Psych-Talks

Department of Psychology & Salzburger Gesellschaft für Psychologie

Talk on Tuesday, 14. Nov 2023

in HS 421

Start: 8:45 (till 10.00)

The talk will be presented in English

Adaptivity of multisensory spatial processing in children and adults

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Biological Psychology and Neuropsychology

Multisensory spatial perception is fundamental for interacting with the environment and involves two distinct processes: integration of crossmodal cues to maximize localization precision, and recalibration of unisensory spatial representations to maximize localization accuracy. In this talk, I will discuss recent findings that show how bottom-up (sensory evidence) and top-down (priors) information is utilized to solve the causal inference problem in multisensory perception, and how multisensory integration and crossmodal recalibration are related across development. Our findings suggest that multisensory integration precedes rather than follows crossmodal recalibration during development, likely because the multisensory percept contains a crucial signal for the calibration of spatial representations across sensory modalities. Moreover, recent experiments in adult individuals suggest that oculomotor behavior might directly influence the peripheral spatial processing of sounds in an experience-dependent manner. Together, these studies illustrate the highly adaptive nature of multisensory spatial processes.