

WHERE IS THE BEAT?: COMPARISON OF FINNISH AND SOUTH-AFRICAN LISTENERS

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Background

Listeners' ability to perceive pulse is assumed to relate both to the conventions of the musical system in one's culture and to the factors independent of the culture. A number of previous studies have investigated pulse perception, but the interplay between culturally dependent and independent factors has not been greatly studied.

Aims

The aim of the study was to investigate the degree to which familiarity with a musical culture affects pulse perception. More specifically, the aim was to study whether the accuracy of predicting perceived pulse with data-driven (bottom-up) computational models of pulse perception depends on the listeners' cultural background.

Method

Excerpts of 16 African and 16 European folk songs were presented in two separate blocks to South-African (N=19) and Finnish (N=20) listeners. The subjects were instructed to tap to the pulse using a MIDI controller connected to a computer.

Results

Overall, the groups displayed similar tapping behaviour. There were, however, some differences between the tapping phase and period, especially with certain African melodies. Preliminary results suggest that data-driven models reached a higher prediction rate for stylistically unfamiliar than for familiar melodies.

Conclusions

The results suggest that stylistic knowledge may give rise to pulse perceptions that cannot be accurately predicted with a purely data-driven approach.