Personality Traits and Correct Voting

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Abstract

Recent studies in political psychology report a significant association between personality traits and ordinary citizens' attitudes and behaviors in the political arena. A growing body of literature examines the influence of personality on individuals' attachment to a political party and vote choice in electoral settings. In line with these studies, we analyze the relationship between personality traits and "correct voting", i.e., the extent to which citizens vote in accordance with their own preferences and values. Using a large-scale national survey fielded in the context of the 2008 presidential election, we find that, after controlling for well-known predictors of correct voting, some of personality traits not only exert a direct influence on correct voting, but also moderate the effect of strength of party identification, a well-established determinant of correct voting. These findings provide new evidence for the idea that individual differences such as dispositional personality traits are deeply intertwined with both vote choice and democratic representation.

Introduction

The field of political psychology is witnessing a renaissance of the study of personality traits. A vast number of studies have recently reported a direct,

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significant effect of personality—usually, measured by the five-factor model (a.k.a., the "Big Five")—on political attitudes and behaviors, including, but not limited to, political ideology (Carney, Jost, Gosling, & Potter, 2008; Gerber, Huber, Doherty, Dowling, & Ha, 2010), political interest (Gerber, Huber, Doherty, & Dowling, 2011), political efficacy (Cooper, Golden, & Socha, 2013), civic duty (Weinschenk, 2014), political discussion (Gerber, Huber, Doherty, & Dowling, 2012b; Hibbing, Ritchie, & Anderson, 2011), and political participation (Gerber, Huber, Doherty, Dowling, et al., 2011; Mondak, Hibbing, Canache, Seligson, & Anderson, 2010). Another body of literature has offered convincing evidence that personality traits also determine ordinary citizens' party preferences and vote choice, and their influence often eclipses more immediate factors such as income and education, embedded in the social and political structure (Barbaranelli, Caprara, Vecchione, & Fraley, 2007; Caprara, Barbaranelli, & Zimbardo, 1999; Caprara, Schwartz, Capanna, Vecchione, & Barbaranelli, 2006; Gerber, Huber, Doherty, & Dowling, 2012a; Schoen & Schumann, 2007; Vecchione et al., 2011). The most robust finding is the positive relationship between Openness and support for left-wing parties that generally endorse distributive justice and challenge traditional social norms. Agreeableness is also known to be associated with left-wing partisanship, whereas Extraversion and Conscientiousness have been reported to relate to support for right-wing parties characterized by market-oriented economic policies and recalcitrant defense of the status quo. Not surprisingly, evidence for the influence of personality traits on vote choice also exists: The finding that people high on Openness are more likely to vote for left-wing party candidates has been well-established (Osborne & Sibley, 2012).

In line with this research, the present study expands on recent work by examining the effect of personality on "correct voting," that is, the extent to which citizens vote in accordance with their own preferences and values (Lau, Andersen, & Redlawsk, 2008; Lau & Redlawsk, 1997). Previous studies on the relationship between personality and voting behavior have been interested in the direction—either right-wing or left-wing—of voters' party preferences and choices made in the elections. However, little is known about the effects of personality on correct voting. We have so far identified cognitive (e.g., political knowledge), motivational (e.g., partisanship strength), and socio-demographic (e.g., education) determinants of correct voting without giving a serious look at the potential significance of dispositional individual differences. Our primary goal here is, thus, not to elaborate the basic theory of correct voting but to explore the effects of personality traits in explaining correct voting. We assume that personality is inextricably linked with correct voting because personality traits affect voters' reactions to political

information environment (Gerber, Huber, Doherty, & Dowling, 2011), and correct voting is, by definition, a vote choice under full information (Lau & Redlawsk, 1997). Using a large-scale online survey fielded in the context of the 2008 US presidential election, we find that personality not only exerts a direct effect on correct voting but also moderates the effects of partisanship strength, one of the most influential determinants of correct voting. Voters high on Openness to Experience are less likely to rely on their partisanship when voting, whereas those high on Conscientiousness are more likely to vote in accordance with their partisan orientations.

This article is organized as follows. In the next section, we discuss the five-factor model of personality and set up a series of hypotheses that explore the relationship between each of personality dimensions and correct voting. In the following sections, we present our data—the 2007-2008 Cooperative Campaign Analysis Project (CCAP)—and the results from statistical analysis. We conclude with a discussion of our findings and propose a direction of future research.

Personality and Correct Voting

The five-factor model of personality traits—defined as "dimensions of individual differences in tendencies to show consistent patterns of thought, feelings, and actions" (McCrae & Costa, 1990, p. 23)—has gained prominence since the late 1980s (e.g., Goldberg, 1990; McCrae & Costa, 1987). Like other competing models of trait structure, the five-factor model results from a questionnaire-based lexical analysis, where researchers gather lists of words that could be used to describe underlying personality characteristics and ask individuals to rate how well each word describes themselves, and then use factor analysis to identify several distinct groups of descriptors that tend to be applied similarly. Due to its parsimony, the five-factor model makes it easy for researchers to accumulate empirical findings, and therefore, it is now "the most widely used and extensively researched measure of personality" (Gosling, Rentfrow, & Swann, 2003, p. 506). The five-factor model is known to be consistent across different samples, languages, raters, and methodological variations (John, Naumann, & Soto, 2008).

The five dimensions of personality are Extraversion, Agreeableness, Conscientiousness, Emotional Stability (also referred to by its inverse, Neuroticism), and Openness to Experience. *Extraversion* involves the degree to which an individual is energetic, social, outgoing, and experiences positive emotion; *Agreeableness* refers to the degree to which an individual is warm, sympathetic, trusting, accommodating, and altruistic; *Conscientiousness* involves the degree to which an individual is well-organized, punctual,

dutiful, and adherent to social norms; *Emotional Stability* means the degree to which an individual is worry-free, immune to stress or depression, and less prone to negative affect; and *Openness to Experience* refers to the degree to which an individual is open-minded, creative, and curious (Funder & Fast, 2010, p. 679).

Based on these characteristics, people high on Extraversion, who consistently seek company of others and external stimulation, are expected to have higher status (e.g., leadership position) and larger number of friends than the introvert; people high on Agreeableness usually show a caring and kind orientation toward other people, and therefore are more likely to excel in collaborative work and less likely to have interpersonal problems than those low on Agreeableness; people high on Conscientiousness, who are inclined to hard work, dutifulness, and order, are expected to perform better in schools and workplaces and tend to live longer—presumably due to self-discipline and good lifestyle—than their counterparts; people who are emotionally unstable (i.e., "neurotic") are generally anxious, tense, and edgy, and therefore are more likely to be easily burnt out and less likely to have satisfied interpersonal relationship; and, finally, people high on Openness, who appreciate new experiences and are susceptible to stereotype-disconfirming information, are expected to succeed more in creative work than those low on Openness who usually follow convention (John et al., 2008; Mondak, 2010).

What can we expect regarding the relationship between these personality dimensions and correct voting? Correct voting is defined as a vote decision "that is the same as the choice which would have been made under conditions of *full information*" (Lau & Redlawsk, 1997, p. 586; emphasis added). That said, personality traits can affect correct voting by influencing individuals' information-gathering and information-digesting processes during the campaign. A previous research (Gerber, Huber, Dohery, & Dowling, 2011) delineates three characteristics of the political information environment, where personality traits can play a significant role. First, during the political campaign, people involve in exchanging ideas. Thus, citizens are usually exposed to a large amount of political information with differing preferences and proposals, and it can be safely assumed whether people follow news and how they react to various types of information is at least partially determined by their inherent personality. Second, political ideas are contentious. Media tend to highlight the conflictual aspects of the political process during the campaign. Therefore, one cannot rule out the possibility that fair evaluations of available political information might be affected—or even distorted—by individual differences in terms of tolerance toward conflict, tension, conspiracy, and disgust. Finally, electoral campaigns always involve a great deal of social interactions. Whether people are sociable or enjoying solitude is, thus,

expected to determine the total amount of political information and its quality (or salience) considered in vote choice. Based on these theoretical expectations, we generate a set of hypotheses about the relationship between the "Big Five" personality dimensions and correct voting.

First, we expect that Openness to Experience will be positively associated with correct voting. Openness captures individuals' receptiveness to—and interest in—novel ideas, experiences, and information (DeYoung, 2010). People high on Openness are more likely to watch informative TV programs (Kraaykamp & van Eijck, 2005), and therefore, they tend to be more interested in politics and have higher levels of political knowledge (Gerber, Huber, Doherty, & Dowling, 2011; Mondak & Halperin, 2008). As they are open-minded and hold an attraction to new and challenging stimuli, they are expected to consider both sides of political arguments and debates during the campaign, which should eventually help them vote correctly.

The likely relationship between Conscientiousness and correct voting should be positive as well. Conscientiousness is characterized by orderliness, dutifulness, self-discipline, and diligence, and therefore those who have higher levels of Conscientiousness should feel obliged to be competently informed about the election or at least claim that they try hard to do so (Gerber, Huber, Doherty, & Dowling, 2011; Mondak & Halperin, 2008). However, given that individuals high on Conscientiousness exhibit socially prescribed impulse control, they should, at least in theory, rarely make a hasty or careless decision (Flynn & Smith, 2007) and, therefore, are more likely to vote correctly. In a similar vein, acknowledging social aspect of political information environment, we can also expect that those high on Extraversion are more likely to be attracted to political information that derives from social interactions during the campaign, and therefore are likely to vote correctly.

Finally, we hypothesize that individuals high on Emotional Stability are more likely to vote correctly. On one hand, just going by labels, it is difficult to imagine "neurotics" making good decisions. Emotionally stable individuals—characterized by high level of self-assuredness and an absence of anxiety—should have the ability to calmly consider and weigh disparate information. Emotional Stability is known to be negatively associated with risk-taking (Lauriola & Levin, 2001), while it is positively linked with deliberation-based decision making (Flynn & Smith, 2007). People who are emotionally stable could also have the confidence to just "go with their gut" if their gut is sending strong signals, which often results in reasonably high-quality decisions without unnecessary effort. On the other hand, emotionally stable individuals may find exposure to political conflict—quite common during the campaign—less upsetting, and therefore will report higher levels of interest in consuming political information (Gerber, Huber, Doherty, &

Dowling, 2011), which will eventually dovetail with correct voting. Likewise, we can expect that people high on Agreeableness are less likely to vote correctly, because their propensity to avoid conflict will prohibit them from receiving and digesting political information.

One thing we would like to clarify here is the difference between Emotional Stability as a chronic disposition and anxiety as an emotional reaction. Affective intelligence theory (Marcus, Neuman, & MacKuen, 2000) holds that anxiety leads people to seek out more effortful contemporary information about the competing candidates in an election rather than relying on easy, habituated means of decision making (Brader, 2011). And then, one can conclude that anxiety should result in a higher probability of a correct vote. But anxiety that affective intelligence theory refers to is discrete, short-term, emotional reactions to specific events or political candidates. Conversely, Emotional Stability as a dimension of the "Big Five" personality traits refers to a more chronic, long-term disposition.

In addition to the above hypotheses that examine the direct effects of personality on vote choice, we propose another set of hypotheses that focus on the potential moderating effect of personality traits. Particularly, we would like to know whether personality moderates the effects of strength of partisanship. Partisanship is a very important determinant of vote choice, and scholars have examined its role as a heuristic, that is, information short-cut, in electoral settings (Lau & Redlawsk, 2001; Schaffner & Streb, 2002). Research suggests that people can often make a good decision on Election Day simply by taking cues from a political party with which they identify. But not all voters rely heavily on partisan cues, and not all voters reap similar benefits if they do. The main reason why we are interested in the role of personality as a potential moderator is to see whether dispositional individual differences clearly distinguish two types of voters, that is, active consumers of political information and cue-takers (or "motivated reasoners") relying on their partisan affiliation.

Two moderation hypotheses are considered. First, people high on Openness to Experience are expected to benefit from partisanship much less than most voters, as they are always willing to consume new information. Generally speaking, a partisan heuristic is useful because it obviates the need for detailed information about the competing candidates. But such an information short-cut is not necessary for voters high on Openness, who, due to their proclivity to novel stimuli, eagerly gather that detailed information. However, voters high on Conscientiousness are expected to benefit from partisanship even more than most voters, because they tend to conform to norms and rules, which, in electoral settings, are supplied by partisan affiliations—usually as a filter through which people evaluate political and social issues. Thus, the

availability of a strong partisan heuristic may be necessary for the benefits of Conscientiousness to be observed.

In sum, we test the following hypotheses:

(A) Direct Effect Hypotheses: (A1) Voters high on Openness are more likely to vote correctly because they are usually active new information-seekers who consider all sides of an issue; (A2) Voters high on Conscientiousness are more likely to vote correctly because they abide by social norms, which include, in this context, a partisan heuristic; (A3) Likewise, voters high on Extraversion are more likely to vote correctly because they draw useful political information via interactions with others during the campaign; (A4) Voters high on Emotional Stability should be more likely to vote correctly because they should be more likely to be tolerant toward the contentious nature of political campaigns, and calmly follow decision strategies that, in the past, have proven successful; and (A5) In a similar vein, voters high on Agreeableness are less like to vote correctly because they will often fail to gather political information during the campaign due to their proclivity to conflict avoidance.

(B) Moderation Hypotheses: (B1) There should be a negative interaction between Openness and Strength of Partisanship, because voters high on Openness are less likely to benefit from partisanship heuristics as they tend to be more interested in gathering and digesting new information; and (B2) There should be a positive interaction between Conscientiousness and Strength of Partisanship, as voters high on Conscientiousness are more likely to effectively benefit from partisanship heuristics if they consider party identification as a social norm, at least among fellow partisans.

Data and Measures

The data for our analysis come from the 2007-2008 Cooperative Campaign Analysis Project (CCAP). The CCAP is an online, opt-in survey of 20,000 registered voters that uses a combination of sampling and matching techniques to generate a sample that is similar to a random digit dialing sample.[1] It is reported that using sampling weights incorporated in the data, the sample can "approximate" a nationally representative, face-to-face, sample such as the American National Election Study (ANES).[2] The CCAP was fielded as a panel survey with five waves before the November 2008 election (the pre-election waves) and one post-election wave. Our analysis draws on the Common Content CCAP sample.

Measuring Correct Voting

Lau and Redlawsk (1997) developed a survey-based "normative naïve" method of estimating correct voting in actual elections. This measure of correct voting is "normative" in the sense that (a) it relies on expert judgments of candidate attributes and policy stands and (b) the same criteria of judgment must be applied to all candidates in the choice set. Yet, at the same time, it is "naïve," as it is based on the respondent's own policy preferences and values. Briefly, the procedure involves calculating "utility scores" for each candidate based on agreement between (a) *respondents*' own policy preferences (and values) and determination of which attributes of judgment they care most about, and (b) *expert* judgments about where the different candidates actually stand on those same policies (and values) and other attributes of judgment.

Although past explorations of correct voting in U.S. presidential elections have relied on the ANES data (Lau et al., 2008; Lau & Redlawsk, 2006), there is no reason that other good surveys could not be used to estimate the same concept. Hence, we try to operationalize the original concept of correct voting with the CCAP as identically as possible to how previous studies did.[3] But we do not know how close those different estimates will be, given that the sampling frame, interview mode, question wording, and in many cases the topic of the questions themselves differ as much as they do between the ANES and the CCAP. We also do not know how robust the measure of correct voting is against different operationalizations of the concept. Surely, estimated levels of correct voting would vary due to sampling error, just as any other survey-based estimates must, and wording differences—much less differences in question content—could similarly affect observed levels of correct voting. We expect the correlates or predictors of correct voting to be much more stable across samples and different operationalizations, but this is an empirical question we are only beginning to address.[4]

We follow the procedures delineated in a previous study (Lau et al., 2008) as closely as possible to estimate correct voting with the CCAP data.[5] The details are reserved for the methodological appendix (see Online Appendix A). Six sets of criteria go into calculating candidate utility scores: (a) party identification (1 item); (b) retrospective evaluations of incumbent's (i.e., President Bush's) job performance (1 item) and the economy (1 item), which are relevant to the incumbent party candidate John McCain; (c) candidate-group connections that encompass nine different groups, that is, men, women, Blacks, the working class, rich people, the middle class, immigrants, Muslims, and corporations and lobbyists (1 item), and respondents' race or income (1 item); (d) beliefs about the most important problem facing the country (1 item); (e) trait ascriptions to the candidates (6 items—strong leader, trustworthy, has the right experience, patriotic, improves America's standing in the world, and likability); and (f)

Table 1. Summary Statistics for Correct Vote Measures (Weighted; *N* = 17,434).

	M	*SD*	Minimum	Maximum
Weighted Sum	0.862	0.345	0	1
Weighted Mean	0.862	0.345	0	1
Unweighted Sum	0.848	0.359	0	1
Unweighted Mean	0.849	0.359	0	1

closeness to the candidates on policy preferences (10 items—immigration, health care, taxes, war in Iraq, Iran, capital punishment, climate change, abortion, civil unions, and adoption by gays and lesbians) and ideology (2 items for both the presidential and vice presidential candidates). For most of these 24 items, it is possible to compute implicit "importance" weights tracking how much respondents cared about each of these different criteria of judgment. We then calculate four different estimates of how much "utility" each respondent should derive from each candidate being elected, by either (a) adding or (b) averaging all of the raw items described above, or by multiplying each item by its importance weight before calculating the (c) sum or (d) mean utility (see Lau & Redlawsk, 2006 for details). It is easy to imagine situations where these mathematically different combination rules could come up with very different rankings of the candidates in an election. In practice, however, they almost never do. Whichever of these four slightly different combination rules are used, the "correct" candidate is the one with the highest utility score. If a respondent voted for that candidate, they voted correctly; if they voted for a different candidate (about whom we had data), they voted incorrectly. Nonvoters, and people who voted for minor party candidates (about whom the survey researchers did not ask any questions), are counted as missing. Descriptive statistics of four correct voting measures are reported in Table 1.

Using these four different combination rules, we estimate about 84.8% to 86.2% (*M* = 85.5%) of McCain and Obama voters in the 2008 U.S. presidential election voted correctly. This is just a point higher than the ANES-based estimate in the 2004 election (Lau et al., 2008) and, at the same time, slightly lower than the 2008 ANES figure, which is 87.9% on average (Lau, 2013).[6] These comparisons give us a great deal of confidence that, whether we are using the ANES or CCAP data to estimate correct voting, we are talking about pretty much the same concept.

Measuring Personality

The CCAP survey includes the 10-Item Personality Inventory (TIPI), developed by Gosling et al. (2003). This battery is ideal in the large-scale survey

Table 2. Correlations and Descriptive Statistics of the "Big Five" Personality Variables (Weighted).

	Extraversion	Agreeableness	Conscientiousness	Emotional stability	Openness
Extraversion	1.000				
Agreeableness	0.027	1.000			
Conscientiousness	0.088	0.293	1.000		
Emotional stability	0.051	0.389	0.370	1.000	
Openness	0.298	0.219	0.195	0.232	1.000
M	0.5165	0.7054	0.7559	0.6705	0.6966
SD	0.2433	0.1938	0.2022	0.2257	0.1959

context because its brevity and speed of administration make it feasible where longer batteries (e.g., 240-item NEO PI-R, 100-item HEXACO-PI-R, or 44-item BFI) do not. The TIPI asks respondents to report whether "I see myself as" being characterized by a set of 10 trait pairs, using a 7-point scale ordered from "Disagree Strongly" to "Agree Strongly." Each personality dimension is captured by responses to 2 trait pairs, with 1 trait pair for each personality dimension reverse coded to mitigate problems of acquiescence bias (Knowles & Nathan, 1997). Responses to these 10 items are used to score a respondent's personality in each of the "Big Five" traits. Descriptive statistics and the correlations between the "Big Five" traits measures are presented in Table 2. Full question wording is available in Online Appendix B.

The TIPI was designed to assess each of the "Big Five" domains by maximizing the content validity of the broad domains using only two bipolar items. Therefore, it is inevitable to have relatively low internal reliability coefficients and poor fit statistics, compared with much longer measures of the same concepts. Nevertheless, the TIPI has good test–retest reliability, and it is highly correlated with those obtained from longer instruments (Gosling et al., 2003). Although a significant number of scholars have raised concerns about the weaknesses of the TIPI (Boston, Homola, Sinclair, Torres, & Tucker, 2014; Credé, Harms, Niehorster, & Gaye-Valentine, 2012), it has been used extensively in a recent large-scale survey, where it is usually difficult to include longer measures. We note that one of the striking things about the TIPI (and all of the instruments used to assign scores in the "Big Five" framework more generally) is that there is little reason to believe that the questions used in the battery are merely rewordings of political beliefs, which may be the case with other personality-related measures that have been used in political research, such as Right-Wing Authoritarianism or Social Dominance Orientation.

Table 3. Summary Statistics of Control Variables (Weighted).

Variables	M (SD)	Minimum	Maximum
Age	−0.0038 (0.2146)	−0.377	0.623
Income	0.0073 (0.2464)	−0.324	0.676
Male (Dummy)	0.4691 (0.4991)	0	1
Non-White (Dummy)	0.2355 (0.4243)	0	1
Liberalism-conservatism	0.0372 (0.2713)	−0.5	0.5
Political interest	0.2043 (0.3383)	−0.5	0.5
Policy-based distinctiveness	0.2965 (0.193)	0	1
Years of education	0.1274 (0.2591)	−0.364	0.636
Political knowledge	0.0486 (0.292)	−0.455	0.545
Strength of partisanship	0.6082 (0.3755)	0	1

Other Variables

For analysis, we specify the models by including theoretically important, individual-level determinants of correct voting—political motivation, cognitive capacity, and heuristic availability (Lau et al., 2008). Political motivation is measured by the policy-based distinctiveness of the major party candidates—based on Rabinowitz and MacDonald's (1989) directional model (see Online Appendix A for details)—and political interest (an average score of a 3-point scale question asked across five waves). Cognitive capacity is measured by years of education and a summary scale of political knowledge, which is generated by counting correct answers to questions that require respondents to describe jobs of 11 political figures (Senators/Congressmen or Congresswomen).[7] The availability of political heuristics is measured by strength of partisanship (which is based on an average score of a 7-point scale question asked across five waves). An interaction term between political knowledge and strength of partisanship is included because past research suggests that the use of partisan heuristics is most beneficial among the politically knowledgeable (Lau & Redlawsk, 2001). We also include individual-level control variables, that is, age (in years), gender (dummy), race (dummy; Whites vs. non-Whites), income (a 14-point scale variable), and political ideology (an average score of a 5-point scale question asked across five waves).[8] All variables were recoded to have a one-point range for easier interpretation of the regression coefficients. Summary statistics of these control variables (with sampling weights) are available in Table 3.

Table 4. Personality Traits and Correct Voting.

Variables	Model 1	Model 2	Model 3
Conscientiousness	−0.153 (0.165)	−0.163 (0.185)	−0.715* (0.297)
Emotional stability	0.885** (0.162)	0.453** (0.154)	0.559 (0.370)
Openness	0.525** (0.173)	0.132 (0.213)	0.935* (0.449)
Agreeableness	−0.176 (0.221)	0.080 (0.233)	0.100 (0.443)
Extraversion	0.058 (0.131)	−0.148 (0.135)	−0.028 (0.297)
Conscientiousness × Strength of partisanship			0.973* (0.458)
Emotional stability × Strength of partisanship			−0.159 (0.608)
Openness × Strength of partisanship			−1.413* (0.690)
Agreeableness × Strength of partisanship			−0.068 (0.636)
Extraversion × Strength of partisanship			−0.201 (0.444)
Age		−0.083 (0.266)	−0.074 (0.265)
Income		−0.162 (0.169)	−0.166 (0.165)
Male		0.106 (0.080)	0.105 (0.080)
Non-White		0.171+ (0.100)	0.175+ (0.100)
Liberalism-conservatism		−0.173 (0.185)	−0.197 (0.182)
Political interest		0.493** (0.119)	0.495** (0.120)
Policy-based distinctiveness		2.901** (0.291)	2.908** (0.290)
Years of education		0.676** (0.217)	0.683** (0.215)
Political knowledge		0.479* (0.240)	0.407+ (0.245)
Strength of partisanship		1.353** (0.102)	1.833** (0.580)
Strength of partisanship × Political knowledge		0.658+ (0.343)	0.766* (0.353)
Constant	1.294** (0.224)	−0.055 (0.307)	−0.333 (0.351)
Observations	14082	14082	14082
Wald χ²	45.78*	560.63**	833.15**
Pseudo R^2	0.0075	0.1142	0.1159

Note. The dependent variable is a binary variable of correct voting (weighted sum); the estimation technique is binomial logit; data are weighted; cluster-robust standard errors (state-level) in parentheses.
+p < .10, *p < .05. **p < .01., two-tailed.

Results

The results from binomial logistic analysis—with the weighted sum measure of correct vote—are reported in Table 4. Model 1 is based on a specification

where only the personality traits are included as independent variables. The results show that Emotional Stability and Openness to Experience are positively associated with correct voting. The directions of the relationship between two personality dimensions and correct voting are quite consistent with our hypotheses (Hypothesis A4 and Hypothesis A1, respectively). This finding suggests that people who are calm and emotionally consistent and those who are curious and open to new information are more likely to make a correct decision in presidential elections. However, the model fit of Model 1 is very low (adjusted R^2 = .0075), and so, we can say that personality is a meaningful, yet weak predictor of correct voting.

Do personality traits add anything to what we already know about the predictors of correct voting? To answer this question, Model 2 includes both personality traits and most of individual-level variables that were considered in Lau et al. (2008). The key difference—setting aside above-mentioned issues from the differences between ANES and CCAP—in our model is that "political interest" is included in this specification, while "caring about the election outcome" was instead considered in Lau and his colleagues' study.

As seen in Table 4 (Model 2), the results are very similar to previous findings from the ANES data (Lau et al., 2008): Voters who have higher levels of motivation (represented by higher levels of political interest and higher levels of policy-based distinctiveness among candidates) are more likely to vote correctly; education, political knowledge, and strength of partisanship are also positively associated with correct voting; and racial minorities tend to make relatively more correct vote choices. Controlling for the variables already known to predict correct voting, however, the effects of the personality traits of our interest are still jointly significant at the 95% confidence level, $\chi^2(5) = 13.54$, $p = .0188$. The effect of Emotional Stability still remains statistically significant, whereas the effect of Openness is washed out, presumably because other independent variables (e.g., political interest, political knowledge, or partisanship) mediate its effect on correct voting. This finding suggests that at least one dimension of personality traits can play a role in explaining correct voting.

It should not be understated that the specification in Model 2 is extremely conservative. Many of the control variables—political knowledge and political interest (Gerber, Huber, Doherty, & Dowling, 2011), strength of partisanship (Gerber et al., 2012b), political ideology (Gerber et al., 2010), and even education and income (Borghans, Duckworth, Heckman, & ter Weel, 2008)—are known to be determined by personality traits. Consequently, the direct effects of personality will inevitably be decreased by adding those variables to the regression model. The fact that Emotional Stability remains a statistically significant predictor suggests that the effect of a distal variable (i.e.,

personality) is not fully mediated by many proximal variables, and therefore personality exerts a direct influence on correct vote. The effect sizes—calculated following the procedures delineated by Long (1997)—tell us that Emotional Stability is also a substantively significant predictor of correct voting: The minimum–maximum effect of Emotional Stability (of which value moves from 0 to 1) corresponds to 3.59%-point increase in the probability of voting correctly, while the equivalent increase from the minimum to the maximum value in political interest, policy-based distinction, years of education, political knowledge, and strength of partisanship yields 4.04%-, 15.79%-, 5.22%-, 3.62%-, and 11.84%-point increase, respectively. That said, the direct effect of Emotional Stability is pretty much on par with that of political interest and political knowledge, though significantly lower than that of policy-based distinction and strength of partisanship.[9]

Model 3 examines both the direct effect of personality on vote choice and its role as a moderator regarding the effect of party identification on correct voting.[10] As expected (Hypothesis B1), the interaction term between Openness to Experience and strength of partisanship has a negative coefficient, which suggests that people high on Openness are less likely to benefit from a partisan heuristic in the process of making a vote decision. The direct effect of Openness (now representing the effect of Openness among pure Independents) becomes positive and statistically significant. This finding—in conjunction with the direct effect of Openness we observed above—suggests that in real world, individuals who are open-minded are not capricious risk takers but are exposed to a large amount of information and make decisions by considering both sides of that information carefully.

Conscientiousness also turns out to play a role as a moderator here: People high on Conscientiousness are actually more likely to use a partisan heuristic effectively when they choose one candidate over the other, presumably because they follow partisan norms without being distracted by less diagnostic information. The direct effect of Conscientiousness in Model 3 (which represents its effect among pure Independents) is negative, which suggests that a tendency to follow rules and norms is of little use if the most important norms in the political world, that is, partisanship, are absent. Needless to say, this finding is a bit inconsistent with the commonsensical image of a Conscientious person who is known to be diligent, hard-working, and meticulous. But, as we suggested above, they make sense if we highlight another element of Conscientiousness—rule-abiding behavior and norm compliance. Both interaction effects (i.e., Partisanship Strength × Conscientiousness and Partisanship Strength × Openness) are graphically shown in Figure 1. The contour plots—a natural choice because both partisanship and personality
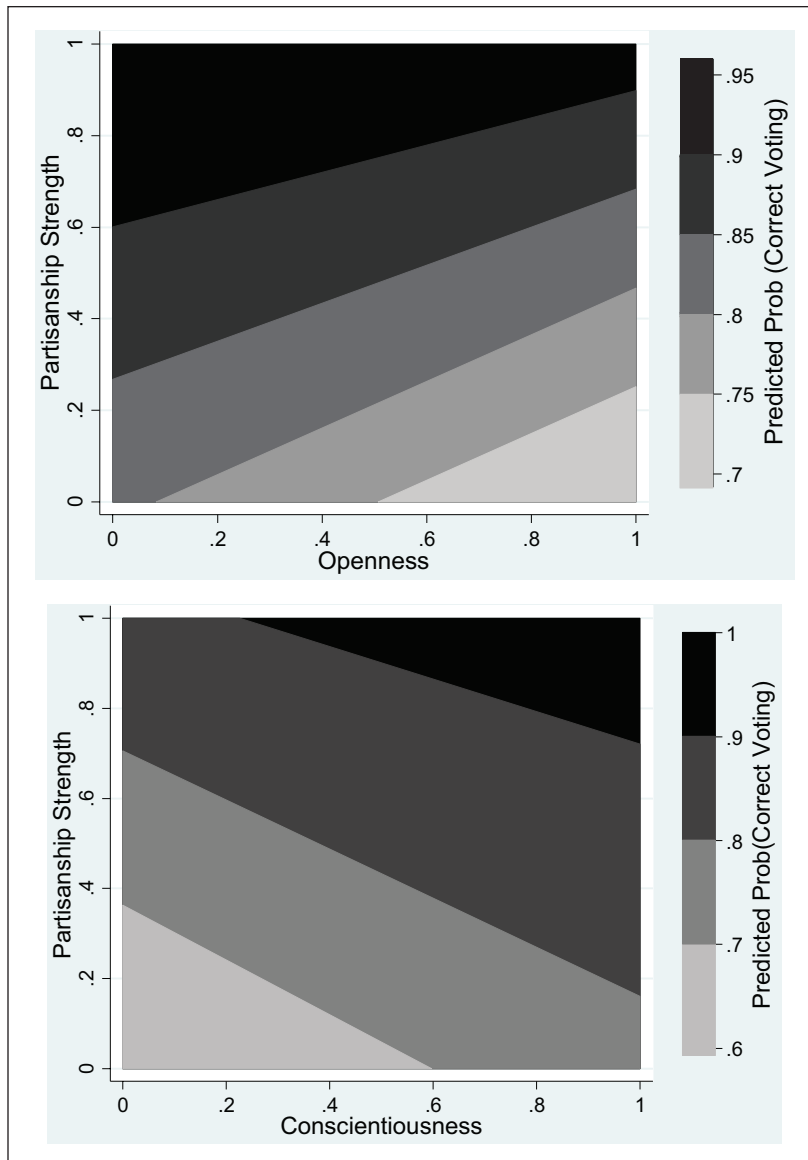
Figure 1. Interactive effects between personality and partisanship strength.
Note. These contour plots are based on Model 3 of Table 4.

variables are continuous—clearly demonstrate that, after controlling for other independent variables, voters are more likely to vote correctly as strength of partisanship increases, but that trend is much greater when the level of Openness is low and when the level of Conscientiousness is high.

The models in Table 4 use the weighted sum measure of correct voting as the dependent variable. When other measures of correct voting are used, the results are pretty similar, but the interaction terms between Conscientiousness and strength of partisanship fails to reach standard levels of statistical significance ($p = .224$ for the unweighted sum and $p = .349$ for the unweighted mean, respectively; two-tailed test). Also, the interaction term between Openness and strength of partisanship turns out to be statistically insignificant when the unweighted mean measure is utilized ($p = .107$; two-tailed test). Full results are available in Online Appendix C.

Discussion

In this article, we find evidence that some of the "Big Five" personality traits not only exert a direct influence on correct voting but also moderate the effect of party identification, a well-known determinant of vote choice. This is the case after controlling for several key individual-level determinants of correct voting, most of which (political knowledge, political interest, strength of partisanship, and liberal-conservative ideology) are themselves fairly well-predicted by personality traits. This finding suggests the potential significance of dispositional factors in understanding voting behavior that has predominantly focused on individual-level cognitive, motivational, and socio-demographic factors. We speak to correct voting literature by suggesting that personality traits can influence correct voting by affecting individuals' political information processing mechanisms. The results regarding the moderation hypotheses are particularly noteworthy, because personality can lead some voters to behave like "motivated reasoners," who heavily rely on partisan heuristics in making vote decision instead of actively consuming political information available during the campaign. The fact that personality measures are significant predictors and moderators of correct voting suggests new insights into the ways in which the quality of a decision is shaped by fundamental psychological differences across individuals, these most basic psychological principles.

There are many other questions that must be addressed to have a more comprehensive and nuanced understanding of the relationship between personality and correct voting. First off, personality could affect correct voting via two different paths, information-gathering and information-digesting. These two processes are conceptually distinct because a person who gathers—or is simply exposed to—a lot of information does not necessarily spend

enough time processing its content, while an individual who gathers less information may relatively easily consider all the potential benefits and disadvantages from it. Unfortunately, we do not have direct measures of either of these processes to disentangle one from the other. A carefully designed lab experiment—reflecting the practices of the original study of correct voting (Lau & Redlawsk, 1997)—is necessary to determine which personality trait plays an important role in either or both of the processes by manipulating the amount of information or its availability (related to information-gathering), and the salience and heterogeneity of information (related to information-digesting).

Another limitation of this study is that it does not directly assess all the possible mediation relationships between personality and correct voting. We have not performed a mediation analysis, mainly because there is now convincing evidence against regression-based mediation analysis, which tends to arbitrarily amplify the effects of the mediators, particularly when observational data are used (e.g., Bullock, Green, & Ha, 2010). However, as briefly mentioned above, we fully acknowledge that many determinants of correct voting (e.g., political interest, political knowledge, partisanship strength, or education) can serve as potential mediators between personality and vote choice. Also, we can easily figure out other mediating factors, which have not been considered in our models. One example is social network. Given that voters process political information via social interactions during the campaigns, the size or density of their interpersonal networks should be an important determinant of correct voting. By carefully considering the possibility of social network as a mediating variable, we will be able to know whether the observed positive association between social networks and correct voting (Richey, 2008; Ryan, 2011; Sokhey & McClurg, 2012) actually stems from a distal, dispositional factor, that is, personality traits.

Further research using a longer battery of personality items—as suggested by recent work (e.g., Credé et al., 2012)—could refine the findings of the present study. Examining the potential heterogeneous effects among various "facets"—sub-dimensions of a personality trait—allows us to significantly augment the research hypotheses and thereby may reveal more nuanced association between a specific facet of personality and voting behavior. For example, even though we hypothesize that Openness to Experience is positively associated with correct voting, we cannot completely rule out the possibility of an opposite hypothesis without a more extensive measure, because Openness is often associated with unconventional behavior. Previous research reports that individuals high on Openness are prone to risky decision making (Lauriola & Levin, 2001), which we would expect to generally be inconsistent with correct voting. Each dimension in the five-factor model is actually

composed of multiple facets and interpretations (DeYoung, Quilty, & Peterson, 2007), which may function differently, depending on the situations. If a facet such as open-mindedness is activated, then it leads to extensive information-gathering, and eventually ends up with a correct vote. But, if another facet—curiosity or risk-taking orientation—is activated, then it yields a decision based on idiosyncratic factors, which may result in an incorrect vote. Examining the potential heterogeneous effects among various facets in a single personality dimension requires us to utilize more detailed and nuanced measures of personality, which, unfortunately, were not available in the present data.

Our study does not speak directly to a vast amount of research on the relationship between emotions and voting behavior (Brader, 2006, 2011; Ladd & Lenz, 2008, 2011). The fact that Emotional Stability seems to be associated—albeit not consistently—with correct voting suggests that emotions (perhaps via personality) might be another set of predictors of voting correctly. Affective intelligence theory (Marcus et al., 2000) posits that emotions condition how voters make decisions based on a strong assumption that emotions are exogenous to the outcome of interest. Unfortunately, the standard items that measure emotions in the survey do not offer clear ideas about whether emotions are predictors of the vote decision or vice versa. Because of these potentially serious measurement concerns with survey-based measures of emotions, the inter-relationship among personality, emotions, and correct vote may potentially be examined in an experimental setting.

Like many other research on personality in the field of political behavior, it is not easy to delineate practical implications of the findings. Although we are not in a good position to propose any policy recommendations based on our findings, we believe that further research that draw on the findings from our study will be able to provide ample practical implications in the political arena. One promising research direction is to conduct cross-national studies that examine the relationship between personality and correct voting. Scholars have just started to investigate how correct voting works in non-U.S. context (Lau, Patel, Fahmy, & Kaufman, 2014). It will be very intriguing to see whether correct voting varies, depending on voters' reactions (due to their personality traits) to different electoral systems (i.e., information environments). Would there be any noticeable differences in the effects of personality on vote choice between candidate-centered elections (in the presidential system) and party-centered elections (in the parliamentary system)? Can we detect significant differences in the relationship between personality traits and correct voting in non-partisan election settings? Practical implications will be drawn and accumulated by answering these questions in a foreseeable future.

Declaration of Conflicting Interests

Funding

Notes

1. For more detailed information on this online, opt-in survey and its sampling technique, see Vavreck and Rivers (2008).
2. See Malhotra and Krosnick (2007) for a dissenting opinion.
3. As shown below, there are some noticeable differences in operationalizing correct voting between ANES and CCAP. For example, we use retrospective evaluations of the nation's economy as a possible objective reason to vote against the Republican candidate, whereas Lau and his colleagues have never done that despite the fact that the identical question is available in the ANES. The ANES typically asks three or four questions on retrospective evaluations of the president's job performance (always including economic performance), but the CCAP only asked overall assessment of the president's job performance. Given the economic crisis occurring around the time of the 2008 general election, we felt that it was best to use the retrospective evaluations of the nation's economy question as an instrument for the missing presidential job performance items.
4. Lau, Patel, Fahmy, and Kaufman (2014) have estimated correct voting in the 1996 and 2004 U.S. presidential election with the Comparative Study of Electoral Systems (CSES) surveys. This study attempts to ask a relatively small number of questions in an identical manner across a large number of the world's democracies. The typical procedure is to "piggy back" on a larger election survey (such as the ANES in the United States) by buying time in a post-election wave. Hence, the sample and actual respondents are identical across the CSES and the ANES. But the questions are somewhat different and, in the case of the CSES, much smaller in number than is typical in larger national election studies. An estimate of 77.2% correct voting is reported in the 1996 U.S. presidential election based on ANES data (Lau, et al., 2008), which compares with an estimate of 82.4% correct voting based on the CSES items. The comparable figures for the 2004 election are 85.1% versus 88.4%.
5. The data, composed of six waves (five pre-election waves and one post-election wave), contain 20,000 respondents. Among them, 1,946 respondents started the survey in October 2008 and an additional 2 respondents never completed one of the first three waves (i.e., Baseline, January 2008, and March 2008). We consider those 1,948 respondents missing for the purpose of judging correct voting in the

2008 general election. We also divide all states into early (earlier than February 1, 2008), middle (February 5, 2008 to March 11, 2008), and late (all the rest) primaries. If respondents live in an early primary state, we only judge correct voting in the primary election from the baseline data; if respondents live in a middle primary state, we look at the baseline and January waves to estimate correct voting, and if respondents live in a late primary state, we use the baseline, January, and March waves.

6. This 2008 figure is not the "final" estimate, as the ANES has not released any data with the open-ended questions coded. This includes answers to several of the political knowledge questions, which we use to identify experts whose mean responses provide our "objective" estimates of where the candidates actually stand on the issues, how well the different traits describe them, and how good of a job President Bush did as president. Our estimates will change slightly once these data have been coded and released.

7. Those who give correct answers to more than nine questions (approximately 18.4% of the total number of respondents) serve as political experts in the analysis.

8. Although it is not easy to figure out the theoretically meaningful relationship between political ideology and correct voting, we include political ideology as a control variable to make our models as close as possible to those shown in Lau et al. (2008). In fact, Lau et al. did not offer any predictions regarding political ideology. It seems like they included it as an element of conventional socio-demographic covariates, including age, gender, income, and education.

9. We conducted additional analysis to consider the possibility that correct voting is a function of campaign factors as shown in our benchmark study (Lau et al., 2008). The analysis using multi-level models failed to yield any significant results regarding campaign-level variables. We cautiously believe that failure to detect campaign effects would be due to the differences in sampling between ANES and CCAP (see Malhotra & Krosnick, 2007 for a detailed discussion).

10. Given that an interaction term between strength of partisanship and political knowledge has already been included in the model, additional analysis was performed by including a set of interaction terms—Political Knowledge × Openness, Political Knowledge × Conscientiousness, Political Knowledge × Partisanship × Openness, and Political Knowledge × Partisanship × Conscientiousness (available on request). None of these additional interaction terms turns out to be statistically significant, and the results remain identical as those reported in Model 4.

Supplementary Material

Online appendices are available on the American Politics Research website at http://apr.sagepub.com/supplemental.

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