



# Homo politicus: brain function of liberals, conservatives differs

by Marlowe Hood *Sun Sep 9, 1:33 PM ET*

The brain neurons of liberals and conservatives fire differently when confronted with tough choices, suggesting that some political divides may be hard-wired, according to a study released Sunday.

Aristotle may have been more on the mark than he realised when he said that man is by nature a political animal.

Dozens of previous studies have established a strong link between political persuasion and certain personality traits.

Conservatives tend to crave order and structure in their lives, and are more consistent in the way they make decisions. Liberals, by contrast, show a higher tolerance for ambiguity and complexity, and adapt more easily to unexpected circumstances.

The affinity between political views and "cognitive style" has also been shown to be heritable, handed down from parents to children, said the study, published in the British journal *Nature Neuroscience*.

Intrigued by these correlations, New York University political scientist David Amodio and colleagues decided to find out if the brains of liberals and conservatives reacted differently to the same stimuli.

A group of 43 right-handed subjects were asked to perform a series of computer tests designed to evaluate their unrehearsed response to cues urging them to break a well-established routine.

"People often drive home from work on the same route, day after day, such that it becomes habitual and doesn't involve much thinking," Amodio explained by way of comparison in an e-mail.

"But occasionally there is road work, or perhaps an animal crosses the road, and you need to break out of your habitual response in order to deal with this new information."

Using electroencephalographs, which measure neuronal impulses, the researchers examined activity in a part of the brain -- the anterior cingulate cortex -- that is strongly linked with the self-regulatory process of conflict monitoring.

The match-up was unmistakable: respondents who had described themselves as liberals showed "significantly greater conflict-related neural activity" when the hypothetical situation called for an unscheduled break in routine.

Conservatives, however, were less flexible, refusing to deviate from old habits "despite signals that this ... should be changed."

Whether that is good or bad, of course, depends on one's perspective: one could interpret the results to mean that liberals are nimble-minded and conservatives rigid and stubborn.

Or one could, with equal justice, conclude that wishy-washy liberals don't stick to their guns, while conservatives are steadfast and loyal.

As to the more intriguing question of which comes first, the patterns in neuron activity or the political orientation, Amodio is reluctant to hazard a guess.

"The neural mechanisms for conflict monitoring are formed early in childhood," and are probably rooted in part in our genetic heritage, he said.

"But even if genes may provide a blueprint for more liberal or conservative orientations, they are shaped substantially by one's environment over the course of development," he added.

Obscuring causal links even more is the fact that the brain is malleable and neural functions can change as a result of new experiences.

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