

Tapping with a stranger: How does empathy mediate the affiliative effects of interpersonal synchronisation?

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Disciplinary background A. Music. The study is informed by music studies focusing on interpersonal synchronisation during musical interactions between individuals with little or no formal musical training.

Disciplinary background B. Psychology. The study draws on research work in psychology that focuses on trait empathy and the emergence of social bonding through non-verbal interactions.

Abstract

The present study aims to explore how trait empathy mediates the feelings of closeness, similarity and empathy stemming from synchronous musical interactions in individuals with little or no formal musical training. In addition, the study seeks to explore how changes in the musical and social environment of a joint action might influence this role of empathy in mediating the affiliative effects of synchronisation.

Background: In the last decades, research has revealed that moving, tapping or playing music in synchrony with others fosters group cohesion and social bonding (Vicaria & Dickens, 2016; Stupacher, Maes et al., 2017). Researchers have also recently observed an association between trait empathy and the strength of those social bonding effects stemming from synchronisation, i.e. one might experience stronger or weaker effects depending on their empathy level (Stupacher, Mikkelsen & Vuust, 2021). However, this mediating role of empathy appears highly susceptible to changes in the musical and social environment of an interaction and requires further investigation (Stupacher, Mikkelsen & Vuust, 2021). We, therefore, sought to explore the changes that might influence this role of empathy by implementing two different musical settings (a finger-tapping and an observational task - social changes) with music in three different tempi (musical changes). The purpose of the two tasks was to detect any differences in the role of empathy when individuals actively engage or passively observe a musical interaction. Furthermore, the different tempi sought to elucidate further the impact of music on this relationship between empathising and synchronising with others.

Methods: Eighty-five participants with little or no previous musical training were recruited, and their empathy was measured using the Interpersonal Reactivity Index (Davis, 1980). Following this, participants completed: a) a finger-tapping task, where they engaged in tapping interactions with a computer, being led to believe that they were interacting with tapping recordings of other participants; and b) an observational task, where participants watched videos of two stick-figures walking (Stupacher, Maes et al., 2017) while imagining being one of them. In both tasks, synchronisation was manipulated based on four conditions: 1) synchronous, in-phase; 2) synchronous, anti-phase; 3) asynchronous, in-phase; and 4) asynchronous, anti-phase tapping or walking, respectively. Music was presented in three different tempi: 83, 100 and 125bpm. Each task comprised 12 trials (4 conditions x 3 tempi), all of which were followed by participants rating their feelings of closeness, similarity and empathy toward their ostensible partners on a Likert scale ranging from 1 ("Not at all") to 5 ("Very much").

Results: Data analysis is currently in progress; however, we anticipate finding that individuals with higher empathy experienced stronger affiliative effects toward synchronous partners, while those with lower empathy experienced a stronger disconnection from asynchronous partners. We further anticipate that slower tempo negatively impacted the role of empathy, and all participants perceived the finger-tapping task as a stronger musical interaction. Therefore, both the affiliative effects of synchronisation and the effect of empathy were stronger in the finger-tapping task across all participants.

Interdisciplinary implications. The anticipated outcomes highlight an emergent interplay between personal characteristics and synchronisation proximity in the general public. Therefore, the implications for music and psychology could be the implementation of this interplay to design more contextually sensitive musical interventions aiming to foster social bonding and empathy across different groups, alleviating, therefore, emerging intergroup barriers.

References

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