

## Brain scans reveal how people 'justify' killing

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A new study has thrown light on how people can become killers in certain situations, showing how brain activity varies according to whether or not killing is seen as justified.

The study, led by Monash researcher Dr Pascal Molenberghs, School of Psychological Sciences, is published today in the journal *Social Cognitive* and Affective Neuroscience.

Participants in the study played video games in which they imagined themselves to be shooting innocent civilians (unjustified violence) or enemy soldiers (justified violence). Their <u>brain activity</u> was recorded via functional magnetic resonance imaging (fMRI) while they played.

Dr Molenberghs said the results provided important insights into how people in certain situations, such as war, are able to commit <u>extreme</u> <u>violence</u> against others.

"When participants imagined themselves shooting civilians compared to soldiers, greater activation was found in the lateral orbitofrontal cortex (OFC), an important <u>brain</u> area involved in making moral decisions," Dr Molenberghs said.

"The more guilt participants felt about shooting civilians, the greater the response in the lateral OFC. When <u>shooting</u> enemy soldiers, no activation was seen in lateral OFC."

The results show that the neural mechanisms that are typically implicated



with harming others become less active when the violence against a particular group is seen as justified.

"The findings show that when a person is responsible for what they see as justified or unjustified violence, they will have different feelings of guilt associated with that – for the first time we can see how this guilt relates to specific <u>brain activation</u>," Dr Molenberghs said.

The researchers hope to further investigate how people become desensitised to <u>violence</u> and how personality and group membership of both perpetrator and victim influence these processes.

Dr Molenberghs is director of the Monash Social Neuroscience Lab, which studies morality, empathy and group membership in order to get a better understanding of how complex social problems such as racism and in-group bias develop.

**More information:** "The neural correlates of justified and unjustified killing: an fMRI study." *Soc Cogn Affect Neurosci* first published online March 9, 2015 DOI: 10.1093/scan/nsv027

## Provided by Monash University

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