A Neural Mechanism for Empathy and the Role of Society in its Modifications

Rizzolatti, Giaccomo [1]

[1] *University of Parma, Italy*

TO CITE

Rizzolatti, G. (2023). A Neural Mechanism for Empathy and the Role of Society in its Modifications. *Proceedings of the Paris Institute for Advanced Study*, *22*. https://paris.pias.science/article/SynE3_2017_08_a-neural-mechanism-for-empathy

PUBLICATION DATE

10/05/2017

ABSTRACT

The Brains that pull the Triggers. 3rd Conference on Syndrome E, Paris IAS, 10-12 May 2017 - Session 2 - Self and Group

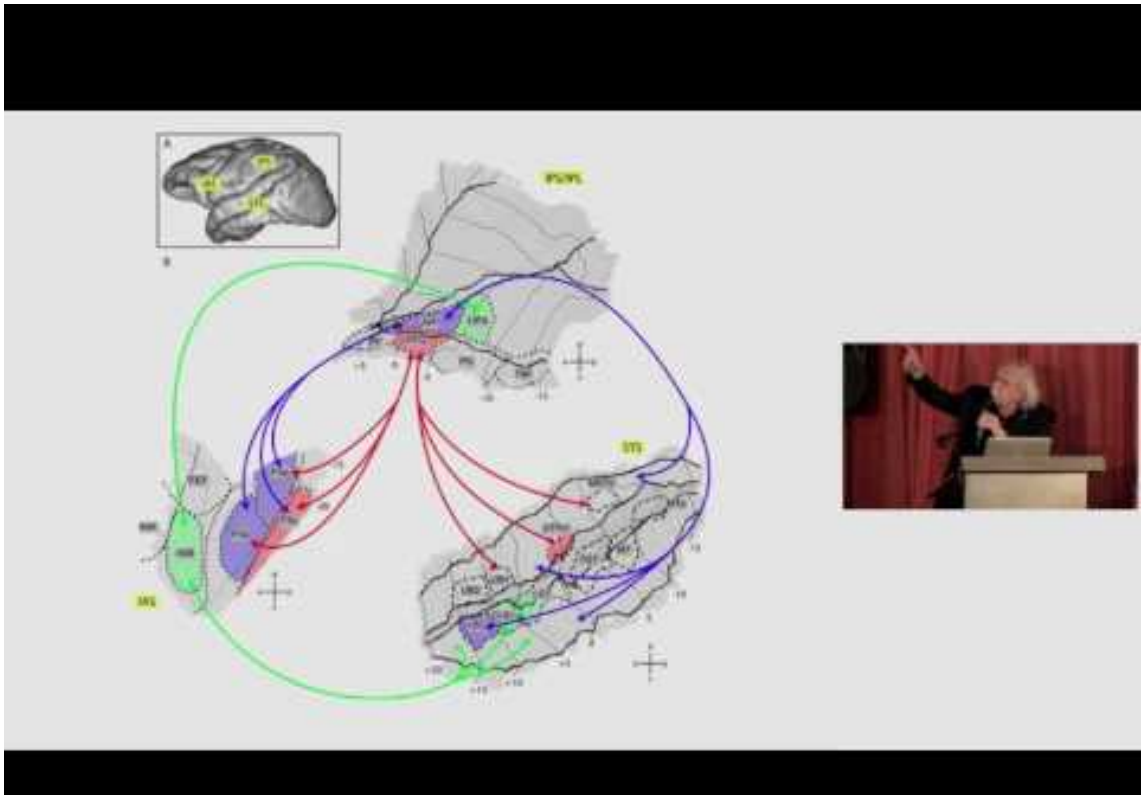
An important discovery in neurosciences over the last years has been that of a mechanism that unifies action execution and action perception. The essence of this mechanism –the mirror mechanism- is the following. When individuals observe an action belonging to their motor repertoire done by others, neurons that encode that action are activated in the observer's motor system. Since the observers are aware of the outcome of their internally generated motor acts, they also understand the goal of others' actions without the necessity of an intermediate cognitive mediation.

In my talk, I will review first some data on the mirror mechanism of the monkey. I will present then evidence that also humans possess the mirror mechanism. I will show then that there is overwhelming evidence that the mirror mechanism exists also in centers related to emotions like the anterior insula and the anterior cingulate cortex. The mirror mechanism of these centers are activated by natural stimuli (e.g. disgusting odorants, painful stimuli) as well as by the observation of individuals that feel emotions determined by those stimuli. Because the same neuronal populations are activated by natural and by social stimuli, it follows that we can not only *understand* others' emotions cognitively, but also *feel* them empathically sharing them with others. This empathic mechanism may be potentiated or inhibited by cultural factors.

Rizzolatti, G. (2023). A Neural Mechanism for Empathy and the Role of Society in its Modifications. *Proceedings of the Paris Institute for Advanced Study*, *22*. https://paris.pias.science/article/SynE3_2017_08_a-neural-mechanism-for-empathy

2017/20 - brains-that-pull-the-triggers - Article No.10. Freely available at https://paris.pias.science/article/SynE3_2017_08_a-neural-mechanism-for-empathy - 2826-2832/©

I will posit that certain ideologies (e.g. Nazism) may inhibit it, thus transforming "the other" into a "thing". In contrast, ethical precepts present in the Bible as well in the texts of others religions are fundamental to reinforce it.



Rizzolatti, G. (2023). A Neural Mechanism for Empathy and the Role of Society in its Modifications. *Proceedings of the Paris Institute for Advanced Study*, *22*. https://paris.pias.science/article/SynE3_2017_08_a-neural-mechanism-for-empathy

2017/20 - brains-that-pull-the-triggers - Article No.10. Freely available at https://paris.pias.science/article/SynE3_2017_08_a-neural-mechanism-for-empathy - 2826-2832/©