

## SFB/TR 8 Spatial Cognition / IQN Video Conference

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### The Role of Infants' Eye-Hand Coordination in Visual Field Perception

Human infants and many animals alike show an innate attentional bias to the right spatial field. This attentional bias disappeared with the emergence of infants' reaching movements to the contralateral field, leading to an even distribution of visual attention and emergence of depth perception. The right side bias is only suppressed, though, because it can show again in reaction time differences of normal adults, in paper-and-pencil tasks of children with ADHD, and in some stroke patients (visual neglect). The primary spatial field division is a *Visual Field Triage*, i.e. a peripheral-central-peripheral visual field, where infants monitor their close (egocentric) vs. far (allocentric) space in relation to their trunk. In contrast, the left-right spatial field division is developmentally 'only' secondary, as infants monitor object- and view-specific space in relation to their hands. Factors involved in this transition are eye-hand coordination skills such as balance regulation, developing handedness, joint flexibility, fine motor skills and motion perception.

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