Exploring how brain chemistry influences formation of political opinions

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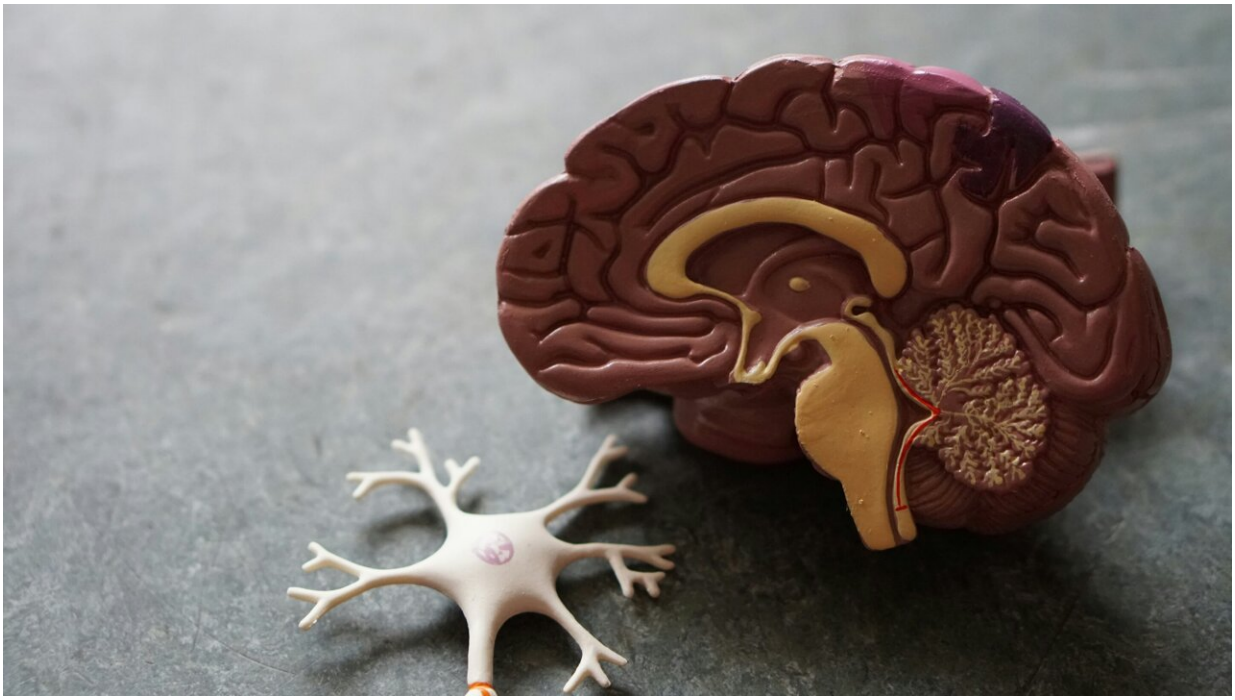

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Researchers are exploring a new theory on how the chemistry of the brain causes people to form political opinions. James Cook University neuroscientist Professor Zoltan Sarnyai was part of an international team exploring the threat-based neural switch theory, which they hope will calm the political landscape and help people make more considered judgments.

The study is published in *Current Opinion in Behavioral Sciences*.

'"History has shown us that economic crises and other sociopolitical threats often lead to a rise of polarization and radicalism, whereby people become more susceptible to intolerant political messages, including propaganda," said Professor Sarnyai.

'"This has been long researched; however, a critical piece of the puzzle is still missing in helping us to understand what cognitive and neural mechanisms in the brain mediate between these threats and responsiveness to political messages.

"The idea is that political information is processed much like non-political information and is influenced by the interplay between neurological processes," said Professor Sarnyai.

He said stress, such as that produced by financial crises and wars, could produce an imbalance in these processes and enhance receptiveness to oversimplified political messages, as opposed to more complex and sophisticated information.

"Stress can alter information processing by shifting learning and memory systems from goal-directed, declarative memory processes toward habit and statistical learning.

"In stressful situations, the processing of simple statistics and regularities becomes more effective for the brain than dealing with more complex patterns," said Professor Sarnyai.

The team will perform non-invasive brain stimulation experiments, weakening the functioning of pre-frontal cortex areas to see if this results in a heightened preference for dogmatic political messages.

"Rather than describing it as a malfunction of cognitive systems or brain networks, we will think about susceptibility to ideological messages as reflecting an imbalance between cognitive systems.

"This will allow us to develop a more holistic and nuanced understanding of how to counter dogmatic ideological thinking with the aim of helping people make considered political decisions," said Professor Sarnyai.

More information: Dezső Németh et al, The interplay between subcortical and prefrontal brain structures in shaping ideological belief formation and updating, *Current Opinion in Behavioral Sciences* (2024). DOI: 10.1016/j.cobeha.2024.101385

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