

Abstract

The study was designed to investigate the effect of the spatial characteristics of stimulus on human bimanual coordination. During the experiment, subjects moved both their left and right arm simultaneously in the same direction and speed. They moved according to visual or auditory metronome. It was observed that the critical frequency for phase transition from anti-phase to in-phase movement pattern was higher for visual than auditory condition. Also, the relative phase accuracy was higher for visual condition than auditory condition. The results support the ideomotor theory proposed by Greenwald (1970), and reveal the constraints of the inherent dynamics on the incidental dynamics of the bimanual coordination. Results were also explained by the concepts of anchoring and contextual coupling.