

Neuroimaging Correlates of Empathy behind Different Dietary Habits

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Empathy refers to the capacity to understand and respond to the unique affective experiences of another person [1]. Across numerous conceptualizations, two primary components of empathy should be considered: (1) an affective component based on emotional state experiencing, and (2) a cognitive component relying on attributing emotional states onto others [2, 3]. Several factors can modulate empathy. Recent studies have demonstrated that people with different dietary habits, due to ethical reasons, such as vegans and vegetarians, experience a higher level of empathy compared to omnivores [4, 5].

The increasing application of advanced MRI techniques to explore neuroimaging correlates of cognitive processes together with the diffusion of vegan and vegetarian diets, have provided an interesting cue to explore the neuroanatomical substrates of empathy and dietary habits. A first study [4] has demonstrated that the neural representation of conditions of suffering differs between subjects who made different feeding choices, resulting in an engagement of different components of the brain networks associated with empathy and social cognition. Considering as an empathy-related feature, the propensity to identify non conspecifics as being like themselves, Filippi et al. [6] showed also that the representation of mouth actions within different brain regions might differ among individuals with different dietary habits and ethical beliefs during processing of actions performed by other humans and members of other species, with a differential involvement of regions of the mirror neuron system.

Together these studies demonstrated through the example provided by vegetarians and vegans how ethical beliefs resulting in a different empathy level could influence brain functional circuitry necessary to navigate in our social environment.

References

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