergic pathways, which enhances cognition and memory consolidation. In the present study, we investigated how curiosity during music listening influences exploratory behaviors and memory outcomes, in both laboratory and natural settings. In the laboratory setting, participants (N=63) performed an exploration/exploitation trade-off paradigm assessing their willingness to pay for exploring new, unfamiliar electronic music. In the natural setting, participants (N=150) attended a DJ set and indicated their willingness to pay for songs or related information. Both experiments included a memory test for recognition/recollection 24 hours later. Results showed that music-induced curiosity states enhanced exploration behavior (i.e., heightened curiosity increased willingness to pay for obtaining new information) and long-term memory performance. Individual differences in music preferences and sensitivity to music reward (measured by the Barcelona Music Reward Questionnaire) were also influential. Remarkably, a machine learning classifier trained on laboratory data accurately predicted the exploration behavior in the natural setting based solely on subjective curiosity ratings. This study sheds light into the interplay between curiosity, decision-making, and memory.

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