

Empathy and violence have similar circuits in the brain

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Empathy and violence have similar circuits in the brain. Credit: Alan Cleaver.

Researchers from the University of Valencia, Spain, have resumed the brain structures involved with empathy, in other words the ability to put oneself in another person's position, and carried out a scientific review of them. They conclude that the brain circuits responsible for empathy are in part the same as those involved with violence.

"Just as our species could be considered the most violent, since we are capable of serial killings, [genocide](#) and other atrocities, we are also the most empathetic species, which would seem to be the other side of the

coin", Luis Moya Albiol, lead author of the study and a researcher at the UV, tells SINC.

This study, published in the most recent issue of the *Revista de Neurología*, concludes that the prefrontal and temporal cortex, the amygdala and other features of the limbic system (such as insulin and the cingulated cortex) play "a fundamental role in all situations in which empathy appears".

Moya Albiol says these parts of the [brain](#) overlap "in a surprising way" with those that regulate aggression and violence. As a result, the scientific team argues that the cerebral circuits - for both empathy and violence - could be "partially similar".

"We all know that encouraging empathy has an inhibiting effect on [violence](#), but this may not only be a social question but also a biological one - stimulation of these neuronal circuits in one direction reduces their activity in the other", the researcher adds.

This means it is difficult for a "more empathetic" brain to behave in a violent way, at least on a regular basis. "Educating people to be empathetic could be an education for peace, bringing about a reduction in conflict and belligerent acts", the researcher concludes.

Techniques for measuring the human brain "in vivo", such as functional magnetic resonance imaging, are making it possible to find out more about the structures of the brain that regulate behaviour and psychological processes such as [empathy](#).

More information: Moya-Albiol, L., Herrero, N. y Bernal, M.C. "Bases neuronales de la empatía". *Revista de Neurología*, 50 (2), 89-100, Feb 2010.

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