

A WRONG BODY: A NEUROSCIENCE PERSPECTIVE ON THE ETIOLOGY OF ANOREXIA NERVOSA

S. Gaudio¹, G. Riva²

¹Università Campus Bio-Medico di Roma, Roma, ²Istituto Auxologico Italiano, Università Cattolica del Sacro Cuore, Milan, Italy

Anorexia nervosa (AN) patients have a disturbance in the way in which one's body is experienced and perceived: they evaluate negatively their own body and body parts and deny the seriousness of their current low body weight. It is controversial whether these symptoms are secondary to dysfunctions in the neuronal processes related to appetite and emotionality or reflect a primary disturbance in the way the body is experienced and remembered. Our spatial experience is organized around two different reference frames - egocentric (body as reference of first-person experience) and allocentric (body as object in the physical world) - that influence each other during the interaction between long- and short-term memory processes in spatial cognition.

Neuroimaging studies on AN patients showed several structural and functional alterations in frame and memory-related body-image-processing brain circuits. Particularly, both structural and functional studies showed alterations of the precuneus and the inferior parietal lobe. These alterations may be related to the etiology of the body image distortion: individuals with AN are locked to an allocentric (*observer view*) negative memory of the body that is no more updated by contrasting egocentric representations driven by perception.