Psy-Talks

Department of Psychology & Salzburger Gesellschaft für Psychologie

Talk on Monday, 1. July 2024

in HS 425

Start: 13:30 (till 14.45)

The talk will be presented in English

Where Movement meets Cognition:

Why and how linked movements can help with motor learning

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Many movements in daily life occur in specific yet flexible motor sequences. For example, when opening a door you would usually reach for the door handle, push it down, and push or pull to open the door. Therefore, it is no surprise that often repeated motor sequences (i.e., linked movements) are represented together in the brain. Consequently, a linked movement can cue the most likely following motor segment and thereby facilitate the desired overall motor response. In music or in sports for instance, it is usually easier to execute linked movements together than to start in the middle of a sequence. In this talk, I will present a complex motor adaptation paradigm which allowed us to investigate which features of a reaching movement are paramount for a linked representation of such two reaches to occur. Crucially, motor adaptation is only possible if movements are linked. Among other things, we investigated movement kinematics of reaches after prior bimanual and imagined reaches. In addition, we looked for neural correlates of successful motor imagery. Taken together, we show that both imagined and real movements of one arm can serve as an effective cue to allow motor adaptation of the other arm. Linking movements seems to be a key mechanism of the human motor system to facilitate motor learning.

Invited by: Tobias Heed