

Abstract

In the present experiment we examined whether a symmetry tendency in bimanual finger coordination is observable in an experimental setting resembling a serial learning task and whether this tendency is defined in hand-based coordinates. Participants performed an eight-finger bimanual coordination task, in which they responded to sequences of visual stimuli by sequences of tapping movements. Visual stimuli triggered flexion of fingers, which were parallel or mirror symmetrical in respect to the body midline. Additionally, the orientation of the right hand relative to the left hand was varied. When both hands had the same orientation, the mirror symmetrical mode was more stable than the parallel mode. When both hands had different orientations, in contrast, the parallel mode was more stable. This result suggests that the tendency towards mirror symmetry was defined in hand-based coordinates. This outcome is relevant for the research of skill learning regarding the issue of whether acquired sequence knowledge is tied to specific effectors.