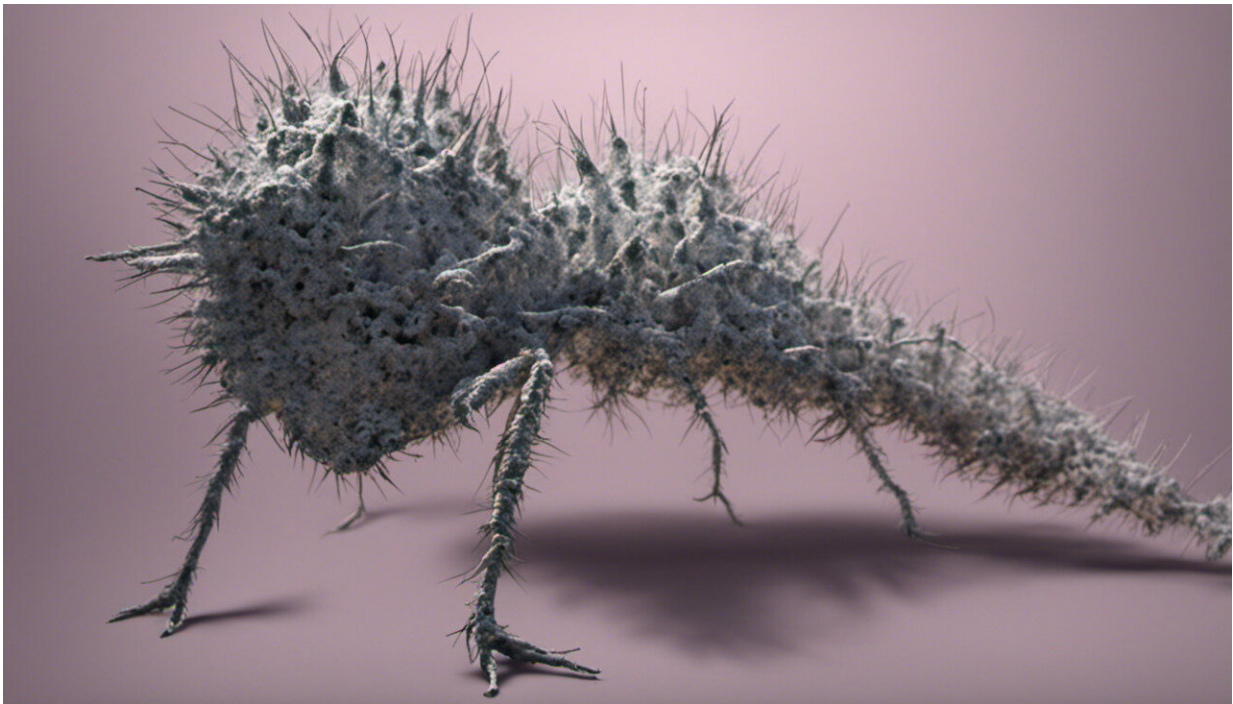


Study explores neural mechanisms behind support for political violence

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Credit: AI-generated image ([disclaimer](#))

Psychologists have often studied the "bright side" of morality—its role in promoting cooperation, for example. But new research from the University of Chicago suggests that morality also has a "dark side": Sometimes, social values held with moral conviction can be used to justify violence.

The study, led by Prof. Jean Decety, used MRI scanning to map participants' evaluations of photos of political [violence](#)—defined as physical assaults of other people, not property damage—that were either aligned with or contrary to the views they held.

"When study participants held strong moral convictions and saw photos of violent protests that were congruent with their own views, we detected activation in the reward system in the brain—almost as if the violence was a 'valuable' thing," said Decety, a cognitive neuroscientist and leading scholar of moral psychology.

Published Nov. 16 in the *American Journal of Bioethics–Neuroscience*, the study was co-authored by Cliff Workman, a postdoctoral fellow at the University of Pennsylvania and former postdoctoral researcher in the Decety Lab, and UChicago postdoctoral researcher Keith Yoder.

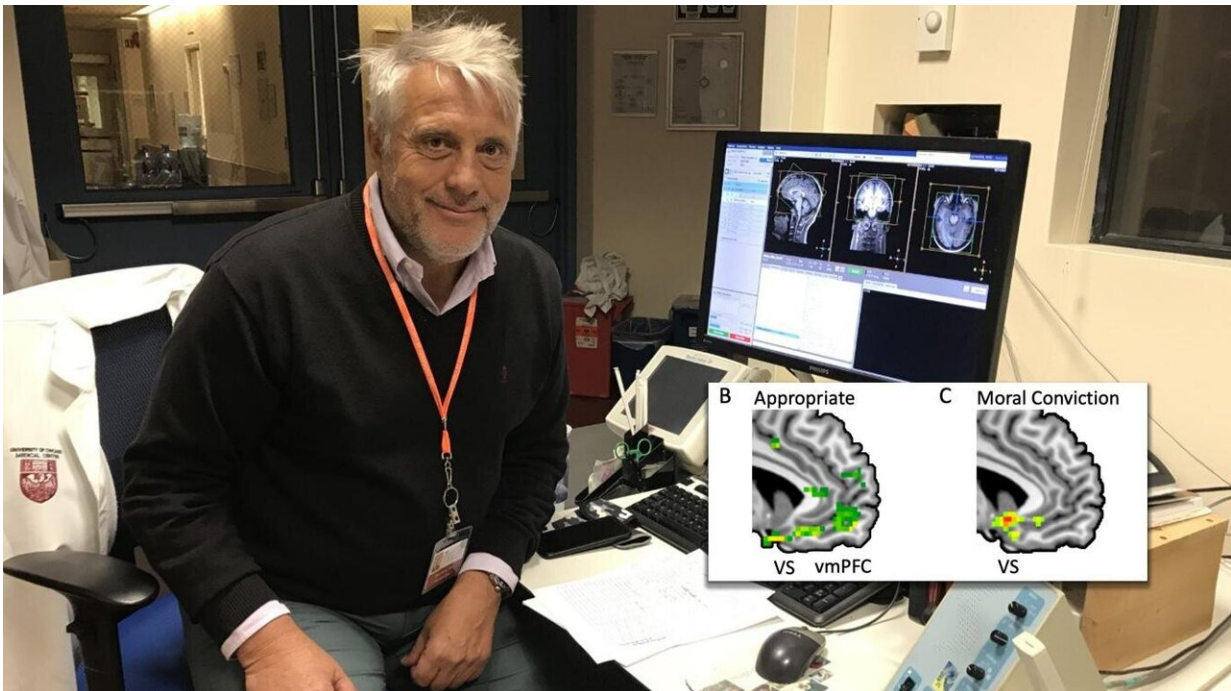
The study's finding may seem surprising because it suggests that violence can result from a desire to act morally, rather than from bad intentions or a lack of impulse control. But by examining the neural responses people have toward images of ideological violence, the neuroscientists have shed light on how the brain processes what would appear to be conflicting motivators: A prohibition against violence and a desire to act virtuously.

Throughout history, Decety argues, violence has often resulted from people trying to impose their [social values](#) and norms. In such cases, moral values exert a powerful motivational force in guiding people to pursue certain goals and desirable outcomes.

"Political violence is not necessarily caused by ill-intentioned people. It's that people really want to be virtuous, and they want to convince others to follow their social norms—and that may include violent means," said Decety, the Irving B. Harris Distinguished Service Professor in the

Departments of Psychology and Psychiatry.

Amid increasing polarization and political violence in the U.S. and around the world, Decety wondered what was going through the minds of people who used physical force to protest or silence their opponents. So, as a first step towards understanding the relationship between moral conviction and ideologically motivated violence, he and his research team recruited participants from Chicago for the study, which sought to elucidate some of the neural mechanisms underlying support for political violence.



Prof. Jean Decety reviews MRI data. The moral convictions of participants about the appropriateness of political violence positively modulated the neural signal in two brain regions, the ventral striatum and the ventromedial prefrontal cortex, shown in the inset image. Credit: University of Chicago

The participants filled out a detailed survey about their own political views, both generally and on specific issues that are traditionally associated with either liberal or conservative politics (e.g., abortion rights, tax cuts). Then, the participants were shown photos of actual violent protests that were ostensibly aligned with or opposed to their own positions and asked to rate their appropriateness.

While the participants completed the task, their brains were scanned with MRI technology that allowed the neuroscientists to identify which neural pathways were involved. The researchers hypothesized that moral convictions would modulate beliefs about the appropriateness of violence in one of two ways: by reducing inhibitory control, or by increasing the subjective value of violence.

The study results support the second hypothesis, according to the authors. "Our findings suggest people's moral convictions were important enough that they didn't have to think about inhibiting an impulse towards violence," Workman said. "That is, they thought they were seeing people do what was socially valuable."

The results suggest that when people hold social views with moral conviction, those views potentially facilitate support for or acceptance of ideological violence. The authors are hopeful that the results of the study and related future work can help inform potential interventions.

They also note that the study does not address the likelihood of someone actually perpetuating violence. The responses shown by study participants may be reflective of bystander perceptions, rather than how violent actors might react under similar conditions.

"If we better understand the psychological mechanisms of the dark side of morality, then maybe we can do something to facilitate mutual understanding and tolerance in the future," Decety said.

One limitation of the study is that the sample size of conservative and moderate individuals—two and five, respectively—was too small to be statistically useful, so the data reported were only from 32 participants who self-identified as holding liberal sociopolitical views.

However, Decety says there is no reason to expect that neural mechanisms would have been different in conservatives, provided that they were equally morally convicted about issues that mattered to them. Current work in the Decety Lab is focused on establishing if these findings apply more broadly across sociopolitical groups, and is using other advanced neural imaging tools to examine the speed at which such moral decisions to support violence happen in the brain and how they are impacted by the social influence of others.

The study is part of a series that is exploring the neurological and computational mechanisms underlying a variety of sociopolitical issues at a more granular level over the next few years.

More information: Clifford I. Workman et al. The Dark Side of Morality – Neural Mechanisms Underpinning Moral Convictions and Support for Violence, *AJOB Neuroscience* (2020). [DOI: 10.1080/21507740.2020.1811798](https://doi.org/10.1080/21507740.2020.1811798)

Provided by University of Chicago

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