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Study: Conservative, liberal brains differ

Region of cortex said more sensitive in Americans whose politics lean left

By Judy Peres

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CHICAGO — The differences between liberals and conservatives may run deeper than how they feel about welfare reform or the progress of the Iraq war: Researchers reported Sunday that their brains may actually work differently.

In a study likely to raise the hackles of some conservatives, psychologist David Amodio and others found that a specific region of the brain's cortex is more sensitive in people who consider themselves liberals than in self-declared conservatives.

The brain region in question helps people shift gears when their usual response would be inappropriate, supporting the notion that liberals are more flexible in their thinking.

"Say you drive home from work the same way every day, but one day there's a detour and you need to override your autopilot," said Amodio, a professor at New York University. "Most people function just fine. But there's a little variability in how sensitive people are to the cue that they need to change their current course."

That "cue" is processed in a part of the brain known as the anterior cingulate cortex, and Amodio was able to monitor its electrical activity by hooking his subjects up to electroencephalographs (EEGs) while they performed laboratory tests.

The work grew out of decades of previous research suggesting that political orientation is linked to certain personality traits or styles of thinking. A review of that research published in 2003 found that conservatives tend to be more rigid and closed-minded, less tolerant of ambiguity and less open to new experiences.

Some of the traits associated with right-wingers in that review were decidedly unflattering, including fear, aggression, tolerance of inequality, and lack of complexity in their thinking.

In the current study, Amodio and his colleagues recruited 43 college students for a simple experiment. The subjects reported their political attitudes confidentially on a scale from -5 (extremely liberal) to +5 (extremely conservative). Then they completed a computer test called "Go/No-Go" while an EEG measured their brain activity.

Subjects were told to press a button ("Go") each time the computer flashed the letter M, but not when a W was displayed. Each stimulus-response set had to be completed within half a second.

Amodio said the "Go" stimulus came up 400 out of 500 times, so "they're sitting there getting in the habit of pressing this button. But 20 percent of the time, the 'No Go' stimulus comes up — it's unexpected — and they're supposed to do nothing. We can see how accurate people are at withholding the habitual response."

Subjects who rated themselves more liberal had higher scores for accuracy, Amodio said. But, more importantly, they also showed stronger electrical activity when the "No Go" cues were presented, indicating that more neurons were firing.

Linda Skitka, a professor of psychology at the University of Illinois-Chicago, said there's ample evidence ideologues

on the far left can also be uptight.

"Extreme conservatives could be really rigid," she said. "Moderates should be pretty flexible. But if we go all the way to the left, they may look a lot like the extreme right — rigid in their ideas."

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