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FROM MIRROR NEURONS TO EMBODIED SIMULATION: A NEW NEUROSCIENTIFIC PERSPECTIVE ON INTERSUBJECTIVITY

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Our seemingly effortless capacity of conceiving of the acting bodies inhabiting our social world as goal-oriented individuals like us depends on the constitution of a shared “we-centric” space. I have proposed that this shared manifold space can be characterized at the functional level as embodied simulation, a basic functional mechanism by means of which our brain/body system models its interactions with the world.

The mirroring mechanism for action and other mirroring mechanisms in our brain represent sub-personal instantiations of embodied simulation. Embodied simulation provides a new empirically based notion of intersubjectivity, viewed first and foremost as intercorporeity. Embodied simulation challenges the notion that Folk-psychology is the sole account of interpersonal understanding. Before and below mind reading is intercorporeity as the main source of knowledge we directly gather about others.

By means of embodied simulation we can map others' actions onto our own motor representations, as well as others' emotions and sensations onto our own visceromotor and somatosensory representations. “Representation”, as used here, refers to a particular type of content, generated by the relations that our situated and inter-acting brain-body system instantiates with the world. Such content is pre-linguistic and pre-theoretical, but nevertheless has attributes normally and uniquely attributed to conceptual content. Social cognition is not only explicitly reasoning about the contents of someone else's mind. Embodied simulation, gives us a direct insight of other minds thus enabling our capacity to empathize with others.

This proposal opens new perspectives on our understanding of autism and other psychopathological states such as schizophrenia.