



Embedding Familiarized Rhythm or Pitch Sequences in Musical Pieces Increases Subjective Song Familiarity

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Background

How are isolated features held within memory traces?

Kostic & Cleary (2009)

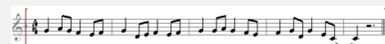
- ❖ Study list of song clips
- ❖ Isolated musical features at test
 - ½ from studied song clips
 - ½ from unstudied song clips

Study Song Clip 

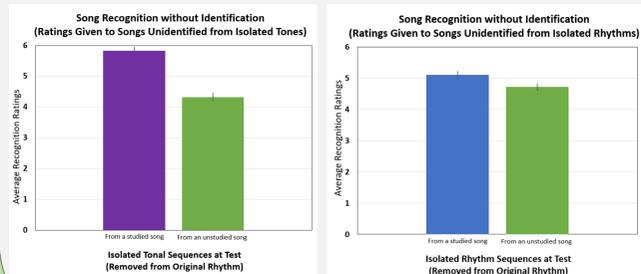


Isolated Rhythm 



Isolated Tone 

Song Recognition without Identification



Present Study

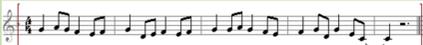
Experiment 1: Can song clips be familiarized through exposure to their isolated features?

Experiment 2: How does increased feature exposure affect familiarity with the song clip later on?

Experiment 1 Method



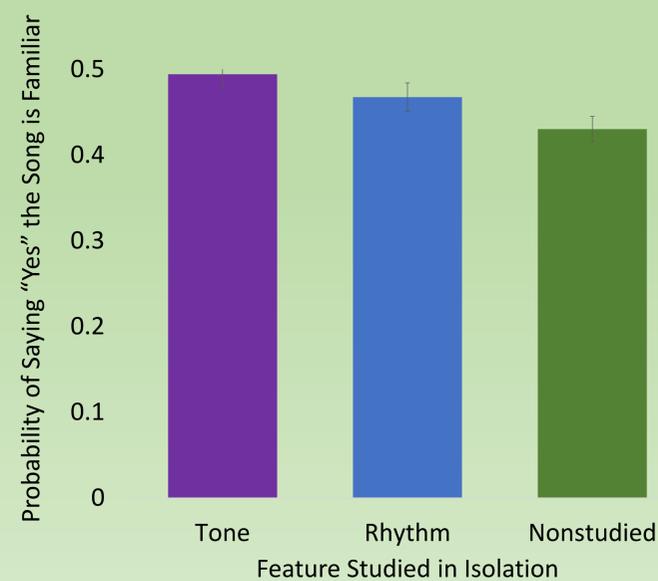
Isolated Rhythm 

Isolated Tone 



Test Song Clip 

Experiment 1 Results: Probability of Song Familiarity



$F(2, 244) = 12.684, MSE = .126, p < .001, \eta_p^2 = .09$

Experiment 2 Method



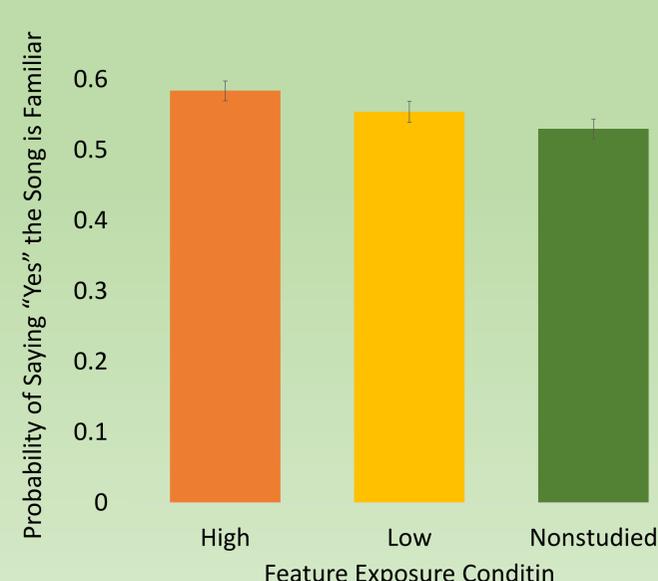
Isolated Rhythm (x1) 

Isolated Rhythm (x3) 



Test Song Clip 

Experiment 2 Results: Probability of Song Familiarity



$F(2, 242) = 10.607, MSE = .090, p < .001, \eta_p^2 = .08$

Implications

- ❖ Subjective song familiarity **increases** when familiarized features are embedded within the song.
- ❖ The feature familiarization effect is larger for familiarized **tonal features** than for familiarized rhythms.
- ❖ Subjective song familiarity also increases with **increasing exposure** to the isolated features that are embedded within the song.
 - Encoding the feature **3x** = Highest probability of familiarity

Future Directions

- ❖ Increased exposure to tonal sequences.
- ❖ Examine the separate contributions of rhythm versus tone in overall song familiarization to better understand how different features combine to form familiarity with the whole.

References

Kostic, B., & Cleary, A. M. (2009). Song recognition without identification: When people cannot "name that tune" but can recognize it as familiar. *Journal of Experimental Psychology: General*, 138(1), 146 – 159.

Krumhansl, C. L. (2000). Rhythm and pitch in music cognition. *Psychological Bulletin*, 126, 159 – 179.