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The Effect of Context on Cross-Cultural Music Memory Performance

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ABSTRACT

Background

Previous research has shown that both expert and novice listeners demonstrate an "enculturation effect" where they have more difficulty processing and remembering music that is culturally unfamiliar (Demorest, et al., 2008; Morrison et al., 2008; Wong, et al., 2009). What is less clear is the influence of contextual variables like timbre and tuning systems on memory responses. Another competing hypothesis is that affective response (e.g. preference) rather than cultural familiarity *per se* influences memory performance of culturally unfamiliar music.

Aims

The purpose of this study was to explore the effect of contextual variables—texture, timbre, tuning, rhythm and complexity—and rhythm on listeners' ability to process and retain culturally unfamiliar music. We also sought to determine if there was a direct relationship between preference for a piece of music and listener's memory of it.

Method

We had US-born participants listen to instrumental excerpts (25-35 sec) from both the Western classical tradition and from the Turkish classical tradition. Participants indicated their preference for each excerpt, and following each block of excerpts from a culture they were asked to identify whether short test items were taken from music previously heard. Participants were randomly assigned to one of two conditions, *contextualized* (authentic original recordings from the culture) or *decontextualized*. The decontextualized examples were transcribed single line melodies without the timbre, instrumentation or tuning of the originals.

Results

We found that removing the stimuli from their cultural texture, timbre and tuning had no impact on cross-cultural memory performance when compared to the original full ensemble performances. Listeners preferred Western examples in general to Turkish examples; when we correlated preference responses with memory performance on each individual piece across the two cultures there was no significant association between the two.

Conclusions

This experiment demonstrates that the removal of surface aspects of music (timbre, instrumentation and tuning) does not alter the effect of enculturation suggesting that cultural differences in memory performance reflect responses to deeper structural characteristics. These findings also demonstrate that poorer memory performance cannot be explained by lower preference for out-of-culture music. These results have implications for a theory of cross-cultural music cognition that centers on statistical properties of expectancy formation for pitch and rhythm patterns. Experiment two is currently underway to explore whether the removal of rhythmic information might affect cross-cultural memory performance.

Keywords

Culture, Memory, Enculturation, Context, Expectancy

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