The Big Five Personality Traits in the Political Arena

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Abstract

Recent political science research on the effects of core personality traits—the Big Five—contributes to our understanding of how people interact with their political environments. This research examines how individual-level variations in broad, stable psychological characteristics affect individual-level political outcomes. In this article, we review recent work that uses the Big Five to predict political attitudes and behavior. We also replicate some of these analyses using new data to examine the possibility that prior findings stem from sampling error or unique political contexts. Finally, we discuss several of the challenges faced by scholars who are currently pursuing or are interested in pursuing this line of inquiry. These challenges include refining theoretical explanations of how the Big Five shape political outcomes, addressing important measurement concerns, and resolving inconsistencies across studies.

INTRODUCTION

Understanding how people interact with and evaluate their political environment is a central focus of research on political behavior. Research has examined how a broad range of factors affect an individual's behaviors and attitudes. These include: sociological factors (such as socioeconomic class, group affiliation, and social networks), political context (including campaign effects and geographic variation in political culture), and psychological factors (such as partisan identity, altruism, authoritarianism, and patriotism). Recent research on the effects of core personality traits—the Big Five—contributes to this tradition by examining how individual-level variations in broad, stable psychological characteristics affect individual-level political outcomes.

Personality psychologists are broadly concerned with "provid[ing] an integrative framework for understanding the whole person" (McAdams & Pals 2006, p. 204). Over the past 20 years, the Big Five traits have emerged in psychology as the dominant framework for measuring personality traits. Psychologists refer to these traits as dispositional or core traits. This label differentiates the Big Five from other aspects of individuals' personalities such as their characteristic adaptations (values, attitudes, interests), self-concepts (self-esteem, identity), and objective biography (careers, background) (McAdams & Pals 2006, McCrae & Costa 1996). In contrast to these other components of personality that develop and change throughout the life cycle, dispositional traits are believed to be stable aspects of individuals that shape how they respond to the vast array of stimuli they encounter in the world. As such, they affect behaviors and attitudes across a wide array of situations.[1]

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[1]Our focus on the Big Five traits in this review does not in any way imply that research on other aspects of personality (including other trait-based approaches) is either inferior or obsolete. In our discussion of directions for future research, we note the importance of integrating Big Five–based accounts of political attitudes and behavior with findings regarding the

THE ORIGINS AND PROPERTIES OF THE BIG FIVE

According to McCrae & Costa (2008), trait-based research on personality is premised on four assumptions about human nature: (*a*) personality traits exist and are measurable, (*b*) these traits vary across individuals, (*c*) the causes of human behavior are rooted within the individual (e.g., personality traits affect individual behavior), and (*d*) people "can understand themselves and others" (p. 161). The Big Five trait domains were identified through extensive lexical analysis. This approach rests primarily on the fourth assumption—that people understand themselves and others and that an important historical function of language has been to provide a way for people to describe enduring differences between individuals (Allport & Odbert 1936; John et al. 2008a). Thus, over time, languages have come to include words that facilitate identifying the most salient and enduring individual-level differences in what people are like.

Lexical analysis involves gathering extensive lists of adjectives or phrases that can be used to describe enduring individual-level characteristics. Subjects are then asked to rate how well each word or phrase describes themselves or another individual. Researchers then use factor analysis to identify the broad superfactors or trait domains that underlie these responses. Although some scholars find evidence of more (Ashton & Lee 2005, Paunonen & Jackson 2000) or fewer (Blackburn et al. 2004, Musek 2007) factors, most analyses identify five: Extraversion, Agreeableness, Conscientiousness, Emotional Stability (sometimes referred to by its inverse—Neuroticism), and Openness to Experience. This five-factor structure has been replicated in a variety of languages and contexts (see John et al. 2008a for a review), as well as in unusual subpopulations (Yang et al.

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relationships between other components of personality and these outcomes.

Table 1   Description of the Big Five traits (adapted from John et al. 2008a)

Trait	Definition
Extraversion	…energetic approach toward the social and material world.
Agreeableness	Contrasts a prosocial and communal orientation toward others with antagonism…
Conscientiousness	…socially prescribed impulse control that faciliates task- and goal-directed behavior…
Emotional stability	Contrasts…even-temperedness with negative emotionality…
Openness to experience	…the breadth, depth, originality, and complexity of an individuals' mental and experiential life.

1999).[2] **Table 1** presents a brief description of each of these traits.

Evidence suggests that the Big Five traits are highly stable through the life cycle (Caspi et al. 2005, but see Srivastava et al. 2003) and are heritable (Bouchard 1997, Plomin et al. 1990, Van Gestel & Van Broeckhoven 2003). There is also a growing body of evidence that variation in dispositional traits is associated with specific, measurable biological factors. Some research has identified relationships between specific genetic markers and Big Five traits (Lesch et al. 1996; see Canli 2008 for a review). DeYoung et al. (2010) find associations between four of the Big Five traits and the size (volume) of theoretically associated regions of the brain (see also DeYoung et al. 2009). For example, they find that Conscientiousness is associated with the volume of the lateral prefrontal cortex, which plays an important role in planning and impulse control.

Measuring the Big Five

Numerous batteries have been developed to measure the Big Five trait domains. Each consists of a list of adjectives [e.g., "temperamental" (Goldberg 1992)] or phrases [e.g., "Sometimes I do things on impulse that I later regret" (Costa & McCrae 1992)] and asks the respondent to rate how well each adjective or phrase describes the individual whose personality is being rated—typically the respondent. Researchers use these ratings to calculate scores for each of the Big Five traits. There are a variety of instruments that can be used to measure the Big Five, ranging from brief batteries of ten items [Ten Item Personality Measure (TIPI) (Gosling et al. 2003; see also Langford 2003)] to batteries that use dozens of items [Big Five Questionnaire (BFQ) (Caprara et al. 1993), Big Five Inventory (BFI) (John et al. 1991), Mini-Markers (Saucier 1994), NEO-Five-Factor Inventory (NEO-FFI) (Costa & McCrae 1992)] or even hundreds [NEO–Personality Inventory–Revised (NEO-PI-R) (Costa & McCrae 1992), International Personality Item Pool (IPIP) (Goldberg et al. 2006)].[3]

The most important trade-off researchers face when deciding which personality battery to use is between internal reliability and brevity. For example, the NEO-PI-R measures each Big Five trait with dozens of items. It has the benefit of producing trait measures with high internal reliability [alpha coefficients greater than 0.85 (Costa & McCrae 1992)]. However, the NEO-PI-R takes more than 30 minutes to complete, making its inclusion extremely difficult on surveys where other content (e.g., political content) needs to be measured. In contrast, the TIPI measures each of the Big Five dimensions with scores from only two items. For example, the Extraversion scale is calculated on the basis of a respondent's level of agreement with

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[2]Alternative approaches to the measurement of personality traits include trait typologies based on a priori, theoretical expectations regarding essential personality traits (e.g., the Myers-Briggs Type Indicator) and idiographic approaches that attempt to identify a unique set of traits that are particularly relevant for a specific individual. See Barenbaum & Winter (2008) for a discussion of these approaches.

[3]Additionally, some researchers have constructed customized batteries of questions using items based on these batteries (e.g., Mondak & Halperin 2008, Mondak et al. 2010).

two statements: "I see myself as extraverted, enthusiastic" and "I see myself as reserved, quiet" (reverse coded). Thus, this battery has the benefit of being short enough to be included in large political surveys. However, with only two items per trait domain, TIPI scales cannot achieve the same level of internal reliability as longer batteries. We discuss the theoretical and empirical implications of battery selection below, under Challenges: Refining Theory and Measurement.

THE BIG FIVE AS PREDICTORS OF BEHAVIORS AND OTHER OUTCOMES

The stability and replicability of the Big Five framework have spurred a great deal of scholarly interest in these traits. Although a large share of this research has been conducted by social psychologists, scholars in fields including public health, economics, education, sociology, and clinical psychology have recognized that dispositional traits have the potential to improve our understanding of fundamental, individual-level differences in how people evaluate and respond to the world around them. This rapidly expanding body of research finds that the Big Five personality traits predict a vast array of behaviors and other outcomes.

Public health researchers have identified a variety of associations between Big Five traits and alcohol and tobacco consumption (McAdams & Donnellan 2009, Mezquita et al. 2010, Paunonen & Ashton 2001), frequency of physical exercise (Rhodes & Smith 2006), cholesterol and triglyceride levels (Sutin et al. 2010), longevity (Friedman et al. 2010, Roberts et al. 2007), and overall mental and physical health (Goodwin & Friedman 2006, Ozer & Benet-Martínez 2006). Economists find evidence that dispositional personality traits predict behavior in economic games (Ben-Ner et al. 2008, Koole et al. 2001) as well as wages (Nyhus & Pons 2005) and occupational status (De Fruyt & Mervielde 1999). Other social research finds evidence that Big Five traits predict parenting style (Huver et al.

2010), satisfaction with intimate relationships (Malouff et al. 2010), and occupational choice and satisfaction (Borghans et al. 2008, Hogan & Holland 2003, Ozer & Benet-Martínez 2006, Roberts et al. 2007, Salgado 1997).

This is not to suggest that all research finds relationships between Big Five traits and outcomes of interest. For example, whereas Paunonen & Ashton (2001) find relationships between Big Five traits and a variety of outcomes, they do not find evidence that these traits predict buying lottery tickets, obesity, or peer ratings of an individual's intelligence and popularity. More broadly, we note that in most cases only some of the Big Five traits significantly predict outcomes of interest. In summary, these traits have predictive power in an impressive variety of domains but are not universal predictors of all outcomes.

THE BIG FIVE IN THE POLITICAL ARENA

The Big Five taxonomy has opened a promising new frontier in research on political attitudes and behavior. Previous research on the relationship between personality and political attitudes and behaviors focused on characteristic adaptations and self concepts that are likely to be particularly relevant to politics, such as racial resentment [a measure based on agreement with statements such as "It's really a matter of some people not trying hard enough; if blacks would only try harder they could be just as well off as whites" (e.g., Feldman & Huddy 2005, Kinder & Sears 1981, Sniderman & Carmines 1997)], right-wing authoritarianism [RWA, a measure based on agreement with statements such as "What our country really needs is a strong, determined leader who will crush evil, and take us back to our true path" (e.g., Adorno et al. 1950, Altemeyer 1996)], and partisanship (e.g., Campbell et al. 1960). This research has yielded a vast array of findings that offer important insight into the relationship between political attitudes and other characteristic adaptations.

One of the key differences between this previous research and research on the Big Five and

political outcomes is that, on their face, the Big Five traits are not obviously associated with political attitudes and behaviors. Instead, they are broad dispositions that are theorized to shape responses to the full range of stimuli people encounter in the world. Thus, just as socioeconomic status is associated with a broad range of forms of political and social engagement, political research on Big Five traits may provide a way to situate political judgments and behaviors within the context of a broader theoretical account of how individuals engage with their environments.

In this section, we summarize current findings regarding the relationships between Big Five traits and political outcomes. The magnitudes of the effects we discuss are summarized in **Table 2**. Specifically, the table presents the estimated effect of a two–standard deviation (SD) increase in each personality trait on the outcome of interest. We also report the effects of similar changes in education and income. As the table illustrates, in many cases the magnitudes of the effects of Big Five traits are comparable to those associated with these canonical predictors of political attitudes and behaviors (e.g., Rosenstone & Hansen 1993). The relationships between characteristic adaptations such as RWA and political outcomes such as ideology are often much stronger than the relationships between Big Five traits and political outcomes (see Gerber et al. 2010c, p. 123). This is to be expected. As noted above, RWA and racial attitudes have clear political corollaries, whereas the Big Five personality traits do not.

Ideology and Political Attitudes

Much of the early political science research on the Big Five has focused on the relationships between these traits and political ideology.[4] The most consistent findings from this line of research are an association between Openness to Experience and liberalism and between Conscientiousness and conservatism (Alford & Hibbing 2007; Carney et al. 2008; Gerber et al. 2010c; Gosling et al. 2003; Jost et al. 2003, 2007; McCrae 1996; Mondak 2010; Mondak & Halperin 2008; Riemann et al. 1993; Van Hiel et al. 2000; Van Hiel & Mervielde 2004). Openness to Experience is associated with positive responses to novel stimuli. Thus, researchers posit that individuals high on this trait are more likely to respond favorably to liberal social policies, which often involve acceptance of unconventional behaviors, and liberal economic policies, which may involve a willingness to support proposals that entail new government involvement in the economy. By contrast, individuals high on Conscientiousness tend to be attracted to social norms and achievement striving. These response tendencies likely explain why those high on this trait are more likely to reject the challenges to social norms that often accompany liberal social policies, as well as liberal economic policies, which may be seen as undermining incentives for individual effort.

According to Carney et al. (2008), the relationships between both Openness to Experience and Conscientiousness and political ideology comport well with earlier theoretical accounts of the relationships between personality and ideology. For example, previous researchers posited that individuals who are "creative, imaginative, [and] curious" (characteristics associated with Openness to Experience) are more likely to be attracted to a liberal or left-wing ideology, whereas those who are "orderly [and] organized" (characteristics associated with Conscientiousness) are more likely to be attracted to a conservative or right-wing ideology.[5]

Recently scholars have also begun to examine the relationships between core personality traits and more specific political attitudes. This new line of research offers sharper insight into

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[4]See Gerber et al. (2010c), table 1, for a summary of findings regarding the relationships between Big Five traits and ideology.

[5]Carney et al. (2008, p. 816, table 1) summarize recent findings regarding the relationships between Big Five traits and ideology and compare these findings with previous work on the relationship between personality and ideology.

Table 2 Marginal effects of changes in personality traits, income, and education on political outcomes

	1	2	3	4	5	6	7
	Effect of a two–standard deviation increase in each measure on the outcome listed in the row						
	Extraversion	Agreeableness	Conscientiousness	Emotional stability	Openness	Income	Education
Self-reported liberalism (−2 = very conservative to 2 = very liberal)[a]	−0.08**	0.02	−0.34***	−0.26***	0.66***	−0.17***	0.28***
Social liberalism (M = 0, SD = 1, −conservative to +liberal)[a]	−0.05**	−0.12**	−0.26***	−0.13***	0.53***	−0.01	0.41***
Economic liberalism (M = 0, SD = 1, −conservative to +liberal)[a]	−0.14***	0.20***	−0.22***	−0.43***	0.48***	−0.50***	−0.07
Probability strong Republican; baseline predicted probability = 23.4%[b]	1.3%	−1.1%	5.5%***	7.1%***	−9.4%***	2.2%	−2.1%*
Probability strong partisan identifier; baseline predicted probability = 23.4%[c]	4.4%***	3.4%***	1.7%	−1.2%	−4.1%***	5.7%***	0.2%
Probability affiliate with major party; baseline predicted probability = 49.0%[c]	6.4%***	5.7%***	2.3%	−3.6%	−8.3%***	12.0%***	−0.8%
Probability voted (validated) in 3 or 4 general elections (2000–2006); baseline predicted probability = 60.2%[d]	4.5%*	−4.2%	−5.6%*	8.5%***	2.3%	10.8%***	5.2%
Probability "very much" interested in politics in October; baseline probability = 62.3%[e]	8.3%***	−2.3%	2.2%	5.2%***	11.8%***	14.6%***	14.4%***
Political knowledge (M = 0, SD = 1, −less knowledge to +more knowledge)[e]	−0.03	−0.06*	−0.03	0.15***	0.11***	0.26***	0.43***

Note: Cell entries indicate the change in the outcome (rows) based on a 2 SD increase in the independent variable (columns). For the three ideology outcomes and political knowledge, reported effects are unit changes in the outcome for a 2 SD change in the independent variable. For the three partisanship outcomes, turnout, and interest in politics, reported effects are absolute percentage point increases/decreases in the outcome (not proportional increases/decreases relative to baseline probabilities) for a 2 SD change in the independent variable. Each outcome was regressed on the Big Five and controls for age, age squared, gender, race, income, education, and state fixed effects (with robust standard errors clustered by state). In addition, the probability strong partisan identifier and probability affiliate with major party models also controlled for ideology and policy positions (abortion, civil unions, health care, and taxes). The interest in politics and political knowledge models also controlled for employment status. All models use CCAP data. * significant at 10%; ** significant at 5%; *** significant at 1% (two-tailed tests). Abbreviations: SD, standard deviation; M, mean.

Sources: [a]Gerber et al. (2010c), table 3; columns 2 (self-reported liberalism), 4 (economic liberalism), 6 (social liberalism); and figure 1. All are Tobit specifications. [b]Gerber et al. (2010a), table 4, column 1 (probability strong Republican), and author calculations. Ordered logit specification. [c]Gerber et al. (2010a), table 5; columns 4 [probability strong partisan identifier (ordered logit specification)], and 5 [probability affiliate with major party (logit specification)]; table 6; and author calculations. [d]Gerber et al. (2011b), table 2, column 1 [probability voted in 3 or 4 (out of 4) elections]. Ordered logit specification. [e]Gerber et al. (2011a), tables 3 and 4 and columns 2 [probability very much interested in politics in October (ordered logit specification) and 4 [political knowledge (OLS specification)].

the mechanisms that drive the associations between Big Five traits and political ideology. An individual's ideological self placement can be thought of as a summary of his or her evaluations of a broad range of public policies and proposals. These policy stimuli vary in ways that are likely to have implications for how personality traits affect individuals' responses. For example, the relationships between Big Five traits and evaluations of economic policies may be shaped by how these traits affect individuals' responses to economic inequality or the security provided by economic safety nets. By contrast, the relationships between Big Five traits and social policy attitudes may be rooted in how people respond to the challenges to societal norms posed by liberal social policies.

Carney et al. (2008) report the first analysis of these relationships. Specifically, they examine the relationships between Big Five traits and self placement on separate social and economic attitude scales using an undergraduate sample ($n = 536$). They do not identify any statistically significant relationships between these traits and economic conservatism but do find relationships between Openness to Experience and social liberalism and between Conscientiousness and social conservatism. Additionally, they find an association between Extraversion and social conservatism.

In a larger national sample ($n = 12,472$), Gerber and colleagues (2010c) reexamine the relationships between Big Five traits and social and economic political attitudes using indices of specific issue attitudes in each domain (social attitudes: abortion and civil unions; economic attitudes: increasing taxes on those earning >\$200,000/year and support for government involvement in health care). The authors find that Openness to Experience is strongly associated with overall liberalism, as well as social and economic liberalism. Similarly, they find that Conscientiousness is associated with overall, social, and economic conservatism. They also find relationships between each of the other Big Five traits and political attitudes.

First, they find that Emotional Stability is associated with conservatism for each of the three political attitude measures. This finding corroborates Mondak's (2010) evidence of a relationship between Emotional Stability and overall conservatism. Gerber et al. (2010c) find strong support for their expectation that because people who score high on Emotional Stability are less likely to feel anxious about their economic futures, they respond less favorably to redistributive policies intended to strengthen broad economic security. The relationship between Emotional Stability and economic conservatism is comparable in magnitude to the relationships between Conscientiousness and Openness to Experience and these economic policy attitudes (a 2-SD increase results in a 0.43 unit change, $p < 0.01$, see **Table 2**). In contrast, although they identify a statistically significant association between Emotional Stability and social conservatism, the magnitude of this relationship is quite small (a 2-SD increase results in a 0.13 unit change, $p < 0.01$, see **Table 2**).

Second, Gerber et al. (2010c) find that Agreeableness is associated with economic liberalism but is also associated with social conservatism.[6] The authors anticipated the relationship between Agreeableness and economic liberalism, hypothesizing that those high on this trait would be more likely to respond sympathetically to individuals in economic need. However, the relationship between Agreeableness and social conservatism was unexpected. One explanation for this relationship may be that people high on Agreeableness are more likely to resist policies that challenge dominant social norms because they may threaten harmonious relationships. Finally, Gerber et al. find some evidence that Extraversion is associated with each measure of conservatism, but these associations are relatively weak.

This line of research is still in its infancy and different studies have yielded different results—particularly regarding the effects of

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[6]Mondak (2010) finds a relationship between Agreeableness and overall liberalism in each of his three samples. However, the relationship only reaches conventional levels of statistical significance in one sample.

Table 3 Direct effects of Big Five traits on ideology and economic and social policy attitudes[a]

	Self-reported ideology		Economic domain		Social domain	
	2008 CCAP	2009 CCES	2008 CCAP	2009 CCES	2008 CCAP	2009 CCES
Extraversion	−	−	−	−	−	−
		$(p = 0.163)$		$(p = 0.087)$		
Agreeableness	+	+	+	+	−	−
	$(p = 0.707)$					
Conscientiousness	−	−	−	−	−	−
Emotional stability	−	−	−	−	−	−
Openness	+	+	+	+	+	+
n	12472	10559	12472	10559	12472	10559

[a]Cell entries indicate the sign on each coefficient; p-values greater than 0.05 reported in parentheses (two-tailed tests). All other relationships are significant at $p < 0.05$. Outcome measures are scaled to range from conservative (low values) to liberal (high values). Model specifications based on table 3, columns 2, 4, and 6 from Gerber et al. (2010c). Abbreviations: Cooperative Campaign Analysis Project (CCAP); Cooperative Congressional Election Study (CCES).

Agreeableness, Emotional Stability, and Extraversion. As such, it is important to replicate findings on the relationships between Big Five traits and political attitudes. Here we replicate Gerber et al.'s (2010c) analysis from the 2007–2008 Cooperative Campaign Analysis Project (CCAP) using data from the 2009 Cooperative Congressional Election Study (CCES). In contrast to the CCAP data, which were gathered in the heat of a presidential campaign, these data were collected in an off year. Additionally, the available measures of social and economic attitudes are somewhat different. To measure social attitudes, we also use an item that solicits abortion attitudes, but we replace Gerber et al.'s (2010c) question measuring support for same-sex civil unions with expressed support for same-sex marriage. For economic attitudes, we use responses to a single item that measured respondents' preference for taxes versus spending.[7] All other aspects of our model specifications are identical to those reported by Gerber et al. (2010c; see that article for further details).

We summarize our findings in **Table 3**. Overall, these findings are remarkably similar to those reported by Gerber et al. (2010c). The signs on all the coefficients are the same as those reported in that previous work, and the statistical significance of each of the coefficients is also similar.[8] The highly similar findings in different political contexts are encouraging and provide further support for the notion that dispositional traits other than Openness to Experience and Conscientiousness shape political attitudes.

Partisanship

Some of the earliest published political research on the Big Five focused on the relationships between Big Five traits and partisan vote choice. Specifically, Caprara et al. (1999) assess the relationships between these traits and voting for either center-right or center-left parties in a sample of Italian voters. Since then, other research has offered insight into the relationships between Big Five traits and partisan preferences. This includes additional

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[7]Question wording: "The federal budget is currently running a substantial deficit. If Congress were to balance the budget it would have to consider cutting expenditures, including on defense and domestic programs such as Medicare, and raising taxes. What would you prefer more: raising taxes or cutting spending?" Respondents used a horizontal slider that captured responses on a scale ranging from 0 (all from tax increases) to 100 (all from spending cuts) [reverse coded].

[8]The coefficients on Extraversion in the self-reported ideology and economic attitudes models fall just short of conventional levels of statistical significance in the CCES analysis ($p = 0.163$ and 0.087, respectively). Additionally, whereas the coefficient on Agreeableness is statistically significant in the CCES analysis of self-reported ideology, it is close to zero in the same CCAP analysis.

work on the relationships between personality and vote choice (Caprara et al. 2006, Schoen & Schumann 2007), as well as studies of the relationships between personality traits and vote intention (Barbaranelli et al. 2007), using European samples. Other work in this vein examines the relationships between measures of (average) statewide personality and statewide party vote shares (Rentfrow et al. 2009) and the relationships between Big Five traits and self-reported partisanship in the United States (Mondak 2010, Mondak & Halperin 2008).

Perhaps not surprisingly, the findings from this research track closely with the findings regarding the relationships between Big Five traits and political ideology. Each of these studies finds that Conscientiousness is associated with supporting conservative candidates and parties, whereas Openness to Experience is associated with voting for liberal candidates and parties. Some also find that Emotional Stability is associated with support for conservative candidates and parties (Barbaranelli et al. 2007, Mondak 2010, Mondak & Halperin 2008, Schoen & Schumann 2007) and that Agreeableness is associated with support for liberal candidates and parties (Barbaranelli et al. 2007, Caprara et al. 1999, Mondak 2010, Mondak & Halperin 2008, Schoen & Schumann 2007). Findings regarding Extraversion are mixed.

The strong similarities in the relationships identified in research on personality and partisan preferences and other research on personality and political attitudes and ideology raise the question of whether these two literatures have effectively addressed the same theoretical question. Gerber et al. (2010a) examine this possibility in their analysis of the relationships between Big Five traits and party identification. Specifically, in this working paper they compare two model specifications. In each they predict reported partisanship using Big Five measures, as well as a series of demographic control variables. In one model, they also include controls for ideological self placement and issue attitudes. Although this approach is imperfect, it provides a way to assess whether Big Five traits predict partisanship apart from

the relationships between these traits and other political attitudes. They find that the relationships between Big Five traits and partisanship track closely with those between these traits and political ideology, and that they are greatly attenuated in the model controlling for ideology.

In this same paper, Gerber et al. (2010a) examine whether personality traits are associated with the decision to affiliate with a party. In other words, do Big Five traits make affiliating with a political party, rather than identifying as an independent, particularly attractive to some individuals? Their analysis shows that individuals high on Extraversion and Agreeableness are significantly more likely to identify with a major political party. These findings are consistent with the authors' expectations that people high on these traits are more likely to be attracted to the idea of affiliating with a social group. They also find that Openness to Experience is strongly associated with declining to identify with a major party. Instead, these individuals may be receptive to entertaining alternative perspectives (or at least may see themselves as receptive). This relationship may also stem from reluctance among more Open individuals to adopt a standing political decision. These relationships are robust to model specifications that account for measures of ideology and attitude preferences, suggesting that they are not an artifact of a relationship between personality traits and strong or polarized attitudes. Conscientiousness and Extraversion, by contrast, are not associated with the decision to adopt a partisan affiliation.

Political Participation

Thus far we have discussed research on how the Big Five traits shape political attitudes and affiliations. Scholars have also begun to examine the role of personality traits in decisions about whether and how to participate in politics. Mondak & Halperin (2008) were the first to assess the relationships between Big Five traits and political participation. Numerous other studies since then have also examined whether personality traits predict various forms of

political participation in the United States (Anderson 2009, Gerber et al. 2011b, Mondak 2010, Mondak et al. 2010) and elsewhere (Mondak et al. 2011, Vecchione & Caprara 2009).

In contrast to the findings regarding ideology and partisanship discussed above, research on Big Five traits and political participation has yielded inconsistent findings.[9] The most consistent pattern is for Extraversion. Extraversion is not always a significant predictor of participation, but when it is, it is consistently associated with higher rates of participation. Similarly, to the extent that Openness to Experience predicts participation, it is associated with higher rates of participation. It is difficult to know the precise mechanisms that drive these relationships, but it seems likely that Extraversion leads people to respond favorably to engaging in social activity. Furthermore, individuals high on this trait tend to be assertive and, thus, may enjoy advocating for their preferences. The relationship between Openness to Experience and participation may be explained by the fact that those high on this trait respond favorably to opportunities to hear new ideas and experience new things—opportunities that abound in the political arena.

Findings regarding other traits are decidedly more mixed. For example, some research finds that Agreeableness is associated with lower levels of participation (Gerber et al. 2011b, Mondak & Halperin 2008) whereas other research finds that this trait is associated with higher levels of participation (Mondak et al. 2010). Similar inconsistencies are found across studies for Conscientiousness and Emotional Stability: Some studies find that these traits lead to higher levels of participation, whereas others find that they are associated with lower levels of participation.

There are numerous potential explanations for the apparent inconsistencies in findings across studies of Big Five traits and participation. One explanation is that, although the meaning of liberalism and conservatism is fairly clear, the meaning of political participation as a stimulus is more ambiguous. Because dispositional traits are expected to affect how people respond to stimuli, relationships between these traits and rates of participation should vary depending on the meaning of the stimulus. For example, Gerber et al. (2011b) find that individuals high on Agreeableness are particularly reluctant to participate in ways that are likely to involve conflict. They also argue that other characteristics of the participatory act—e.g., how socially engaging it is and whether it is likely to yield instrumental benefits—are likely to shape the relationship between Big Five traits and participation. Similarly, Mondak et al. (2010) note that Extraverts are particularly likely to be attracted to forms of participation that involve social interaction. This expectation is corroborated by evidence that Extraversion is associated with active political participation (e.g., attending a rally) but not passive or individualistic forms of participation [e.g., donating to a candidate (Mondak 2010)].

Although this explanation is promising, it cannot account for inconsistencies in findings regarding a specific participatory act. For example, Mondak et al. (2010) find that individuals high on Agreeableness are more likely to report contacting an elected official, whereas Gerber et al. (2011b) find the opposite. Similarly, some find that Emotional Stability is associated with lower turnout (Anderson 2009, Mondak 2010, Mondak et al. 2010), whereas others find that this trait is associated with higher turnout (Gerber et al. 2011b). One possible explanation for these inconsistencies is that the meaning of participation varies across historical and geographic contexts, making findings particularly sensitive to factors such as sampling frames. Another possibility is that the inconsistencies stem from differences in the batteries researchers use to measure personality traits, a possibility we discuss in more depth when identifying challenges for future research.

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[9]See table A1 in the online Appendix to Gerber et al. (2011b) for a recent summary of findings in this area (**http://huber.research.yale.edu/**).

Context as a Moderator of Relationships between the Big Five and Political Outcomes

The results discussed so far build on the assumption that dispositional traits affect how people respond to different types of stimuli. However, to the extent that a given stimulus (e.g., the opportunity to vote) varies in meaning across individuals or contexts, so too should the relationship between Big Five traits and responses to that stimulus (e.g., turning out). Some recent studies examined how variation in how individuals understand a stimulus shapes the relationship between personality and political attitudes and behavior.

Mondak and colleagues examine whether the relationship between Big Five traits and participation in election activities depends on individuals' perceptions about the election and their own ability to affect the election's outcome. For example, Mondak et al. (2010) find a negative association between Conscientiousness and participation among those who do not perceive the election to be important but not among those who think the election is important. Similarly, Mondak (2010) finds that Conscientiousness is associated with higher participation among individuals who believe that their participation is likely to be effective (i.e., those with high levels of external efficacy) but lower participation among those low on external efficacy. These findings are consistent with the notion that behaviors of individuals high on this trait are "strongly shaped by a sense of the task's importance" (Mondak et al. 2010, p. 97) and the perceived instrumental benefits associated with the task (Gerber et al. 2011b). Mondak (2010) also finds that the relationships between participation and both Extraversion and Openness to Experience depend on the perceived tone of the campaign.

Gerber et al. (2010c) examine whether the relationships between Big Five traits and political attitudes (ideology, social attitudes, and economic attitudes) vary across racial groups. They leverage the existing literature that finds that black Americans tend to view many public policies—particularly economic policies—through a different lens than white Americans to develop hypotheses about how stimuli are likely to have different meanings across racial groups. If this is the case, one would expect the relationships between Big Five traits and attitudes about these policies to also vary. For example, blacks are more likely than whites to view welfare policies as a means of remedying systematic social injustice. Thus, although Conscientiousness may be associated with conservative economic attitudes among white respondents because they are more likely to see liberal economic policies as discouraging achievement striving, this relationship may not exist among black respondents if they are more inclined to see these policies as remedies for systematic injustice. The authors find clear support for this expectation.

We also replicated this analysis with the 2009 Cooperative Congressional Election Study (CCES) data described above. We report the sign and statistical significance of the interactions between each Big Five trait and the indicator for race (black) in **Table 4**. This analysis also yields substantively similar findings to those reported by Gerber et al. (2010c). In the two cases where coefficients on these interaction terms show different signs (Agreeableness in the ideology model and Extraversion in the social attitudes model), both fall far short of conventional levels of statistical significance. The signs on all the other coefficients are the same across these analyses (although there are several cases where a coefficient is statistically significant in the analysis from one data set but not in the other). The 2009 CCES analysis also validates some of the more tentative findings from the Cooperative Campaign Analysis Project (CCAP) analysis. For example, in the economic attitudes model using the CCES data, the coefficients on the interactions between the indicator for black respondents and Openness to Experience and Agreeableness provide independent support for the statistically imprecise evidence of these relationships as reported by Gerber et al. (2010c). We also find some evidence that the relationships between

Table 4   Interactions between Big Five traits and race (black) indicator[a]

	Self-reported ideology		Economic domain		Social domain	
	2008 CCAP	**2009 CCES**	**2008 CCAP**	**2009 CCES**	**2008 CCAP**	**2009 CCES**
Conscientiousness × black	+	+	+	+	+	+
			($p = 0.082$)	($p = 0.141$)	($p = 0.272$)	($p = 0.095$)
Openness × black	−	−	−	−	−	−
			($p = 0.110$)			
Agreeableness × black	−	+	−	−	+	+
	($p = 0.709$)	($p = 0.765$)	($p = 0.251$)	($p = 0.073$)	($p = 0.389$)	($p = 0.409$)
Emotional stability × black	+	+	+	+	+	+
	($p = 0.189$)				($p = 0.858$)	($p = 0.243$)
Extraversion × black	+	+	+	+	+	−
	($p = 0.702$)			($p = 0.522$)	($p = 0.958$)	($p = 0.874$)
n	12472	10559	12472	10559	12472	10559

[a]Cell entries indicate the sign on each coefficient; p-values greater than 0.05 reported in parentheses (two-tailed tests). All other relationships are significant at $p < 0.05$. Outcome measures are scaled to range from conservative (low values) to liberal (high values). Model specifications based on table 5, columns 2, 5, and 8 from Gerber et al. (2010c). Abbreviations: Cooperative Campaign Analysis Project (CCAP); Cooperative Congressional Election Study (CCES).

Emotional Stability and Extraversion and ideology are moderated by race. More generally, replicating the different relationships between Big Five traits and political attitudes across racial groups shows that these differences were not confined to the context of the 2008 presidential campaign season.

Research on the Big Five and Other Political Outcomes

Much of the existing research on the relationships between Big Five traits and political outcomes has focused on political attitudes—especially ideology—and political participation. However, scholars have also examined the associations between Big Five traits and several other outcomes. We review that work in this section.

Political information and discussion. Other research on the Big Five trait domains examines how they shape individuals' engagement with political information. For example, researchers find that individuals high on Openness to Experience are more interested in and knowledgeable about politics (Gerber et al. 2011a, Mondak 2010, Mondak & Halperin

2008) and are more likely to try to persuade others to vote for a particular candidate (Mondak et al. 2010). Although some research finds that people high on Extraversion and Conscientiousness report greater levels of interest in politics and opinionation, these traits tend to be associated with lower levels of substantive knowledge about political matters (Gerber et al. 2011a, Mondak 2010, Mondak & Halperin 2008). There is also evidence that Big Five traits predict what sources of political information people select (Gerber et al. 2011a, Mondak 2010).

Some research also finds relationships between Big Five traits and the size of people's social networks (Mondak 2010, Mondak et al. 2010). This work finds that those high on Openness to Experience and Extraversion have larger social networks whereas Conscientiousness and Emotional Stability are associated with smaller networks. Additionally, this research finds that the relationships between size of social network and likelihood of being exposed to cross-cutting political discourse vary across individuals with different levels of Extraversion and Agreeableness. Other work finds that Big Five traits predict the frequency with which people discuss topics including politics

and religion with friends and family (Gerber et al. 2010b, Hibbing et al. 2010).

Persuasion. The Big Five traits also appear to play an important role in the persuasion process. In a study of group deliberation, Gastil et al. (2008) find that discussion is less likely to result in group attitude changes in groups with members who are (on average) more Extraverted and Conscientious. In a working paper, Gerber et al. (2010d) use experiments to examine whether Big Five traits moderate the effects of get-out-the-vote appeals, focusing on how these traits affect responses to appeals that attempt to leverage social pressure. They report findings from both lab and field experiments that indicate individuals high on Emotional Stability are more likely to be persuaded by this type of appeal. Additionally, people high on Openness to Experience are more responsive to this appeal. Findings from the lab study, which tests the effects of four different appeals, suggest that individuals high on Openness to Experience are broadly more persuadable than those low on this trait.

Elites. Numerous studies also examine elites' traits. Some of this research focuses on how individuals evaluate the personalities of elected officials and candidates, where two key findings emerge. First, when people rate politicians' personalities, rather than yielding five factors, their assessments tend to reduce to two factors—Extraversion, which they refer to as Energy, and Agreeableness (Caprara et al. 1997, 2002). Second, respondents tend to be more supportive of politicians who they perceive to have the same personality traits as they do (Caprara et al. 2002, Caprara & Zimbardo 2004). Additional research has measured elites' Big Five traits directly. For example, Caprara & Zimbardo (2004) surveyed a sample of Italian politicians, asking them to complete a Big Five self-assessment.[10] The politicians in their

sample scored higher on Extraversion and Agreeableness than the general population. They also found that center-right politicians scored higher on Extraversion and Conscientiousness than center-left politicians.

CHALLENGES: REFINING THEORY AND MEASUREMENT

Despite the progress that has been made to date, numerous challenges to our understanding of the role of Big Five traits in the political arena remain. The growing interest in research on the Big Five stems, in large part, from the scholarly consensus that the Five-Factor Model provides a remarkably comprehensive way to measure dispositional traits. However, some of the most fundamental challenges researchers must address pertain to measurement of the Big Five. As we discuss in this section, addressing these measurement issues may help scholars to refine theoretical models of the relationships between core personality traits and political outcomes, resolve inconsistent findings across studies, and clarify the nature of the causal relationship between Big Five traits and political outcomes.

One of the most promising approaches to these issues involves using more refined measures of dispositional traits. Specifically, the Big Five trait domains are broad and encompass a number of more specific facets (e.g., Costa & McCrae 1992). These related but distinct dimensions of the Big Five domains offer a more refined picture of an individual's personality profile. For example, the facets of Neuroticism (the inverse of Emotional Stability) measured by the NEO-PI R include Anxiety, Angry Hostility, Depression, Self-consciousness, Impulsiveness, and Vulnerability. (Because more extensive personality batteries typically refer to Emotional Stability by its inverse—Neuroticism—we adopt this terminology in this section.) Research shows that the relationships between facets within a domain and nonpolitical outcomes vary (e.g., Ashton et al. 1999, Mershon & Gorsuch 1988, Paunonen et al. 2003). This may also be the

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[10]An alternative approach is to have experts rate politicians (e.g., Rubenzer et al. 2000).

case in the realm of politics—e.g., Angry Hostility and Impulsiveness may be associated with higher levels of participation, whereas Self-consciousness and Anxiety may lead to lower levels of participation.[11]

Refining Theory

Examining the facets of the Big Five trait domains may provide important leverage as scholars refine existing theoretical accounts of how personality affects political outcomes. We are able to provide additional preliminary evidence regarding the importance of examining the facets in political research using data from the 2008 CCAP, which included the 44-item Big Five Inventory (BFI) on a portion of the postelection survey. Soto & John (2009) developed a way to assess two facets of each domain using 35 of the 44 items from the BFI [we standardize each of the personality measures (mean = 0, SD = 1)]. This allows us to examine whether the relationships between political outcomes and the two measured facets within each domain vary. In particular, we examine the three political attitudes (political ideology, social attitudes, and economic attitudes) used by Gerber et al. (2010c), self-reported interest in politics, self-reported turnout in the 2008 general election, and validated turnout in general elections from 2000–2006 (a count of the number of elections voted in, ranging from 0 to 4). In each model we include the demographic controls used by Gerber et al. (2010c): race, gender, age, age-squared, education (category indicators), income, and state of residence.

The analysis presented in **Table 5** demonstrates that the relationships between the facets of the Big Five (that we are able to measure) and political outcomes vary within domain. It also

allows us to begin to show how facet-level measures can improve our theoretical understanding of the relationships between Big Five domains and political outcomes. Although there are many interesting differences in the effects of each of the two facets of the Big Five traits that we analyze, we highlight only a few of the most compelling differences here.

For the attitudinal outcomes in columns 1 to 3 we find a relationship between the Activity facet of Extraversion (associated with a need to keep busy) and conservative social attitudes as well as overall conservatism, but we find that the Assertiveness facet (associated with dominance) is associated with social and overall liberalism ($p = 0.114$ and 0.076, respectively). Previous research has not found strong relationships between Extraversion and political attitudes. These countervailing relationships suggest that the specific components of Extraversion may play an important role in shaping these attitudes.

We also find a clear positive relationship between the Self-Discipline facet of Conscientiousness and all three measures of conservatism, but we find no independent relationship between the Order facet (associated with neatness and organization) and these attitudes. This suggests that the relationship between Conscientiousness and economic conservatism is rooted in dispositions that lead people to respond unfavorably to policy stimuli that are seen as rewarding individuals who fail to do their part. By contrast, simply desiring neatness and organization does not appear to incline one to either liberalism or conservatism.

The most notable finding from column 4 of **Table 5** is that the Ideas facet of Openness to Experience (associated with intellectual curiosity) is associated with interest in politics, but the Aesthetics facet (associated with appreciation of art and beauty) is not. This supports the claim that individuals high on Openness to Experience are likely to be attracted to political information, which often involves exchanges of ideas (Gerber et al. 2011a). The fact that the Aesthetics facet is not associated with political interest is also encouraging because there is

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[11] Little research has examined the relationships between the facets of the Big Five and political outcomes—primarily because measuring these facets involves administering an extensive and time-consuming personality inventory—but there are a handful of exceptions (Carney et al. 2008, Jost et al. 2007, Van Hiel & Mervielde 2004, Van Hiel et al. 2000). However, these studies are limited by their fairly narrow scopes and reliance on small convenience samples.

Table 5   Relationships between ten facets of the Big Five and political outcomes[a]

	1	2	3	4	5	6
	Self-reported ideology (−2 = v. cons. to 2 = v. lib.)	Social domain (M = 0, SD = 1, −cons. to +lib.)	Economic domain (M = 0, SD = 1, −cons. to +lib.)	Political interest (M = 0, SD = 1)	Report voting (1 = yes)	Validated turnout (general elections 2000–2006; 0–4)
Assertiveness (extraversion)	0.062 [0.039]	0.052 [0.029]	0.003 [0.032]	0.038 [0.031]	0.067 [0.209]	−0.107 [0.051]*
Activity (extraversion)	−0.100 [0.044]*	−0.111 [0.034]**	−0.047 [0.034]	−0.017 [0.035]	0.102 [0.260]	0.091 [0.060]
Altruism (agreeableness)	−0.026 [0.044]	0.021 [0.032]	−0.033 [0.039]	0.037 [0.044]	0.647 [0.227]**	0.000 [0.064]
Compliance (agreeableness)	0.115 [0.046]*	0.016 [0.031]	0.065 [0.038]	0.064 [0.041]	−0.332 [0.215]	0.010 [0.067]
Order (conscientiousness)	0.002 [0.041]	0.012 [0.031]	0.037 [0.035]	−0.035 [0.035]	0.176 [0.257]	−0.144 [0.052]**
Self-discipline (conscientiousness)	−0.165 [0.047]**	−0.147 [0.037]**	−0.074 [0.037]*	0.012 [0.042]	0.050 [0.258]	0.006 [0.067]
Anxiety (neuroticism)	0.008 [0.042]	−0.007 [0.034]	0.048 [0.035]	0.012 [0.036]	−0.052 [0.247]	0.056 [0.057]
Depression (neuroticism)	0.045 [0.043]	0.001 [0.036]	0.079 [0.036]*	−0.042 [0.037]	−0.122 [0.233]	−0.113 [0.055]*
Aesthetics (openness)	0.238 [0.038]**	0.186 [0.030]**	0.119 [0.034]**	0.013 [0.042]	−0.432 [0.223]	−0.021 [0.055]
Ideas (openness)	0.085 [0.044]	0.162 [0.033]**	0.057 [0.036]	0.219 [0.037]**	0.160 [0.212]	−0.004 [0.052]
Constant	0.324 [0.400]	0.144 [0.321]	−0.262 [0.307]	−0.153 [0.325]	20.089 [2.509]**	−0.134 [0.546]
Observations	1693	1693	1693	1693	1168	1184
R-squared	0.220	0.245	0.191	0.259	–	0.314

[a]Cell entries are OLS regression coefficients (columns 1, 2, 3, 4, and 6) and logit coefficients (column 5). Robust standard errors in brackets. * significant at 5%; ** significant at 1%. Controls for race, gender, age, age-squared, education (indicators), income, and state suppressed. Number of cases in column 5 is lower because reported turnout did not vary within some states and all cases. Number of cases in column 6 is lower because not all individuals were successfully matched to voter rolls.

little theoretical reason to expect this particular aspect of Openness to Experience to affect interest in politics. In this case, facet-level measures suggest empirical support for the theoretical account proposed in previous work.

Turning to the two measures of voter turnout, in column 5 we find that the Altruism facet of Agreeableness (associated with generosity) predicts higher levels of reported turnout whereas those higher on the Compliance facet (associated with deference to others) are less likely to report turning out ($p = 0.123$). There is also some evidence that the Aesthetics facet of Openness to Experience predicts lower reported turnout ($p = 0.053$). The model of validated voter turnout reported in column 6 reveals numerous within-domain differences in the relationships between facets of the Big Five and validated turnout: (*a*) In the Extraversion domain, Assertiveness is associated with lower levels of validated turnout, whereas Activity is associated with higher levels of actual turnout ($p = 0.127$); (*b*) the Order facet of Conscientiousness is associated with lower levels of validated turnout, whereas the Self-Discipline facet is not; and (*c*) the Depression facet of Neuroticism is associated with lower levels of validated turnout, but the Anxiety facet is not.

This preliminary analysis demonstrates how facet-level measures can be used to improve our understanding of the micro-foundations of the relationships between personality traits and political outcomes. For example, Gerber et al. (2011b) argue that the relationship between Neuroticism and lower rates of participation stem from anxieties about the prospect of expressing and having to defend one's opinions. The relationships identified in **Table 5** suggest that this is not the case. Instead, the relationship between the Depression facet and decreased levels of validated turnout suggests that the domain-level relationship may stem from a tendency for individuals high on Neuroticism to withdraw from politics as part of a broader pattern of negative emotionality. However, because the BFI was not designed to measure the facets of the Big Five, the facet measures we use in **Table 5** are necessarily makeshift. Further-

more, these measures only capture two of the six facets of each domain. Because this preliminary analysis only examines two of the six facets for each trait, it runs the risk of ascribing differences in outcomes to differences in those facets when the true source of differences may originate in the other (unmeasured) facets—a problem made more acute by the correlations among the facets within each domain. Future research that examines the relationships between all 30 facets of the Big Five using a battery intended to measure these specific dispositions should yield greater insights.

Resolving Inconsistencies across Studies

Measurement issues may also explain some of the inconsistencies in findings across previous studies. For example, the short-form batteries used in previous studies may vary in the weight they implicitly assign to the facets of each trait. If this is the case, analyses that use different batteries may systematically yield different estimates of the relationships between Big Five traits and outcomes. Data from the CCAP demonstrate that even within the same sample different batteries can yield different findings. The sample we used in the analysis reported in **Table 5** also completed the Ten Item Personality Measure (TIPI) in the baseline wave of the CCAP. In **Table 6** we compare models using the TIPI and BFI measures of the Big Five domains. Specifically, we regress each of the six political outcome measures examined in **Table 5** on the five domain measures (standardized M = 0, SD = 1), as well as the demographic controls described above. This exploratory analysis suggests researchers should be sensitive to the consequences of using different personality batteries for predicting political outcomes. For a variety of reasons, however (e.g., differences in the measurement properties of the TIPI and BFI batteries), this analysis is necessarily preliminary.

We find little evidence that the choice of personality battery is particularly consequential in the models predicting political

Table 6   Comparing the TIPI and BFI Big Five measures as predictors of political outcomes[a]

	Self-reported ideology (−2 = v. cons. to 2 = v. lib.)		Social domain (M = 0, SD = 1, −cons. to +lib.)		Economic domain (M = 0, SD = 1, −cons. to +lib.)		Political interest (M = 0, SD = 1)		Report voting (1 = yes)		Validated turnout (general elections 2000–2006; 0–4)	
	1	2	3	4	5	6	7	8	9	10	11	12
	TIPI	BFI	TIPI	BFI	TIPI	BFI	TIPI	BFI	TIPI	BFI	TIPI	BFI
Extraversion	−0.031	−0.038	−0.015	−0.026	−0.075	−0.052	0.085	0.045	0.283	0.161	0.038	−0.044
	[0.037]	[0.037]	[0.028]	[0.028]	[0.031]*	[0.031]	[0.035]*	[0.035]	[0.203]	[0.167]	[0.044]	[0.049]
Agreeableness	0.017	0.075	−0.007	0.024	0.071	0.020	0.038	0.087	0.015	0.379	−0.103	0.055
	[0.043]	[0.039]	[0.031]	[0.028]	[0.031]*	[0.036]	[0.039]	[0.048]	[0.196]	[0.203]	[0.049]*	[0.056]
Conscientiousness	−0.176	−0.182	−0.106	−0.144	−0.068	−0.057	0.012	−0.014	−0.132	0.230	−0.113	−0.090
	[0.040]**	[0.037]**	[0.029]**	[0.030]**	[0.029]*	[0.030]	[0.030]	[0.030]	[0.186]	[0.238]	[0.048]*	[0.053]
Neuroticism	0.092	0.054	0.048	0.015	0.167	0.096	−0.078	−0.021	−0.290	−0.066	−0.123	−0.040
	[0.043]*	[0.041]	[0.030]	[0.031]	[0.030]**	[0.030]	[0.030]	[0.038]	[0.201]	[0.242]	[0.052]*	[0.056]
Openness	0.265	0.244	0.225	0.264	0.196	0.140	0.110	0.193	−0.050	−0.265	−0.012	−0.010
	[0.037]**	[0.037]**	[0.028]**	[0.030]**	[0.030]**	[0.029]**	[0.034]*	[0.032]**	[0.182]	[0.168]	[0.047]	[0.048]
Constant	0.455	0.361	0.284	0.155	−0.223	−0.238	−0.222	−0.208	17.898	18.841	−0.117	−0.135
	[0.429]	[0.425]	[0.332]	[0.323]	[0.302]	[0.311]	[0.318]	[0.315]	[0.000]	[0.000]	[0.555]	[0.548]
Observations	1693	1693	1693	1693	1693	1693	1693	1693	1168	1168	1184	1184
R-squared	0.202	0.197	0.207	0.227	0.205	0.180	0.237	0.250	–	–	0.312	0.304

[a]Cell entries are OLS regression coefficients (columns 1–8 and 11–12) and logit coefficients (columns 9–10). Robust standard errors in brackets. * significant at 5%; ** significant at 1%. Controls for race, gender, age, age-squared, education (indicators), income, and state suppressed. Number of cases in columns 9 and 10 are lower because reported turnout did not vary within some states and all cases. Number of cases in columns 11 and 12 are lower because not all individuals were successfully matched to voter rolls.

attitudes (columns 1–6 of **Table 6**). The sign, statistical significance, and magnitude of the coefficients on Conscientiousness, Openness to Experience, and Extraversion are similar across each pair of models. The coefficients on Neuroticism are also signed identically across the models (although the BFI measure of this trait falls short of conventional levels of statistical significance in the ideology model). The TIPI measure of Agreeableness is a statistically significant predictor of economic liberalism, but the BFI measure is not.

The findings from the political interest models are less consistent across measurement batteries. For example, the coefficient on the BFI measure of Openness to Experience is almost twice the size of that on the TIPI measure. We also find that the TIPI measure of Neuroticism is negatively and significantly associated with political interest. The sign on the BFI measure of this trait domain is also negative, but it is one fourth the size and well short of statistical significance ($p = 0.577$). Similarly, there is a statistically significant association between the TIPI measure of Extraversion and political interest, but the coefficient on the BFI measure is half as large and not statistically significant ($p = 0.194$).

The analyses of the final two participation variables—self-reported and validated turnout—show clear evidence that choice of personality measures is consequential. The coefficients on the Extraversion measures are the only ones that are similar across the models. For the self-reported turnout models (columns 9 and 10), although they are not statistically significant, the coefficients on the Conscientiousness measures show different signs. Also, the coefficient on the TIPI measure of Neuroticism comes close to conventional levels of statistical significance ($p = 0.149$), whereas the coefficient on the BFI measure is near zero ($p = 0.785$). By contrast, both Openness to Experience and Agreeableness come close to conventional levels of statistical significance in the BFI model ($p = 0.114$ and 0.062, respectively) but are near zero in the TIPI model ($p = 0.782$ and 0.939, respectively).

The coefficients on Conscientiousness and Openness to Experience are similar across the two validated turnout models (columns 11 and 12). However, the TIPI model finds a negative and statistically significant relationship between Agreeableness and turnout, whereas the sign on this trait in the BFI model is positive ($p = 0.329$). Also, the TIPI measure of Neuroticism is negatively and significantly associated with turnout, whereas the BFI measure is one third of the size and not statistically significant ($p = 0.474$). Finally, although both fall short of statistical significance, the signs on the Extraversion measures are at odds across the two models.

Research on the relationships between Big Five traits and political attitudes has reached fairly consistent conclusions. The evidence presented in **Table 6** suggests that the relationships between Big Five traits and these attitudinal outcomes are not sensitive to choice of personality measures. In contrast, findings from research on the relationships between these traits and political participation have varied substantially. For example, some studies find a positive association between Neuroticism and turnout (Anderson 2009, Mondak et al. 2010), whereas others find evidence that this trait is associated with lower turnout (Gerber et al. 2011b). Both Anderson and Mondak et al. use personality batteries they designed specifically for their own work, whereas Gerber and his colleagues use the TIPI. Thus, these conflicting findings may be driven by differences in the personality batteries used across these studies.

Facet-level personality measures may help to address this measurement issue by clarifying the implications of the imbalances in the weights that different batteries implicitly assigned to the facets within each domain. For example, Soto & John (2009, p. 85) find that the BFI is particularly suited to measuring the 10 Big Five facets analyzed in **Table 5**. For Neuroticism, the facets best measured by this battery are Anxiety and Depression. The trait pairs used on the TIPI to measure Neuroticism seem to tap a different set of facets. One pair likely taps Anxiety (with the word "anxious")

and Angry Hostility ("easily upset"), whereas the other pair may only tap Vulnerability (inverse of "calm" and "emotionally stable"). A strong relationship between Vulnerability or Angry Hostility and liberalism would suggest that the weaker relationship between Neuroticism as measured by the BFI and liberalism can be explained, in part, by the relatively lower weight the BFI assigns to these facets.

Other Measurement Issues

Another important measurement issue has to do with the fact that, apart from a handful of studies that use expert ratings to measure politicians' personalities, political research has relied exclusively on self-reports of personality. Previous research finds that these self-reports are correlated with third-party evaluations of an individual's personality (e.g., Kolar et al. 1996, Vazire & Carlson 2010). However, reliance on self-reports—particularly if personality is measured in the context of an explicitly political survey—may yield biased estimates of the relationships between personality traits and outcomes of interest. When asked to characterize their personality within the context of a political survey, respondents may assess their personality within the specific domain of politics. For example, measures of Agreeableness may reflect how the respondent behaves when political topics come up, rather than Agreeableness more generally.

There are at least two ways researchers could attempt to mitigate the potential problems associated with self-reports of personality traits. First, they could employ peer ratings. Rather than predicting self-reported political attitudes with self-reported personality traits, personality traits could be measured using assessments provided by a spouse or close friend. Second, a panel design could be used, in which personality and other nonpolitical characteristics are measured in the first wave and political outcomes are measured in the second.

Causality Issues

Thus far, researchers have relied exclusively on observational, cross-sectional analysis of the relationships between Big Five traits and political outcomes. This analysis rests on the assumption that these traits are causally prior to these outcomes and are not confounded by other individual-level characteristics that also affect political behavior. From a theoretical perspective, this approach seems sensible. Dispositional traits are posited to be essential individual-level attributes that shape responses to external stimuli, rather than characteristics that are affected by these stimuli. As discussed above, evidence regarding the biological bases of personality traits and the stability of these traits from an early age support this account. However, other characteristics including right-wing-authoritarianism (RWA) and social dominance orientation (Anderson & Summers 2007) as well as political attitudes and behaviors (Alford et al. 2005, Fowler et al. 2008) are also associated with genetic and other biological factors. One explanation for these additional relationships may be that genetic or other biological factors shape dispositional traits which, in turn, affect other individual-level characteristics and behaviors. However, this account has only been tested in one preliminary study (Verhulst et al. 2009), and the findings from that study suggested that personality traits cannot fully account for the heritability of political attitudes.

Another component of the theoretical account of the relationship between personality traits and political outcomes that demands further empirical study is the claim that these relationships stem from the way personality traits shape responses to political stimuli. Scholars posit that, to the extent that the meaning of political stimuli varies across individuals or contexts, so too should the relationships between Big Five traits and political outcomes. Above we discussed numerous studies that examine how contextual and individual-level factors affect the relationships between Big Five traits and political outcomes. However, these studies either rely on assumptions about how the meaning of political stimuli varies across contexts (Gerber et al. 2010c) or on self-reported interpretations of stimuli (Mondak et al. 2010), which may be affected by personality traits.

THE FUTURE OF BIG FIVE RESEARCH

Although political research on the Big Five traits is only in its initial stages, this line of inquiry is both empirically and theoretically promising. From an empirical perspective, the findings discussed here show that the Big Five traits predict a variety of political behaviors and attitudes. However, these findings may only be the beginning. Because the Big Five are posited to shape stimuli response more generally, researchers may find that these traits can improve the explanatory power of models predicting other outcomes that are of interest to political researchers. For example, these traits may affect how people respond to different information frames, candidates' appearance, and other political stimuli.

From a theoretical standpoint, research on the Big Five traits builds on longstanding traditions in research on political behavior. The Big Five traits appear to be essential aspects of individuality that shape individuals' responses to stimuli. Thus, they may be an important component of the system whereby the interactions between individuals' characteristics and their environments yield political behaviors and attitudes. As researchers refine theoretical accounts of the mechanisms that drive the relationships between Big Five traits and political outcomes, we will better understand how fundamental differences in what people are like affect how they engage with the political world.

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