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• Friday, November 29, 2002

Confusing the Mind by Crossing the Hands: The Psychophysics, Neuropsychology and Neuroimaging of Visuotactile Remapping

Interaction with our environment relies heavily on the use of our hands, which serve both as tools for manipulating objects and as receptor surfaces for perceiving those objects. This dual role means that the hands move constantly within peripersonal space as different postures are adopted. Tactile stimuli presented to the hands can be coded either in terms of their relative position on the body surface (a somatotopic frame of reference), or relative to some environmental (e.g., allocentric) or body-centered frame of reference. The present talk explores the abilities and limitations of the brain to accommodate various postures-linking visual with tactile information. Visuotactile illusions, tactile temporal order judgments, cross-modal congruency tasks (with normals and split-brain patients), and functional Magnetic Resonance Imaging are all used to demonstrate these factors in tactile remapping.

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