

An underlying cause for psychopathic behavior?

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Psychopaths are known to be characterized by callousness, diminished capacity for remorse, and lack of empathy. However, the exact cause of these personality traits is an area of scientific debate. The results of a new study, reported in the May 2010 issue of Elsevier's *Cortex*, show striking similarities between the mental impairments observed in psychopaths and those seen in patients with frontal lobe damage.

One previous explanation for psychopathic tendencies has been a reduced capacity to make inferences about the mental states of other people, an ability known as Theory of Mind (ToM). On the other hand, psychopaths are also known to be extremely good manipulators and deceivers, which would imply that they have good skills in inferring the knowledge, needs, intentions, and beliefs of other people. Therefore, it has been suggested recently that ToM is made up of different aspects: a cognitive part, which requires inferences about knowledge and beliefs, and another part which requires the understanding of emotions.

Dr Simone Shamay-Tsoory, from the University of Haifa in Israel, along with colleagues from The Shalvata [Mental Health](#) Care Center and the Rambam Medical Center, tested the hypothesis that impairment in the emotional aspects of these abilities may account for psychopathic behaviour. Earlier research from the same group had shown that patients with damage to the frontal lobes of the brain lack some of the emotional aspects of Theory of Mind, so they speculated that psychopathy may also be linked to [frontal lobe](#) dysfunction.

The emotional and cognitive aspects of Theory of Mind abilities were examined for participants in the new study, which consisted of a number of different groups: criminal offenders, who had been diagnosed as having [antisocial personality disorder](#) with highly psychopathic tendencies, patients with damage to the frontal lobes of the brain, patients with damage to other areas of the brain, and healthy control subjects. The pattern of impairments in the psychopathic participants showed a remarkable resemblance to those in the participants with frontal lobe damage, suggesting that an underlying cause of the behavioural disturbances observed in psychopathy may be dysfunction in the frontal lobes.

More information: The article is "The role of the orbitofrontal cortex in affective theory of mind deficits in criminal offenders with psychopathic tendencies" by Simone G. Shamay-Tsoory, Hagai Harari, Judith Aharon-Peretz and Yechiel Levkovitz and appears in *Cortex*, Volume 46, Issue 5 (May 2010). *Cortex* is available online at www.sciencedirect.com/science/journal/00109452

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