

Twins study confirms genetic role in political belief

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Kevin Smith (left) and John Hibbing Credit: Craig Chandler

(Medical Xpress)—A research paper appearing in the academic journal *Political Psychology* re-affirms the genetic underpinnings of political beliefs, refuting critics who challenged previous research that linked politics with genetics.

The new paper, "Genetic and Environmental Transmission of Political Orientations," is the lead article in the December edition of the journal.

It is based upon a 2009 survey of nearly 600 sets of [twins](#) in their 50s and 60s, sought through the Minnesota Twin Registry.

"The data from the twin studies is strong enough now that if you don't believe political attitudes and behaviors are genetically inherited, you can't believe that breast cancer is genetically inherited and you can't believe that addictions are genetically inherited," said Kevin Smith, a University of Nebraska-Lincoln political scientist who co-authored the study.

The online publication includes a video featuring Smith explaining the study's methodology and why comparing the political attitudes held by identical, or monozygotic, twins with those held by fraternal, or dizygotic, twins, demonstrates a genetic factor in political belief.

The reasoning behind a twins study is that pairs of twins share the same environment—they are reared by the same parents, in the same household, with the same socioeconomic and political influences. But [monozygotic twins](#)—who develop from the same fertilized egg—share 100 percent of their genetics, while dizygotic twins, who develop from separate fertilized eggs, share about half their genetics, like any other pair of siblings. Therefore, if monozygotic twins show a greater tendency to share political orientations than do dizygotic twins, that tendency can be attributed to genetics, not to environment.

Hibbing cautions that the latest study shows a genetic connection to general political orientations, which in turn influence a person's stance on specific issues.

"Since it is not logical that genetics directly relates to highly specific political issues such as tax codes and school prayer, the recently published article constitutes an attempt to identify the broader orientations, such as authoritarianism and egalitarianism, that do connect

to both genetics and specific issues."

This is not the first time political scientists have studied twins to tease out whether [political beliefs](#) result from genetics.

A 2005 paper written by Smith's colleagues and research collaborators, Hibbing of UNL, John Alford of Rice University and Carolyn L. Funk of Virginia Commonwealth University, sent shock waves through the field of political science. Study of personality traits and how they influence political orientation date back at least to the 1950s, when researchers attempted to understand the rise of fascism in the 1930s and '40s.

The 2005 paper directly challenged conventional wisdom that children are taught their political attitudes by their parents, with their beliefs later being shaped by life events and experiences.

"We find that political attitudes are influenced much more heavily by genetics than by parental socialization," the researchers wrote in the 2005 paper.

But critics questioned that study's methodology, saying that twin studies are problematic measures of the influence of environment and genetics on personality traits.

Critics in one article argued that it cannot be assumed that twins, whether monozygotic or dizygotic, have equal environmental influences. Monozygotic twins tend to spend more time with one another and to more closely identify with one another than do dizygotic twins. That intimacy, more than actual genetics, could explain why monozygotic twins are more likely to share beliefs and traits.

"When that paper came out, it shook up political science," Smith said.

"People said, 'That can't be true, there must be something wrong with the method or the data or something.'"

Smith and Hibbing returned to the topic in 2007. This time, they developed a survey that zeroed in on political orientation. The previous work relied upon data that related to politics, but had been gathered for another purpose.

The new survey data, collected in 2009 with the support of a National Science Foundation grant, has been made available to other researchers studying the causes of political orientations. Smith said he and his colleagues worked hard to address the questions about their findings.

"This is part and parcel of the Political Psychology piece does: This data is not cobbled together from a survey not intended to be a survey of [political attitudes](#) and behavior. This survey directly addresses that and we've confirmed the key elements," he said.

Smith said the conclusions remained unchanged, even after factoring assumptions about monozygotic twins' shared environments.

"We made serious, heroic assumptions about shared environments, but we couldn't make the [genetic](#) connection go away," Smith said.

Smith emphasized that genetics are not destiny. Even though people may be genetically predisposed to take a conservative or liberal view toward politics and social issues, those views also are influenced by their social environment and experiences.

"I know people get bent out of shape about this," he said. "The environment is important, it's just not everything. You can talk about biology and you can talk about the environment. Who we are is a combination of both."

More information: Funk, C. L., Smith, K. B., Alford, J. R., Hibbing, M. V., Eaton, N. R., Krueger, R. F., Eaves, L. J. and Hibbing, J. R. (2013), "Genetic and Environmental Transmission of Political Orientations." *Political Psychology*, 34: 805–819. [DOI: 10.1111/j.1467-9221.2012.00915.x](https://doi.org/10.1111/j.1467-9221.2012.00915.x)

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