

STEMBoost Newsletter



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Can Rats Enjoy Music?

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Music is commonly a feature of culture that only humans are thought to be able to connect with. However, as it turns out, we aren't the only animals capable of bopping to a banger.

Recently, scientists discovered that rats also bob their heads to the beat of music-- a skill known as beat synchronization. Previously, humans and parrots were thought to be the only animals capable of it. Researchers at the University of Tokyo played Mozart's "Sonata for Two Pianos in D Major" at various tempos and observed the motion of the rats, both visually and with accelerometers implanted in the rats. Surprisingly, despite the vast difference in size between humans and rats, both species were found to vibrate most with tempos between 120 and 140 BPM, with beats below or above that range no longer evoking behavior of beat synchronization. More modern songs, such as Lady Gaga's "Born This Way" and Michael Jackson's "Beat It," saw similar responses of bopping.

Interestingly, however, the study raises the question of whether the rats are truly synchronizing with the beats. The mechanism behind beat synchronization is predicting the beat, meaning it usually results in bopping on or slightly before the beat. However, because the rats' motions were so small, it wasn't discernible whether their motions were before or after the beats, meaning it wasn't clear if the rats were predicting the beat or reacting to it. Furthermore, showing reactions to music doesn't necessarily mean that the rats enjoy the music. Following the beats of songs, the researchers explain, does not conclusively show that they are enjoying it, or even perceiving it.

Nevertheless, this discovery may be valuable in investigating the evolutionary origins of beat synchronization.

Sources Used:

Balthazar, Deborah. "Rats Can Bop Their Heads to the Beat." *Science News*, 23 Nov. 2022, <https://www.sciencenews.org/article/rats-bop-their-heads-to-the-beat-music>.