

November 14, 2007

LETTER

Politics and the Brain

To the Editor:

“This Is Your Brain on Politics” (Op-Ed, Nov. 11) used the results of a brain imaging study to draw conclusions about the current state of the American electorate. The article claimed that it is possible to directly read the minds of potential voters by looking at their brain activity while they viewed presidential candidates.

For example, activity in the amygdala in response to viewing one candidate was argued to reflect “anxiety” about the candidate, whereas activity in other areas was argued to indicate “feeling connected.” While such reasoning appears compelling on its face, it is scientifically unfounded.

As cognitive neuroscientists who use the same brain imaging technology, we know that it is not possible to definitively determine whether a person is anxious or feeling connected simply by looking at activity in a particular brain region. This is so because brain regions are typically engaged by many mental states, and thus a one-to-one mapping between a brain region and a mental state is not possible.

For example, rather than simply providing a brain marker of anxiety levels, as the article assumed, we know that the amygdala is activated by arousal and positive emotions as well. Such problems of interpretation with brain imaging studies can be avoided only by careful experimental design, and, as with any scientific data, the peer review process is critical to understanding whether the data are sound or based on faulty methodology.

Unfortunately, the results reported in the article were apparently not peer-reviewed, nor was sufficient detail provided to evaluate the conclusions.

As cognitive neuroscientists, we are very excited about the potential use of brain imaging techniques to better understand the psychology of political decisions. But we are distressed by the publication of research in the press that has not undergone peer review, and that uses flawed reasoning to draw unfounded conclusions about topics as important as the presidential election.

Adam Aron, Ph.D., University of California, San Diego
David Badre, Ph.D., Brown University
Matthew Brett, M.D., University of Cambridge
John Cacioppo, Ph.D., University of Chicago
Chris Chambers, Ph.D., University College London
Roshan Cools, Ph.D., Radboud University, Netherlands
Steve Engel, Ph.D., University of Minnesota
Mark D’Esposito, M.D., University of California, Berkeley

Chris Frith, Ph.D., University College London
Eddie Harmon-Jones, Ph.D., Texas A&M University
John Jonides, Ph.D., University of Michigan
Brian Knutson, Ph.D., Stanford University
Liz Phelps, Ph.D., New York University
Russell Poldrack, Ph.D., University of California, Los Angeles
Tor Wager, Ph.D., Columbia University
Anthony Wagner, Ph.D., Stanford University
Piotr Winkielman, Ph.D., University of California, San Diego

[Copyright 2007 The New York Times Company](#)

[Privacy Policy](#) | [Search](#) | [Corrections](#) | [RSS](#) | [First Look](#) | [Help](#) | [Contact Us](#) | [Work for Us](#) | [Site Map](#)
