

Find a partner who marches to the beat of your own drum

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Everyone marches to the beat of their own drum: From walking to talking to producing music, different people's movements occur at different speeds. But do these differences influence coordination of group actions? The answer is yes, according to McGill University researchers. The finding has the potential to help us predict for each person how successful they will be in a group task, depending on how similar their partners are to them in their internal rhythms.

"We found that pairs of musicians (pianists) with similar [rates](#) of solo music performance are better at synchronizing the timing of tone onsets during piano duets than partners with different solo performance rates,"

says McGill psychology professor Caroline Palmer.

"We think this could extend to interpersonal synchrony in other fields, such as recreational activities like jogging, where health benefits may be greatest when partners are matched for rates; or in education, when teachers and students are matched in conversational speech rates; and especially in sports, such as tennis doubles, pairs skating or team rowing," explains Palmer.

Solo movement rates: stable predictor of group coordination

The McGill research team found that solo rates are a stable predictor of coordination between individuals. There were no group differences in other factors known to influence coordination, such as years of [musical training](#) and age at which pianists started musical training. This suggests that solo rates are the only difference in partners' duet coordination between matched and mismatched pairs.

"These findings suggest that [coordination](#) of timing with a partner is facilitated by similarity of [partners'](#) individual movement speeds," says Anna Zamm, a Ph.D student at McGill and the study's first author.

"Success on group tasks is linked to how well pair members match up - a bit like rowers in a boat. The boat will move straight ahead if both people are matched in the force with which they row", explains Palmer. "It does not matter whether each individual is strong or weak - it's the match in force that matters".

More information: Anna Zamm et al. Endogenous Rhythms Influence Interpersonal Synchrony., *Journal of Experimental Psychology: Human Perception and Performance* (2016). [DOI: 10.1037/xhp0000201](https://doi.org/10.1037/xhp0000201)

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