

Keep the beat say, rhythm researchers

19 October 2011



Michael Shutz, an assistant professor of music in the School of the Arts, has found that keeping the beat while listening to music not only helps people feel and enjoy the music but also helps them hear it better. File photo.

Why we do move when we hear good music? Researchers at McMaster University have found that tapping to the beat measurably enriches the listening experience, broadening our capacity to understand timing and rhythm.

The research, recently presented at the [Acoustics Week in Canada](#) conference in Quebec City, probes the complex relationship between [perception](#) and action.

"We set out to answer a simple question: Can moving to the beat actually help us understand the music?" said Michael Schutz, an assistant professor of music in the School of the Arts at McMaster, who designed and conducted the study. "We found that tapping along while listening does more than help us feel and enjoy the music. It actually helps us hear it better."

Participants in the study heard a series of regular beats and were asked whether the final beat was consistent with the preceding rhythm. They then

rated their confidence to each response. On half of the trials subjects were asked to tap along on an electronic drum pad; on the other half they listened without tapping.

When the experimenters played the final tone after participants would have expected the beat, listeners performed 87 per cent better at detecting the change when tapping versus listening passively. The tapping had little effect on performance when researchers played the tone early or on time.

These findings have implications for [listeners](#), performers, and music educators alike, said Schutz.

"From a young age, we teach students to move to the [music](#) while performing, and now we know at least one reason why this is beneficial," he explained. "This study sheds light on why moving while playing helps [musicians](#) keep time and improves their overall performance."

Schutz and his team also found that participants who tapped to the beat felt more confident in their responses compared to those who did not tap.

"Not only does moving to the beat help us keep track of the [rhythm](#), it increases listeners' confidence in their understanding of the music's structure, whether or not participants actually performed better," said Fiona Manning, a graduate student working on the project.

Provided by McMaster University

APA citation: Keep the beat say, rhythm researchers (2011, October 19) retrieved 29 September 2020 from <https://medicalxpress.com/news/2011-10-rhythm.html>

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