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Interpersonal physiological connection is associated with improved orchestral performance

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Abstract

Interpersonal physiological connection is thought to play a crucial role in group activities. A previous study with participants who had little musical experience has shown that the groups with higher heart rate synchronization were better able to perform simple drumming tasks in a coordinated manner. In the present study, we investigated whether heart-rate synchronization is associated with improvement in a complex harmonic performance of an orchestra. The subject of this study was an orchestra composed of several semi-professional and amateur musicians rehearsing a new original piece. The heart rates of sixteen musicians were simultaneously measured during a joint rehearsal. The results indicate that while the average heart rate of the musicians decreased, heart-rate synchronization among the musicians increased over the course of repeated group rehearsals. For a harmonic performance, the musicians may need to have a physiological connection to each other without their physiological arousal being too high.