Advance Access publication September 25, 2016

Political Analysis (2016) 24:492–500
doi:10.1093/pan/mpw026

The Influence of Emotion on Trust

C. Daniel Myers
Department of Political Science, University of Minnesota, Minneapolis, MN 55455
e-mail: cdmyers@umn.edu (corresponding author)

Dustin Tingley
Department of Government, Harvard University, Cambridge, MA 02138
e-mail: dtingley@gov.harvard.edu

Edited by Justin Grimmer

Political scientists frequently wish to test hypotheses about the effects of specific emotions on political behavior. However, commonly used experimental manipulations tend to have collateral effects on emotions other than the targeted emotion, making it difficult to ascribe outcomes to any single emotion. In this letter, we propose to address this problem using causal mediation analysis. We illustrate this approach using an experiment examining the effect of emotion on dyadic trust, as measured by the trust game. Our findings suggest that negative emotions can decrease trust, but only if those negative emotions make people feel less certain about their current situation. Our results suggest that only anxiety, a low-certainty emotion, has a negative impact on trust, whereas anger and guilt, two emotions that differ in their control appraisals but induce the same high level of certainty, appear to have no effect on trusting behavior. Importantly, we find that failing to use causal mediation analysis would ascribe a *positive* effect of anxiety on trust, demonstrating the value of this approach.

Attempts to establish the effects of specific emotions on political behavior using experiments are limited by the difficulty of manipulating specific emotions. As the authors of the lead article in this symposium note, there is no "political anxiety pill" that alters levels of anxiety and has no other effect on subjects' emotional state. Reactions to realistic political stimuli are complex, so inducing emotions using, for example, news stories about smallpox is likely to induce some subjects to feel emotions other than the targeted emotion. For many research questions, this is not a problem; for example, viewers' reactions to threatening news about terrorism are of interest regardless of whether these reactions are the product of anxiety or a combination of anxiety and anger (Gadarian 2010). However, studies that make claims about the effects of specific emotions by themselves must grapple with the problem that an experimental manipulation rarely affects only one emotion.

A search of the literature suggests that political scientists are increasingly interested in these kinds of questions. In the last eight years, forty-four articles studying the effect of specific emotions (as opposed to general positive or negative valance) on some aspect of politics have been published in top general interest political science journals or top subfield journals in political psychology and political communication. Of these, twenty-three included an experiment and thirteen included an experimental manipulation that aimed to induce a specific emotion in subjects. The autobiographical emotional memory task (AEMT), the manipulation studied in this article, was the most frequently used technique to induce specific emotions in subjects.[1]

Authors' note: Replication data are available on the Harvard Dataverse at http://dx.doi.org/10.7910/DVN/EBBP1O. See Myers and Tingley (2016). Supplementary materials for this article are available on the *Political Analysis* Web site. The authors thank Rebecca Morton, Shana Gadarian, Bethany Albertson, participants in the Southern Political Science Association 2011 Mini-Conference on Experimental Methods, several anonymous reviewers, and the editors of this symposium for their helpful comments. This research was supported by a grant from the Princeton Laboratory for Experimental Social Science.

[1]Details of the search that produced these counts are available in Online Appendix H.

We frame the problem of experimental manipulations affecting more than one emotion by using the causal mediation analysis framework (e.g., Imai, Keele, and Tingley 2010a,b; Imai et al. 2011) to account for the collateral effects of a manipulation on non-target emotions. This method involves trade-offs; specifically, it requires measuring subjects' emotional state during the experiment, something that might attenuate the influence of the target emotion on the behavior being studied (Keltner, Locke, and Aurain 1993). Further, the statistical method comes with some important assumptions that we briefly revisit. However, this method allows us to estimate the effect of target emotions while accounting for the effect that the experimental manipulation has on non-target emotions.

We illustrate this approach using an experiment investigating the influence of emotion on dyadic trust. Political scientists have long viewed trust as essential to democratic politics (Almond and Verba 1963; Sullivan and Transue 1999; Wilson and Eckel 2011). Theoretical arguments about the effect of emotions on dyadic trust make competing claims as to which elements of a person's emotional state affect trust: Dunn and Schweitzer (2005) argue that emotions characterized by a sense that another person is in control (other-control appraisals), such as anger, will have the biggest effect on trust, whereas the work of Albertson and Gadarian (2015) suggests that emotions characterized by a low sense of certainty (low-certainty appraisals), such as anxiety, will have the biggest impact on trust. Since these theories make competing claims about emotions that share a valence, adjudicating between them requires accounting for the effect of experimental manipulations of non-target emotions. However, existing research on emotion and dyadic trust has either failed to differentiate between specific positive or negative emotions (e.g., Capra 2004) or failed to account for the fact that common experimental manipulations have collateral effects on non-target emotions (e.g., Dunn and Schweitzer 2005; Mislin, Williams, and Shaughnessy 2015).

We address these weaknesses by inducing experimental subjects to feel one of five specific emotions and then measuring their levels of all five emotions, along with their levels of general positive and negative affect. Subjects then played the trust game as a measure of dyadic trust (Berg, Dickhaut, and McCabe 1995; Wilson and Eckel 2011). We use causal mediation analysis to isolate the effect of each of the five emotions. We find that, as expected, the experimental manipulation used in past studies of emotion and trust has collateral effects on nontarget emotions. We find some evidence that anxiety has a negative effect on dyadic trust, but fail to find support for earlier claims that anger has a negative effect on trust.

1 Emotions and Trust

The existing literature offers several approaches for generating hypotheses about the effect of emotion on trust. Building on an appraisal-tendency framework (Smith and Ellsworth 1985; Lerner and Keltner 2000), Dunn and Schweitzer (2005) argue that the effect of an emotion on trust will depend on two factors: the emotion's valence (whether it is positive or negative) and whether the emotion's cognitive appraisal leads the trustor to apply this valence to the trust decision. They further argue that an emotion's control appraisal will be the primary determinant of whether an emotion's valence will influence the decision to trust. Control appraisals determine whether the emotion leads to a sense that oneself is in control of the situation (self-control appraisal) or another person is in control of the situation (other-control appraisal). Dunn and Schweitzer (2005) hypothesize that an emotion characterized by other control appraisals (e.g., anger) will increase or decrease trust depending on that emotion's positive or negative valence, whereas an emotion characterized by self-control appraisal will have no effect on trust. Thus, anger, a negative emotion with an other-control appraisal, would have a negative effect on trust, whereas guilt, a negative emotion with a self-control appraisal, would not affect trust.

In contrast, Albertson and Gadarian (2015) suggested that anxiety has important effects on trust in government and other institutions. Anxiety lacks strong control appraisals, the key element in Dunn and Schweitzer (2005)'s theory; instead, it is primarily characterized by its low certainty appraisal. Although Albertson and Gadarian (2015) investigated trust in institutions instead of dyadic trust, their findings suggest that certainty appraisals, in addition to control appraisals, might lead people to incorporate the valence of their emotional state into a decision about dyadic trust. If

this were true, we would expect negative low-certainty emotions, such as anxiety, to reduce trust and positive low-certainty emotions, such as hope, to increase trust.

We build on this previous work by testing the effect of emotions that vary in their control and certainty appraisals on dyadic trust as measured by the trust game (Berg, Dickhaut, and McCabe 1995; Wilson and Eckel 2011). The focus on dyadic trust marks a difference from Albertson and Gadarian (2015), whereas our use of the trust game to measure trust stands in contrast to Dunn and Schweitzer (2005), who measured trust using survey items (cf. Wilson and Eckel 2011).[2] Two existing studies measure the effect of emotional state on play in the trust game and found mixed results. Capra (2004) found no effect of general positive or negative affect on trusting behavior; however, this study fails to distinguish between specific positive or negative emotions. Mislin, Williams, and Shaughnessy (2015) found a positive effect of happiness on trust. However, the fact that Mislin, Williams, and Shaughnessy (2015) examined a single emotion makes it hard to ascribe this effect of any particular cognitive appraisal.

The two theoretical frameworks described above predict that different emotions will have an effect on trust: in the control appraisals framework, the prediction is that other-control emotions such as anger will affect trust, whereas in the certainty appraisals framework, the prediction is that low-certainty emotions such as anxiety will affect trust. Given these predictions, it is particularly important to account for the effects of an experimental manipulation on non-targeted emotions. Capra (2004), Dunn and Schweitzer (2005), and Mislin, Williams, and Shaughnessy (2015) all used variations of the AEMT, a widely used manipulation in which subjects are asked to write about past experiences that made them feel the target emotion (Strack, Schwarz, and Gschneidinger 1985). Although this manipulation promises specificity, it has been found to affect levels of non-target emotions (Mills and D'Mello 2014). For example, DeSteno et al. (2004) found that writing about an anger-inducing memory also increases levels of sadness, and vice versa, when compared to a neutral control condition; Mills and D'Mello (2014) found increased levels of sadness and disgust in subjects who wrote about an anger-inducing emotion, whereas both anger and anxiety inductions reduced happiness. Using a different method, Valentino, Hutchings, and Banks (2008) found that subjects instructed to write about anger-inducing emotions sometimes produced responses that reflected anxiety. This imprecision makes interpreting experimental results difficult; for example, if writing about a memory that evokes anger also produces anxiety in some subjects, then any observed effect on trust could be the result of anger's other-control appraisal or of anxiety's low certainty appraisal. By using causal mediation analysis, we can account for these effects on non-target emotions, providing more precise estimates of the effects of specific emotions on trust.

2 Experimental Design

The experiment took place in no-deception laboratory and involved 268 undergraduate students recruited through the laboratory's subject pool; this research was approved by the Institutional Review Board at Princeton University.[3] Upon arrival in the laboratory, subjects were randomly assigned to an experimental condition. We used the AEMT to induce subjects to feel one of five emotions: anger, anxiety, guilt, happiness, or self-assurance, as well as a control condition where subjects were asked to write about a novel they had recently read.[4] After they finished this task, subjects completed the Positive and Negative Affect Schedule - Expanded Form (PANAS-X) battery to measure the five emotions listed in Table 1 as well as general positive and negative affect (Watson and Clark 1999).

Once all subjects in a session completed the PANAS-X, they moved on to the second stage of the experiment, a trust game modeled after the one used in Cesarini et al. (2008). Subjects in the first position (the "sender") were given five dollars. They could then select a portion of this five dollars to send to the person in the second position (the "receiver"). Any money sent to the receiver was

[2]Dunn and Schweitzer (2005) also measured trust in a specified other, whereas our study measures trust in an anonymous other.
[3]Data and replication files for this study are archived in the Political Analysis Dataverse (Myers and Tingley 2016).
[4]See Online Appendix A for the precise wording of the experimental instructions.

Table 1 Positive and Negative Affect Schedule - Expanded Form subscales

PANAS scale	*Construct measured*	*Range*	*Items*
General positive	General positive affect	10–50	active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, strong
General negative	General negative affect	10–50	afraid, scared, nervous, jittery, irritable, hostile, guilty, ashamed, upset, distressed
Fear	Anxiety	6–30	afraid, scared, frightened, nervous, jittery, shaky
Hostility	Anger	6–30	angry, hostile, irritable, scornful, disgusted, loathing
Guilt	Guilt	6–30	guilty, ashamed, blameworthy, angry at self, disgusted with self, dissatisfied with self
Joviality	Happiness	8–40	happy, joyful, delighted, cheerful, excited, enthusiastic, lively, energetic
Self-assurance	Self-assurance	6–30	proud, strong, confident, bold, daring, fearless

tripled. The receiver could then return any portion of the tripled amount to the sender. Subjects were told that they were being randomly matched with another participant and within this pair randomly assigned to be either the sender or the receiver. Senders and receivers selected their actions simultaneously. Senders selected an amount to send to the receiver from a list of amounts from zero dollars to five dollars in fifty-cent increments. Receivers' actions were solicited using the strategy method, in which each receiver selected an amount that they would return given each possible amount the sender could send to them. Our focus on trusting behavior means that we focus on senders in our analyses of the trust game. The Nash Equilibrium prediction for this game is for the sender to keep all five dollars and for the receiver to keep any amount that the sender does send, though experiments with a variety of populations find that subjects send and return positive amounts (Johnson and Mislin 2011).

Prior to arriving at the laboratory, subjects completed a pre-survey questionnaire that included two survey-based measures of trust and trusting behavior (Glaeser et al. 2000). After the trust game, subjects completed a questionnaire that included the same measures of trust, as well as demographic questions.[5] They were then told the action of their partner in the trust game and paid in private. Average earnings, including a five-dollar show-up fee, were $11.72.

3 Empirical Analysis

3.1 *Effects of Writing Tasks on Emotions*

We begin by examining whether each experimental condition successfully induced the target emotion and whether, as we expect, there were collateral effects on non-target emotions. Figure 1 shows the level of each emotion, along with general disposition negative and positive scales, reported by subjects in each experimental condition. If the AEMT were to have a highly targeted effect, we would find that each experimental manipulation produced a higher level of its targeted emotion than the control condition and that no experimental manipulation produced a higher-than-control level of any non-target emotion. Additionally, we would expect subjects in negatively valenced conditions to report higher levels of general negative disposition than the control group, and subjects in positively valanced conditions to report higher levels of general positive affect.

As Fig. 1 shows, each negative experimental condition produced a higher level of its targeted emotion than the control group, as well as a higher level than the level produced by any other experimental condition. However, each of these experimental conditions also produced heightened levels of non-target emotions. Subjects in the Anxiety condition also reported higher levels of anger and guilt than subjects in the control condition; these effects were nearly as large as the effect on anxiety, the targeted emotion. Both the Anger and the Guilt manipulations produced increased

[5]Surveys available in Online Appendix A.

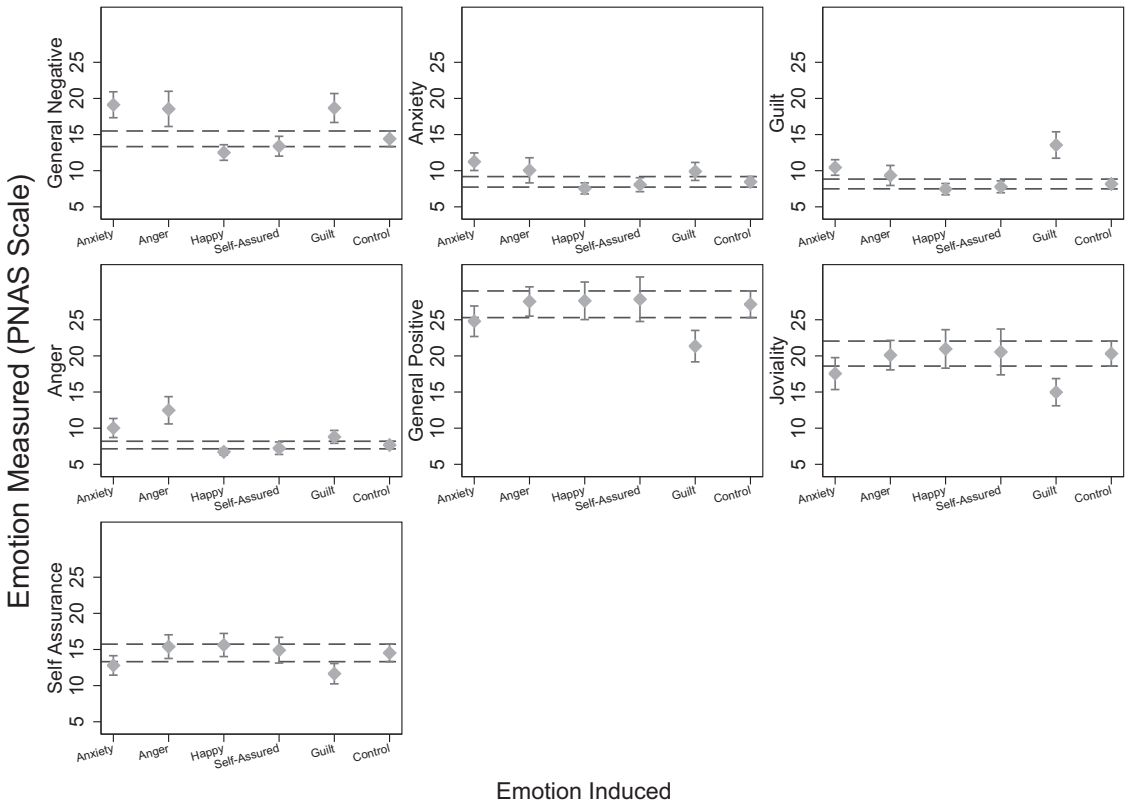

Fig. 1 Effects of emotion manipulations on negative and positive emotions. Means with 95% confidence intervals. Dashed Horizontal lines indicate control condition confidence interval.

levels of the two other non targeted negative emotions, though the confidence intervals of these means overlap with the confidence intervals of the control condition. Finally, the Guilt manipulation had a strong negative effect on all three measures of positive affect. Figure 1 shows that the AEMT failed to manipulate positive emotions in any meaningful way. This failure suggests that alternative ways of manipulating specific positive emotions are needed; if the AEMT is used, a thorough manipulation check is needed to demonstrate that the manipulation has succeeded.

These results show that although the AEMT has its largest effect on the target emotion, it also has collateral effects on non-target emotions. This means that any observed effect of the manipulation on an outcome variable of interest might work through the manipulated emotion, or might work through one of these non-target emotions. For example, the effect of having subjects write about an experience that made them feel anxious might operate through increased levels of anger.

3.2 *Effects of Writing Tasks on Trust Behavior Mediated through Emotion Changes*

Next we turn to whether the experimental manipulations had any influence on behavior via changes in emotional states. Do the changes in the emotional states generated by the negative manipulations have an influence on behavior in the trust game? Since the experimental manipulations changed subjects' levels of several different emotions, not just the targeted emotion, we conduct a causal mediation analysis to see how much of the effect of the manipulation on trust behavior is mediated by changes in the targeted emotional state, allowing for the effect to be transmitted through other pathways.

A review of causal mediation analysis is beyond the scope of the current article (Imai, Keele, and Tingley 2010a,b; Imai et al. 2011). However, we briefly remind the reader that mediation analysis decomposes the total effect of the manipulation into the mediated (or indirect) and direct effects. Importantly, the direct effect will absorb alternative pathways such as a manipulation's effect on non-target emotions. In most applied research (Imai et al. 2014), the fundamental concern with this

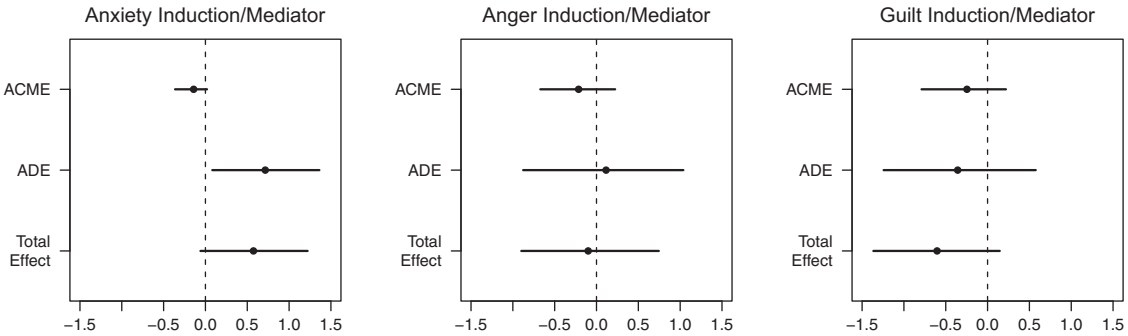

Fig. 2 ACME, average direct effect (ADE), and total effects of anxiety, anger, and guilt manipulations for targeted emotion mediator. Point estimates with 90% confidence intervals.

research design is that there is an omitted variable that has an impact on both the mediator and outcome variable. The first paper in the symposium more directly discusses this in the present context.[6]

The relationship between the mediator and the treatment is modeled with linear regression, as is the relationship between the outcome and both the treatment and mediator.[7] We include controls for gender, political ideology, and a pre-treatment measure of generalized trust in order to make the requisite identification assumptions more plausible. For example, the measure of pre-treatment generalized trust increases our confidence that there are not omitted factors that could have a causal impact on the amount sent. If the amount someone sends is a function of how generally trusting a person is, then the pre-treatment measure of generalized trust helps to control for this latent tendency to trust others. If this variable were omitted and it were to have a causal impact on the mediating variable, then we would be particularly concerned about violating the necessary identification assumptions. Of course, it is possible that other omitted variables could impact both the mediator and outcome, and hence in the Online Appendix we report sensitivity analyses to violations of the necessary identification assumptions.

Figure 2 shows the effect of each manipulation on the amount sent as mediated by the targeted emotion.[8] If the control appraisals theory is correct, we would expect the anger manipulation to have a negative effect on trust, as mediated by subjects' levels of anger; if the certainty appraisals theory is correct, we would expect the anxiety manipulation to have a negative effect on trust, as mediated through subjects' levels of anxiety. Finally, a negative effect of the guilt manipulation mediated through levels of guilt would suggest that neither of these theories accounts for the effect of emotion on trust.

We first look at the total effect of the three negative manipulations. This is the effect that would be estimated by a naïve reading of the experimental results, which assumes that all of the effect of a manipulation operates through the targeted emotion. Although all three confidence intervals overlap at least slightly with zero, the total effect suggests no effect of anger and a *positive* effect of anxiety on trust. Further, looking only at the total effect would suggest that guilt, not anxiety or anger, has the largest negative impact on trust. These results would have confusing theoretical implications, suggesting an effect of guilt on trust through some heretofore untheorized mechanism.

However, looking at the effect of each manipulation mediated through its target emotion as captured by the average causal mediation effect (ACME) tells a very different story. The point

[6]We do not, however, consider the case where some of these potential mediators are causally related. Alternative estimation strategies and assumptions are required in this case (Imai and Yamamoto 2013).

[7]Since some individuals sent the maximum amount, the use of linear regression may be problematic because of censoring. Online Appendix E provides a robustness check in which we rely on a Tobit regression model for the outcome. Results are substantively similar.

[8]Our theoretical framework suggests that the valence of a subject's emotional state will influence their willingness to trust when the appraisal tendency leads them to misattribute this valence to the trust situation. An analysis that uses general disposition–negative, presented in Online Appendix D, better accounts for the full degree of negative valence experienced by subjects. However, since our measure of negative valence includes adjectives measuring nontarget emotions, it relies on the assumption that the primary appraisal produced by each manipulation is the appraisal associated with the target emotion; the results in Section 3.1 suggest that this is questionable. The results of these two analyses are substantively similar.

estimates of the ACME for all three manipulations are negative, though in the case of guilt and anger this effect is very imprecisely estimated and far from statistically significant. Only the effect of anxiety is marginally statistically significant, although again the 90% confidence interval overlaps slightly with zero. These results suggest that if negative emotions have an effect on trust, this effect operates through certainty appraisals; the finding regarding anger offers no support for the control appraisals theory. Importantly, these findings suggest very different theoretical conclusions than naïvely assuming that all effects of the manipulations operate through the target emotion.

To evaluate the robustness of these findings to violations of the assumption that no variable affects both the mediator and the amount sent, Online Appendix F presents a sensitivity analysis for the anxiety results. There, we ask how much of an impact a confounding variable would need to have on the mediator and the outcome in order to change the sign of the mediation effect. We learn from the sensitivity analyses that if an omitted confounder influences the mediator and outcome variables in opposite directions, our results would get stronger (more negative). However, if such a confounder affects the mediator and outcome variables in the same direction, then its impact would need to be modest in order for the estimated sign on the mediation effect to change.[9]

4 Conclusion

It may be impossible to find a "political anxiety pill" that makes subjects feel anxious while having no impact on other aspects of their affective state. However, this article shows how the effect of such a pill can be approximated by using causal mediation analysis to account for the impact of a manipulation on non-target emotions. Our findings about emotion and trust show why this is so important. The total effect of the anxiety manipulation on trust is *positive*, a puzzling finding that is inconsistent with both existing theoretical frameworks. However, causal mediation analysis, by accounting for the impact of the anxiety manipulation on non-target emotions, shows that the effect of negative affect mediated through anxiety is in fact negative and only marginally statistically significant. Thus, the conclusion we reach by using causal mediation analysis is the opposite of the conclusion that comes from naïvely assuming that the entire effect of a manipulation operates through the targeted emotion.

Our findings offer tepid support for the hypothesis that anxiety mediates the effect of negative affect on trust and the theory that certainty appraisals mediate the effect of emotion on trust. We find that neither guilt, an emotion with strong self-control appraisal, nor anger, an emotion with strong other-control appraisal, plays a mediational role. This finding is inconsistent with the hypothesis of Dunn and Schweitzer (2005) that control appraisals mediate the effect of negative affect on trust. At a theoretical level, this may offer additional support for the certainty appraisals hypothesis; anger is a high-certainty emotion and would thus not be expected to affect trust. However, there may be more practical explanations. In particular, Dunn and Schweitzer (2005) did not measure the effect of the manipulation on their subjects or perform mediation analysis. This leaves open the possibility that while writing about an anger-inducing experience causes subjects to show less trust, this effect is not caused by an increase in anger but instead through the effect of the task on another negative emotion, such as anxiety, or on levels of positive affect. Additionally, Dunn and Schweitzer (2005) measured trust using a survey instrument, whereas we measure trust using the trust game. These two techniques may measure different constructs; survey-based measures of trust seem to be more predictive of trustworthy behavior (i.e., behaving in a manner deserving of trust) than of the trusting behavior that they purport to measure (Glaeser et al. 2000). Although we have no strong theoretical reasons for believing that control appraisals would matter for trustworthiness, it is not surprising that different emotions would be important for different aspects of trusting relationships.

Causal mediation analysis, as employed here, does have notable drawbacks. The fact that it requires measuring subjects' emotions after induction means that effect sizes are likely depressed. Researchers might consider alternative methods to measure subjects' emotional states that do not

[9]Online Appendix G presents results where the amount sent was modeled with a quantile regression model.

require subjects to self-evaluate these states. For example, Albertson and Gadarian (2015, chap. 3) had coders rate the emotion expressed in subjects' responses to a thought-listing exercise, then used the level of anger and anxiety expressed in a causal mediation analysis.[10] Physiological measures of emotional response could also be used to avoid asking subjects to introspect about their emotional states (e.g., Renshon, Lee, and Tingley 2015). Further, researchers need to make substantively based justifications for meeting the assumptions of a causal mediation analysis. The case presented in this article includes a set of candidate control variables. Other issues, such as what to do if different dimensions of emotional arousal are interrelated, require more sophistical statistical treatment (Imai and Yamamoto 2013), as well as better measurement tools. Thus, although not a panacea, causal mediation analysis is a useful tool for researchers seeking to test hypotheses about the effect of specific emotions on political behavior.

References

Albertson, B., and S. K. Gadarian. 2015. *Anxious politics: Democratic citizenship in a threatening world*. Cambridge, UK: Cambridge University Press.

Almond, G. A., and S. Verba. 1963. *The Civic Culture*. Princeton, NJ: Princeton University Press.

Berg, J., J. Dickhaut, and K. McCabe. 1995. Trust, reciprocity, and social history. *Games and Economic Behavior* 10:122–42.

Capra, C. M. 2004. Mood-driven behavior in strategic interactions. *AEA Papers and Proceedings* 94:367–72.

Cesarini, D., C. T. Dawes, J. H. Fowler, M. Johannesson, P. Lichtenstein, and B. Wallace. 2008. Heritability of cooperative behavior in the trust game. *Proceedings of the National Academy of Sciences* 105:3721–26.

DeSteno, D., N. Dasgupta, M. Y. Bartlett, and A. Cajdric. 2004. Prejudice from thin air: The effect of emotion on automatic intergroup attitudes. *Psychological Science* 15:319–24.

Dunn, J. R., and M. E. Schweitzer. 2005. Feeling and believing: The influence of emotion on trust. *Journal of Personality and Social Psychology* 88:736–48.

Gadarian, S. K. 2010. The politics of threat: How terrorism news shapes foreign policy attitudes. *The Journal of Politics* 72:469–83.

Glaeser, E. L., D. I. Laibson, J. A. Scheinkman, and C. L. Soutter. 2000. Measuring trust. *The Quarterly Journal of Economics,* 13:811–46.

Imai, K., L. Keele, and D. Tingley. 2010a. A general approach to causal mediation analysis. *Psychological Methods* 15:309–34.

Imai, K., L. Keele, D. Tingley, and T. Yamamoto. 2011. Unpacking the black box: Learning about causal mechanisms from experimental and observational studies. *American Political Science Review* 105:765–89.

———. 2014. Practical implications of theoretical results for causal mediation analysis. *Psychological Methods* 19:488–92.

Imai, K., L. Keele, and T. Yamamoto. 2010b. Identification, inference, and sensitivity analysis for causal mediation effects. *Statistical Science* 25:51–71.

Imai, K., and T. Yamamoto. 2013. Identification and sensitivity analysis for multiple causal mechanisms: Revisiting evidence from framing experiments. *Political Analysis* 21:141–71.

Johnson, N. D., and A. A. Mislin. 2011. Trust games: A meta-analysis. *Journal of Economic Psychology* 32:865–89.

Keltner, D., K. D. Locke, and P. C. Aurain. 1993. The influence of attributions on the relevance of negative feelings to personal satisfaction. *Personality and Social Psychology Bulletin* 19:21–29.

Lerner, J. S., and D. Keltner. 2000. Beyond valence: Toward a model of emotion-specific influences on judgment and choice. *Cognition and Emotion* 14:473–93.

Mills, C., and S. D'Mello. 2014. On the validity of the autobiographical emotional memory task for emotion induction. *PLOS One* 9:e95837.

Mislin, A., L. V. Williams, and B. A. Shaughnessy. 2015. Motivating trust: Can mood and incentives increase interpersonal trust? *Journal of Behavioral and Experimental Economics* 58:11–19.

Myers, D. C., and D. Tingley. 2016. The influence of emotion on trust. http://dx.doi.org/10.7910/DVN/EBBP1O, Harvard Dataverse, v1.

Renshon, J., J. J. Lee, and D. Tingley. 2015. Physiological arousal and political beliefs. *Political Psychology* 36:569–585.

Smith, C. A., and P. C. Ellsworth. 1985. Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology* 48:813–38.

Strack, F., N. Schwarz, and E. Gschneidinger. 1985. Happiness and reminiscing: The role of time perspective, affect, and mode of thinking. *Journal of Personality and Social Psychology* 49:1460–69.

[10]Note that this method relies on the assumption that the emotions expressed in subjects' responses to prompts such as the AEMT are highly correlated with their emotional state. This seems likely, but researchers can strengthen their case by offering empirical evidence that subjects who, for example, write responses coded as "anxious" also report experiencing heightened anxiety.

Sullivan, J. L., and J. E. Transue. 1999. The psychological underpinnings of democracy: A selective review of research on political tolerance, interpersonal trust, and social capital. *Annual Review of Psychology* 50:625–50.

Valentino, N. A., V. L. Hutchings, and A. J. Banks. 2008. Is a worried citizen a good citizen? Emotions, political information seeking, and learning via the internet. *Political Psychology* 29:247–73.

Watson, D., and L. A. Clark. 1999. *The PANAS-x: Manual for the positive and negative affect schedule - expanded form*. Typescript, University of Iowa.

Wilson, R. K., and C. C. Eckel. 2011. Trust and social exchange. In *Cambridge Handbook of Experimental Political Science*, eds. J. N. Druckman, D. P. Green, J. H. Kuklinski, and A. Lupia. Cambridge, UK: Cambridge University Press.