

EFFECT OF MUSICAL RHYTHM ON DYADIC BEHAVIORAL SYNCHRONY

ABSTRACT

The current study investigated the effect of musical rhythmical auditory stimuli on behavioral synchrony. To test out how different temporal properties of rhythm may result in different level of behavioral synchrony and how individual difference towards rhythm could possibly moderate the relationship, 104 participants were recruited to take part in this experiment. They were formed into dyads to test out the level of synchronization. Individual differences on music experience and competency was measured using the Barcelona Music Reward Questionnaire (BMRQ). The dyads were required to engage in an interaction task with discussion topics given whilst the background auditory condition will be manipulated into the five conditions (high metricality with high regular/ high metricality with low regular/ low metricality with high regular/ low metricality with low regular/ silent). During the interaction process, behavioral synchronization level was measured using the Motion Energy Analysis technique. A windowed cross-correlation (WCC) method was used for analysis.

The result suggested that there was no significant correlation found between auditory conditions or regularity on behavioural synchrony. However, effect of metricality sound sequence does affect the level synchrony to a marginally significant extend. The mixed model ANOVA also revealed that there was no interaction effect of sensory-motor score. These finding assured the effect of metricality as implied by Dynamic Attending Theory and future research should further look into other moderator factors that could possible affect synchrony.