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Personality, Negativity, and Political Participation

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Abstract

Scholars have recently started to integrate personality traits into models of political participation. In this paper, we present the results of a survey experiment (N = 724) designed to test whether negative political messages differentially impact people with different personality traits. We found evidence that individuals with high scores on agreeableness were less likely, and individuals with high scores on extraversion were more likely, to report intending to participate in politics than their counterparts after being exposed to negative political messages. Agreeableness and extraversion also interacted with negative messages to influence specific intentions to make a political donation, attend a meeting, rally, or event, and volunteer for a political campaign. We also found suggestive evidence that agreeableness interacted with negativity to influence turnout intentions. The results of this study have important implications for the study of political engagement, the ways in which people interact with political information, and the practice of democratic politics.

Keywords: Big Five, personality traits, political participation, negativity, experiment

Negativity in political campaigning is commonplace. In general, negative campaigning refers to attacks made against a political opponent or contrasts between a candidate and his or her opponent (where the information about the opponent is negatively oriented). As Schulman and Rivera (2009) have pointed out, "The use of negative campaign tactics in electoral campaigns is something that commonly occurs not only within the American political landscape, but also in other democratic nations throughout the world" (p. 1). Whether in television ads, candidate speeches, or campaign materials, it seems as though negativity is inescapable these days. Indeed, Schulman and Rivera (2009) have observed that in last several years "the frequency and intensity of [negative] ads have increased" (p. 1). Given the widespread use of negativity in political campaigns, it is perhaps unsurprising that a voluminous literature has developed around describing and measuring the effects of negativity. In their meta-analysis on the effects of negative campaigns, Lau, Sigelman, and Rovner (2007) located over 100 studies that aim to understand the effects of negativity on a variety of dependent variables. Some of the research on the effects of negative campaign messages has focused on integrating measures of campaign negativity into individual-level

models of political behavior. Although a number of scholars have taken this approach to studying the individual effects of negative campaigns (Ansolabehere, Iyengar, & Simon, 1999), only a few studies have accounted for individual differences in receptivity to negative campaign messages (see Fridkin & Kenney, 2004). Given the important individual differences that have been identified by psychologists and political scientists alike, we believe that it is theoretically important to account for the idea that people might react differently to negativity depending on their personality traits.

Caprara, Schwartz, Capanna, Vecchione, and Barbaranelli (2006) have pointed out that personal characteristics, like personality traits and basic personal values, are becoming increasingly important for political decision-making. In line with this view, a number of recent studies have indicated that personality traits play a significant role in shaping political attitudes and behaviors in countries around the world, including the Netherlands (Bekkers, 2005), South Korea (Ha, Kim, & Jo, 2013), Venezuela (Mondak, Hibbing, Canache, Seligson, & Anderson, 2010), Uruguay (Mondak et al., 2011), Finland (Mattila et al., 2011), Germany (Schoen & Steinbrecher, 2013), Italy (Caprara et al., 2006), and the United States (Gerber et al., 2011; Mondak, 2010). Although all of these studies find evidence that personality "matters" to political behavior, the particular personality traits that are relevant to political attitudes and behaviors often vary from place to place, which provides evidence that context is important (Ha et al., 2013). Caprara et al. (2006) make an observation about the role of context in shaping the relevance of personality traits to political decisions, noting that personality traits are "brought 'online' more spontaneously [than values], set off almost automatically by the context" (p. 4). While previous studies, including many of the ones mentioned above, have considered how the influence of personality traits varies across countries and cultural settings (two important contextual factors), there are a host of contextual factors that might play a role in how personality traits shape behaviors.

In this paper, we are interested in the extent to which one particular environmental factor—negativity in political messages—influences the relationship between personality and political participation. We think that this particular contextual factor has the potential to play a key role in the relationship between personality traits and political behavior. In the context of Caprara et al.'s (2006) argument, negativity is something that *changes the context within which individuals make political decisions* (about political participation, for instance) and this has the capacity to jolt the influence of personality. Caprara et al. (2006) point out that personality traits should be important predictors of responses over which individuals exert little cognitive control—perhaps like affect, which is likely influenced by negativity. When one considers how differently people with different personality traits can respond to the same situation, it seems quite reasonable to think that people with different traits might react differently to negative information in politics. While exposure to negative messages might motivate some people to learn about or to participate in politics, it might turn others off of politics or reduce their probability of taking action.

The notion that personality may moderate reactions to campaign negativity has important implications for theory as well as practical politics. Given the sophisticated technologies that campaigns now have at their disposal to tailor campaign materials to individuals, it is worth investigating whether individual personality traits have important effects on receptiveness to different kinds of political messages. If personality traits do influence how people respond to political messages, it may be possible for campaigns to learn about potential voters' personality attributes and adapt political messages to different personality traits. While "microtargeting" techniques have already been employed by many political campaigns, we are not aware of many efforts by campaigns to account for personality differences. With social media platforms becoming more and more popular, many of which feature detailed inform-

ation about users, it certainly seems possible for campaigns to learn about a wide range of individual differences and adapt their messages to account for those differences.

In this study, conducted in the United States, we provide an analysis of the extent to which personality traits interact with political messages, particularly negative political messages, to shape individuals' decisions to get involved in politics. This is a focus that has been subjected to limited empirical scrutiny to date. Although recent analyses (Gerber et al., 2011; Mondak, 2010) have illustrated the *direct effects* of personality on political participation, we argue it is important to continue to learn about the *interactive effects* between personality and political context in shaping political behavior (see Gerber, Huber, Doherty, Dowling, & Panagopoulos, 2013; Mondak, 2010; Mondak et al., 2010; Redlawsk & Tolbert, 2012). As Mondak (2010) has noted, "[f]or decades, scholars in the field of trait psychology have mentioned possible interactions between trait variables and situational forces, yet theory-driven empirical study of such effects remains disappointingly rare" (p. 186). The current study represents an attempt to reexamine but also expand upon tests of the interplay between personality and context in determining political behavior.

Our analysis unfolds as follows. First, we provide a brief overview of the commonly-used Big Five framework that we rely upon to assess personality traits in our study. Second, we briefly outline the literature on negative advertising and political participation. Third, we outline hypotheses about how the relationship between negative political messages and political participation might be influenced by individual personality attributes. Fourth, we test hypotheses about personality and political messages by using a survey experiment conducted on Amazon's Mechanical Turk interface. We measure political participation in a number of ways, including a general political participation index and measures of intentions to vote, attend a meeting, rally, or event, and volunteer for a political campaign.

The use of turnout intention as a dependent variable allows us to re-examine Mondak's (2010) analysis of the influence of the Big Five and negative ads on voter turnout, which indicated that the effects of negativity were muted for those with high scores on the openness trait and amplified for those with high scores on the extraversion trait. We also expand upon Mondak's analysis in several ways by examining the effects of negativity using a new treatment and by investigating the effects of negativity on the propensity to engage in a number of other political acts. We highlight a number of interesting patterns regarding the interaction of negative campaign messages and individual personality traits. In the end, this study justifies additional research on personality-environment interactions.

Big Five Personality Traits

Political scientists have long been interested in the determinants of political engagement. Recent research on political participation has highlighted the fact that deeply rooted individual factors play a role in shaping the extent to which people choose to engage in civic life. One line of research in this area revolves around the role of individual personality traits in shaping participation decisions. Research by Gerber et al. (2011), Mondak (2010), Mondak et al. (2010) has demonstrated a link between the Big Five personality traits and political engagement. The Big Five traits are: openness, conscientiousness, extraversion, agreeableness, and emotional stability. In brief, "[t]he Big-Five framework is a hierarchical model of personality traits with five broad factors, which represent personality at the broadest level of abstraction. Each bipolar factor (e.g., Extraversion vs. Introversion) summarizes several more specific facets (e.g., sociability), which, in turn, subsume a large number of even more specific traits (e.g., talkative, outgoing). The Big-Five framework suggests that most individual differences in human personality

can be classified into five broad, empirically derived domains" (Gosling, Rentfrow, & Swann, 2003, p. 506). John and Srivastava (1999) describe the Big Five as follows:

> Extraversion implies an *energetic approach* to the social and material world and includes traits such as sociability, activity, assertiveness, and positive emotionality. Agreeableness contrasts a *prosocial and communal orientation* toward others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty. Conscientiousness describes *socially prescribed impulse* control that facilitates task-and goal-directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks. [Emotional stability describes even-temperedness and] contrasts ... with negative emotionality, such as feeling anxious, nervous, sad, and tense ... Openness to Experience (versus closed-mindedness) describes the breadth, depth, originality, and complexity of an individual's *mental and experiential life.* (p. 121)

Researchers in psychology have repeatedly shown that the Big Five are extremely stable over time (McCrae & Costa, 2006; Pullmann, Raudsepp, & Allik, 2006), genetically heritable, to at least some extent (Bouchard, 1994; Bouchard, 2004; Stelmack, 1991), and empirically distinct from other orientations, including values (Funk et al., 2013). Researchers have also shown that personality traits have important effects on the appeal of a wide number of objects, activities, and stimuli. In short, personality traits play an important role in structuring how people respond to things in their environment. Here, we are interested in how the Big Five traits shape the effect of one environmental factor that people often encounter in the political world—negativity.

Negative Advertisements, Individual Differences, and Political Engagement

One line of research on campaign effects focuses on the role of negative advertisements in shaping mass political engagement. Early studies on the influence of negative ads on citizens (Ansolabehere, Iyengar, & Simon, 1999; Ansolabehere, Iyengar, Simon, & Valentino, 1994), especially Ansolabehere and Iyengar's (1995) *Going Negative,* elicited a great deal of attention from political scientists and spawned considerable follow up research. While the conventional wisdom suggested that negative political ads and messages served to demobilize voters and turn them off of politics, laboratory experiments by Ansolabehere and colleagues provided empirical support for this idea. In their groundbreaking study on negative ads and turnout, Ansolabehere et al. (1994) found that exposing people to negative ads dropped turnout intention by about 5 percentage points. Similarly, Ansolabehere and Iyengar (1995) found that intention to vote was 4.6 percentage points lower among experimental participants who were exposed to a negative political advertisement. One line of research that has evolved from early work on negative ads focuses on how different people react to negative information. A number of studies have suggested that perhaps in order to understand how negative ads influence individuals, scholars need to account for differences in receptivity to negative information (Fridkin & Kenney, 2004; Mondak, 2010). For some people, negative ads might *motivate* them to participate in politics, while for others negative ads might lead them to *withdraw* from politics.

To date, a number of studies have examined how different individual attributes lead to heterogeneous responses to negativity. For example, in their analysis of how negative Senate advertisements influence voters' feelings about political candidates, Fridkin and Kenney (2004) examined the influence of political sophistication on receptivity to negative information and found that "the impact of negative information varies for different types of citizens … political experts do not penalize candidates for running negative campaigns. Political novices—who constitute the majority of the citizenry—are more likely to be influenced by the valence of the candidates' messages and are more likely to punish candidates for 'going negative' during campaigns" (p. 588). Kahn and Kenney (1999) also

found evidence that individuals with different attributes—political interest, sophistication, and partisanship strength—vary in their sensitivity to negative campaigning. While much of the focus of previous studies has been on *psychological resources*, we know very little about how *personality traits* might influence negativity in politics. In this paper, we seek to understand whether and how people with different personality attributes respond differently to negative political messages, a question that has only just recently begun to receive empirical scrutiny (see Mondak, 2010). In this way, we view our study as a reexamination of previous findings but also as an expansion of the existing literature.

Revisiting Hypotheses About Personality Traits and Receptiveness to Negativity

Mondak (2010) presents a number of hypotheses about how the Big Five personality traits might influence reactions to negativity in political messages. On the whole, we find the claims he advanced to be reasonable and we rely on these arguments and theoretical expectations to extract testable hypotheses about how the Big Five traits may moderate reactions to negative political messages with respect to political participation. Mondak speculated that the impact of negative advertisements on turnout would be muted for individuals with high scores on openness and for individuals with high scores on emotional stability, since open people should be capable of "looking past any given advertisement and seeing the bigger picture" and those who are emotionally stable are "relatively un-flappable and not prone to agitation" (pp. 171-172). Mondak hypothesized that the effect of negative advertisements would be pronounced for those who score highly on agreeableness, conscientiousness, and extraversion. The logic here is that agreeable people will shy away from things that are conflictual or disagreeable, conscientious people have clear ideas about right and wrong and will not appreciate critical or inflammatory ads, and that extra-verts, who tend to be enthusiastic and are often drawn to positive social experiences, will turn away from politics when it becomes too ugly (p. 172).

Mondak (2010) tested these hypotheses by making use of a survey experiment included in the 2005 National Jury Survey. Participants in the study were randomly assigned to read transcripts (of different tones) from radio ads run in a recent House campaign and were then asked to rate the tone of the campaign. Participants were then asked (on an 11-point scale) how likely they would have been to vote in the election. Overall, Mondak did not find support for his hypotheses about agreeableness, emotional stability, or conscientiousness, but he did find statistically significant interactions for openness and extraversion. Those with high scores on openness were "able to dismiss negative ads as a basis to deter from participation" (p. 174) and extraverts who perceived campaign ads as very negative were much less likely to report intending to turnout than those who perceived campaign ads as very positive.

Our first goal in studying negativity and personality traits is to add to Mondak's (2010) recent work on the interplay between personality and negativity. Because research on the Big Five and political participation is fairly new to the political psychology literature, and because inconsistent findings have emerged across similar studies of the Big Five traits in political domains (see Gerber et al., 2011; Ha et al., 2013; Mondak et al., 2010), it is crucial that scholars reexamine initial studies on personality and political behavior. The field of psychology has a rich tradition of replication studies, and we believe it is important that the emerging political science research on personality and politics be replicated, reexamined and extended. The ability to generalize results rests on the ability to replicate findings across different studies. In short, despite Mondak's (2010) preliminary study, we view the question of whether and how personality traits interact with negativity in campaigns very much an open one. How do Mondak's findings hold up in the context of a different sample and a different measure of negativity? As Mondak et al. (2011)

nicely noted, "[i]f similar findings emerge in independent analyses conducted with different datasets and different Big Five instruments, confidence rightly will grow in the identified effects" (p. 19).

Below we examine the interplay between the Big Five and negativity using data from an original survey experiment. We begin our analysis by using a general measure of political participation, but we also reexamine—using new data and a time-tested experimental treatment from Ansolabehere and Iyengar (1995)—whether and how personality and political advertisements interact to influence turnout intentions, the dependent variable that is the focus of Mondak's (2010) study. Accordingly, we extend this line of inquiry to consider other forms of political participation, exploring whether personality and negative messages interact to influence intentions to donate, attend a rally, meeting, or event, or volunteer. In short, we ask whether the effects of negativity on civic engagement influence a variety of other important political acts beyond voting.

Method

Participants and Procedure

In 2012, we carried out a survey experiment using Amazon's Mechanical Turk (MTurk) interface.[i] Mechanical Turk is an online platform for recruiting and paying individuals to perform tasks. It can also be used to recruit participants for surveys and experiments and is becoming increasingly popular in the social sciences (Berinsky, Huber, & Lenz, 2012). Berinsky et al. (2012) have shown that Mechanical Turk is a valuable recruitment tool, especially because the demographic attributes of respondents are more representative and diverse than the student and convenience samples that are often used. Berinsky et al. (2012) have also found that classic experimental findings from political science replicate well when using Mechanical Turk to recruit participants.

Our survey experiment began by asking all participants a variety of basic demographic and political questions (on average, it took respondents 4 minutes and 33 seconds to complete the survey). The demographic attributes of our sample (N = 724) are consistent with other studies that have employed Mechanical Turk (Berinsky et al., 2012; Buhrmester, Kwang, & Gosling, 2011). The average age of our participants was 34 years old, 76 percent of our respondents were white, and 54 percent were male. As Buhrmester et al. (2011) have noted, "MTurk participants are slightly more demographically diverse than are standard Internet samples and are significantly more diverse than typical American college samples" (p. 3). To be clear, our sample was made up of participants living in the United States, something that obviously limits our ability to generalize our findings to other countries. Although psychologists have provided evidence of the cross-cultural applicability of the Big Five traits (Schmitt, Allik, McCrae, & Benet-Martínez, 2007), it is certainly the case that citizens in other countries experience negativity in politics and in political messages differently from citizens in the U.S. As such, we believe that it is important to re-examine our findings in other contexts.

Operationalization of Variables

Big Five Traits

Beyond demographic questions, we asked participants to complete the Ten-Item Personality Inventory (TIPI) as developed by Gosling, Rentfrow, and Swann (2003) to measure the Big Five traits. It is important to note that because the TIPI only includes ten items, it does not provide a detailed assessment of all of the facets of the Big Five traits. In addition, the psychometric properties of trait measures derived from the TIPI tend to be weaker than

those derived from longer measurement batteries (Gosling et al., 2003). On the upside, the TIPI is quick to administer and provides a fairly reliable way of measuring personality traits (see Gosling et al., 2003). The TIPI directions are as follows: "Here are a number of personality traits that may or may not apply to you. Please indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other." Respondents are asked to report the extent to which they are characterized by a series of 10 trait pairs, each of which is assessed on a seven-point scale that ranges from Disagree Strongly to Agree Strongly. Each Big Five trait is captured by responses to two trait pairs.[ii] Responses to these 10 questions are used to score a respondent's personality on each of the Big Five dimensions. For each of the Big Five traits, we averaged the two corresponding trait pairs together. In Table 1, we provide a look at the iter-item correlations for the trait pairs. The items correlated at fairly high levels. Also, the correlation values were very similar to those reported in previous studies (see Gerber et al., 2011; Mondak, 2010), which speaks directly to the reliability of our estimates.

Table 1

Correlations Among Trait Pairs for Big Five Traits (N = 724)

	Pearson's *r*
Extraversion	.50
Agreeableness	.30
Conscientiousness	.40
Openness	.31
Emotional Stability	.55

Note. All correlations statistically significant at the *p* < .05 level (two-tailed).

Measuring Negativity in Political Messages

In order to understand how the Big Five traits interact with negative political messages to influence participation, participants were randomly assigned with equal probability to receive a negative or positive political message. Our messages were adapted from Ansolabehere and Iyengar's (1995) book, *Going Negative.* Participants who were exposed to the negative ad were shown the following message, which centers on two fictitious candidates:

> For over 200 years, the United States Senate has shaped the future of America and the world. Today, our state needs honesty, compassion, and a voice for all the people in the U.S. Senate. Suppose there are two candidates running for the U.S. Senate this year: John Smith and James Williams. As a Congressman, James Williams opposed new government ethics rules. He accepted large campaign contributions from special interests. And James Williams opposed tougher penalties on white-collar crime. Our state can't afford a politician like James Williams in the U.S. Senate.

The other set of participants received a positive version of the same ad, which read as follows:

> For over 200 years, the United States Senate has shaped the future of America and the world. Today, our state needs honesty, compassion, and a voice for all the people in the U.S. Senate. Suppose there are two candidates running for the U.S. Senate this year: John Smith and James Williams. As a Congressman, John Smith proposed new government ethics rules. He rejected large campaign contributions from special interests. And John Smith supported tougher penalties on white-collar crime. Our state needs John Smith in the U.S. Senate.

We note these messages are time-tested, and identical (or very similar) messages have been used in previous studies on negativity (see, e.g., Ansolabehere et al., 1994).

Political Participation

After participants were exposed to one of the messages above at random, we queried them about the likelihood of subsequent participation in a range of political activities during the 2012 election cycle. We asked participants about their likelihood of voting, as well as donating money, volunteering, and attending a political meeting, rally, or event. Participants were asked to report their likelihood of engaging in each of these acts using a 10-point slider, where 1 corresponded to "definitely will not" and 10 corresponded to "definitely will." We asked participants a number of questions about their probability of participating because we were interested in gauging the reliability of our measures of participation and in being able to examine the effects of personality and negativity on a range of political acts. Cronbach's alpha for our participation items was quite high at .75, indicating that our measure was fairly reliable.[iii] We averaged the four participation items together to form our first dependent variable of interest, *intended political participation*. Higher values correspond to higher levels of participation intention. Overall, there was considerable variation in citizens' expectations about the extent to which they would participate in politics. The minimum value of the dependent variable was 1 and the maximum was 10, with the mean being 4.37. About 57 percent of respondents had scores that fell below the mean.

Control Variables

In the analyses below, we included a number of control variables to enhance the precision of our estimates. We controlled for sex, age (and age squared), race, education, whether subjects reported voting in the 2008 presidential election, and education.

Results and Discussion

Preliminary Analysis

Before analyzing the experiment results, it is important to provide some basic information about our key variables of interest. Table 2 contains descriptive statistics for all of the participation and personality trait measures.

Next we show the correlations among the Big Five traits in Table 3. We note the Big Five appeared to capture different elements of personality; the highest correlation in Table 3 was .335. The correlation values reported were very similar to those reported in previous studies (see Gerber et al., 2013), which speaks directly to the validity of the measures.

Table 2

Descriptive Statistics for Personality and Participation Measures (N = 724)

Variables	Mean	SD	Minimum	Maximum
Extraversion	3.678	1.490	1	7
Openness	5.093	1.243	1	7
Agreeableness	5.043	1.252	1	7
Emotional Stability	4.715	1.455	1	7
Conscientiousness	5.229	1.283	1	7
Turnout	7.927	2.960	1	10
Donate	3.206	2.904	1	10
Volunteer	2.942	2.641	1	10
Rally	3.423	2.741	1	10
Participation Index	4.374	2.128	1	10

Note. Frequencies for all variables available from authors by request.

Table 3

Pearson Correlations Among Big Five Traits (N = 724)

	Extraversion	Agreeableness	Conscientiousness	Openness
Agreeableness	.019			
Conscientiousness	.161	.256		
Openness	.182	.282	.177	
Emotional Stability	.220	.332	.335	.245

Negativity and Political Participation in General

In order to evaluate hypotheses about the interactive effects between personality and negative political messages, we created a dummy variable indicating whether a subject was exposed to the negative political message treatment (coded 1 if yes, 0 if no).[iv] We then interacted this variable with each of the Big Five personality trait measures. Regressing our measure of political participation on these variables provided us with an indication of whether negative political messages had different effects on people with different personality attributes. We used OLS regression for all of the models presented below. In order to make the coefficients comparable across variables, we rescaled each of the independent variables to a common metric (0 to 1) before creating the interaction terms.

Model 1 in Table 4 provides an assessment of how the Big Five traits performed, alongside a number of traditional predictors of political participation. In short, this model provides a look at the direct (average) effects of personality. Model 1 indicated that extraversion had a positive and statistically significant effect on intended participation, which is consistent with previous research (Gerber et al., 2011; Mondak, 2010). Agreeableness and conscientiousness were also both statistically significant predictors, although they exerted negative effects on participation. Gerber et al. (2011) found evidence of a negative effect for conscientiousness, which may be related to the fact that conscientious people are often interested in practical activities and may therefore choose not to expend time and resources in the realm of politics. The effect of agreeableness has been mixed across studies. Finally, neither openness nor Emotionally Stability exerted statistically significant effects on intended participation.

In Model 2 in Table 4, each personality trait was interacted with the negative message treatment variable (removing the demographic variables as controls did not impact the patterns of statistical significance). A joint F-test of the interactions indicated that they significantly improved the explanatory power of the model, $F(5, 704) = 3.21$, $p = .007$. In addition, many of the control variables performed as expected. For example, education, previous voter turnout, and the variable indicating whether a participant was African American were statistically significant predictors of participation (ps < .05, two-tailed). Although the coefficient on the negative message treatment variable indicated that it was not statistically significant, we were not particularly interested in the average effect of the treatment. Instead, our primary interest centered on the idea that there may be heterogeneous treatment effects associated with individual differences in the Big Five traits. The interaction variables provided a test of hypotheses about how each of the Big Five traits might moderate the effect of being exposed to a negative political message. Positive coefficients on the interactions indicated that the effect of the negative message was stronger for individuals high on the trait (compared to their counterparts), while negative coefficients indicated that the effect of the treatment was weaker for those high on the trait.

Table 4

Linear Regression Models (OLS) of Intended Political Participation (N = 724)

	Model 1			Model 2		
	B	**SE**	**p**	**B**	**SE**	**p**
Extraversion	1.236	0.369	.001	0.299	0.507	.556
Openness	0.451	0.457	.325	0.231	0.634	.716
Agreeableness	-0.830	0.488	.090	0.127	0.672	.850
Emotional Stability	0.467	0.420	.267	0.187	0.593	.752
Conscientiousness	-1.716	0.457	<.001	-2.130	0.647	.001
Negative Message (1=Negative)	-0.120	0.151	.427	-1.267	0.920	.169
Extraversion*Negative Message	---	---	---	1.958	0.734	.008
Openness*Negative Message	---	---	---	0.473	0.901	.600
Agreeableness*Negative Message	---	---	---	-2.002	0.929	.032
Emotional Stability*Negative Message	---	---	---	0.673	0.814	.409
Conscientiousness*Negative Message	---	---	---	1.026	0.891	.250
Male	0.252	0.164	.126	0.270	0.164	.099
White	-0.090	0.237	.703	0.008	0.236	.973
Black	0.896	0.337	.008	1.049	0.337	.002
Hispanic	0.281	0.476	.555	0.327	0.473	.490
Age	-6.007	0.837	.035	-6.262	2.816	.027
Age squared	6.284	0.687	.020	6.608	2.668	.013
Education	1.215	0.384	.002	1.281	0.382	.001
Turnout 2008	0.913	0.171	<.001	0.892	0.169	<.001
Constant	4.800	0.819	<.001	5.177	.923	<.001

Note. Adjusted R^2 for Model 1 is .11. Adjusted R^2 for Model 2 is .12. Degrees of Freedom is 709 for Model 1 and 704 for Model 2. Reported p-values are two-tailed hypothesis tests. Effects for each trait when negative message is 0 (positive ad treatment) are as follows: extraversion (0.299, ns), openness (0.231, ns), agreeableness (0.127, ns), emotional stability (0.187, ns), and conscientiousness (-2.130, $p < .05$, two-tailed). Effects for each trait when negative message is 1 (negative ad treatment) are as follows: extraversion (2.257, $p < .05$, two-tailed), openness (0.704, ns), agreeableness (-1.875, $p < .05$, two-tailed), emotional stability (0.86, ns), and conscientiousness (-1.104, ns). ns indicates not statistically significant at $p < .05$ level (two-tailed).

Our results provided evidence of several statistically significant interactions between personality traits and political messages (the results held even after adding interactions between demographics and treatment variable to check

robustness of personality interactions). For the agreeableness trait, we found that the coefficient on the interaction between the treatment (negative message) and agreeableness was statistically significant (p = .032, two-tailed) and negatively signed, indicating that among those exposed to the negative message people with high scores on agreeableness reported intending to participate in politics at lower rates than those with low scores. Figure 1 shows the relationship. The slope of the line indicates that those with high scores on agreeableness were about 2 points (on a 10 point scale) less likely to participate in politics than those with low scores after being exposed to a negative political message, an impressive effect given the fact that our experimental manipulations were fairly weak (short paragraphs of text). The fact that agreeable people seem to be turned off of politics after experiencing negativity makes a great deal of theoretical sense given the nature of agreeable people, who tend to prefer social harmony and dislike conflict.[v] Since negative ads are typically aimed fostering divisiveness and entail direct conflict, it was not surprising to find that agreeable individuals were negatively impacted by negative ads. This result fits nicely with the theoretical expectation put forth by Mondak (2010) about agreeableness and negativity, although we note that his discussion focused on turnout as the participation measure of interest rather than a general participation index.
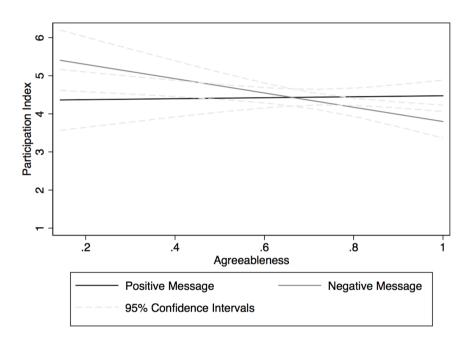

Figure 1. Interaction between agreeableness and negative political message.

Note. Other variables in model set at median levels.

The coefficient for the extraversion and negative message interaction was also statistically significant (p = .008, two-tailed), and positively signed. Figure 2 shows the effect. Overall, those with the highest score on the extraversion trait reported being more likely to participate in politics than those with low scores after being exposed to the negative political message. It appears that extraverts who were exposed to negative political messages were motivated to participate in politics. This finding is at odds with the expectation from Mondak (2010) that, "[w]hen politics turns ugly, the extravert likely turns elsewhere," although this hypothesis was originally discussed in the context of voter turnout (p. 172). Although extraverts do tend to be enthusiastic and enjoy positive social experiences, it could be the case that negative ads remind extraverts, who tend to be assertive and participate in a wide

range of political activities (including both conflictual and non-conflictual acts; see Gerber et al., 2011), what it is that draws them to politics and increases their intention to get involved. Given the inconsistent findings that have emerged with respect to extraversion, it is crucial that further research be done on the interplay between the extraversion trait and negativity in politics.[vi]
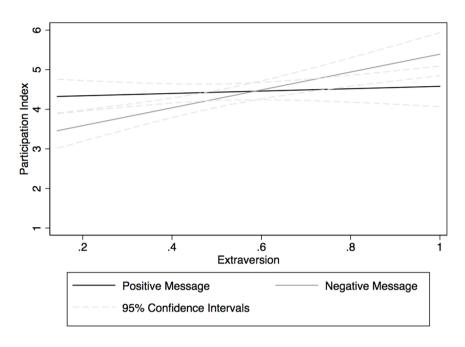

Figure 2. Interaction between extraversion and negative political message.

Note. Other variables in model set at median levels.

Negativity and Specific Forms of Political Participation

In addition to examining how the Big Five and negative ads interact to influence a general measure of political participation, our data allowed us to examine the influence of personality and negative ad interactions on specific acts on participation—turnout, which was Mondak's (2010) dependent variable of interest, donating, volunteering, and attending a rally, meeting, or event.

In Tables 5 and 6, we used each act as a separate dependent variable (all independent variables scaled to range from 0 to 1). The first model in Table 5 contains the results for the turnout intention model. While Mondak (2010) found evidence of two statistically-significant interactions between personality traits (openness and extraversion) and campaign tone, none of the personality interactions in our model of turnout intention were statistically significant. The only coefficient that showed some relationship with turnout was the agreeableness interaction. The interaction was negatively signed, suggesting that those with high scores on agreeableness tended to report being less likely to turnout after exposure to negativity, but not statistically significantly ($p = .201$, two-tailed). The agreeableness interaction performed consistently across the other models in Tables 5 and 6 (negatively signed); it was statistically significant at $p = .025$ (two-tailed) in the rally model, and marginal at $p = .074$ (two-tailed) in the volunteer model. Consistent with the results presented in Table 4, across three of the dependent variables (rally, donate, volunteer), the extraversion and negative advertisement interaction was statistically significant or marginal ($p < .10$, two-tailed)

and positively signed. These results suggest that negative political messages interacted with personality attributes to influence general participation levels but also specific acts of civic engagement.

Table 5

Linear Regression Models (OLS) of Political Participation, Vote and Donate Intentions (N = 724)

	Vote			Donate		
	B	**SE**	**p**	**B**	**SE**	**p**
Extraversion	0.028	0.623	.964	1.027	0.705	.145
Openness	0.792	0.778	.309	0.061	0.881	.945
Agreeableness	0.636	0.825	.441	-0.595	0.935	.524
Emotional Stability	0.134	0.727	.853	0.967	0.824	.241
Conscientiousness	0.585	0.794	.462	-3.164	0.899	<.001
Negative Message (1=Negative)	0.841	1.130	.457	-1.663	1.279	.194
Extraversion*Negative Message	0.752	0.901	.404	1.702	1.021	.096
Openness*Negative Message	-0.250	1.106	.821	0.679	1.252	.588
Agreeableness*Negative Messsage	-1.459	1.141	.201	-1.665	1.291	.198
Emotional Stability*Negative Message	0.406	1.000	.684	-0.110	1.132	.923
Conscientiousness*Negative Message	-0.570	1.094	.603	1.837	1.239	.139
Male	-0.281	0.201	.162	0.511	0.228	.025
White	0.815	0.290	.005	-0.638	0.328	.052
Black	1.099	0.414	.008	0.894	0.469	.057
Hispanic	0.873	0.581	.133	-0.278	0.658	.673
Age	-9.450	0.458	.006	-2.095	3.915	.593
Age squared	8.535	0.276	.009	4.282	3.708	.249
Education	1.180	0.469	.012	1.430	0.531	.007
Turnout 2008	3.164	0.208	<.001	0.345	0.236	.143
Constant	5.476	1.133	<.001	3.851	1.283	.003

Note. Adjusted R^2 for Vote model is .31. Adjusted R^2 for Donate model is .09. Degrees of Freedom is 704 in both models. Reported p-values are two-tailed hypothesis tests. Effects for each trait when negative message is 0 (positive ad treatment) are as follows for vote model: extraversion (0.028, *ns*), openness (0.792, *ns*), agreeableness (0.636, *ns*), emotional stability (0.134, *ns*), and conscientiousness (.585, *ns*). Effects for each trait when negative message is 1 (negative ad treatment) are as follows: extraversion (.869, *ns*), openness (.542, ns), agreeableness (-.823, ns), emotional stability (0.54, ns), and conscientiousness (.015, ns). Effects for each trait when negative message is 0 (positive ad treatment) are for donate model are: extraversion (1.027, ns), openness (.061, ns), agreeableness (-.595, ns), emotional stability (.967, ns), and conscientiousness (-3.164, *p* < .05, two-tailed). Effects for each trait when negative message is 1 (negative ad treatment) are as follows: extraversion (2.729, *p* < .05, two-tailed), openness (0.74, ns), agreeableness (-2.26, *p* < .05, two-tailed), emotional stability (0.857, ns), and conscientiousness (-1.327, ns). ns indicates not statistically significant at *p* < .05 level (two-tailed).

By and large, the results in Tables 5 and 6 were fairly consistent across the four models. Although Mondak (2010) found evidence that extraversion interacted with negativity to influence turnout in his study, our results did not confirm this result. It could be the case that the differences across studies stem from differences in measures of negativity, sample differences, or differences in measures of personality traits (which may capture different facets of personality). We strongly encourage efforts to replicate our study and to reexamine this finding using a different personality measurement battery, different measures of negativity, different samples or in different contexts.

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Table 6

Linear Regression Models (OLS) of Political Participation, Volunteer and Rally Intentions (N = 724)

	Volunteer			Rally		
	B	*SE*	*p*	*B*	*SE*	*p*
Extraversion	0.473	0.646	.464	-0.333	0.671	.620
Openness	0.294	0.808	.716	-0.223	0.839	.791
Agreeableness	0.202	0.857	.814	0.267	0.890	.764
Emotional Stability	0.048	0.755	.949	-0.402	0.785	.609
Conscientiousness	-3.258	0.825	<.001	-2.684	0.857	.002
Negative Message (1=Negative)	-1.523	1.173	.194	-2.723	1.219	.026
Extraversion*Negative Message	1.842	0.936	.049	3.537	0.972	<.001
Openness*Negative Message	0.264	1.148	.818	1.200	1.193	.315
Agreeableness*Negative Messsage	-2.120	1.184	.074	-2.765	1.230	.025
Emotional Stability*Negative Message	1.035	1.037	.319	1.360	1.078	.208
Conscientiousness*Negative Message	1.435	1.135	.207	1.403	1.180	.235
Male	0.485	0.209	.020	0.366	0.217	.092
White	-0.176	0.301	.558	0.032	0.313	.918
Black	1.037	0.430	.016	1.168	0.446	.009
Hispanic	0.526	0.603	.383	0.185	0.627	.768
Age	-5.889	3.589	.101	-7.612	3.729	.042
Age squared	6.310	3.400	.064	7.305	3.533	.039
Education	1.410	0.486	.004	1.103	0.505	.029
Turnout 2008	-0.138	0.216	.524	0.195	0.224	.384
Constant	4.937	1.176	<.001	6.443	1.222	<.001

Note. Adjusted R^2 for Volunteer model is .07. Adjusted R^2 for Rally model is .07. Degrees of Freedom is 704 in both models. Reported p-values are two-tailed hypothesis tests. Effects for each trait when negative message is 0 (positive ad treatment) are as follows for volunteer model: extraversion (0.473, ns), openness (0.294, ns), agreeableness (0.202, ns), emotional stability (0.048, ns), and conscientiousness (-3.258, *p* < .05, two-tailed). Effects for each trait when negative message is 1 (negative ad treatment) are as follows: extraversion (2.315, *p* < .05, two-tailed), openness (.558, ns), agreeableness (-1.918, ns), emotional stability (1.083, ns), and conscientiousness (-1.823, ns). Effects for each trait when negative message is 0 (positive ad treatment) for rally model are: extraversion (-.333, ns), openness (-.223, ns), agreeableness (.267, ns), emotional stability (-.402, ns), and conscientiousness (-2.684, *p* < .05, two-tailed). Effects for each trait when negative message is 1 (negative ad treatment) are as follows: extraversion (3.204, *p* < .05, two-tailed), openness (0.97, ns), agreeableness (-2.498, *p* < .05, two-tailed), emotional stability (0.958, ns), and conscientiousness (-1.281, ns). ns indicates not statistically significant at *p* < .05 level (two-tailed).

Limitations and Future Research

There are a number of important limitations worth pointing out regarding our study. We acknowledge our study was limited to one specific temporal context; it was fielded in 2012, prior to the presidential election. Generally speaking, we do not believe that this feature of our research design influenced the observed relationships since the experiment was administered well before the election (the experiment was carried out in June and the election was held in November). In short, we see little theoretical reason to believe that the timing of our study would alter the relationship between personality traits, negative messages (from a fictitious campaign), and participation. Replications in different contexts could address these possibilities.

We also acknowledge that MTurk is not a perfect recruitment tool; some scholars have documented concerns with the MTurk platform (see Chandler, Mueller, & Paolacci, 2014 for a discussion of some of the problems with MTurk). Future studies could rely on alternative samples to study personality and contextual interactions.

We also recognize the analyses presented above did not consider the potential indirect effects of personality on political engagement. Recent studies (see Schoen & Steinbrecher, 2013) provide evidence that the effects of some personality traits are mediated by political attitudes. We remain agnostic on this issue but underscore the need to consider these possibilities in subsequent research. Existing studies imply that attitudes and orientations like political efficacy, civic duty, and political interest are worth investigating. In short, there is still much to learn about the way that traits, attitudes, and contextual factors come together to influence political behavior.

It is also worth noting that the messages we used in our study were consistent with the classical conception of negative messages in the literature and were not intended to capture incivility in political messages, a dimension of advertising tone that has recently been the subject of some political science research (see Brooks & Geer, 2007). Brooks and Geer (2007) suggest that incivility refers to "attacks that go beyond facts and differences, and move instead towards name-calling, contempt, and derision of the opponent" (p. 1). Future research could examine the interplay between incivility and personality traits, but in this study we focused on more traditional negative messages. We point out that future studies could consider using different experimental manipulations than the ones we employed. We opted to use the treatments outlined above because they have been used in numerous, classic studies in political science, but it would be worthwhile to extract treatments from other studies on negativity in politics and to examine how the findings reported below compare. It could also be interesting to use the same messages as above but to mention different issues.

Given the evidence reported above, which illustrates that people with different personality traits do, in fact, respond differently to negativity in politics, we believe future research on the interactive effects between individual personality traits and political context is both necessary and important. We have highlighted a number of interesting patterns regarding personality, context, and participation, but we encourage additional scholarship in this area. The development of hypotheses about personality and contextual interactions, along with the inclusion of personality measurement batteries in future studies, will play an important role in moving the personality and politics literature forward. The use of experiments will also help to tease out causal patterns of influence that facilitate learning about how contextual factors interact with individual personality traits and dispositions to drive political behaviors and attitudes; the inclusion of questions on surveys asking about contextual factors or individual perceptions of context could also be valuable. One question ripe for future study, and one we did not address in the current study, is to investigate the duration that interactive effects between personality and context persist. Previous studies on political mobilization (Davenport et al., 2010) have examined the durability of contextual factors (e.g., appeals to social pressure) related to participation, but whether the effects we observed in this study are durable or weaken over time remains an open question. It is unclear, for example, if the effects of negativity on people with certain personality attributes endure over the course of a single or several election cycles or if they decline shortly after exposure.

Conclusion

In this study, we investigated the interaction between individual personality traits and negativity in shaping participation decisions. On the theoretical level, we suspected negativity would be an important factor to consider because it changes the context in which individuals make political decisions. This is very much in line with the insight offered by Caprara et al. (2006) that contextual factors would play a role in shaping how personality influences behaviors and attitudes. Using data from an experiment conducted in the United States, we found evidence that negativity in political messages does influence the relationship between a number of the Big Five personality traits

and decisions to get involved in politics. Of course, a single study cannot determine definitively whether similar effects would obtain in other national, political or cultural contexts; extant studies indicate the relationship between personality and political behavior can vary across place (see Ha et al., 2013; Mondak et al., 2010). We acknowledge the effects we observe may not generalize to samples in other national or cultural environments; as we noted above, negativity is commonplace in elections in the U.S. (Geer, 2006), but it is conceivable that negativity may interact with personality traits in different ways in electoral contexts in which negative political messages are frowned upon or atypical. Even in the U.S. context, it is possible that the effects could differ in electoral environments that are less competitive (compared to a close, presidential election) or less salient (subnational races). Subsequent research will be necessary to explore the nuances of the phenomena we describe above and to address the generalizability of the effects we detect. In short, greater clarity on the nature of the relationship between the Big Five, negativity in political messages, and political engagement is required.

As we noted in the introduction above, we believe that the results reported here have important implications for the practice of electoral politics that deserve attention. Our results suggest that personality traits—agreeableness and extraversion, in particular—play a role in how people interact with negativity in politics. It is important to recognize that different kinds of political advertisements, mobilization appeals, and campaign activities may impact people in different ways depending on their content and personality attributes. When designing political appeals, it may be worthwhile to consider whether people with different personality traits will be motivated or turned off based on particular messages. For example, those who dislike negativity or conflict are unlikely to be motived by political appeals highlighting the negative or conflictual elements of politics. Given recent research on the impact of different get-out-the-vote messages (and on the effectiveness of different messages) (Green & Gerber, 2008; Panagopoulos, 2011), it is worth considering how personality traits shape the appeal of political messages.

Notes

i) The survey was fielded from 6/10/2012 to 6/21/2012. Respondents had to be from the United States in order to participate. Respondents were paid $0.20 to participate. The text of the Mechanical Turk request read: "Survey on Politics and Public Affairs (very easy, takes 2-3 minutes to complete). The instrument is available here: [URL] Payment is auto-approved in 7 days."

ii) Trait pairs for each Big Five item; (R) indicates reverse scoring: Extraversion: Extraverted, enthusiastic; Reserved, quiet (R). Agreeableness: Sympathetic, warm; Critical, quarrelsome (R). Conscientiousness: Dependable, self-disciplined; Disorganized, careless (R). Emotional stability: Calm, emotionally stable; Anxious, easily upset (R). Openness: Open to new experiences, complex; Conventional, uncreative (R).

iii) A factor analysis of the four participation measures indicated that the Eigenvalue for the first factor was 2.48. The Eigenvalues for the second, third, and fourth factors were .94, .36, and .21.

iv) Before proceeding to the main analysis, it is necessary to ensure the randomization procedure successfully yielded experimental groups that were balanced in terms of observable characteristics. We examined balance in key, pre-treatment covariates (sex, race, age, education level, voter turnout in 2008, extraversion, conscientiousness, openness, agreeableness, emotional stability) extracted from participants. Balance was tested statistically using logistic regression to predict experimental assignment as a function of the 13 covariates. As expected, a likelihood ratio test of significance of these covariates was non-significant ($p = .57$), indicating that the covariates did not predict assignment to treatment condition. We also conducted t-tests and Chi^2 tests for each of the covariates. None of the tests indicated statistically significant differences between the treatment and control groups (results available from the authors on request).

v) An anonymous reviewer suggested examining the effects of the two personality items designed to capture agreeableness (critical, quarrelsome; sympathetic, warm). We entered these two items into the model (using the specification in Model 2 in Table 3) separately and interacted each with the experimental treatment. Interestingly, the critical, quarrelsome*treatment interaction was statistically significant (t = -2.40, p = .017, two-tailed), indicating that those who are less critical were less likely to intend to participate after seeing the negative message, which makes a great deal of sense. The sympathetic* treatment interaction was not statistically significant (t = -0.08, p = .936, two-tailed). It appears that the "critical" element of agreeableness was driving the observed interaction between agreeableness and the negative message shown in Table 3. All other variables in the model performed similarly to those shown in Table 4. Full model results are available upon request. When each of the 10 personality items was included in the model (along with interaction terms between the 10 items and the treatment), the only other statistically significant interactions were between the "dependability" item (conscientiousness) (t = 2.04, p = .042, two-tailed) and the negative message and between the "extraverted" item and the negative message (t = 1.64, p = .10, two-tailed). The coefficients on the interactions for each of the 10 trait items were as follows: extraverted*treatment (0.182), critical*treatment (-0.184), dependable*treatment (0.281), anxious*treatment (-0.026), open*treatment (-0.141), reserved*treatment (0.111), sympathetic*treatment (-0.051), disorganized*treatment (-0.089), calm*treatment (-0.196), conventional*treatment (0.109). The direction on many of the coefficients was similar to the direction on the coefficients for the respective Big Five*treatment interactions.

vi) The extraversion interaction appears to be driven by the "extraverted, enthusiastic" item rather than the "reserved, quiet" item. When the two traits that make up extraversion are separated and interacted with the negative treatment, the "extraverted, enthusiastic" and negative message interaction was statistically significant (t = 2.36, p = .019, two-tailed), while the "reserved, quiet" and negative message interaction was not statistically significant (t = .340, p = .730, two-tailed).

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Competing Interests

The authors have declared that no competing interests exist.

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