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Exploring the Speech-to-Song Transformation: Linguistic Influences in Tonal and Non-Tonal Language Speakers

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Abstract

When speech is repeated, we sometimes perceive a musical quality in it, a phenomenon known as the speech-to-song transformation. Pitch information is shown to play a significant role in this process. However, this effect is less pronounced in tonal language speakers for ununderstood reasons. To explore this further, the current study recruited 140 participants, both tonal and non-tonal language speakers, and tested them using various languages and non-speech fragments. Results indicated that the reduced transformation effect in tonal language speakers was specific to speech materials and did not extend to non-speech materials. This suggests that while repetition invites listeners to perceive musical qualities in sound, the mechanisms underlying speech-to-song transformation seem to operate with an additional layer of linguistic processes. The findings provide a basis for further investigations into the dynamic information processing link between language and music.