

From the Los Angeles Times

Study finds left-wing brain, right-wing brain

Even in humdrum nonpolitical decisions, liberals and conservatives literally think differently, researchers show.

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Exploring the neurobiology of politics, scientists have found that liberals tolerate ambiguity and conflict better than conservatives because of how their brains work.

In a simple experiment reported today in the journal *Nature Neuroscience*, scientists at New York University and UCLA show that political orientation is related to differences in how the brain processes information.

Previous psychological studies have found that conservatives tend to be more structured and persistent in their judgments whereas liberals are more open to new experiences. The latest study found those traits are not confined to political situations but also influence everyday decisions.

The results show "there are two cognitive styles -- a liberal style and a conservative style," said UCLA neurologist Dr. Marco Iacoboni, who was not connected to the latest research.

Participants were college students whose politics ranged from "very liberal" to "very conservative." They were instructed to tap a keyboard when an M appeared on a computer monitor and to refrain from tapping when they saw a W.

M appeared four times more frequently than W, conditioning participants to press a key in knee-jerk fashion whenever they saw a letter.

Each participant was wired to an electroencephalograph that recorded activity in the anterior cingulate cortex, the part of the brain that detects conflicts between a habitual tendency (pressing a key) and a more appropriate response (not pressing the key). Liberals had more brain activity and made fewer mistakes than conservatives when they saw a W, researchers said. Liberals and conservatives were equally accurate in recognizing M.

Researchers got the same results when they repeated the experiment in reverse, asking another set of participants to tap when a W appeared.

Frank J. Sulloway, a researcher at UC Berkeley's Institute of Personality and Social Research who was not connected to the study, said the results "provided an elegant demonstration that individual differences on a conservative-liberal dimension are strongly related to brain activity."

Analyzing the data, Sulloway said liberals were 4.9 times as likely as conservatives to show activity in the brain circuits that deal with conflicts, and 2.2 times as likely to score in the top half of the distribution for accuracy.

Sulloway said the results could explain why President Bush demonstrated a single-minded commitment to the Iraq war and why some people perceived Sen. John F. Kerry, the liberal Massachusetts Democrat who opposed Bush in the 2004 presidential race, as a "flip-flopper" for changing his mind about the conflict.

Based on the results, he said, liberals could be expected to more readily accept new social, scientific or religious ideas.

"There is ample data from the history of science showing that social and political liberals indeed do tend to support major revolutions in science," said Sulloway, who has written about the history of science and has studied

behavioral differences between conservatives and liberals.

Lead author David Amodio, an assistant professor of psychology at New York University, cautioned that the study looked at a narrow range of human behavior and that it would be a mistake to conclude that one political orientation was better. The tendency of conservatives to block distracting information could be a good thing depending on the situation, he said.

Political orientation, he noted, occurs along a spectrum, and positions on specific issues, such as taxes, are influenced by many factors, including education and wealth. Some liberals oppose higher taxes and some conservatives favor abortion rights.

Still, he acknowledged that a meeting of the minds between conservatives and liberals looked difficult given the study results.

"Does this mean liberals and conservatives are never going to agree?" Amodio asked. "Maybe it suggests one reason why they tend not to get along."

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