

# Study reveals a common beat in global music

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A group of shishi-odori deer dancers, Japanese folk performing artists who sing, drum and perform acrobatic dancing. Credit: Hiro Ugaya

A new study carried out by the University of Exeter and Tokyo University of the Arts has found that songs from around the world tend to share features, including a strong rhythm, that enable coordination in social situations and encourage group bonding.

Despite decades of skepticism about the presence of cross-culturally universal aspects of music, the study provides strong evidence for the existence of common features in global music. The results, which are published in the *Proceedings of the National Academy of Sciences* (PNAS), support the idea that music is a powerful social glue that helps bond societies together.

Dr Thomas Currie from the University of Exeter said: "Our findings help explain why humans make music. The results show that the most common features seen in music around the world relate to things that allow people to coordinate their actions, and suggest that the main function of music is to bring people together and bond social groups - it can be a kind of social glue.

"In the West we can sometimes think of music as being about individuals expressing themselves or displaying their talent, but globally music tends to be more of social phenomena. Even here we see this in things like church choirs, or the singing of national anthems. In countries like North Korea we can also see extreme examples of how music and mass dance can be used to unite and coordinate groups."

The researchers analysed 304 recordings of stylistically diverse music from across the world to reveal the common features. Although they found no absolute universals, they found dozens of statistical universals (i.e., features that were consistently present in a majority of songs across different world regions). These included features related to pitch and rhythm as well as social context and interrelationships between musical features.



A brass band accompanies a dance-drama troupe as they process down a street in San Agustín de Cajas, Peru, during a patron-saint fiesta. Image courtesy of Joshua Katz-Rosene. Credit: Joshua Katz-Rosene (CUNY).

The results showed that rhythms based on two or three beats were present in music from all regions sampled - North America, Central/South America, Europe, Africa, the Middle East, South Asia, East Asia, Southeast Asia and Oceania.

Lead author Pat Savage, a PhD student from the Tokyo University of the Arts, said: "In the old days, Western people believed that Western scales were universal. But then when we realised that other cultures had quite

different ideas about scales, that led some people to conclude that there was nothing universal about music, which I think is just as silly. Now we've shown that despite its great surface diversity, most of the music throughout the world is actually constructed from very similar basic building blocks and performs very similar functions, which mainly revolve around bringing people together.

"My daughter and I were singing and drumming and dancing together for months before she even said her first words. Music is not a universal language... music lets us connect without language." He added.

When analysing the results, the researchers combined a new way of classifying music, originally pioneered by Alan Lomax - a well-known American music collector and archivist whose music was extensively sampled by the musician Moby in his late nineties album *Play*, with statistical analysis to reveal the features that are common to music from across the world.

"Statistical universals reveal the structures and functions of human [music](#)" is published in *PNAS* by Patrick E. Savage, Steven Brown, Emi Sakai, and Thomas E. Currie.

**More information:** Statistical universals reveal the structures and functions of human music, *PNAS*, [www.pnas.org/cgi/doi/10.1073/pnas.1414495112](http://www.pnas.org/cgi/doi/10.1073/pnas.1414495112)

Provided by University of Exeter

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