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Role of the First and Second Person Perspective for Control of Behaviour: Understanding other People's Facial Expressions

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## **Role of the First and Second Person Perspective for Control of Behaviour: Understanding other People's Facial Expressions**

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### **Abstract**

Humans typically make probabilistic inferences about another person's affective state based on her/his bodily movements when viewing body language like emotional facial expressions, emblematic gestures and whole body movements. Furthermore, they deduce tentative predictions about the other person's intentions. Such interpretations reflect the valuating first person perspective of humans which allows the subject to adopt a second person perspective as in theory of mind and in empathy. Neuroimaging investigations have shown that the medial frontal cortex is a critical node in the circuits underlying theory of mind, empathy, and intention of action. It is suggested that personal perspective taking in social interactions is paradigmatic for the capability of humans to generate personally discriminable accounts of the complex world and to control behaviour.

### **Introduction**

The mechanistic model of the action-perception cycle describes the spatio-temporal contingencies of behaviour as highly interwoven processes of sensory perception and action production (Fuster 1990, Guillery et al. 2005). Physical activity, however, includes the impact of cognition at all levels of processing. Specifically, action has been linked to perception by motor intention (Navchev et al 2008, Passingham et al. 2010). Conversely, perception is linked to action by comprehension which allows the subject to recognize an object by

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