



THE UNIVERSITY OF
CHICAGO

Department of Psychology



Electrical Neuroimaging of Embodied Cognition, and Mental Simulation of Actions of Others: a Window on the Social Mind

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Inferring intentions and desires of other people from the simple observation of their body language and/or their actions requires a broad range of complex evaluative processes including the [implicit and explicit] decoding of their body postures, kinematics, the understanding of object affordances, and the abilities for elaborating [pre-conscious and/or conscious] assumptions to anticipate the final outcome of their actions (Grafton, 2009). A growing body of evidence suggests that some of these decoding processes rely on embodied cognition, a mechanism providing a mental roadmap of past self-related actions from which simulation mechanisms can be used to decode at least some actions performed by other people. This mechanism recruits the inferior fronto-parietal action observation network as well as a putative social network that includes the posterior superior temporal sulcus (STS). Interestingly recent functional studies using electrical neuroimaging refine the recruitment of these two brain networks by specifying their temporal dynamic at multiple stages during the intention decoding and without a strict segregation of intention decoding between these two networks. During her talk, Dr. Ortigue will review these neuroimaging studies, and show when simulation operations occur and how this relates with other constructs, including top-down versus bottom-up processing between action observation and social networks.

When: Thursday, May 5th, 2011, 4:00pm

Where: Harper 130, 1116 E. 59th Street