

Handedness of Imagined Actions as an Index of Motor Involvement: the Role of Perspective Taking

Daniele Marzoli
University of Chieti

Luca Tommasi
University of Chieti

Abstract: Past research at the interface of action and perception has investigated the role of perspective taking in many behavioural and neuroimaging studies. Some investigators have addressed the issue of ones own vs others action imagination, but the possible effects of front or back view in imagining others actions has been so far neglected. We report two experiments in which participants were asked to imagine an actor performing a single manual action either in front or in back view and had to indicate the hand used by the imagined actor during movement execution. We assume that greater activation of motor areas in back view compared to front view could result in increased correspondence between ones own manual preference and the hand used by the imagined actor. The findings of both experiments are consistent with this hypothesis.