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Different cultures' music matches their speech styles, researchers find

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Music from different cultures mimics their languages in terms of the types of pitch changes most often used, a study has found.

Researchers have debated for years what the biological basis of music might be. The new findings provide "a way of explaining at least some aesthetic preferences in biological terms," wrote Shui'er Han of the Duke-NUS Graduate Medical School in Singapore and colleagues, reporting the findings in the May 27 online issue of the research journal *PLoS One*.

Past studies have already found "several aspects of musical tonality... are closely tied to voiced speech," they noted.

Han and colleagues analyzed samples of the music and languages of China, Thailand, Vietnam, the United States, France and Germany in terms of pitch content and frequency of pitch changes. The first three of these cultures employ "tone languages," in which pitch is an essential part of the meaning of some words, giving such languages what some listeners describe as a sing-song quality. The other three cultures are not generally considered to have tone languages.

It turned out that tone-language cultures have music in which pitch changes more frequently, and the pitch differences are larger, than non-tone-language cultures, Han and colleagues wrote. These differences, they added, are also reflected in the speech of these cultures.

"Different tonal preferences apparent in music... are closely related to the differences in the tonal characteristics of voiced speech," wrote the scientists. The findings may also help explain why Eastern and Western music differs in the first place, they added. "Explanations often refer to the use of different scales, but this begs the question of why different sets of pitch intervals are preferred in the first place," they noted.