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reports:

Douglas R. Oxley, Kevin B. Smith, John R. Alford, Matthew V. Hibbing, Jennifer L. Miller, Mario Scalora, Peter K. Hatemi, and John R. Hibbing

Political Attitudes Vary with Physiological Traits

Science 2008; 321: 1667-1670 [[Abstract](#)] [[Full text](#)] [[PDF](#)]

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PUBLISHED E-LETTER RESPONSES:

▼ Response to J. C. Gewirtz and B. N. Cuthbert's E-Letter

John R. Hibbing, Kevin B. Smith, Douglas R. Oxley, John R. Alford, Matthew V. Hibbing, Peter K. Hatemi (3 September 2009)

▼ Are Fearfulness and Protectiveness Characteristics of Social Conservatives?

Jonathan C. Gewirtz, Bruce N. Cuthbert (3 September 2009)

Response to J. C. Gewirtz and B. N. Cuthbert's E-Letter

3 September 2009 ▲ ▲

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Respond to this E-Letter:

[Re: Response to J. C. Gewirtz and B. N. Cuthbert's E-Letter](#)

In our Report ("Political attitudes vary with physiological traits," D. R. Hibbing *et al.*, 19 September 2009, p. 1667) we present evidence that individuals displaying greater blink amplitudes subsequent to auditory startles and greater skin conductance increases in response to threatening visual images are more likely to hold a collection of political beliefs that we label "protective" (these beliefs include support of warrantless searches and opposition to gun control). On this basis, we suggest that those individuals whose physiology leads them to experience threats more viscerally are also likely to support policies that could be believed to ameliorate threats.

J. C. Gewirtz and B. N. Cuthbert offer an alternative explanation. They point out that participants with heightened physiological reactions to threat may not be generically predisposed to such responses but rather may have been "fearful" only at the time of testing. They speculate that those supporting protective policy positions are also likely to believe that "scientific advances will harm mankind" and therefore will be more easily startled when placed in a context that could be interpreted as scientific. Gewirtz and Cuthbert are quite right to point to the importance of context. Even subtle features of the immediate environment can influence physiological readings and we fully support their desire to see research replicated in other contexts. However, our suspicion in this case is that their concerns are unfounded.

Setting aside the questionable nature of the assertion that those who believe something will harm mankind are also more likely to startle in the presence of that thing (do we expect those believing methane from cattle exacerbates global warming to startle more easily in the presence of a cow?), the belief that certain participants in our study were made fearful by the looming presence of science and scientists may be based on misperceptions of the pertinent physical surroundings. There were no beakers and labcoats, only friendly graduate students and a computer terminal. It is true that sensors were attached to the participants but, if anything, this connoted a theme more medical than scientific. Moreover, several months before the physiological readings were taken, all participants visited the research site, expressed comfort, and volunteered to return for further tests. Based on their comments, they were mostly bemused that political scientists were doing this kind of research and excited to have parked in the shadow of the university's football stadium. Perhaps this is why there was no statistically significant difference in baseline heart rate and skin conductance levels of the groups professing high and low support for "protective" policies. If the entire scientific context of the experience made those supporting protective policies fearful, baseline physiological indicators give no indication of this.

Though we agree with Gewirtz and Cuthbert on the value of additional empirical work in this area, we caution against two directions suggested in their E-Letter. First, they are comfortable classifying people simply as "liberal" or "conservative," even though many people do not fit these overall molds and even though physiological responses correlate with certain specific issue clusters but not others. Second, Gewirtz and Cuthbert attempt to draw a connection between our results and issues of mental disorders by noting that "high

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responsiveness to threat is closely associated with anxiety disorders," but this does not mean there is necessarily a correlation between physiological threat sensitivity and mental health in larger non-clinical populations. Responding vigorously to threats is evolutionarily sensible, so the inclination to treat all those who do as suffering from a disorder is inaccurate and should be avoided. The unquestioned importance of context should not blind us to the fact that people differ—politically and physiologically. Moreover, the richness of these differences is not adequately captured by dichotomous distinctions between liberals and conservatives or between those with disorders and those without.

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Are Fearfulness and Protectiveness Characteristics of Social Conservatives?

3 September 2009



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D. R. Oxley *et al.* ("Political attitudes vary with physiological traits," Reports, 19 September 2008, p. 1667) reported that individuals who expressed strongly conservative attitudes on fourteen social issues (e.g., support for the death penalty and biblical truth; opposition to gun control and gay marriage) showed higher skin conductance responses to threatening pictures and higher startle reactivity than individuals who held opposing views. The authors concluded that, "physiological responses to generic threats and political attitudes on policies related to protecting the social order may both be derived from a common source."

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[Re: Are Fearfulness and Protectiveness Characteristics of Social Conservatives?](#)

This conclusion is appealing because fearfulness and protectiveness would appear to be complementary attributes and one can easily imagine an individual with a fearful disposition being drawn to protective political positions. But is the level of protectiveness toward the existing social order the most apt means of capturing the political differences between these groups? Oxley *et al.* explain that the use of the terms "conservative" and "liberal" was explicitly avoided because attitudes toward other political issues (e.g., economic) were not measured. Nevertheless, it is hard to believe that a group that held these fourteen, core components of a socially conservative worldview would not also share a broader spectrum of conservative views and would not identify themselves as conservatives.

If it were true that conservatives were generally more responsive to threatening stimuli it would have significant implications not only for political science but also for mental health policy, because high responsiveness to threat is closely associated with anxiety disorders (1). Such a conclusion is not warranted, however, at least based upon the data presented.

Although the Report assumes that the "protective" group is predisposed in general to react more strongly to threats, it is also possible that these individuals were simply more wary, or fearful, at the time of testing. The latter possibility is more likely, given the labile nature of both skin conductance and startle measures across time and experimental contexts (2). Indeed, it is worth noting that the startle measure reported (startle elicited in the absence of explicit, emotional stimuli such as pictures) is sensitive to modulation by contextual fear cues (2). In other words, the results could reflect a difference in state due to a particular context, rather than a difference in trait.

One can only speculate about potential sources of the conservatives' fear during the experiment, but suspicion of the entire scientific research enterprise is a likely one. Participants were not asked about their views toward science and scientists. However, one of the 14 measures of protectiveness was belief in "biblical truth," and individuals who do not believe in the theory of evolution are significantly more likely than those who do to say that scientific advances will harm mankind (3).

If such speculation were justified, then we would predict that the results would be reversed if the experiment were repeated in a context that is particularly threatening to liberals, such as a gun show. Until this prediction is put to the test, it is safer to assume that political attitudes are related to people's responses to threat under specific circumstances rather than to a phenotypic difference in physiological responsiveness to threats in general.

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