

Ideological Uncertainty and Investment of the Self in Politics

Joseph A. Vitriol

Harvard University

Michal Reifen Tagar

IDC Herzliya, Israel

Christopher M. Federico

University of Minnesota

Vanessa Sawicki

Ohio State University

© 2018, American Psychological Association. This paper is not the copy of record and may not exactly replicate the final, authoritative version of the article. Please do not copy or cite without authors' permission. The final article will be available, upon publication.

Editor's Note. Robbie Sutton served as Action Editor for this article.

Author Note

Joseph A. Vitriol, Department of Psychology, Harvard University; Michal Reifen Tagar, Baruch Ivcher School of Psychology, IDC Herzliya, Israel; Christopher M. Federico, Departments of Psychology and Political Science, University of Minnesota; Vanessa Sawicki, Department of Psychology, Ohio State University.

Correspondence concerning this article should be addressed to Joseph Vitriol, Department of Psychology, Harvard University, 33 Kirkland St., Cambridge, MA 02138. Tel.: 215.771.4697. E-mail: joevitriol@gmail.com.

Abstract

Ideological orientation may provide some citizens with an efficient heuristic for guiding their political judgment. Accordingly, one might expect that ideological uncertainty would lead individuals to engage more deeply with the political domain in order to acquire a sufficient level of subjective certainty that the ideological orientation they have adopted is the “right” one. Given the inherent complexity and ambiguity of the political realm, however, we propose that ideological uncertainty should instead undermine political efficacy and interest, thereby motivating individuals to disengage and withdrawal from participating in electoral politics. Using both correlational and experimental methods, we conduct four studies on both convenience and representative samples in the context of two electoral contexts to test this hypothesis. Study 1 (N = 343) and Study 2 (N = 1,054) demonstrate that ideological uncertainty covaries with reduced levels of political engagement and participation in the 2012 and 2016 U.S. Presidential Election, respectively. Study 3 (N = 170) and Study 4 (N = 798) replicate and extend the results of Study 1 and 2 by experimentally manipulating ideological uncertainty using an original and innovative false-feedback paradigm. We demonstrate the causal effect of ideological uncertainty on political engagement (independent of demographic variables, political knowledge, and ideological extremity and conviction), and find that it is particularly pronounced among individuals who reflect on the meaning of their political judgment and behaviors for their political orientation. Implications for political choice and behavior are considered.

Keywords: political psychology, uncertainty, ideology, electoral participation, metacognition

Ideological Uncertainty and Investment of the Self in Politics

Theory and research in the social sciences suggests that ideological orientation can provide citizens with a basis for organizing political judgment and for navigating an otherwise complex and ambiguous political environment (Conover & Feldman, 1989; Glasgow & Alvarez, 2005; Sanders, 2001; Jost, Federico, & Napier, 2009). In this paper, we argue that effective engagement and participation will be higher among those who possess subjective *certainty* that the ideological orientation they have adopted is the “right” one. Uncertainty about *specific* policy preferences, candidate evaluations, or vote intentions has been shown to reduce engagement and participation in the political realm (e.g., Alvarez 1998; Bartels 1986; Enelow & Hinich 1984; Krosnick & Schuman, 1988; Visser, Krosnick, & Simmons, 2003). Additionally, some evidence indicates that citizens who express high (vs. low) levels of certainty in their ideological orientation more closely align their political preferences and judgments with their ideological self-placement (Shoots-Reinhard, Petty, DeMarree, & Rucker, 2014). Importantly, however, no studies that we are aware of have directly examined the causal effects of uncertainty about one’s overall ideological orientation for political engagement and participation. Drawing on insights from a number of literatures, we address this gap across 4 studies, using both correlational and experimental methods embedded in two electoral contexts, by testing the hypothesis that uncertainty about one’s ideological self-placement reduces political engagement and electoral participation.

The Complexity of the Political Realm

For most, navigation of the political realm is inherently burdensome and complex (Alvarez & Franklin, 1994; Conover & Feldman, 1989; Enelow & Hinrich, 1984; Glasgow & Alvarez, 2005; Sanders, 2001). This situation is worsened by low levels of political knowledge and belief

Ideology and Self

system structure in the mass public (Converse, 1964; Delli Carpini & Keeter, 1996).

Furthermore, political leaders' intentionally adopt ambiguous issue positions and obfuscate their prior records in order to broaden their appeal and avoid alienating parts of the electorate (Koch, 2003; Page, 1978; Shepsle, 1972). Moreover, the mass media often provide inadequate reporting on the substance of political controversy, policy prescriptions, and electoral competition (Graber, 1980; Patterson & McClure, 1976), thereby increasing the cost of acquiring useful and accurate information for the average citizen (Enelow & Hinrich, 1984; Glasgow & Alvarez, 2005). Even if these problems were less pronounced, formal treatments of political behavior have often come to the conclusion that a high level of engagement among average citizens cannot be rationally justified in instrumental terms, since no individual is likely to cast a decisive vote in any given election (e.g., Lomasky & Brennan, 1993; Downs 1957; Somin 2013).

Although campaigns can provide some useful information about candidates and their issue positions (Alvarez, 1998; Bartels, 1988; Franklin, 1991; Meirowitz, 2005), citizens often struggle to forecast the future performance and conduct of prospective political candidates (Achen & Bartels, 2016; Downs, 1957). This has numerous downstream consequences. For example, voter uncertainty about candidates' policy positions weakens the relationship between policy attitudes and candidate evaluations (Page, 1978; Peterson, 2004, 2005; Visser, Krosnick, & Simmons, 2003). Similarly, many voters are risk-averse and less willing to participate on behalf of a political candidate who adopts ambiguous issue positions (Bartels, 1986; Enelow & Hinrich, 1984; Koch, 2003; Visser, Krosnick, & Simmons, 2003; see also Lavine, 2001).

Together, these results emphasize that the complexity of political life can unfortunately leave potential voters with insufficient motivation and ability to engage cognitively and behaviorally with politics.

Psychological and Behavioral Implications of Ideological Uncertainty

One way in which at least some voters are able to navigate a complex political world and reduce the costs of political decision-making is to rely on an overall ideological stance to make judgments about the suitability of different electoral options and simplify the process of political participation (Conover & Feldman, 1989; Downs, 1957; Enelow & Hinrich, 1984; Koch, 2003). Having a general ideological orientation (e.g., “liberal” or “conservative”) or a coherent and socially transmitted framework that structures and organizes a shared set of political beliefs, attitudes, values, and identities (Jost, Federico, & Napier, 2009) potentially provides one with a basis for making judgments about a wide variety of objects and actors. However, the utility of ideological self-placement varies considerably across citizens. Though most survey respondents are willing to identify themselves as liberals or conservatives at a symbolic level (Ellis & Stimson, 2012), many of these individuals fail to use their self-placement as a basis for structuring specific political judgments and behaviors (Converse, 1964; Federico & Schneider, 2007).

This suggests that the usefulness of ideology as an aid to navigating the political world is quite variable. In this paper, we explore the consequences of one potential source of variability in the utility of ideology for political engagement and activity: *uncertainty about one’s ideological orientation*. At first glance, one might expect uncertainty about one’s ideological orientation to encourage deeper processing, greater information search, and greater engagement, insofar as subjective uncertainty motivates efforts to re-establish a firm basis for judgment (Lavine, Johnston, & Steenbergen, 2012). However, we hypothesize that uncertainty about one’s ideological self-placement should make the latter a *less* useful heuristic and evoke *doubts* about one’s ability to navigate the political space. In other words, if a person is uncertain about their

Ideology and Self

ideological orientation, it may not help them overcome uncertainty about other political decisions and achieve the confidence needed to participate effectively in politics. Indeed, uncertainty about one's ideological self-placement may be experienced as a threat (e.g., Blascovich & Tomaka, 1996) that cannot be reduced in the political domain, thereby promoting disengagement from politics altogether.

In this respect, we argue that ideological orientations may vary in the degree to which they are held with certainty, just as attitudes toward specific objects do. Attitudinal certainty is traditionally conceptualized as a dimension of attitude strength (Abelson, 1988; Petty & Krosnick, 1995). However, certainty is also distinct from other aspects of attitude strength, including attitude extremity, importance, and accessibility (e.g., Krosnick et al., 1993; Miller & Peterson, 2004; Tormala & Rucker, 2007; Visser, Bizer, & Krosnick, 2006). Specifically, attitudinal certainty can be generally understood as confidence in the validity of one's existing attitudinal preferences and the ability to correctly identify them (Gross, Holtz, & Miller, 1995; Peterson, 2004; Rios, DeMarree, & Statzer, 2014). Attitudes held with certainty are more stable, resistant to persuasion and social influence, and predictive of judgment and behavior (Boninger, Krosnick, & Berent, 1995; Boninger, Krosnick, Berent, & Fabrigar, 1995; Bassili, 1993; Fazio & Zanna, 1978; Clarkson, Tormala, & Rucker, 2008; Krosnick, 1986, 1989; Rucker & Petty, 2004; Swann, Pelham, & Chidester, 1988; Tormala & Petty, 2002; Visser, Krosnick, & Simmons, 2003). Just as attitudes held with certainty are more predictive of judgment and behavior, meta-cognitive confidence has been found to strengthen the effect of self-relevant beliefs on behavior (see Briñol, DeMarree, & Petty 2010).

Thus, without certainty, people may lack confidence in their attitudinal judgments and may feel unclear about how to act in a particular domain (Tormala & Rucker, 2007). Because people

Ideology and Self

are motivated to maintain correct opinions and value accuracy in their judgment (Petty & Cacioppo, 1986), uncertainty in a given domain may be aversive, and serve as a disincentive for future engagement with that domain. Indeed, threats to one's sense of certainty about the self has been found to motivate individuals to cope with the uncertainty by avoiding or disengaging from its source altogether (e.g., Burke, 2006). Similarly, lacking clarity in one's self-concept—as indicated by the extent to which one's self-relevant beliefs are internally consistent, stable, and held with confidence—undermines the willingness to rely on beliefs about the self as a guide for behavior (e.g., Campbell, 1990; Guadagno & Burger, 2007; Setterlund & Niedenthal, 1993). In this way, uncertainty about one's ideological orientation may function similarly in the political domain as uncertainty in regard to one's evaluation of a specific attitudinal object, including the self.

However, it remains possible that ideological uncertainty could instead motivate individuals to engage more strongly with an attitude domain to reaffirm and bolster their subjective certainty, as has sometimes been observed in response to other sources of threats to self-relevant beliefs (Burke, 2006; Hogg, 2007; Jost, Banaji, & Nosek, 2004; Kay et al., 2010; Steele, 1988). Recent work in the attitude domain also suggests that attitudinal uncertainty *can* motivate efforts to bolster one's convictions when individuals reflect on the implications of their judgments for the validity of their own attitudes (i.e., meta-cognitive reflection; Sawicki & Wegener, 2018). This perspective is consistent with recent findings in the attitudinal domain indicating that concerns about the potential invalidity of one's attitudes can motivate people to seek out attitudinally-consistent information (Clark & Wegener, 2013; Sawicki et al., 2011) and even identify more strongly with or perceive members of one's attitudinal-ingroup more positively (Clarkson et al., 2017; Sawicki & Wegener, 2018). Because meta-cognitive reflection

Ideology and Self

may heighten concerns about the validity of one's beliefs, attitudinal uncertainty under these conditions may motivate individuals to actively engage in behaviors to bolster their attitudes.

In the political context, these findings suggest that ideological uncertainty *could* motivate greater political interest and engagement, particularly if individuals reflect on the meaning of their political judgments and behaviors for their ideological orientation. For example, as noted above, a sense of uncertainty about one's ideological orientation might lead individuals to engage in a deeper and confirmatory political information search and heightened cognitive elaboration with respect to political questions in an effort to resolve uncertainty or bolster one's ideological convictions (e.g., Clark & Wegener, 2013; Lavine et al., 2012; Sawicki et al., 2011). If so, ideological uncertainty might promote *increased* political interest and participation, especially over time. This alternative possibility provides additional justification for a closer look at the interface between ideological uncertainty and various dimensions of political engagement. Nevertheless, the complexity and ambiguity of the political domain for most citizens makes it unlikely that increased engagement will suffice to bolster subjective certainty. Thus, for individuals uncertain about their ideology, reflecting on the meaning of one's political judgment for one's political orientation may heighten the sense that one is not able to effectively and meaningfully participate in the political domain. Consequently, we expect that ideological uncertainty, by reducing individuals' sense of efficacy in the political domain, will depress engagement and participation both in the short and long-term. We also expect that meta-cognitive reflection will increase the sense of invalidity and exacerbate the effects of ideological uncertainty on disengagement.

The Present Research

In the present studies, we investigate the consequences of feeling uncertain about one's

Ideology and Self

overall ideological self-placement. Specifically, we test the hypothesis that uncertainty about ideological identification will leave individuals unclear about what to do or how to act in the political realm, thereby depressing their engagement and participation in politics overall. Across four studies, we examine this prediction by looking at the relation between uncertainty in one's ideological self-placement and political engagement and participation.

Study 1 (N = 343) utilizes a convenience sample and demonstrates that self-reported ideological uncertainty (a) covaries with low levels of interest in and investment of the self in politics and (b) predicted decreased participation in the 2012 U.S. presidential election and state-wide ballot initiatives, approximately two months later. In Study 2 (N = 1,054), we replicate and extend the findings of Study 1 on a large representative sample in the context of the 2016 U.S. presidential election.

Studies 3 and 4 were designed to move beyond observational evidence and evaluate the extent to which ideological uncertainty is causally prior to reductions in political engagement and participation. Using an original and innovative false-feedback paradigm following completion of an ideology-based implicit association test to manipulate ideological uncertainty, Study 3 (N = 170) indicates that induced ideological uncertainty caused a reduction in political engagement. Having provided causal and convergent experimental evidence for our hypothesis in Study 3, we then replicate the experimental and correlational findings from Studies 1-3 on an independent sample in Study 4 (N=798) and provide evidence for the moderating role of meta-cognitive reflection. That is, in Study 4, we identified a potential moderator of the experimental effects observed in Study 3. In particular, we find that the causal effect of experimentally induced ideological uncertainty on political disengagement are stronger when participants reflect on the meaning of their political judgments and behavior for their ideological orientation.

In sum, across four independent samples in two electoral contexts, multiple measures of actual political participation, and both correlational (i.e., cross-sectional and longitudinal) and experimental methodological approaches, we find strong and converging evidence to suggest that when people feel or are made to feel uncertain about their ideological orientation, they feel less able to meaningfully and effectively navigate a complex political environment, and instead disengage and withdraw from politics altogether. We also find that political disengagement as a function of ideological uncertainty is particularly likely when individuals reflect on the implications of their political judgments and behavior for the validity of their ideology. These effects were observed while controlling for demographic variables, political knowledge, and ideological conviction and extremity. Below, we report the evidence that supports this conclusion.

Study 1

Participants, Procedure, and Measures

Study 1 utilized data collected for a 3-wave panel study that examined the effect of political advertisements on political behavior in the months leading up to the 2012 presidential election. Specifically, 411 students in an introductory Psychology course at the University of Minnesota were recruited for an online survey investigating beliefs about current events and were offered extra course credit upon completing the study. For the analyses reported below, we relied primarily on measures administered at Time 1 (T1; early September 2012) and at Time 3 (Post-election 2012). Attrition was approximately 10%, suggesting that more than 90% of the sample was retained across all three measurement points ($n = 372$). We recruited as many participants as possible at T1 and did not allow new participants to enroll after the T2 survey was in the field.

Ideology and Self

We used only participants who indicated that they were eligible to vote (i.e., US citizens, 18 years of age or older), leaving us with a final sample of $N = 343$ (229 females and 112 males, with two participants not indicating a gender; mean age = 19.47, $SD = 2.68$; White = 84.55%). Our measures are described below¹. All measures were rescaled to run from 0-1 for easier comparison and estimation of effect sizes unless otherwise indicated. Summary statistics are provided for the 0-1 coding.

Ideological extremity. This measure was computed based on a T1 measure of *ideological self-placement*. *Ideological self-placement* was measured using a seven-point scale ranging from *very liberal* (1) to *very conservative* (7; $M = 3.61$; $SD = 1.68$). *Ideological extremity* was computed as the absolute value of deviation from the mid-point of the ideological self-placement scale ($M = 1.42$; $SD = 0.97$). In order to account for the role of strength of ideological self-placement in political engagement and participation, this measure of ideological extremity is included as a covariate.

Ideological uncertainty. Following the item designed to measure ideological self-placement at T1, participants were asked the uncertainty question: “To what extent do you feel certain about your [response from previous item] political outlook?” The responses were: 1 (*not at all*), 2 (*slightly*), 3 (*moderately*), 4 (*much*), and 5 (*very much*). Responses were reversed so that higher scores indicate greater uncertainty ($M = 3.73$; $SD = 1.13$).

¹ Measures relevant to our research questions and not included in this analysis (but administered for research questions not addressed in the current study), include cognitive style; candidate evaluations; feeling thermometers of political candidates, actors, and parties; issue-positions, political activism and exposure to political messages and consumption of political media; sociopolitical orientations and attitudes about race. Two items that evaluate political cynicism and clarity in political understanding were also assessed. While these items are conceptually similar to political efficacy, they also lack face validity for that operationalization and are weakly related to one another. For this reason, these items are omitted, but analyses utilized these constructs are available upon request.

Political engagement. This variable was measured at T1 using three items. One measured political interest: “Some people seem to follow what’s going on in government and public affairs most of the time, whether there’s an election going on or not. Others aren’t that interested. Would you say you follow what’s going on in government and public affairs most of the time, some of the time, only now and then, or hardly at all?” Two others measured the centrality of politics to the self: (1) “My political attitudes and beliefs are an important reflection of who I am”; and (2) “In general, my political attitudes and beliefs are an important part of my self-image.” Both of these items were answered on a seven-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Since the three items formed a highly reliable scale ($\alpha = 0.80$), they were averaged. Higher scores indicate greater engagement ($M = 3.90$; $SD = 1.21$).

Political participation indices. Three items assessed participation at T3. The first two items evaluated *ballot initiative participation*. In the 2012 election, citizens of Minnesota voted on two major ballot initiatives: one amending the state constitution to ban same-sex marriage and one amending it to require photo ID for all voters. Participants were asked if they voted on each initiative: (1) “Did you vote on the Minnesota same-sex marriage ballot on November 6?” and (2) “Did you vote on the Minnesota voter-ID ballot on November 6?” (1 = yes, 0 = no, on both items). The third item was a dichotomous index of *presidential election participation*, i.e., whether the participant voted in the 2012 presidential election: “Did you vote in the most recent presidential election?” (1 = yes, 0 = no; $M = 0.92$; $SD = 0.27$). Responses were added up to generate a single count index of political participation ($\alpha = 0.86$; $M = 2.60$; $SD = 0.90$).

Additional controls. To control for demographic correlates of engagement that may be confounded with uncertainty (e.g., Delli Carpini & Keeter, 1996), we also included indices of *gender* (0 = female, 1 = male), *family income* (11-point scale, in increments of \$10,000; recoded

Ideology and Self

to run from 0 to 1), *age*, and *race* (0 = nonwhite, 1 = white), measured at T1. Moreover, since information about politics influences both engagement and reliance on ideological self-placement (Delli Carpini & Keeter, 1996), we also included a control for political knowledge measured at T1. This was indexed by the number of correct responses to the following items: (1) “What job or political office does Joseph Biden currently hold?” (2) “What job or political office does John Roberts currently hold?” (3) “What job or political office does David Cameron currently hold?” (4) “What job or political office does John Boehner currently hold?” (5) “Which political party currently has the most members in the Senate in Washington?” (6) “Which political party currently has the most members in the House of Representatives in Washington?” (7) “How long is the term of office for a U.S. Senator?” (8) “Whose responsibility is it to nominate judges to the Federal Courts - the President, the Congress, or the Supreme Court?” ($M = 0.59$, $SD = 0.26$; Cronbach’s $\alpha = 0.81$).

Results

In Study 1, we first examined our key hypothesis by regressing the measure of political engagement on ideological uncertainty and gender, income, age, race, political knowledge, and ideological extremity using ordinary least-squares. The results of this analysis are summarized in Table 1. As the estimates indicate, neither age, income, gender (1 = male), race (1 = white), nor ideological extremity were significantly related to political engagement (all $ps > .050$), though political knowledge, $b = 0.15$, CI 95% (0.08, 0.22), $p < .001$, corresponded with higher levels of engagement. More importantly, as predicted, ideological uncertainty was associated with reduced political engagement, $b = -0.36$, CI 95% (-0.43, -0.30) $p < .001$. Given that all variables were coded on a 0-1 interval, this estimate indicates that moving from the lowest to the highest level of uncertainty was associated with a 36% reduction in engagement, while controlling for

Ideology and Self

political knowledge, ideological extremity, and demographics. The effect of uncertainty remains strong even without these controls, $b = -0.41$, CI 95% $(-0.48, -0.35)$, $p < .001$.

To extend this result, we next looked at the relationship between ideological uncertainty and political participation, again controlling for the same covariates². The count of votes (out of 3) was regressed on the predictors using logistic regression for binomial counts (Cook & Weisberg, 1999). This model is appropriate for dependent variables consisting of a count of the number of “successes” (i.e., ballot initiatives and presidential candidates voted on) observed over a fixed number of trials (i.e., three total initiatives). These results are summarized in the top panel of Table 2. Again, none of the controls significantly predicted political participation (all $ps > .050$), except ideological extremity, $\text{Exp}(b) = 10.25$, CI 95% $(2.22, 47.30)$, $p = .003$. However, consistent with predictions, ideological uncertainty was significantly related to political participation, $\text{Exp}(b) = 0.13$, CI 95% $(0.03, 0.59)$, $p = .008$. Without covariates in the model, the coefficient for ideological uncertainty obtained significance, $\text{Exp}(b) = 0.10$, CI 95% $(0.03, 0.33)$, $p < .001$. This estimate indicates that respondents at the highest compared to the lowest level of uncertainty were approximately 7-8 times less likely to participate in the 2012 presidential election.

In sum, the results of Study 1 confirm our hypotheses. Across three different outcomes, our key hypothesis was supported: higher levels of ideological uncertainty are associated with reduced engagement with politics and diminished political participation approximately 2-months later, net the effect of several demographic and political variables often associated with political

² When evaluated separately, ideological uncertainty was a significant predictor of reduced ballot voting (with covariates, $\text{Exp}(b) = 0.35$, $p = .066$; without covariates, $\text{Exp}(b) = 0.26$, $p = .007$) and participation in a presidential election (with covariates, $\text{Exp}(b) = 0.16$, $p = .011$; without covariates, $\text{Exp}(b) = 0.11$, $p < .001$).

involvement, including ideological extremity. Nevertheless, a major limitation of Study 1 is that we relied upon a non-representative sample of undergraduate psychology students in a single election context. Accordingly, in Study 2, we turn to data from a nationally representative sample recruited in the context of the 2016 U.S. presidential election. We replicate and extend our prior results by showing that ideological uncertainty earlier in the election predicts subsequent reductions in levels of interest and participation in the 2016 American general election.

Study 2

Participants, Procedure, and Measures

Study 2 utilized data collected as part of a large, multi-investigator study of the 2016 presidential election by the Center for the Study of Political Psychology at the University of Minnesota, Twin Cities, utilizing a 4-wave panel design. Specifically, 3,557 U.S. citizens were recruited by Survey Sampling International (SSI) for an online survey investigating beliefs about current events and political affairs and were offered monetary compensation upon completing each wave of the study. Sample size at T1 was determined to increase the likelihood that approximately 1,500 participants would be retained across all 4-waves, based on estimated attrition provided by SSI. Attrition for the full sample across the four waves was 49%, with 1,730 participants responding to the Time 4 survey. For the analyses reported below, we relied primarily on measures administered at Time 2 (T2; September 10–16, 2016) and at Time 4 (T4; November 7-10, 2016). Attrition from T2 ($n = 1,565$) to T4 ($n = 1,054$) for participants who responded to all of our measures was approximately 33%, suggesting that more than 67% of the T2 sample was retained across the remaining measurement points.

The final sample used in the analyses below included 1,054 U.S. citizens (407 females and

Ideology and Self

644 males, with 3 participants not indicating a gender; mean age = 55.98, $SD = 14.28$; White = 81%). All measures were rescaled to run from 0-1 for easier comparison and estimation of effect sizes unless otherwise indicated, although we report the descriptive statistics for the measures below in their original scale. T4 sample weights were applied to improve the extent to which these data are nationally representative of the U.S. population. These weights were created by raking on respondents' race, age, ethnicity, income, gender, and educational attainment. The use of sampling weights do not substantively change the results or interpretation of our analysis.

Ideological extremity. Ideological self-placement ($M = 4.12$, $SD=1.70$) and ideological extremity ($M = 1.32$, $SD=1.08$) were measured, computed, and coded just as they were in Study 1, but only the latter was used as a covariate.

Ideological uncertainty. This variable was measured at T1 using the same item employed in Study 1, and it was coded in the same fashion ($M = 2.31$; $SD = 1.24$). In order to account for the role of strength of ideological self-placement in political engagement and participation, this measure of ideological extremity is included as a covariate, just like in Study 1.

Political engagement. This variable was assessed at T2 using three items that were different from but conceptually related to those used in Study 1, adjusted to fit the context of the elections. Two items measured political interest: (1) "How interested are you in information about what's going on in government and politics?" and (2) "Some people don't pay much attention to the political campaigns. How about you? How interested would you say that you are in following the political campaigns (so far) this year?". Both of these items were answered on a five-point scale ranging from 1 (*not at all interested*) to 5 (*extremely interested*). A third item measured centrality of politics to the self: "Generally speaking, how much would you say that

Ideology and Self

you personally care about who wins the presidential election this fall?” This item was also measured on a five-point scale, ranging from 1 (*Not at all*) to 5 (*A great deal*). Since the three items formed a highly reliable scale ($\alpha = 0.83$), they were averaged. Higher scores indicate greater engagement ($M = 2.03$; $SD = 0.90$).

Political participation. To assess political participation, participants were asked whether they voted in the 2016 presidential election: “In talking to people about elections, we often find that a lot of people were not able to vote because they weren’t registered, they were sick, or they just didn’t have time. Which of the following statements best describes you?” Participants chose from the following options: (1) “I did not vote in the election this November,” (2) “I thought about voting this time, but did not,” (3) “I usually vote, but did not this time,” and (4) “I am sure I voted.” Participants who chose option 4 were coded as 1 (voted; $n = 963$ or 91%), whereas participants who chose one of the other 3 options were coded as 0 (did not vote; $n = 91$ or 9% did not vote).

Additional Controls. We included the same demographic controls (measured at T1) that were considered in Study 1; all were coded in the same fashion. Moreover, we again included an index of political knowledge, which was measured, computed, and coded just as it was in Study 1 ($M = 0.66$, $SD = 0.30$), except participants were asked “What job or political office does Paul Ryan currently hold?” (instead of John Boehner).

Results

We began by conceptually replicating our key result from Study 1. To do this, we regressed the political engagement measure on ideological uncertainty and the covariates using ordinary least squares. These results are summarized in Table 3. As the estimates indicate, income ($b = 0.14$, $p = .007$), gender (1 = male; $b = 0.06$, $p = .005$), and ideological extremity ($b =$

Ideology and Self

0.15, $p < .001$), but not political knowledge ($b = 0.06$, $p = .190$), race (1 = white; $b = 0.004$, $p = .895$), age ($b = 0.09$, $p = .094$), were significantly related to political engagement. More importantly, as predicted, ideological uncertainty was associated with reduced political engagement ($b = -0.25$, CI 95%(0.07, 0.24), $p < .001$; without covariates in the model, $b = -0.36$, CI 95%(-0.47, -0.26), $p < .001$). Given that all variables were coded on a 0-1 interval, this estimate indicates that moving from the lowest to the highest level of uncertainty was associated with a 25% reduction in interest. The results of this analysis are summarized in Table 3.

Next, we looked at the relationship between ideological uncertainty and participation in the 2016 presidential election, with the full set of controls. To do so, we regressed the dichotomous vote indicator on ideological uncertainty and the covariates using binary logistic regression. These model estimates are shown in Table 4. Gender (1 = male), $\text{Exp}(b) = 3.25$, CI 95%(0.50, 30.05), $p = .008$, was the only covariate significantly related to political participation. As hypothesized, uncertainty was marginally associated with reduced participation in the presidential vote, $\text{Exp}(b) = 0.15$, CI 95%(0.02, 1.04), $p = .055$. With no covariates included in the model, the effect of ideological uncertainty on political participation was significant, $\text{Exp}(b) = 0.11$, CI 95%(0.03, 0.48), $p = .003$. This estimate indicates that respondents at the highest compared to the lowest level of uncertainty were approximately 6 times less likely to participate in the 2016 presidential election. The results of this analysis are summarized in Table 4.

In sum, the results of Study 2 replicates Study 1 on a larger and more representative sample and extends those findings to an additional electoral context. Our key hypotheses are once again supported: higher levels of ideological uncertainty are associated with reduced psychological engagement with politics and diminished political participation, net of several demographic and political variables often associated with political involvement, including ideological extremity.

Of course, a major limitation of our Study 1 and 2 analyses are their correlational approach, which limits our ability to draw causal inferences regarding the direction of the relationship between uncertainty and engagement. Thus, we extend our analysis in Studies 3 and 4 by using an innovative and novel false-feedback paradigm to manipulate perceived ideological uncertainty. In these studies, we focus solely on establishing the internal validity of the uncertainty effect.

Study 3

Participants and Procedure

Participants. 170 participants were recruited from Amazon's Mechanical Turk platform (MTurk). MTurk samples are more diverse than typical samples of university students and more representative than typical Internet samples (Buhrmester, Kwang and Gosling 2011; Berinsky, Huber, and Lenz 2012; Mason and Suri 2012). Data collection was terminated after the original target sample of approximately 160 participants was reached and no data analysis was undertaken until the full sample was recruited. We retained individuals who were in the process of completing the study when we terminated recruitment of new participants. As before, we used only participants who indicated that they were US citizens. We also excluded four participants who did not continue the study after experimental treatment and one participant who failed an informational manipulation check, leaving us with a final sample of $N = 155$ (84 females and 67 males, with four participants not indicating a gender; mean age = 34.63, $SD = 12.03$; White = 79.91%). With the current sample size in order to detect mean differences between experimental conditions, we estimated that we had 35% power to detect a Cohen's d of 0.2 and 90% power to detect a Cohen's d of 0.5 and 99% to detect a Cohen's d above 0.5.

Experimental design. Study 3 used a between-subjects design with a single two-level

Ideology and Self

independent variable. Participants were randomly assigned to receive certain or uncertain feedback about their performance on an ideology IAT (described below), which was designed to manipulate uncertainty about their ideological identification. To our knowledge, this is the first study to utilize false-feedback following completion of the IAT for an experimental paradigm, and represents a novel approach to manipulating self-relevant beliefs and other psychological constructs.

Experimental manipulation of ideological uncertainty. Participants first completed an ideology-based Implicit Association Test (Greenwald, McGhee, and Schwartz 1998), which measured the strength of association between good or bad adjectives (on one hand) and liberal or conservative attributes (on the other). The liberal attributes were left-wing, Democrat, donkey, blue, and liberal, whereas the conservative attributes were right-wing, Republican, elephant, red, and conservative. These label stimuli were selected from the universe of objects that are semantically associated with differences in ideological self-placement. The purpose of the IAT, however, was not to measure ideology or partisanship, but merely to serve as a cover story for our manipulation. Prior to completing the ideology IAT, participants were provided with the following instructions, which were intended to strengthen the credibility of the post-IAT feedback:

“People seem to have both conscious ideological views that they are able to report, and unconscious ideological views that they are less aware of. The IAT test that you are going to now take reveals unconscious views which may be inconsistent with the positions people believe they have, indicating that they are less certain about their ideological views than they think. In fact, research shows that sometimes these unconscious preferences tend to be better predictors of people’s real political behaviors than what they report in a survey. We are therefore interested in comparing your score on the unconscious measure to your conscious political attitudes to see how certain you are about your ideological views.”

Following completion of the ideology IAT, participants were randomly assigned to either the

Ideology and Self

certainty or uncertainty feedback condition. In the *certainty-feedback condition*, participants were told: “Based on this test, it is clear that many of your unconscious ideological preferences are consistent with your consciously reported ideological view. Your scores on the unconscious measure indicate that you are very CERTAIN about what your political ideology is.” In the *uncertainty-feedback condition*, participants were told: “Based on this test, it is clear that many of your unconscious ideological preferences are inconsistent with your consciously reported ideological views. Your scores on the unconscious measure indicate that you are highly UNCERTAIN about what your political ideology is.”

Measures

All measures were rescaled to run from 0-1 for easier comparison and estimation of effect sizes unless otherwise indicated. Below we report the descriptive statistics in the original scale, but analyses are conducted on recoded variables. Measures relevant to our research questions and not included in this analysis (but administered for research questions not addressed in the current study), include pre-manipulation measure of ideological certainty, and post-manipulation measures of issue-positions, feeling thermometers, political activism, and moral foundations (Graham et al., 2011).

Ideological extremity and moral conviction. Ideological self-placement ($M = 3.30$, $SD = 1.62$) and ideological extremity ($M = 1.44$, $SD = 1.01$) were assessed prior to the experimental manipulation. These variables were measured, computed, and coded just as it was in Study 1 and 2, and ideological extremity once again served as a covariate. Additionally, we also measured moral conviction (e.g., Morgan et al., 2010) in ideological self-placement using two items: (1) “To what extent is your political outlook deeply connected to your beliefs about fundamental questions of 'right' and 'wrong'?”, and (2) “To what extent is your political outlook a reflection of

Ideology and Self

your core moral beliefs and convictions?” The average of these two items served as our measure of the extent to which participants hold their ideological self-placement as a moral conviction ($r = 0.799$, $p < .001$; $M = 3.73$; $SD = 0.99$). We include this variable in our model as an additional control on attitude strength.

Political engagement. This variable was assessed after the experimental manipulation and was measured, constructed, and coded just as it was in Study 1 ($\alpha = 0.91$; $M = 1.17$; $SD = 0.23$).

Additional Controls. We included the same demographic controls as in Study 1 and 2; all were coded in the same fashion. Moreover, we again included a measure of political knowledge as a control; this was measured, computed, and coded just as it was in Study 2 ($M = 0.45$, $SD = 0.17$).

Results: Pilot Study

In order to validate our manipulation before conducting the main study, we carried out a separate pilot study using an independent sample of 149 U.S. citizens recruited on MTurk; the procedure was the same as in the full experiment, with the addition of a no-feedback condition that served as a control group. For the pilot study, ideological uncertainty was measured and coded in the same way as in previous studies and was administered immediately following the experimental manipulation. Two dummy-coded variables were constructed to represent condition assignment, with the uncertainty condition coded as the reference group, and then submitted to regression analysis. Participants assigned to the uncertainty feedback condition ($M = 0.37$, $SD = 0.30$) were significantly more uncertain in their ideological identification than participants in the certainty feedback condition ($M = 0.26$, $SD = 0.23$), $F(2, 146) = 2.4$, $b = -0.11$, $p = .033$, Cohen's $d = 0.41$, and marginally more uncertain than participants who received no feedback ($M = 0.29$,

$SD = 0.22$), $b = -0.08$, $p = .113$, Cohen's $d = 0.13$. These results from the pilot study support the validity of our experimental paradigm for manipulating ideological certainty. However, because the mean difference between the uncertain and no feedback condition was only marginally significant, the main study only included the uncertain and certain feedback conditions.

Results and Discussion: Main Study

Given our interest in controlling for the usual demographic and political correlates (ideological extremity and conviction, and political knowledge) of engagement, we used a regression framework rather than analysis of variance to analyze the data from Study 3. Specifically, we estimated an ordinary least-squares regression model similar to that used in Study 1 and 2, with political engagement as the dependent variable and a dummy variable for experimental condition (1 = uncertain condition, 0 = certain condition) substituted for responses to the uncertainty item. The results of this analysis are summarized in Table 5. Looking first at the controls, only political knowledge ($b = 0.40$, $p < .001$) and ideological conviction ($b = 0.32$, $p < .001$) were significantly associated with an increase in engagement, as all other covariates were nonsignificant ($ps > .05$). Consistent with our hypothesis, political engagement was lower in the uncertain condition versus the certain condition, $b = -0.07$, $p = .033$, Cohen's $d = 0.29$. The adjusted means for the two conditions are plotted in Figure 1 ($M = 0.60$ in the certain condition; $M = 0.54$ in the uncertain condition). Without covariates in the model, the effect of induced uncertainty was marginally significant, $b = -0.07$, $CI\ 95\%(-0.14, 0.01)$, $p = .078$.

Thus, ideological uncertainty caused a reduction in political engagement. Although these results are consistent with our hypothesis, aspects of the analysis suggest the need for caution. In particular, the effect of the manipulation was quite modest: given the 0-1 coding of the dependent variable, moving from the certainty to the uncertainty condition accounts only for a

Ideology and Self

7% drop in engagement, and the R^2 indicates that the full set of predictors accounted for 37% of the variance in engagement. Nevertheless, in light of recent evidence that political engagement is remarkably stable at the individual level over both short periods of time and across the broader life cycle (e.g., Prior, 2010; Shani, 2009), our ability to detect even modest movement in engagement after a transient uncertainty induction stands out as more impressive.

Together, the results of Studies 1-3 suggest that, when people feel uncertain about their ideological self-placement, it causes disengagement from the political domain and a reduced willingness to participate in politics. The results of Study 2 are particularly impressive, as they demonstrate that ideological uncertainty was able to predict decreased participation in the 2016 U.S. Presidential Election approximately 2-months prior to election day in a sample representative of the U.S. population. Having provided convergent experimental evidence for this prediction in Study 3, we next seek to replicate these findings on an independent sample in Study 4. We also seek to test the additional prediction that the effect of ideological uncertainty on political disengagement and depressed participation will be *more* pronounced when people reflect on the implications of their political judgment or behavior, such as evaluating political candidates or voting in an election, for the validity of their ideology (i.e. metacognitive reflection).

Specifically, in Study 4, we examine the possibility that the experimental effects observed in Study 3 are more likely under some conditions. That is, when individuals engage in metacognitive reflection about the meaning of their judgments for the nature of their attitudes, attitudinal uncertainty *can* motivate behavior intended to bolster attitudes, as has been observed in non-political domains (e.g., Clark & Wegener, 2013; Sawicki et al., 2011; Sawicki & Wegener, 2018). In the political context, this *could* translate into increased engagement and

participation. However, our theory and the results of Studies 1-3 clearly suggest that the default tendency is for ideological uncertainty to elicit disengagement from politics. As we note above, this is likely because the complexity and ambiguity of the political domain for the average citizen means that the simple act of participation might do more to heighten awareness of ideological uncertainty than to resolve it. When people consider the connection between their political orientation and voting, for example, the sense of invalidity should be more salient in this context and thus heighten the disengaging effects of uncertainty. Thus, we hypothesize that the effect of ideological uncertainty on political disengagement should be *more* pronounced as a function of meta-cognitive reflection, that is, when people reflect on the extent to which their overall political orientation is implicated by their political judgment or behavior.

Accordingly, in Study 4, using panel data with repeat measurements of the constructs of interest, we replicate our prior results by showing that ideological uncertainty—both measured as an individual difference and manipulated experimentally—predicts subsequent *change* in levels of engagement and participation in the 2016 U.S. Presidential Election. More importantly, we also extend our investigation to test the prediction that the disengagement effect of uncertainty would be moderated by meta-cognitive reflection about the implications of their political judgments for their political orientation. By leveraging multiple measurement points over a two-month period, our approach allows us to establish causality more convincingly and to examine intra-individual change over time in a real world context as a function of the experimental manipulation. This kind of longitudinal methodological design is rare in psychological research generally, but evidence consistent with our expectations would provide even stronger support for our hypothesis that ideological uncertainty undermines engagement and effective participation in politics.

Study 4

Design

Study 4 utilized an on-line 3-wave panel design (*Time 1 baseline*, October 25 to October 26, 2016, $n = 798$; *Time 2 pre-election*, October 29-November 4, 2016, $n = 412$; *Time 3 post-election*, November 9 to November 16, 2016, $n = 295$; election day was November 8, 2016). The experimental manipulation (described below) was embedded in the Time 2 (T2) pre-election survey. Study 4 used a 2(Ideological Feedback: Certain, Uncertain) x 2(Meta-Cognitive Reflection, Control) between-subjects design. Participants were randomly assigned to receive certain or uncertain feedback about their performance on an ideology IAT, which was intended to manipulate uncertainty about their ideological identification. Next, some participants were randomly assigned to reflect on the meaning of their political judgments and behavior in relation to their ideology (meta-cognitive reflection condition, described below), whereas other participants did not receive this prompt.

Participants

Eight hundred and thirteen participants were first recruited from Amazon's Mechanical Turk platform (MTurk). Sample size at T1 was determined to increase the likelihood that at least 400 U.S. Citizens would be retained for T2, where we implemented our experimental manipulation. We relied on a conservative estimate of retention (50%) from T1 to T2 and terminated data collection when we hit our mark of 800. We retained individuals who were in the process of completing the study when we terminated recruitment of new participants. Data analysis was not conducted until data collection was complete. As before, we used only participants who indicated that they were US citizens, leaving us a final sample at T1 of $N = 798$ (508 females and 288 males, with two participants who not indicating gender; mean age = 37.15,

Ideology and Self

$SD = 12.66$; White = 84.59%). Attrition from T1 ($n = 798$) to T2 ($n = 412$) was approximately 48%, whereas attrition from T2 to T3 ($n = 295$) was approximately 38%. With the current sample size at T2, in order to detect the interaction in mean differences between experimental conditions, we estimated that we had 37% power to detect a Cohen's d of 0.2 and 99% power to detect a Cohen's d of 0.5 or larger.

Procedure

Below we describe the measures assessed at T1, T2, and T3. At T1 and T3 participants completed a battery of individual difference measures. Here we describe the experimental manipulation at T2.

At T2, participants were first randomly assigned to an ideology-feedback condition (certain vs. uncertain feedback), which was manipulated in the same way as described in Study 2. Participants then completed a measure of ideological certainty, which served as a manipulation check for the feedback. Next, all participants were informed that: "On the following screens, you will be asked to make a series of political judgments regarding the upcoming presidential election". Participants who were randomly assigned to the meta-cognitive reflection condition then received the following instructions: "When you choose your candidate, think about how this vote reflects back on your political approach". Participants who were in the control condition for the meta-cognitive reflection manipulation did not receive these instructions. All participants then proceeded to complete the dependent variables assessed at T2.

Measures

All measures were rescaled to run from 0-1 for easier comparison and estimation of effect

Ideology and Self

sizes for our analysis. The measures used in this analysis are described below³. Descriptive statistics are given for the original scale.

Ideological extremity. Ideological self-placement ($M = 3.78$, $SD = 1.74$) and ideological extremity ($M = 1.44$, $SD = 1.00$) were measured, computed, and coded just as they were in Study 1, but only the latter was used as a covariate.

Ideological uncertainty. Using the same item employed in Study 1, this variable was measured at T1 ($M = 3.93$; $SD = 0.97$) and T2 ($M = 4.00$; $SD = 0.95$), and was coded in the same fashion, such that higher values represent increased levels of uncertainty.

Political engagement. This variable was measured at T1 and T2, constructed, and coded just as it was in Study 1 and Study 3 (T1 $\alpha = 0.85$; $M = 4.83$; $SD = 1.57$; T2 $\alpha = 0.86$; $M = 4.86$; $SD = 1.53$)

Political participation. This variable was assessed at T3. Participants were asked, “Did you vote in the most recent Presidential Election?” (1 = yes, 0 = no; $M = 0.89$; $SD = 0.31$).

Additional controls. Additional covariates were assessed at T1, and include *gender* (0 = female, 1 = male), *income* (11-point scale, in increments of \$10,000), *age*, and *race* (0 = nonwhite, 1 = white). Moreover, at T1, we again included a measure of political knowledge as a control; this was measured, computed, and coded just as it was in Studies 2 and 3 ($M = 0.72$, $SD = 0.26$; Cronbach’s $\alpha = 0.70$).

Results

Overview of Analyses

³ Measures that were administered for research questions not addressed in the current study include feeling thermometer ratings and self-reported activism behaviors.

We began by conceptually replicating our key result from Studies 1, 2, and 3 by leveraging the panel design, in which we estimate T1 to T2 change in political engagement and T3 political participation as a function of T1 to T2 change in ideological uncertainty. We also examine the effect of manipulated ideological uncertainty, implemented at T2, on T1 to T2 change in political engagement. By leveraging repeated assessment of our independent and dependent variable, we are able to model the effect of either (a) T1 to T2 change in self-reported ideological uncertainty or (b) T2 manipulated ideological uncertainty (c) on T1 to T2 change in political engagement and (d) participation in the 2016 U.S. Presidential Election. For these analyses, we included lagged indicators of the dependent or independent variable as covariates to model *intra-individual change* in the constructs of interest (see Finkel, 1995; Lenz, 2013). All model estimates reported below control for the full set of covariates.

Replication of Study 1 and 2 Correlational Findings

First, we examine the effect of T1 to T2 change in ideological uncertainty on T1 to T2 change in political engagement. To do this, we regressed the T2 measure of political engagement on T1 political engagement, T1 ideological uncertainty, and T2 ideological uncertainty, and interpret the coefficient of the latter as an estimate of the effect T1 to T2 change in ideological uncertainty on T1 to T2 change in political engagement (see Finkel, 1995; Lenz, 2013). As the estimates indicate, only ideological extremity, $b = 0.03$, CI 95%(0.01, 0.05), $p = .015$, was significantly related to T1 to T2 *increase* in political engagement; no other covariates obtained significance ($ps > .05$) More importantly, we find that T1 to T2 *increases* in ideological uncertainty was a significant predictor of a T1 to T2 *decrease* in political engagement with covariates, $b = -0.30$, CI 95%(-0.41, -0.19), $p < .001$, and without covariates in the model (other

than T1 certainty and engagement), $b = -0.32$, CI 95%(-0.43, -0.21), $p < .001$. The results of this analysis are summarized in Table 6.

We then examined the effect of T1 to T2 increases in ideological uncertainty on political participation, measured at T3. To do so, we regressed T3 participation on T1 ideological uncertainty and T2 ideological uncertainty, and interpret the coefficient of the latter as an estimate of the effect T1 to T2 change in ideological uncertainty on T3 participation. Among the covariates, only income ($\text{Exp}(b) = 5.27$, (95% CI = 1.11, 24.97), $p = .036$), political knowledge ($\text{Exp}(b) = 18.49$, (95% CI = 3.41, 100.14), and ideological extremity ($\text{Exp}(b) = 1.83$, (95% CI = 1.02, 3.27), $p = .043$) were significantly related to T1 to T2 *increase* in political engagement; no other covariates obtained significance ($ps > .05$). However, unlike the results from Study 1 and 2, with covariates in the model, T1 to T2 change in ideological uncertainty was not a significant predictor of political engagement, $\text{Exp}(b) = 2.70$, (95% CI = 0.14, 52.86), $p = .514$. With no covariates in the model (other than T1 certainty), T1 to T2 *increase* in ideological uncertainty corresponded with a significant decrease in political engagement, $\text{Exp}(b) = .10$, (95% CI=0.01, 0.89), $p = .038$.

Replication of Study 3 Experimental Findings

Next, we sought to replicate the experimental effects of Study 3, in which ideological uncertainty (vs. certainty) feedback decreased political engagement. We again leverage the panel design by controlling for T1 political engagement (and all other covariates, including demographics, political knowledge, and ideological extremity) and estimate the effect of experimental condition on T2 political engagement. For this replication test, we also included a dummy-coded variable for the other experimental condition as a covariate, so this analysis controls for and collapses across manipulated meta-cognitive reflection. The effect of

experimental condition (1=Uncertain, 0=Certain) on T1 to T2 change in ideological uncertainty attained significance, $b = 0.10$, (95% CI = 0.07, 0.14), $p < .001$, again providing evidence for the validity of our primary experimental manipulation on this sample. More importantly, and consistent with the results of Study 3, we find that uncertainty (vs. certainty feedback) caused a T1 to T2 *decrease* in political engagement, $b = -0.04$, (95% CI = -0.08, -0.002), $p = .038$, net the controls. The results of this analysis are summarized in Table 7. The effect of experimental condition was not moderated by pre-experimental levels of expressed ideological uncertainty, with or without covariates in the model ($p > .05$)

Does Meta-Cognitive Reflection Moderate the Effect of Uncertainty on Political Engagement?

Finally, we examine the extent to which the main effects of uncertain (vs. certain) feedback on T1 to T2 political engagement is moderated by manipulated meta-cognitive reflection. For this analysis, we regress T2 political engagement on the full set of covariates, T1 political engagement, and the interaction between the uncertainty feedback and meta-cognitive reflection condition. We find that the uncertainty-feedback and meta-cognitive reflection significantly interacted to predict T1 to T2 change in political engagement, $b = -0.09$, (95% CI = -0.16, -0.01), $p = .028$. This interaction was not moderated by pre-experimental levels of expressed ideological uncertainty, with or without covariates in the model ($p > .05$). Because our interest is in identifying boundary conditions for the effects of the uncertainty feedback manipulation, we decomposed the significant interaction by examining the effect of uncertainty feedback separately in the meta-cognitive reflection or control condition. The results of this analysis are summarized in Table 8.

In the control condition, the effect of uncertain (vs. certain) feedback did not obtain significance for T1 to T2 change in political engagement, $b = 0.002$, (95% CI = -0.05, 0.06), $p=0.96$. However, in the meta-cognitive reflection condition, uncertain (vs. certain) feedback led to a significant T1 to T2 reduction in political engagement, $b = -0.09$, (95% CI = -0.14, -0.03), $p = .002$. Thus, consistent with our expectations, we find that, among participants who reflected on the meaning of their political judgments and behavior for their political orientation, uncertain (vs. certain) feedback led to a T1 to T2 decrease in political engagement of approximately 9%. This analysis is graphically represented in Figure 2.

Summary of Study 4 Results

Together, these findings replicate and extend the correlational findings of Study 1 and Study 2 by showing that intra-individual increases in ideological uncertainty predicted intra-individual decreases in political engagement; we observed evidence that increases in ideological uncertainty reduced participation in the 2016 U.S. Presidential Election, but this effect was null with covariates in the model. Study 4 also replicates and extends the experimental findings of Study 3, demonstrating that induced ideological uncertainty can *cause* intra-individual reductions in political engagement, particularly for participants who reflected back on how their political judgments related to their overall political approach.

General Discussion

Without a sufficient degree of certainty in one's ideological identification as a liberal, conservative, or something in between, navigation of a complex, ambiguous political realm is likely to be more difficult. Across four studies, using both correlational and experimental methods to evaluate beliefs, behavioral intentions, and actual behavior in both the 2012 and 2016 presidential election, we provide converging evidence in both convenience and representative

Ideology and Self

samples to support the hypothesis that ideological uncertainty is associated with reduced political engagement and participation. Using an original and innovative false-feedback paradigm, Studies 3 and 4 also demonstrate that ideological uncertainty is causally prior to reduced political engagement, particularly among individuals who reflect on the meaning of their political judgment and behavior for their overall political orientation. Instead of stimulating deeper information search and heightened cognitive elaboration to acquire sufficient levels of certainty, these findings indicate that uncertainty in one's ideological orientation can reduce interest and participation in politics.

While existing work indicates that uncertainty about *specific* policy preferences and candidate evaluations can reduce engagement and participation in the political realm (e.g., Alvarez 1998; Bartels 1986; Enelow & Hinich 1984; Krosnick & Schuman, 1988; Visser, Krosnick, & Simmons, 2003), and that ideological orientations held with certainty are more closely aligned with and better able to structure political judgments and preferences (Shoos-Reinhard, Petty, DeMarree, & Rucker, 2014), this program of research is the first to demonstrate the causal effects of ideological uncertainty on political engagement and electoral participation. However, ideological orientation does not merely reflect the sum of one's attitudes on public policy or political leadership. Investigations of the underlying structure of citizens' ideological commitments indicate that a large, politically disengaged portion of the public has difficulty understanding and structuring their political preferences in relation to abstract concepts and beliefs, and instead tend to express their opinions in a relatively random and unsophisticated manner (e.g., Converse, 1964; Zaller, 1992). Having a general ideological orientation simplifies the task of participating in the complexity of political life because it structures and coheres interrelated political beliefs, attitudes, values, and identities. Indeed, the "use" of ideology as a

Ideology and Self

guide for one's political judgments is more common among citizens in possession of a well-organized and crystallized schema about political institutions, actors, and ideas (Delli, Carpini, & Keeter, 1996; Federico & Schneider, 2007; Shoots-Reinhard, Petty, DeMarree, & Rucker, 2014). Among these more politically engaged members of the mass public, ideology functions as a cognitively efficient heuristic for organizing political judgment and responding to political stimuli in ways consistent with one's underlying psychological characteristics, needs, and sense of self (Jost, Federico, & Napier 2009). As we have shown here, having certainty in the suitability of this heuristic facilitates meaningful engagement with and participation in political processes.

We also believe our findings help elucidate psychological mechanisms that may contribute to increasing polarization and ideological extremity in mass politics. If political engagement is more common among citizens with the highest degrees of certainty in their political orientation, and if individuals who lack that certainty withdraw from politics altogether, the most involved and active segment of the electorate will be disproportionately composed of those with strongly and possibly inflexibly held opinions (e.g., Abramowitz, 2010; Bartels, 2000; Hetherington, 2001; Levendusky, 2013; Prior, 2013; Stroud, 2011). Importantly, however, our findings also suggest that ideological certainty is malleable. If so, then certainty may be lowered to the extent that even the ideologically dogmatic might be inclined to reconsider the confidence with which they hold their political attitudes and act on their convictions. One potential implication of this process is that political communications, interactions, or events that target and reduce subjective ideological certainty may be an effective strategy for demobilization of opposing constituencies—a possibility future research would do well to explore.

Consistent with decades of attitude research, we provide clear evidence that ideological

uncertainty reduces political engagement and participation. However, some emerging work suggests that, under specific circumstances, uncertainty *can* act as a motivating rather than disengaging force. For example, attitude uncertainty has been shown to motivate behavior aimed at increasing certainty, including seeking agreeable over disagreeable information (Sawicki et al., 2011), processing attitude-consistent information deeply (Clark & Wegener, 2013), attraction to attitudinally-similar others (Sawicki & Wegener, 2018), and increased affiliation with groups that support one's views (Clarkson et al., 2017). One possibility for why we did not observe this motivational effect of uncertainty in the political domain could be that behaviors vary in usefulness at increasing certainty. Specifically, the responses examined in the current research might not have provided doubtful individuals with a viable option to resolve ideological uncertainty. For example, voting for a specific presidential candidate might not change an individual's more global uncertainty about their ideology. Because the political landscape is often ambiguous and complex, expressing interest in politics or casting a vote—the dependent variables examined in these studies—might not clarify the many possible sources of doubt about one's political ideology. Future research should investigate the possibility that ideological uncertainty may lead to increased motivation to acquire political information (instead of political participation) when individuals reflect on the meaning of their political judgment and behavior for their overall political orientation.

Despite the strength of our evidence, our studies are limited by their exclusive reliance on samples of U.S. citizens and their focus on the context of U.S. electoral politics. It is possible that ideological uncertainty is less consequential for navigating the political landscape in different cultural or political contexts. For example, research in comparative politics suggests that numerous institutional features not present in the U.S. context—such as proportional

representation and reliance on a parliamentary system rather than a presidential one—make it easier for citizens to clearly see the consequences of their political choices and maintain a high level of political engagement (Gordon & Segura, 1997). In systems with these features, citizens may require a lower level of subjective certainty about their ideological orientations before they are willing to engage with the political world and take political action. Thus, additional research should extend our findings and examine the consequences of ideological uncertainty for political engagement in contexts outside the U.S.

Furthermore, the current research does not consider individual difference variables that could moderate the impact of uncertainty on political engagement, and it does not examine alternative outcomes that may be similarly impacted by ideological uncertainty. While we did not observe an interaction between ideological identification and ideological uncertainty in any of our studies (e.g., such that uncertainty has different consequences for liberals and conservatives), it remains possible that other individual differences—such as authoritarianism (Altemeyer, 1996) or the need for cognitive closure (Webster & Kruglanski, 1994)—that reflect intolerance of uncertainty and ambiguity may moderate the observed effects. For example, ideological uncertainty may lead to an even stronger withdrawal from politics among individuals who are dispositionally averse to uncertainty and therefore more sensitive to the discomfort and loss of orientation associated with a lack of clarity in one's political preferences. Similarly, constructs that covary with both ideological certainty and political engagement—such as belief in the superiority of one's political opinions (e.g., Raimi & Leary, 2014)—also provide opportunities for future research to better understand the political effects of ideological uncertainty. For example, it is possible that when individuals acquire a high level of certainty in the appropriateness of their ideological orientation, they may infer that their political opinions

Ideology and Self

are superior to others and, consequently, may be more willing to act on these beliefs by engaging with the political domain (e.g., Hall & Raimi, 2018).

It is important to note that emerging perspectives on meta-cognitive properties of attitudes emphasize the need to distinguish between two conceptualizations of certainty—correctness and clarity (e.g., Rios, DeMarree, & Statzer, 2014). Attitude clarity refers to the extent to which a person is capable of discerning their “true” evaluation of an attitudinal object, whereas correctness refers to the perception that one’s attitude is the “correct” one.

Unfortunately, the current work did not clearly differentiate between these distinct facets of certainty, although it is possible that our experimental paradigm used in Study 3 and 4 impacts clarity more than correctness. In general, we suspect that both facets are important for understanding the political implications of ideological uncertainty. Nonetheless, because correctness and clarity may activate different psychological mechanism or have different implications for behavior (Cheatham & Tormala, 2015), we recommend that future work more directly examine the potentially distinct role of each for understanding the relationship between ideological certainty and political engagement and participation.

Finally, future research should also consider additional downstream consequences of ideological uncertainty, such as its potential effects on information-seeking, attitude extremity and polarization, and ideological constraint. Examination of these dependent variables represents a potentially fruitful way of extending our investigation of ideological uncertainty to better understand its psychological antecedents and consequences for political engagement and participation—and its implications for contemporary democracy.

Open Practices

Data from all studies can be retrieved from:

<https://osf.io/ydnfe/>

Acknowledgements

The authors would like to thank Matt Motta, Thomas Lindsey, Andrew Sell, and Alica Hofelich Mohr for software design; and the Center for the Study of Political Psychology at University of Minnesota for supporting this research program.

References

- Abramowitz, A. I. (2010). *The disappearing center: Engaged citizens, polarization, and American democracy*. Yale University Press.
- Abelson, R. P. (1988). Conviction. *American Psychologist*, 43(4), 267.
- Achen, C., & Bartels, L. M. (2016). *Democracy for realists: Why elections do not produce responsive government*. Princeton, NJ: Princeton University Press.
- Alvarez, R. M., & Franklin, C. H. (1994). Uncertainty and political perceptions. *The Journal of Politics*, 56(3), 671-688.
- Bartels, L. M. (1986). Issue voting under uncertainty: An empirical test. *American Journal of Political Science*, 709-728.
- Bartels, L. M. (1988). *Presidential primaries and the dynamics of public choice*. Princeton University Press.
- Bartels, L. M. (2000). Partisanship and voting behavior, 1952-1996. *American Journal of Political Science*, 35-50.
- Bassili, J. N. (1993). Response latency versus certainty as indexes of the strength of voting intentions in a CATI survey. *Public Opinion Quarterly*, 57(1), 54-61.
- Berinsky, A. J., Huber, G. A., & Lenz, G. S. (2012). Evaluating online labor markets for experimental research: Amazon.com's Mechanical Turk. *Political Analysis*, 20(3), 351-368.
- Boninger, D. S., Krosnick, J. A., & Berent, M. K. (1995). Origins of attitude importance: self-interest, social identification, and value relevance. *Journal of Personality and Social Psychology*, 68(1), 61.

Ideology and Self

- Boninger, D. S., Krosnick, J. A., Berent, M. K., & Fabrigar, L. R. (1995). The causes and consequences of attitude importance. In *Attitude strength: Antecedents and consequences*, 4, 159-189. New York, NY: Psychology Press.
- Briñol, P., DeMarree, K. G., & Petty, R. E. (2010). [Processes by which confidence \(vs. doubt\) influences the self](#). In R. Arkin, K. Oleson, & P. Carroll (Eds.), *Handbook of the uncertain self* (pp. 13-35). New York: Psychology Press.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data?. *Perspectives on Psychological Science*, 6(1), 3-5.
- Burke, P.J (2006). Identity change. *Social Psychology Quarterly*, 69, 81-96.
- Campbell, J. D. (1990). Self-esteem and clarity of the self-concept. *Journal of Personality and Social Psychology*, 59, 538–549.
- Cheatham, L. & Tormala, Z.L. (2015). Attitude certainty and attitudinal advocacy. The unique role of clarity and correctness. *Personality and Social Psychology Bulletin*, 4(11), 1537-1550.
- Clark, J. K., & Wegener, D. T. (2013). Message position, information processing, and persuasion: The Discrepancy Motives Model. In P. Devine & A. Plant (Eds.), *Advances in Experimental Social Psychology* (Vol. 47, pp. 189-232). Burlington, UK: Academic Press.
- Clarkson, J., Smith, E., Tormala, Z., and Dugan, R. (2017). Group identification as a means of attitude restoration. *Journal of Experimental Social Psychology*, 68, 139-145.
- Clarkson, J. J., Tormala, Z. L., & Rucker, D. D. (2008). A new look at the consequences of attitude certainty: The amplification hypothesis. *Journal of Personality and Social Psychology*, 95(4), 810.

Ideology and Self

- Conover, P. J., & Feldman, S. (1989). Candidate perception in an ambiguous world: Campaigns, cues, and inference processes. *American Journal of Political Science*, 912-940.
- Converse, P. (1964). The nature of belief systems in mass publics. In *Ideology and Discontent*, ed. Apter, D.. New York: Free Press.
- Delli Carpini, M.X., & Keeter, S.(1996). *What Americans know about politics and why it matters*. New Haven, CT: Yale University Press.
- Downs, A. (1957). An economic theory of political action in a democracy. *Journal of Political Economy*, 65(2), 135-150.
- Ellis, C., & Stimson, J. A. (2012). *Ideology in America*. New York, NY: Cambridge University Press.
- Enelow, J. M., & Hinich, M. J. (1984). *The spatial theory of voting: An introduction*. CUP Archive.
- Fazio, R. H., & Zanna, M. P. (1978). Attitudinal qualities relating to the strength of the attitude-behavior relationship. *Journal of Experimental Social Psychology*, 14(4), 398-408.
- Federico, C.M, & Schneider, M.C. (2007). Political expertise and the use of ideology: Moderating effects of evaluative motivation. *Public Opinion Quarterly*, 71, 222-252.
- Finkel, S. E. (1995). *Causal analysis with panel data* (No. 105). Sage.
- Franklin, M. N. (2002). The dynamics of electoral participation. *Comparing Democracies*, 2, 148-168.
- Glasgow, G., & Alvarez, R. M. (2005). Voting behavior and the electoral context of government formation. *Electoral Studies*, 24(2), 245-264.
- Gordon, S. B., & Segura, G. M. (1997). Cross-national variation in the political sophistication of individuals: Capability or choice? *Journal of Politics*, 59, 126-147.

Ideology and Self

- Graber, D. A. (1980). *Crime News and the Public*. New York: Praeger.
- Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, 101, 366-385.
- Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: the implicit association test. *Journal of Personality and Social Psychology*, 74(6), 1464.
- Gross, S. R., Holtz, R., & Miller, N. (1995). Attitude certainty. In *Attitude strength: Antecedents and consequences*, 4, 159-189. New York, NY: Psychology Press.
- Guadagno, R. E., & Burger, J. M. (2007). Self-concept clarity and responsiveness to false feedback. *Social Influence*, 2, 159 – 177
- Hall, M. P., & Raimi, K. T. (2018). Is belief superiority justified by superior knowledge? *Journal of Experimental Social Psychology*, 76, 290-306.
- Hetherington, M. J. (2001, September). Resurgent mass partisanship: The role of elite polarization. In *American Political Science Association*, 95(3), 619-631. Cambridge University Press.
- Hogg, M. A. (2007). Uncertainty-identity theory. *Advances in Experimental Social Psychology*, 39, 69–126.
- Jost, J. T., Banaji, M. R., & Nosek, B. A. (2004). A decade of system justification theory: Accumulated evidence of conscious and unconscious bolstering of the status quo. *Political Psychology*, 25(6), 881-919.
- Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology*, 60, 307–337.

Ideology and Self

- Katz, D. (1960). The functional approach to the study of attitudes. *Public Opinion Quarterly*, 24(2), 163-204.
- Kay, A. C., Gaucher, D., McGregor, I., & Nash, K. (2010). Religious belief as compensatory control. *Personality and Social Psychology Review*, 14(1), 37-48.
- Koch, J. W. (2003). Political cynicism and third party support in American presidential elections. *American Politics Research*, 31(1), 48-65.
- Krosnick, J. A., & Schuman, H. (1988). Attitude intensity, importance, and certainty and susceptibility to response effects. *Journal of Personality and Social Psychology*, 54(6), 940.
- Krosnick, J. A., Boninger, D. S., Chuang, Y. C., Berent, M. K., & Carnot, C. G. (1993). Attitude strength: One construct or many related constructs?. *Journal of Personality and Social Psychology*, 65(6), 1132.
- Krosnick, J. A. (1986). *Policy voting in American presidential elections: An application of psychological theory to American politics* (Doctoral dissertation, ProQuest Information & Learning).
- Krosnick, J. A. (1989). Attitude importance and attitude accessibility. *Personality and Social Psychology Bulletin*, 15(3), 297-308.
- Lavine, H. (2001). The electoral consequences of ambivalence toward presidential candidates. *American Journal of Political Science*, 34, 398-421.
- Lavine, H. G., Johnston, C. D., & Steenbergen, M. R. (2012). *The ambivalent partisan: How critical loyalty promotes democracy*. Oxford University Press.
- Lenz, G. S. (2013). *Follow the leader? How voters respond to politicians' policies and performance*. University of Chicago Press.

Ideology and Self

- Levendusky, M. S. (2013). Why do partisan media polarize viewers?. *American Journal of Political Science*, 57(3), 611-623.
- Lomasky, L., & Brennan, G. (1993). Democracy and decision: The pure theory of electoral preference. *Cambridge: Cambridge UP*.
- Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's Mechanical Turk. *Behavior research methods*, 44(1), 1-23.
- Meirowitz, A. (2005). Informational party primaries and strategic ambiguity. *Journal of Theoretical Politics*, 17(1), 107-136.
- Miller, J. M., & Peterson, D. A. (2004). Theoretical and empirical implications of attitude strength. *Journal of Politics*, 66(3), 847-867.
- Morgan, G. S., Skitka, L. J., & Wisneski, D. C. (2010). Moral and religious convictions and intentions to vote in the 2008 presidential election. *Analyses of Social Issues and Public Policy*, 10, 307-320.
- Page, B. I. (1978). *Choices and echoes in presidential elections: Rational man and electoral democracy*. University of Chicago Press.
- Patterson, T. E., & McClure, R. D. (1976). *The unseeing eye: The myth of television power in national politics* (Vol. 451). New York: Putnam.
- Peterson, D. A. (2004). Certainty or accessibility: Attitude strength in candidate evaluations. *American Journal of Political Science*, 48(3), 513-520.
- Peterson, D. A. (2005). Heterogeneity and certainty in candidate evaluations. *Political Behavior*, 27(1), 1-24.

- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, 36(4), 717-731.
- Petty, R.E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York:Springer/Verlag.
- Petty, R. E., & Krosnick, J. A. (2014). *Attitude strength: Antecedents and consequences*. Psychology Press.
- Prior, M. (2010). You've either got it or you don't? The stability of political interest over the life cycle. *The Journal of Politics*, 72(3), 747-766.
- Prior, M. (2013). Media and political polarization. *Annual Review of Political Science*, 16, 101-127.
- Raimi, K. T. & Leary, M. R. (2014). Belief superiority in the environmental domain: Attitude extremity and reactions to fracking. *Journal of Environmental Psychology*, 40, 76-85.
- Rios, K., DeMarree, K. G., & Statzer, J. (2014). Attitude certainty and conflict style: Divergent effects of correctness and clarity. *Personality and Social Psychology Bulletin*, 40(7), 819-830.
- Rucker, D. D., & Petty, R. E. (2004). When resistance is futile: consequences of failed counterarguing for attitude certainty. *Journal of personality and social psychology*, 86(2), 219.
- Sanders, L. M. (2001, August). The psychological benefits of political participation. In *Annual Meeting of the American Political Science Association: 2001; San Francisco*.
- Sawicki, V., Wegener, D. T., Clark, J. K., Fabrigar, L. R., Smith, S. M., & Bengel, S. T. (2011).

- Seeking confirmation in times of doubt: Selective exposure and the motivational strength of weak attitudes. *Social Psychological and Personality Science*, 2, 540-546.
- Sawicki, V. & Wegener, D. T. (in press). Metacognitive reflection as a moderator of attitude strength versus attitude bolstering: Implications for attitude similarity and attraction. *Personality and Social Psychology Bulletin*.
- Setterlund, M. B., & Niedenthal, P. M. (1993). 'Who am I? Why am I here?': Self-esteem, selfclarity, and prototype matching. *Journal of Personality and Social Psychology*, 65, 769-780.
- Shani, D. (2009). *On the origins of political interest*. Princeton University.
- Shepsle, K. A. (1972). The strategy of ambiguity: Uncertainty and electoral competition. *American Political Science Review*, 66(02), 555-568.
- Shoots-Reinhard, B. L., Petty, R. E., DeMarree, K. G., & Rucker, D. D. (2015). Personality certainty and politics: Increasing the predictive utility of individual-difference inventories. *Political Psychology*, 36(4), 415-430.
- Somin, I. (2014). Why political ignorance undermines the wisdom of the many. *Critical Review*, 26(1-2), 151-169.
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. *Advances in experimental social psychology*, 21, 261-302.
- Stroud, N. J. (2011). *Niche news: The politics of news choice*. Oxford University Press on Demand.
- Swann, W. B., Pelham, B. W., & Chidester, T. R. (1988). Change through paradox: using self-verification to alter beliefs. *Journal of Personality and Social Psychology*, 54(2), 268.

- Tormala, Z.L., & Petty, R.E. (2002). What doesn't kill me makes me stronger: The effects of resisting persuasion on attitude certainty. *Journal of Personality and Social Psychology*, 83, 1298-1313.
- Tormala, Z. L., & Rucker, D. D. (2007). Attitude certainty: A review of past findings and emerging perspectives. *Social and Personality Psychology Compass*, 1(1), 469-492.
- Van den Bos, K. (2009). Making sense of life: The existential self trying to deal with personal uncertainty. *Psychological Inquiry*, 20(4), 197-217.
- Visser, P. S., Bizer, G. Y., & Krosnick, J. A. (2006). Exploring the latent structure of strength-related attitude attributes. *Advances in Experimental Social Psychology*, 38, 1-67.
- Visser, P. S., Krosnick, J. A., & Simmons, J. P. (2003). Distinguishing the cognitive and behavioral consequences of attitude importance and certainty: A new approach to testing the common-factor hypothesis. *Journal of Experimental Social Psychology*, 39(2), 118-141.
- Webster, D. M., & Kruglanski, A. W. (1994). Individual differences in need for cognitive closure. *Journal of Personality and Social Psychology*, 67, 1049-1062.

Table 1

Political Engagement as a Function of Ideological Uncertainty (Study 1)

	Political Engagement		
	<i>b</i>	SE	95% CI

Ideology and Self

Gender (1 = Male)	0.004	(0.02)	-0.04, 0.04
Income	-0.050	(0.03)	-0.11, 0.01
Race (1 = White)	0.011	(0.02)	-0.04, 0.06
Age	0.115†	(0.06)	-0.01, 0.24
Political knowledge	0.147***	(0.04)	0.08, 0.22
Ideological Extremity	.058†	(0.03)	-0.01, 0.12
Ideological uncertainty	-.362***	(0.04)	-0.43, -0.30
Intercept	.496***	(0.04)	0.41, 0.58
<i>F</i> (degrees of freedom)	31.93 (7, 333) ***		
<i>R</i> ²	0.38		

Note. Entries are ordinary least square regression coefficients, with HC3 robust standard errors and confidence intervals. $N = 145$. († $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 2

Political Participation as a Function of Ideological Uncertainty (Study 1)

	Number of Ballot Initiatives and Candidates Voted On (out of 3 total)		
	<i>Exp(B)</i>	SE	95% CI
Gender (1 = Male)	0.743	0.38)	0.28, 2.01
Income	2.675	(2.20)	0.53, 13.46
Race (1 = White)	2.703†	(1.52)	0.90, 8.12
Age	0.460	(0.90)	0.01, 21.58
Political knowledge	7.256†	(7.67)	0.91, 57.61
Ideological extremity	10.25**	(8.00)	2.22, 47.30
Ideological uncertainty	0.132**	(0.10)	0.03, 0.59
Intercept	0.896	(1.04)	0.09, 8.65
<i>N</i>		312	
Wald χ^2 (degrees of freedom)		32.80 (7, 305) ***	

Note. Entries are ordinary least square regression coefficients, with HC3 robust standard errors and confidence intervals. († $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 3

Political Engagement as a Function of Ideological Uncertainty (Study 2)

	Political Engagement		
	<i>b</i>	SE	95% CI
Gender (1 = Male)	0.060**	(0.02)	0.02, 0.10
Income	0.136**	(0.05)	0.04, 0.24
Race (1 = White)	0.004	(0.03)	-0.05, 0.06
Age	0.09†	(0.06)	-0.02, 0.20
Political knowledge	0.057	(0.04)	-0.03, 0.14
Ideological extremity	0.153***	(0.04)	0.07, 0.24
Ideological uncertainty	-0.251***	(0.06)	-0.37, -0.13
Intercept	0.60***	(0.06)	0.40, 0.65
<i>F</i> (degrees of freedom)	18.90 (6, 1,240) ***		
<i>R</i> ²	0.21		

Note. Entries are ordinary least square regression coefficients, with linearized standard errors and confidence intervals. $N = 354$. († $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 4

Political Participation as a Function of Ideological Uncertainty (Study 2)

	Voted in 2016 Presidential Election?		
	<i>Exp(B)</i>	SE	95% CI
Gender (1 = Male)	3.250**	(1.43)	1.37, 7.71
Income	7.819	(10.38)	0.58, 105.97
Race (1 = White)	0.477	(0.24)	0.18, 1.27
Age	3.870	(4.04)	0.50, 30.05
Political knowledge	0.427	(0.39)	0.07, 2.61
Ideological extremity	0.583	(0.59)	0.08, 4.18
Ideological uncertainty	0.150†	(0.15)	0.02, 1.04
Intercept	9.57*	(11.03)	1.00, 91.79
<i>N</i>		830	
Wald χ^2 (degrees of freedom)		2.38 (7, 823)***	

Note. Entries are odds ratios from binary logistic regression, with linearized standard errors and confidence intervals. († $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 5

Political Engagement as a Function of Manipulated Ideological Uncertainty (Study 3)

	Political Engagement		
	<i>b</i>	SE	95% CI
Gender (1 = Male)	0.047	(0.03)	-0.02, 0.11
Income	-0.090	(0.06)	-0.21, 0.03
Race (1 = White)	0.032	(0.04)	-0.05, 0.12
Age	-0.001	(0.001)	-0.004, 0.002
Political knowledge	0.40***	(0.11)	0.18, 0.62
Ideological extremity	0.119†	(0.06)	-0.01, 0.24
Ideological conviction	0.322***	(0.07)	0.19, 0.46
Uncertainty feedback (1) vs. control (0)	-0.071*	(0.03)	-0.14, -0.01
Intercept	0.091***	(0.09)	-0.09, 0.27
<i>F</i> (degrees of freedom)	10.18 (8, 138) ***		
<i>R</i> ²	0.37		

Note. Entries are ordinary least square regression coefficients, with HC3 robust standard errors and confidence intervals. $N = 151$. († $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

Table 6

T1 to T2 Change in Political Engagement as a Function of T1 to T2 Change in Ideological Uncertainty (Study 4)

	Political Engagement		
	<i>b</i>	SE	95% CI
T1 Political Engagement	0.050**	(0.06)	0.38, 0.62
Gender (1 = Male)	-0.006	(0.02)	-0.04, 0.03
Income	0.006	(0.03)	-0.05, 0.06
Race (1 = White)	-0.018	(0.03)	-0.07, 0.03
Age	-0.024	(0.04)	-0.10, 0.06
Political knowledge	-0.012	(0.04)	-0.09, 0.06
Ideological extremity	0.030*	(0.01)	0.01, 0.05
T1 Ideological uncertainty	-0.036	(0.06)	-0.15, 0.08
T2 Ideological uncertainty	-0.297***	(0.06)	-0.41, -0.19
Intercept	0.389***	(0.06)	0.27, 0.50
<i>F</i> (degrees of freedom)	53.53 (9, 401) ***		
<i>R</i> ²	0.52		

Note. Entries are ordinary least square regression coefficients, with linearized standard errors and confidence intervals. $N = 354$. ($\dagger p < 0.10$, $*p < 0.05$, $**p < 0.01$, $***p < 0.001$)

Table 7

*T1 to T2 Change in Political Engagement as a Function of Manipulated Ideological Uncertainty**(Study 4)*

	Political Engagement		
	<i>b</i>	SE	95% CI
T1 Political Engagement	0.560***	(0.06)	0.44, 0.68
Gender (1 = Male)	-0.010	(0.02)	-0.05, 0.03
Income	0.039	(0.03)	-0.02, 0.10
Race (1 = White)	-0.006	(0.03)	-0.06, 0.05
Age	-0.001	(0.05)	-0.09, 0.09
Political knowledge	0.038	(0.04)	-0.04, 0.12
Ideological extremity	0.053***	(0.01)	0.03, 0.08
Meta-cognitive Reflect (1) vs. control (0)	0.019	(0.02)	-0.02, 0.06
Uncertainty feedback (1) vs. control (0)	-0.040*	(0.02)	-0.08, -0.002
Intercept	0.30***	(0.05)	0.08, 0.26
<i>F</i> (degrees of freedom)	32.35 (9, 398) ***		
<i>R</i> ²	0.47		

Note. Entries are ordinary least square regression coefficients, with HC3 robust standard errors

and confidence intervals. *N* = 151. (†*p* < 0.10, **p* < 0.05, ***p* < 0.01, ****p* < 0.001)

Table 8

T1 to T2 Change in Political Engagement as a Function of T2 Manipulated Ideological Uncertainty x Meta-Cognitive Reflection (Study 4)

	T1 to T2 Change in Political Engagement		
	<i>b</i>	SE	95% CI
T1 Political Engagement	0.55**	(0.06)	0.43, 0.68
Gender (1 = Male)	-0.01	(0.02)	-0.05, 0.03
Income	0.04	(0.03)	-0.02, 0.10
Race (1 = White)	-0.01	(0.03)	-0.06, 0.05
Age	0.01	(0.001)	-0.08, 0.10
Political knowledge	0.04	(0.04)	-0.04, 0.12
Ideological extremity	0.06***	(0.01)	0.03, 0.08
Uncertainty feedback (1) vs. control (0)	.001	(0.03)	-0.05, 0.05
Meta-cognitive Reflect (1) vs. control (0)	0.06*	(0.03)	0.01, 0.11
Uncertainty x MR	-0.09*	(0.04)	-0.16, -0.01
Intercept	0.14**	(0.06)	0.04, 0.25
<i>F</i> (degrees of freedom)	31.03 (10, 397)***		
<i>R</i> ²	0.48		

	T1 to T2 Change in Political Engagement		
Meta-Cognitive Control Condition	<i>b</i>	SE	95% CI
T1 Political Engagement	0.53***	(0.09)	0.36, 0.71
Gender (1 = Male)	-0.01	(0.03)	-0.06, 0.05
Income	0.06	(0.05)	-0.03, 0.15
Race (1 = White)	-0.001	(0.04)	-0.07, 0.07
Age	-0.03	(0.001)	-0.15, 0.10
Political knowledge	0.05	(0.07)	-0.08, 0.18
Ideological extremity	0.06**	(0.02)	0.02, 0.10
Uncertainty feedback (1) vs. control (0)	0.002	(0.03)	-0.05, 0.06
Intercept	0.14†	(0.07)	-0.01, 0.30
<i>F</i> (degrees of freedom)	16.80 (8, 204)***		
<i>R</i> ²	0.45		

	T1 to T2 Change in Political Engagement		
--	---	--	--

Ideology and Self

Meta-Cognitive Reflection Condition	<i>b</i>	SE	95% CI
T1 Political Engagement	0.58***	(0.09)	0.40, 0.76
Gender (1 = Male)	-0.02	(0.03)	-0.07, 0.04
Income	0.01	(0.04)	-0.07, 0.08
Race (1 = White)	-0.01	(0.04)	-0.08, 0.07
Age	0.05	(0.07)	-0.09, 0.019
Political knowledge	0.04	(0.06)	-0.07, 0.14
Ideological extremity	0.05*	(0.02)	0.01, 0.09
Uncertainty feedback (1) vs. control (0)	-0.09**	(0.03)	-0.14, -0.03
Intercept	0.21**	(0.07)	0.06, 0.34
<i>F</i> (degrees of freedom)	18.45 (9, 185) ***		
<i>R</i> ²	0.51		

Note. Entries are ordinary least square regression coefficients, with robust standard errors and confidence intervals. († $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

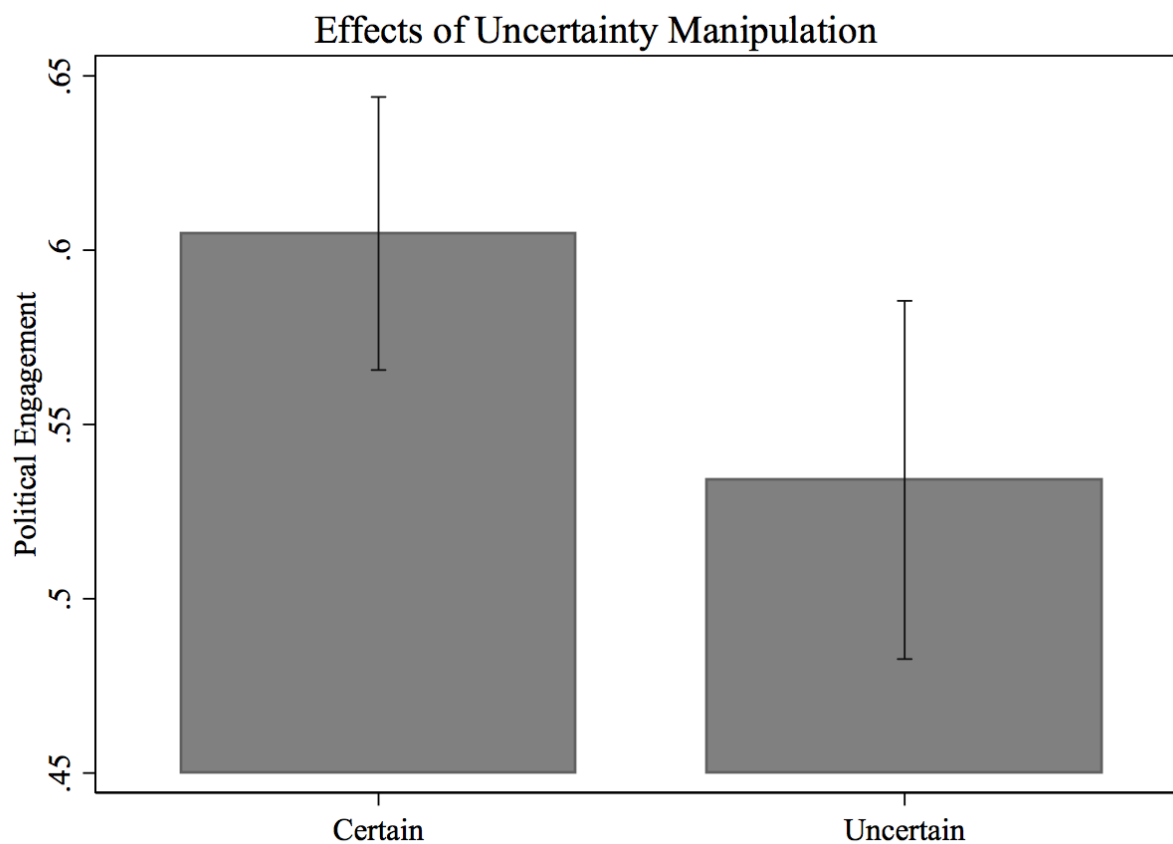


Figure 1. Political engagement as a function of manipulated ideological uncertainty. Error bars represent 95% confidence intervals for adjusted means based on estimates in Table 5 (Study 3).

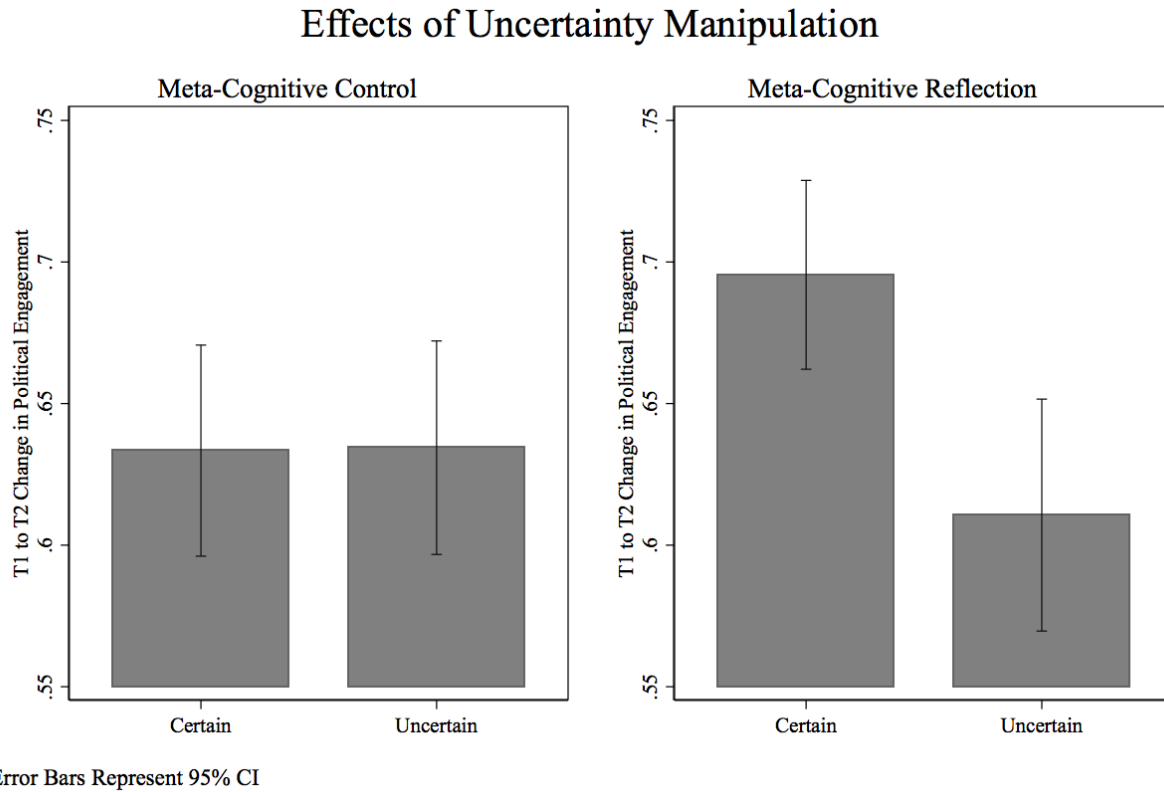


Figure 8. T1 to T2 Change in political engagement as a function of manipulated ideological uncertainty and meta-cognitive reflection. Error bars represent 95% confidence intervals for adjusted means based on estimates in Table 5 (Study 4).