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Beyond Openness to Experience and Conscientiousness: Testing links between lower-level personality traits and American political orientation

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Abstract

Introduction: Research has consistently revealed positive correlations between political liberalism and Openness to Experience, and between conservatism and Conscientiousness. Most of this research has made use of domain-level models of the Big Five personality traits. Recent work suggests, however, that each Big Five trait domain can be divided into distinct aspects or facets, which offer more nuanced characterizations of each trait.

Methods: Across four studies (*N*s ranging from 1,123 to 116,406), the present research examined the degree to which distinct lower-level traits would be associated with meaningful differences in political orientation. United States residents completed two different hierarchical Big Five personality measures (the Big Five Aspect Scales and the Big Five Inventory-2), as well as a range of measures of political orientation.

Results: Across both personality measures, liberal political orientation showed distinct positive associations with the lower-level traits Openness/Aesthetic Sensitivity, Intellect/Intellectual Curiosity, Compassion, and Withdrawal/Depression, as well as distinct negative associations with Orderliness/Organization, Politeness, and Assertiveness.

Discussion: By examining individual differences at a higher level of granularity, these data provide insight into specific motivations that predispose individuals toward different ends of the political spectrum.

KEYWORDS

Big Five, ideology, Personality, political orientation

1 | INTRODUCTION

Which processes move people toward different ends of the left-right political spectrum? A growing literature suggests that personality traits help to shape individuals' political attitudes (Bakker & Lelkes, 2018; Carney et al., 2008; Gerber et al., 2010, 2011, 2012; Mondak & Halperin, 2008). In particular, liberalism is consistently positively predicted by the Big Five trait Openness to Experience, while conservatism is positively predicted by Conscientiousness (Carney et al., 2008; Hirsh et al., 2010; Sibley et al., 2012). Given the characteristics of these two traits, researchers have suggested that liberals generally value creativity, curiosity, and novelty, whereas conservatives emphasize structure, organization, and dutifulness (Carney et al., 2008).

These patterns appear to be robust, with Openness to Experience consistently predicting more liberal political attitudes, regardless of how personality or political

orientation are measured (Gerber et al., 2010; Mondak & Halperin, 2008; Sibley et al., 2012). Similarly, Conscientiousness is consistently associated with conservative attitudes, for example, greater resistance to change (Kandler et al., 2012), increased preference for conservative partisanship (Hirsh et al., 2010; Mondak & Canache, 2014), and more conservative social values (Carney et al., 2008). Importantly, personality differences predict real-life political behaviors, with studies from the United States and Europe finding that Openness to Experience predicted voting for more liberal political parties, and Conscientiousness predicted voting for more conservative parties (Mondak & Canache, 2014; Rentfrow et al., 2009; Vecchione et al., 2011). Personality differences also predicted the strength of political party affiliation (Gerber et al., 2012), as well as political and civic engagement (Mondak et al., 2010).

1.1 | Lower-level traits within the Big Five personality domains

Although the existing research on personality and political orientation provides helpful insights into the psychological roots of political differences, several important questions remain. First, most of the previous research has focused on the broad, domain level of the Big Five personality taxonomy. Recent work, however, suggests that each of the Big Five trait domains can be meaningfully divided into more specific, lower-level traits. These lower-level traits offer more nuanced characterizations of the types of motivations and behaviors associated with each broad trait domain (DeYoung et al., 2007; Soto & John, 2017).

One research group (DeYoung et al., 2007) empirically divided each Big Five trait domain into two related yet distinct *aspects*: Openness and Intellect (within Openness to Experience), Orderliness and Industriousness (Conscientiousness), Compassion and Politeness (Agreeableness), Assertiveness and Enthusiasm (Extraversion), and Withdrawal and Volatility (Neuroticism). These aspects are assessed via the Big Five Aspect Scales (DeYoung et al., 2007).

Another group of researchers (Soto & John, 2017) separately identified three conceptually and empirically prominent facets comprising each Big Five trait: Intellectual Curiosity, Aesthetic Sensitivity, and Creative Imagination (within Openness to Experience); Organization, Productiveness, and Responsibility (Conscientiousness); Compassion, Respectfulness, and Trust (Agreeableness); Sociability, Assertiveness, and Energy Level (Extraversion); and Anxiety, Depression, and Emotional Volatility (Neuroticism). The Big Five Inventory-2 (BFI-2; Soto & John, 2017) was developed to assess each of these 15 facets.

1.2 | Advantages of a lower-level trait approach

An increasing amount of evidence indicates that examining trait-to-outcome relationships at the lower level illuminates findings that remain obscured at the domain level. For example, research using the BFAS has demonstrated that the two aspects of Openness to Experience differently predicted intelligence scores (DeYoung et al., 2014). The two aspects of Openness to Experience also differentially predicted responses to novel stimuli (Fayn et al., 2015). Research using the BFI-2 has revealed analogous divergences among facets when predicting a variety of social, emotional, and behavioral outcomes (Denissen et al., 2020; Soto & John, 2017). Thus, it appears that examining lower-level traits contributes greater predictive power, most likely due to more granular identification of motivational, emotional, and behavioral tendencies.

1.3 | Big Five aspects and political orientation

We suggest that examining the associations between lower-level traits and political orientation confers two primary advantages. First, a lower-level trait approach may help to clarify existing findings on links between personality and political orientation. A weak or nonsignificant association between a particular Big Five domain and political orientation may be due to a strong association between one of that domain's lower-level traits and political orientation, but a weak (or even reversed) association between another lower-level trait and political orientation. For example, at the domain level, Agreeableness is not an especially robust predictor of political orientation (e.g., Carney et al., 2008). But when the two BFAS aspects of Agreeableness are entered simultaneously to predict political orientation, the Compassion aspect predicts liberalism, while the Politeness aspect predicts conservatism (Hirsh et al., 2010; Osborne et al., 2013). Thus, measurement of lower-level traits may illuminate psychologically meaningful patterns that remain obscured at the domain level.

Second, examining the lower-level trait predictors of political orientation allows researchers to draw more precise inferences about specific constellations of psychological processes (e.g., goals, cognitive styles, and emotional proclivities) that guide people toward different ends of the political spectrum. According to one theoretical framework (Xu et al., 2016), individual differences in broad, underlying dispositions (e.g., a generalized preference for order) increase the likelihood of activation of more concrete goals (e.g., maintaining a familiar social environment) which, in turn, encourage the endorsement of political positions that further those goals (e.g., restricting immigration). In summary, an

analysis of the lower-level trait predictors of political orientation may provide further insight into specific motivational and affective processes that contribute to political orientation.

1.4 | Our approach and analytic strategy

We examined the links between lower-level traits and political orientation across four high-powered studies. We assessed lower-level personality traits via both the BFAS (Studies 1 and 2) and BFI-2 (Studies 3 and 4), and assessed political orientation using a battery of different measures. To determine whether the personality predictors of political orientation would remain robust, we also controlled for relevant demographic variables.

2 | STUDY 1

Study 1 examined how the BFAS aspects related to political orientation. Based on previous work (e.g., Hirsh et al., 2010), we hypothesized that Orderliness and Politeness would predict higher conservatism, and Compassion, Openness, and Intellect would predict liberalism.

2.1 | Method

2.1.1 | Participants and procedure

Participants (N = 3,218; 1,324 males) were recruited online via Mechanical Turk (mturk) and completed the study materials via Qualtrics. Recent work suggests that, when it comes to studying the link between personality and political ideology, such convenience samples provide results similar to those from more representative national samples (Vitriol et al., 2019). To ensure participant quality, only those with mturk approval ratings of ≥97% were recruited. Study participation was restricted to residents of the United States. On average, participants were 33.03 years old (SD = 11.85) with 15.33 years of education (SD = 2.74).

2.2 | Materials

2.2.1 | Personality traits

The Big Five Aspect Scales (BFAS; DeYoung et al., 2007) has been validated against other standard Big Five measures, including the Big Five Inventory (mean convergent r = .88) and NEO PI-R (mean r = .82; DeYoung et al., 2007). The BFAS contains 100 items describing a person's dispositional tendencies (e.g., "I keep things tidy"), for which participants indicated their agreement on a 5-point Likert scale from "Strongly disagree" to "Strongly agree." The BFAS includes subscales that assess two aspects within each Big Five domain (described earlier). Alpha reliabilities in Study 1 were .90 for Extraversion, .89 for Agreeableness, .88 for Conscientiousness, .93 for Neuroticism, and .86 for Openness to Experience. Alphas for the 10 aspect scales ranged from .80 to .90, with a mean of .85.

2.2.2 | Political orientation

Multiple measures allowed us to evaluate discrete elements that may jointly constitute a person's general political orientation. Participants rated their general preference for the two dominant American political parties ("Politically, I favor the Democratic/Republican party") on a 5-point scale from "Strongly disagree" to "Strongly agree." They also completed an item indicating their overall political orientation ranging from "Very conservative" to "Very liberal" on a 7-point scale. Finally, participants completed the IPIP Liberalism scale (Goldberg, 1999), which asked them to indicate their agreement with 10 statements (e.g., "Believe that we should be tough on crime") on a 5-point scale from "Strongly disagree" to "Strongly agree" (α = .84).

2.3 | Results

2.3.1 | Correlations between personality, political orientation, and demographics

The political orientation measures (party preferences, overall political orientation, IPIP Liberalism) were highly correlated with each other (rs from .58 to .74). We first conducted correlation analyses to examine the zero-order relationships between personality, political orientation, and demographics (Table 1 for descriptives; Table 2 for correlations). Demographically, liberalism exhibited small correlations with younger age (rs from −.08 to −.17), being female (rs from .04 to .12), and higher educational attainment (rs from .05 to .07). At the level of the Big Five domains, across the different political orientation measures, liberalism correlated positively with Openness to Experience (rs from .07 to .23) and Neuroticism (rs from .12 to .14), and negatively with Conscientiousness (rs from −.12 to −.32) and Extraversion (rs from −.05 to −.12). At the aspect level, we found significant zero-order correlations between the measures of political orientation and almost all 10 aspects. The aspects that most consistently correlated with liberalism were both aspects of Openness to Experience (rs from .08 to .25), both aspects of Conscientiousness (rs from −.10 to −.29), both aspects of Neuroticism (rs from .08 to .16), the Compassion aspect of Agreeableness (rs from .05 to .07), and the Assertiveness aspect of Extraversion (rs from −.07 to −.10). Taken together, these results replicate previously observed links between the

TABLE 1 Descriptives for BFAS personality and political orientation variables in Studies 1 and 2

Variable	Study 1	Study 2
	Mean (*SD*)	Mean (*SD*)
Openness to Experience	3.81 (0.51)	3.75 (0.54)
Openness	3.78 (0.61)	3.73 (0.63)
Intellect	3.84 (0.60)	3.78 (0.65)
Conscientiousness	3.41 (0.56)	3.53 (0.59)
Orderliness	3.43 (0.65)	3.55 (0.65)
Industriousness	3.40 (0.66)	3.51 (0.71)
Agreeableness	3.79 (0.54)	3.83 (0.60)
Compassion	3.82 (0.65)	3.81 (0.73)
Politeness	3.77 (0.59)	3.86 (0.62)
Extraversion	3.29 (0.60)	3.24 (0.64)
Enthusiasm	3.34 (0.68)	3.30 (0.72)
Assertiveness	3.25 (0.72)	3.18 (0.76)
Neuroticism	2.79 (0.70)	2.68 (0.74)
Withdrawal	2.86 (0.76)	2.78 (0.80)
Volatility	2.72 (0.78)	2.59 (0.80)
Democratic party preference	3.25 (1.36)	3.28 (1.39)
Republican party preference	2.34 (1.30)	2.39 (1.35)
Overall political orientation	4.56 (1.64)	4.56 (1.76)
IPIP liberalism	3.03 (0.76)	3.06 (0.80)
ACT score	–	3.65 (1.22)
SDO score	–	2.45 (1.31)

Big Five personality domains and political attitudes (e.g., Burton et al., 2015; Carney et al., 2008). They also suggest that certain nonsignificant associations at the domain level obscure significant associations at the lower level.

2.3.2 | Regression analyses examining the aspect predictors of political orientation

To examine the personality aspect predictors of political orientation, we conducted two sets of regression analyses for each political orientation measure. First, we examined how the two aspects of each Big Five domain predicted political orientation. To do so, we conducted a hierarchical regression with demographics (age, gender, and education) entered in Step 1, and the two aspects of a domain entered in Step 2. Separate regression analyses were conducted for each Big Five domain (Table 3). Overall, across the different measures of political orientation, the most consistent aspect-level predictors of liberalism were higher Openness (βs from .120 to .258), Compassion (βs from .078 to .108), and Withdrawal (βs from .113 to .173), and lower Orderliness (βs from −.075 to −.237), Industriousness (βs from −.075 to −.116), Politeness (βs from −.049 to −.149), and Assertiveness (βs from −.073 to −.081).

Next, to determine how much additional variance each aspect would explain in the total model, we conducted stepwise regression analyses for each political orientation measure. In these analyses, demographics were again entered in Step 1, and the ten aspects were entered in a stepwise manner in Step 2 (Table 3 lists significant predictors; complete results are available at https://osf.io/d4sf2). Across all measures of political orientation, the most consistent aspect-level predictors of liberalism were higher Openness (|βs| from .09 to .22), Withdrawal (|βs| from .08 to .11), and Intellect (|βs| from .10 to .14), and lower Orderliness (|βs| from .09 to .22) and Assertiveness (|βs| from .12 to .17).

2.4 | Summary

Study 1 found that at the domain level, liberal orientation was positively predicted by Openness to Experience and Neuroticism, whereas conservative orientation was positively predicted by Conscientiousness and Extraversion. However, aspect-level analyses revealed that trait-to-attitude associations often differed in strength—and sometimes in direction—between the more specific aspects within each Big Five domain. The most consistent aspect-level predictors were Openness, Intellect, and Withdrawal, which predicted more liberal views, as well as Orderliness and Assertiveness, which predicted more conservative views.

These results suggest two specific motivations that appear to play a particularly important role in guiding people toward different ends of the political spectrum: (a) approach/avoidance of belief-challenging information (Hirsh et al., 2012; Jost et al., 2003; Xu & Plaks, 2015) and (b) approach/avoidance of uncertain situations (Hayes et al., 2016). Notably, these motivations are largely *intrapsychic* in nature, in that they are motivations about one's own cognition (as opposed to motivations about interpersonal or intergroup dynamics). Such data raise the intriguing possibility that politically relevant interpersonal and intergroup concerns may stand on the shoulders of such foundational, epistemic motivations (see Xu et al., 2016). At the same time, these analyses also revealed associations between political orientation and aspects that are more interpersonal in nature (Assertiveness-conservatism, Withdrawal-liberalism), suggesting that political orientation does not derive exclusively from intrapsychic concerns.

3 | STUDY 2

Although the results of Study 1 were informative, an even higher-resolution picture could be generated by using improved measures of political orientation. For example, three of the four

TABLE 2 Correlations between political orientation, demographics, and personality in Study 1

	Democratic party preference	Republican party preference	Overall political orientation	IPIP liberalism
Age	−.08***	.08***	−.13***	−.17***
Gender	.12***	−.04*	.08***	−.00
Education	.07***	−.05**	.06**	.06***
Openness to Experience	.07***	−.16***	.16***	.23***
Openness	.11***	−.18***	.18***	.25***
Intellect	−.00	−.08***	.08***	.12***
Conscientiousness	−.12***	.18***	−.19***	−.32***
Orderliness	−.10***	.15***	−.16***	−.29***
Industriousness	−.11***	.15***	−.17***	−.25***
Agreeableness	.03	−.02	.01	−.06***
Compassion	.07***	−.05**	.07***	.02
Politeness	−.02	.02	−.05**	−.13***
Extraversion	−.05**	.09***	−.06***	−.12***
Enthusiasm	−.01	.07***	−.03	−.11***
Assertiveness	−.07***	.09***	−.08***	−.10***
Neuroticism	.13***	−.12***	.14***	.14***
Withdrawal	.14***	−.14***	.15***	.16***
Volatility	.10***	−.08***	.10***	.09***

*$p < .05$; **$p < .01$; ***$p < .001$.

measures used in Study 1 were single item measures. Thus, Study 2 aimed to replicate and extend the Study 1 findings with more detailed and complex measures of political orientation.

3.1 | Method

3.1.1 | Participants and procedure

Participants were recruited via mturk ($N = 1{,}123$; 457 males) and completed the study materials online via Qualtrics. Participation was again restricted to United States residents, and only those with mturk approval ratings of ≥97% were recruited. The participants on average were 37.47 years old ($SD = 12.55$ years), with 15.15 years of education ($SD = 2.40$ years).

3.2 | Materials

3.2.1 | Personality traits

Personality traits were again measured using the BFAS. In Study 2, alpha reliabilities for the five domain scales were .91 for Extraversion, .91 for Agreeableness, .89 for Conscientiousness, .93 for Neuroticism, and .87 for Openness to Experience. Alphas for the 10 aspects ranged from .82 to .91, with a mean of .87.

3.2.2 | Political orientation

Participants completed the same four political orientation measures used in Study 1, as well as two additional measures: the Authoritarianism-Conservatism-Traditionalism (ACT) Scale (Duckitt et al., 2010) and the Social Dominance Orientation (SDO) Scale (Pratto et al., 1994). The ACT Scale consists of 36 items (e.g., "Our leaders should be obeyed without question"), for which participants indicated their agreement using a 7-point Likert scale ranging from "Strongly disagree" to "Strongly agree" ($\alpha = .97$).[1] The SDO Scale consists of 16 items (e.g., "Some groups of people are simply inferior to other groups"), for which participants provided ratings from "Very negative" to "Very positive" on a 7-point Likert scale ($\alpha = .96$).

3.3 | Results

3.3.1 | Correlations between personality, political orientation, and demographics

First, correlation analyses examined the zero-order relationships between personality, political orientation, and demographics (Table 1 for descriptive; Table 4 for correlations). The political orientation measures were substantially inter-correlated (*r*s from .34 to .82). Demographically, liberal orientation was generally correlated with younger age (*r*s from .07 to .18),

TABLE 3 Regression results summary for analyses conducted in Study 1

	Democratic party preference		Republican party preference		Overall political orientation		IPIP liberalism	
	β	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)
Trait-level personality predictors								
Openness to Experience	**.073*****	**.195 (.053)**	**−.207*****	**−.532 (.050)**	**.196*****	**.635 (.062)**	**.319*****	**.478 (.027)**
Conscientiousness	**−.103*****	**−.251 (.048)**	**.143*****	**.333 (.045)**	**−.166*****	**−.485 (.056)**	**−.278*****	**−.376 (.024)**
Agreeableness	.030	.076 (.051)	−.019	−.045 (.048)	.005	.015 (.060)	**−.056****	**−.080 (.026)**
Extraversion	−.018	−.042 (.047)	**.109*****	**.238 (.045)**	**−.065****	**−.177 (.056)**	**−.137*****	**−.173 (.024)**
Neuroticism	**.078*****	**.151 (.040)**	**−.042***	**−.079 (.038)**	**.055****	**.127 (.047)**	−.008	−.008 (.020)
R^2 (ΔR^2)	.053 (.026)		.083 (.071)		.101 (.070)		.209 (.171)	
Aspects of Openness to Experience								
Openness	**.120*****	**.267 (.043)**	**−.179*****	**−.381 (.041)**	**.176*****	**.470 (.051)**	**.258*****	**.319 (.023)**
Intellect	**−.060****	**−0.136 (.044)**	.000	.000 (.042)	.001	.002 (.052)	.012	.015 (.023)
R^2 (ΔR^2)	.039 (.012)		.044 (.031)		.061 (.030)		.105 (.067)	
Aspects of Conscientiousness								
Orderliness	**−.075*****	**−.157 (.042)**	**.109*****	**.220 (.040)**	**−.128*****	**−.324 (.049)**	**−.237*****	**−.278 (.022)**
Industriousness	**−.075*****	**−.155 (.041)**	**.095*****	**.190 (.040)**	**−.094*****	**−.236 (.049)**	**−.116*****	**−.134 (.022)**
R^2 (ΔR^2)	.043 (.016)		.043 (.030)		.066 (.036)		.132 (.094)	
Aspects of Agreeableness								
Compassion	**.083*****	**.174 (.043)**	**−.078*****	**−.157 (.042)**	**.107*****	**.272 (.052)**	**.108*****	**.126 (.024)**
Politeness	**−.075*****	**−.173 (.048)**	**.049***	**.108 (.047)**	**−.099*****	**−.276 (.058)**	**−.149*****	**−.192 (.027)**
R^2 (ΔR^2)	.033 (.006)		.017 (.005)		.041 (.010)		.055 (.017)	
Aspects of Extraversion								
Enthusiasm	.013	.027 (.040)	.037	.072 (.039)	−.003	−.007 (.048)	**−.070*****	**−.079 (.022)**
Assertiveness	**−.077*****	**−.146 (.037)**	**.076*****	**.138 (.036)**	**−.081*****	**−.184 (.045)**	**−.073*****	**−.077 (.021)**
R^2 (ΔR^2)	.032 (.005)		.022 (.010)		.037 (.007)		.053 (.015)	
Aspects of Neuroticism								
Withdrawal	**.113*****	**.203 (.042)**	**−.154*****	**−.266 (.041)**	**.134*****	**.291 (.050)**	**.173*****	**.173 (.023)**
Volatility	.006	.010 (.041)	.037	.061 (.039)	−.010	−.021 .049)	−.042	−.040 .022)
R^2 (ΔR^2)	.040 (.013)		.029 (.017)		.046 (.016)		.059 (.021)	
Stepwise analyses including all 10 aspects								
Significant aspect predictors (in order entered into regression model)	1. Withdrawal 2. Orderliness 3. Openness		1. Openness 2. Orderliness 3. Withdrawal 4. Intellect 5. Assertiveness 6. Politeness		1. Openness 2. Orderliness 3. Withdrawal 4. Intellect 5. Assertiveness 6. Politeness 7. Compassion		1. Orderliness 2. Openness 3. Enthusiasm 4. Politeness 5. Assertiveness 6. Intellect 7. Compassion 8. Withdrawal 9. Volatility	

Note: The regression coefficients displayed here are taken from Step 2 of the hierarchical regression analysis, after controlling for demographics (age, gender, and education) in Step 1. Bolded fonts emphasize significant findings.

$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

being female (*r*s from .09 to .21), and higher educational attainment (*r*s from .07 to .11). Turning to the Big Five personality domains, the results from Study 2 largely replicated those of Study 1. Liberal orientation was positively correlated with Openness to Experience (*r*s from .10 to .36) and Neuroticism (*r*s from .07 to .12), and negatively with Conscientiousness (*r*s from −.10 to −.29) and Extraversion (*r*s from −.06 to −.12). At the aspect level, the measures of political orientation had significant zero-order correlations with most of the 10 aspects. The aspects most consistently associated with liberal political

orientation were Openness (*r*s from .13 to .37), Intellect (*r*s from .09 to .24), Orderliness (*r*s from −.09 to −.29), Industriousness (*r*s from −.08 to −.22), Compassion (*r*s from .08 to .41), and Withdrawal (*r*s from .09 to .14). Altogether, these correlations largely replicate the those observed in Study 1, and extend these links to two additional measures of political orientation: authoritarianism and social dominance orientation.

3.3.2 | Regression analyses examining the aspect predictors of political orientation

As with Study 1, we conducted analogous sets of regression analyses for each political orientation measure to determine how the BFAS aspects predicted political orientation (Table 5). For analyses examining only the two aspects of each trait, the most consistent aspect-level predictors of liberalism across the political orientation measures were Openness (βs from .125 to .290), Orderliness (βs from −.077 to −.243), Compassion (βs from .096 to .233), Politeness (βs from −.083 to −.307), and Withdrawal (βs from .091 to .152). These results largely replicate the patterns observed in Study 1, with the exception of Assertiveness (though Assertiveness did re-emerge as a significant independent predictor when included in a regression model.)

We next conducted stepwise regression analyses examining all ten aspects simultaneously (significant predictors in Table 5; full results at https://osf.io/d4sf2). The most consistent predictors of liberalism across the four political orientation measures retained from Study 1, as well as the additional measure of authoritarianism, were higher Openness (|βs| from .12 to .24), Intellect (|βs| from .12 to .33), and lower Orderliness (|βs| from .10 to .20) and Assertiveness (|βs| from .08 to .20). In contrast, analyses examining the aspect-level predictors of SDO revealed a somewhat different picture, with the strongest aspect-level predictors of SDO being Politeness ($\beta = -.32$, $p < .001$), Openness ($\beta = -.16$, $p < .001$), Intellect ($\beta = -.14$, $p < .001$), and Compassion ($\beta = -.11$, $p = .002$). Perhaps most notably, these results differ from previous findings in that (a) neither aspect of Conscientiousness emerged as a significant predictor, and (b) whereas Politeness generally predicts higher overall conservatism (Hirsh et al., 2010), here Politeness predicted *lower* SDO.

3.4 | Summary

Study 2 successfully replicated most of the trait-attitude associations obtained in Study 1. In particular, the most consistent domain-level trait predictors were again Openness to Experience and Conscientiousness. At the aspect level, multiple aspects significantly predicted political orientation,

TABLE 4 Correlations between political orientation, demographics, and personality in Study 2

	Democratic party preference	Republican party preference	Overall political orientation	IPIP liberalism	ACT score	SDO score
Age	−.08**	.07*	−.11***	−.18***	.14***	−.04
Gender	.13***	−.06	.09**	−.03	.09**	−.21***
Education	.05	−.07*	.06	.09**	−.11***	.01
Openness to Experience	.10***	−.19***	.17***	.22***	−.28***	−.36***
Openness	.13***	−.21***	.20***	.25***	−.25***	−.37***
Intellect	.04	−.11***	.09**	.12***	−.21***	−.24***
Conscientiousness	−.10**	.15***	−.17***	−.26***	.29***	−.13***
Orderliness	−.09**	.15***	−.16***	−.24***	.29***	−.09**
Industriousness	−.08**	.12***	−.13***	−.22***	.21***	−.13***
Agreeableness	.03	−.05	.05	−.06	.10***	−.47***
Compassion	.08**	−.08**	.09**	.00	.04	−.41***
Politeness	−.03	−.01	−.01	−.11***	.15***	−.43***
Extraversion	.00	.06*	−.03	−.12***	.12***	−.09**
Enthusiasm	.03	.06	−.01	−.11***	.15***	−.16***
Assertiveness	−.02	.05	−.05	−.09**	.07*	.01
Neuroticism	.07*	−.07*	.08**	.12***	−.09**	.09**
Withdrawal	.09**	−.10**	.11***	.14***	−.10***	.02
Volatility	.04	−.03	.03	.08**	−.06*	.14***

*$p < .05$; **$p < .01$; ***$p < .001$.

TABLE 5 Regression results summary for analyses conducted in Study 2

	Democratic party preference		Republican party preference		Overall political orientation		IPIP liberalism		ACT score		SDO score	
	β	*b* (*SE*)	*B*	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)
Trait-level personality predictors												
Openness to Experience	**.117*****	**.299 (.088)**	**−.256*****	**−.638 (.084)**	**.219*****	**.712 (.109)**	**.360*****	**.534 (.047)**	**−.458*****	**−1.034 (.069)**	**−.246*****	−.597 (.073)
Conscientiousness	**−.117*****	**−.275 (.082)**	**.177*****	**.402 (.078)**	**−.202*****	**−.597 (.101)**	**−.266*****	**−.360 (.044)**	**.294*****	**.606 (.064)**	.014	.032 (.068)
Agreeableness	.011	.026 (.083)	−.042	−.095 (.078)	.045	.130 (.102)	−.034	−.045 (.044)	**.108*****	**.218 (.064)**	**−.408*****	**−.890 (.068)**
Extraversion	.010	.022 (.081)	**.122*****	**.257 (.077)**	−.061	−.167 (.100)	**−.172*****	**−.216 (.043)**	**.204*****	**.388 (.063)**	**.122*****	**.249 (.067)**
Neuroticism	.033	.062 (.072)	.015	.028 (.069)	−.005	−.012 (.089)	−.041	−.045 (.038)	**.073***	**.120 (.056)**	.004	.008 (.060)
R^2 (ΔR^2)	.053 (.023)		.097 (.082)		.100 (.072)		.203 (.159)		.264 (.228)		.279 (.236)	
Aspects of Openness to Experience												
Openness	**.125*****	**.275 (.073)**	**−.200*****	**−.427 (.070)**	**.185*****	**.516 (.091)**	**.262*****	**.334 (.040)**	**−.231*****	**−.448 (.061)**	**−.290*****	**−.605 (.064)**
Intellect	−.018	−.037 (.070)	−.021	−.043 (.067)	.014	.036 (.087)	.009	.011 (.039)	**−.110*****	**−.206 (.059)**	**−.120*****	**−.240 (.062)**
R^2 (ΔR^2)	.044 (.014)		.058 (.043)		.064 (.036)		.112 (.069)		.122 (.085)		.168 (.125)	
Aspects of Conscientiousness												
Orderliness	**−.077***	**−.164 (.073)**	**.124*****	**.257 (.071)**	**−.137*****	**−.369 (.092)**	**−.186*****	**−.229 (.041)**	**.243*****	**.455 (.062)**	−.004	−.008 (.069)
Industriousness	−.038	−.074 (.067)	.049	.092 (.065)	−.050	−.124 (.084)	**−.095****	**−.107 (.038)**	**.067***	**.115 (.057)**	**−.118*****	**−.218 (.063)**
R^2 (ΔR^2)	.040 (.010)		.038 (.024)		.056 (.028)		.104 (.061)		.115 (.079)		.057 (.014)	
Aspects of Agreeableness												
Compassion	**.118****	**.225 (.071)**	**−.106****	**−.197 (.069)**	**.142*****	**.344 (.089)**	**.111****	**.122 (.041)**	**−.096****	**−.162 (.062)**	**−.233*****	**−.422 (.060)**
Politeness	**−.105****	**−.233 (.083)**	.035	.076 (.082)	**−.083***	**−.233 (.106)**	**−.117****	**−.151 (.048)**	**.149*****	**.291 (.073)**	**−.307*****	**−.646 (.071)**
R^2 (ΔR^2)	.040 (.010)		.022 (.007)		.041 (.013)		.054 (.011)		.050 (.014)		.237 (.194)	
Aspects of Extraversion												
Enthusiasm	.047	.090 (.067)	.035	.066 (.065)	.018	.044 (.085)	−.060	−.067 (.038)	**.116*****	**.196 (.058)**	**−.189*****	**−.343 (.062)**
Assertiveness	−.049	−.090 (.063)	.042	.075 (.062)	−.059	−.137 (.080)	**−.070***	**−.074 (.036)**	.017	.028 (.055)	**.100****	**.173 (.059)**
R^2 (ΔR^2)	.032 (.002)		.019 (.004)		.031 (.003)		.056 (.013)		.052 (.015)		.068 (.025)	
Aspects of Neuroticism												
Withdrawal	**.091***	**.158 (.073)**	**−.140****	**−.235 (.071)**	**.152*****	**.335 (.092)**	**.140*****	**.140 (.042)**	**−.117****	**−.178 (.064)**	**−.129****	**−.212 (.068)**
Volatility	−.039	−.069 (.073)	.080	.136 (.071)	**−.095***	**−.209 (.092)**	−.046	−.046 (.042)	.035	.054 (.064)	**.236*****	**.390 (.068)**
R^2 (ΔR^2)	.034 (.005)		.025 (.010)		.040 (.011)		.055 (.012)		.045 (.009)		.072 (.029)	
Stepwise analyses including all 10 aspects												

(Continues)

TABLE 5 (Continued)

	Democratic party preference		Republican party preference		Overall political orientation		IPIP liberalism		ACT score		SDO score	
	β	*b* (*SE*)	*B*	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)
Significant aspect predictors (in order entered into regression model)	1. Openness 2. Orderliness		1. Openness 2. Orderliness 3. Intellect 4. Assertiveness		1. Openness 2. Orderliness 3. Intellect 4. Assertiveness		1. Openness 2. Orderliness 3. Intellect 4. Assertiveness 5. Politeness 6. Industriousness		1. Openness 2. Orderliness 3. Enthusiasm 4. Intellect 5. Assertiveness 6. Politeness 7. Industriousness		1. Politeness 2. Openness 3. Intellect 4. Compassion 5. Withdrawal	

Note: The regression coefficients displayed here are taken from Step 2 of the hierarchical regression analysis, after controlling for demographics (age, gender, and education) in Step 1. Bolded fonts emphasize significant findings.

*$p < .05$; **$p < .01$; ***$p < .001$.

with Openness, Intellect, and Orderliness being the most robust. Study 2 extended this pattern of trait-attitude links to two additional, conceptually distinct indicators of political orientation: authoritarianism and SDO. Whereas the personality predictors of authoritarianism largely paralleled those of party preference and ideological orientation, the predictors of SDO were more distinctive. In particular, SDO's negative links with *both* Compassion and Politeness (in contrast to Hirsh et al., 2010; Osborne et al., 2013) suggests that SDO may be less driven by epistemic motivations, and more by competitive intergroup goals (e.g., Duckitt et al., 2002).

4 | STUDY 3

Although Studies 1 and 2 found that the 10 BFAS aspects made unique contributions to predicting multiple measures of political orientation, we considered it important to determine whether these findings would extend to other operationalizations of lower-level traits. In other words, do the findings documented in Studies 1 and 2 reflect meaningful psychological differences, or are they merely due to measurement artifacts? Studies 3 and 4 adopted another widely used, hierarchically structured Big Five measure—the Big Five Inventory-2 (BFI-2)—to examine how lower-level traits relate to political orientation.

4.1 | Method

4.1.1 | Participants and procedure

Participants in Study 3 were 1,559 U.S. adults from the Life Outcomes of Personality Replication Project (LOOPR Project; Soto, 2019). Quota sampling was used to ensure that the sample would be representative of the U.S. population in terms of age ($M = 46.36$ years old, $SD = 16.62$) and gender (51.6% female, 48.4% male), as well as ethnicity, education level, and household income (see Soto, 2019 for more details about this sample). All participants completed the BFI-2 and measures of political orientation.

4.2 | Materials

4.2.1 | Personality traits

Personality was assessed using the Big Five Inventory-2 (BFI-2; Soto & John, 2017). This measure contains 60 short statements that assess participants' characteristics and behaviors (e.g., "Is outgoing, sociable"). Participants indicated their agreements using a 5-point Likert scale ("Disagree strongly" to "Agree strongly"). The BFI-2 includes subscales assessing three facets within each Big Five domain (described earlier).

Previous research has shown that the BFI-2 includes facets that converge strongly with each BFAS aspect (Soto & John, 2017). In Study 3, alpha reliabilities for the five domain scales were .83 for Extraversion, .81 for Agreeableness, .87 for Conscientiousness, .90 for Neuroticism, and .82 for Openness to Experience. Alphas for the 15 facet scales ranged from .56 to .79, with a mean of .70.[2]

4.2.2 | Political orientation

Political orientation was assessed using abbreviated versions of the Right-Wing Authoritarianism (RWA) Scale (Altemeyer, 1998) and Conservatism Scale (C-Scale; Wilson & Patterson, 1968). The abbreviated RWA Scale contains six political statements, for example, "Gays and lesbians are just as healthy and moral as anybody else" (reverse-coded), which participants rated on a 9-point Likert scale ("Very strongly disagree" to "Very strongly agree") ($\alpha = .75$). The abbreviated C-Scale asked participants to indicate their preference for seven issues/topics (e.g., "death penalty") using 1 as "No," 2 as "?," and 3 as "Yes" ($\alpha = .49$).

4.2.3 | Preregistration

The main hypotheses and planned analyses for Study 3 were preregistered prior to data analysis, with preregistration materials available at https://osf.io/d4sf2.

4.3 | Results

4.3.1 | Correlations between personality, political orientation, and demographics

The two political orientation measures were highly correlated with each other: $r = .63$, $p < .001$ (Table 6 for descriptives; Table 7 for correlations). Demographically, more conservative political orientation was generally correlated with older age (*r*s from .19 to .33) and lower education level (*r*s from −.10 to −.13). At the domain level, higher conservatism was correlated with higher Conscientiousness ($r = .14$) and Agreeableness ($r = .05$), and lower Openness to Experience (*r*s from −.21 to −.24) and Neuroticism (*r*s from −.09 to −.13). At the facet level, the two measures of political orientation had significant zero-order correlations with most of the 15 facets. The facets most consistently associated with more conservative political orientation were the three facets of Conscientiousness (*r*s from .09 to .15), the three facets of Neuroticism (*r*s from −.07 to −.14), and the three facets of Openness to Experience (*r*s from −.10 to −.23).

TABLE 6 Descriptives for BFI-2 personality and political orientation variables in Studies 3 and 4

	Study 3	Study 4
Variable	Mean (*SD*)	Mean (*SD*)
Openness to Experience	3.65 (0.68)	4.09 (0.60)
Intellectual curiosity	3.70 (0.78)	4.39 (0.63)
Aesthetic sensitivity	3.50 (0.88)	3.87 (0.90)
Creative imagination	3.75 (0.81)	4.02 (0.78)
Conscientiousness	3.88 (0.72)	3.43 (0.76)
Organization	3.87 (0.91)	3.32 (1.04)
Productiveness	3.86 (0.84)	3.37 (0.88)
Responsibility	3.92 (0.77)	3.59 (0.80)
Agreeableness	3.81 (0.64)	3.68 (0.61)
Compassion	3.88 (0.78)	3.90 (0.76)
Respectfulness	4.14 (0.74)	3.91 (0.72)
Trust	3.40 (0.80)	3.22 (0.84)
Extraversion	3.21 (0.72)	3.19 (0.78)
Sociability	2.98 (0.98)	2.82 (1.05)
Assertiveness	3.27 (.86)	3.32 (0.96)
Energy level	3.38 (0.85)	3.43 (0.88)
Neuroticism	2.73 (0.89)	2.91 (0.88)
Anxiety	3.08 (0.98)	3.35 (0.99)
Depression	2.49 (0.99)	2.72 (1.03)
Emotional volatility	2.62 (1.00)	2.66 (1.04)
RWA	4.87 (1.73)	–
C-Scale	2.07 (0.39)	–
Political conservatism	–	2.12 (.77)
Social conservatism	–	1.95 (.78)
Economic conservatism	–	2.30 (.96)
Conservative ideology	–	2.76 (1.50)

4.3.2 | Regression analyses examining the personality predictors of political orientation

As in the previous two studies, we conducted sets of regression analyses for each political orientation measure to determine associations with each of the 15 Big Five facets (Table 8). The first set of regression analyses separately examined each trait domain's three facets, and found that the most consistent facet predictors of conservatism were lower Intellectual Curiosity (βs from −.083 to −.123) and Aesthetic Sensitivity (βs from −.144 to −.170). For RWA, the three facets of Neuroticism also emerged as significant predictors (|βs| from .087 to .111).

The stepwise regression analyses examining the 15 facets simultaneously found that for RWA, the significant facet-level predictors of conservatism were lower Aesthetic Sensitivity ($\beta = -.15$, $p < .001$), Depression

TABLE 7 Correlations between political orientation, demographics, and personality in Study 3

	RWA	C-Scale
Age	.19***	.33***
Gender	−.03	−.02
Education	−.13***	−.10***
Openness to Experience	−.24***	−.21***
Intellectual curiosity	−.23***	−.19***
Aesthetic sensitivity	−.23***	−.22***
Creative imagination	−.15***	−.10***
Conscientiousness	.14***	.14***
Organization	.13***	.11***
Productiveness	.11***	.09***
Responsibility	.12***	.15***
Agreeableness	.05*	.05*
Compassion	.03	.06*
Respectfulness	.05	.08**
Trust	.06*	−.00
Extraversion	.03	−.07**
Sociability	.04	−.04
Assertiveness	−.01	−.06*
Energy level	.04	−.06*
Neuroticism	−.13***	−.09***
Anxiety	−.14***	−.07**
Depression	−.14***	−.09***
Emotional volatility	−.08**	−.07**

*$p < .05$; **$p < .01$; ***$p < .001$.

($\beta = -.13$, $p < .001$), Intellectual Curiosity ($\beta = -.14$, $p < .001$), Creative Imagination ($\beta = -.09$, $p = .005$), and higher Organization ($\beta = .10$, $p < .001$) and Energy Level ($\beta = .08$, $p = .01$). For the C-Scale, the stepwise regression revealed that higher conservatism was predicted by lower Aesthetic Sensitivity ($\beta = -.17$, $p < .001$) and Intellectual Curiosity ($\beta = -.09$, $p < .001$), and higher Responsibility ($\beta = .12$, $p < .001$).[3]

4.4 | Summary

In Study 3, the most consistent domain-level personality predictors of political orientation were Openness to Experience and Conscientiousness, replicating the findings of Studies 1 and 2, and existing literature (e.g., Sibley et al., 2012). At the facet level, two of the three lower-level traits within the Openness to Experience domain—Intellectual Curiosity (similar to BFAS Intellect) and Aesthetic Sensitivity (similar to BFAS Openness)—emerged as the most robust predictors of political liberalism. This finding again replicates the distinctive predictive power of the lower-level Openness traits. It suggests that more conservative ideologies may be significantly motivated by a lower proclivity toward artistic and intellectual stimuli. A lower preference for aesthetically challenging and complex stimuli may, in turn, limit one's exposure to novel ideas, which, in turn, facilitates the maintenance of more traditional or conservative views.

5 | STUDY 4

Study 4 aimed to (a) further examine and replicate the BFI-2 facet-level predictors of political orientation, using a different, larger, and international sample, and (b) potentially resolve discrepant findings between Studies 1 and 2 versus Study 3. It also tested whether the findings from Studies 1–3 would generalize to additional measures of political orientation.

5.1 | Method

5.1.1 | Participants and procedure

Study 4 participants were volunteers who completed an online survey titled "All About You: The Big Five Personality Test" on the web site PersonalityLab.org. Participants were recruited passively, and could find the survey through search engines, links from other web sites, and word of mouth. Participants were compensated with automatically generated feedback about their standing on the Big Five traits. Participants were excluded from analyses if they (a) completed less than 90% of the BFI-2 items, (b) completed less than half of the political orientation items, (c) had a within-person standard deviation of less than .50 across the completed BFI-2 items, (d) reported that they had previously completed the survey, (e) reported that they were not fluent in English, (f) reported inconsistent geographical information, (g) had multiple responses with the same demographic information from the same IP address, (h) reported an age outside the range of 18 to 80 years old, or (i) did not report their gender. The final Study 4 analyses consisted of 116,406 participants. The demographic breakdowns were as follows: gender: 57% male, 42% female, 1% other; age: 18 to 80; $M = 36.57$, $SD = 13.28$.

5.2 | Materials

5.2.1 | Personality traits

As in Study 3, personality traits were assessed using the BFI-2 (Soto & John, 2017). In Study 4, alpha reliabilities for the BFI-2 domain scales were .86 for Extraversion,

TABLE 8 Regression results summary for analyses conducted in Study 3

	RWA		C-Scale	
	B	***b* (*SE*)**	***β***	***b* (*SE*)**
Trait-level personality predictors				
Openness to Experience	**−.325*****	**−.827 (.071)**	**−.214*****	**−.122 (.016)**
Conscientiousness	**.132*****	**.317 (.073)**	**.144*****	**.078(.016)**
Agreeableness	−.008	−.021 (.081)	−.023	−.014 (.018)
Extraversion	**.099*****	**.238 (.072)**	−.025	−.013 (.016)
Neuroticism	**−.090****	**−.176 (.062)**	−.040	−.018 (.014)
R^2 (ΔR^2)	.152 (.097)		.168 (.050)	
Facets of Openness to Experience				
Intellectual curiosity	**−.123*****	**−.275 (.072)**	**−.083****	**−.041 (.016)**
Aesthetic sensitivity	**−.144*****	**−.282 (.058)**	**−.170*****	**−.075 (.013)**
Creative imagination	.001	.003 (.066)	.034	.016 (.014)
R^2 (ΔR^2)	.106 (.052)		.159 (.040)	
Facets of Conscientiousness				
Organization	**.087****	**.166 (.063)**	.043	.019 (.014)
Productiveness	.013	.027 (.075)	−.011	−.005 (.016)
Responsibility	.025	.056 (.075)	.053	.027 (.016)
R^2 (ΔR^2)	.067 (.012)		.124 (.005)	
Facets of Agreeableness				
Compassion	−.028	−.063 (.071)	.005	.003 (.015)
Respectfulness	−.012	−.028 (.075)	.039	.020 (.016)
Trust	.050	.107 (.064)	**−.070***	**−.034 (.014)**
R^2 (ΔR^2)	.057 (.002)		.122 (.004)	
Facets of Extraversion				
Sociability	.017	.030 (.054)	−.037	−.015 (.012)
Assertiveness	−.026	−.052 (.060)	−.011	−.005 (.013)
Energy level	**.069***	**.140 (.059)**	−.012	−.005 (.013)
R^2 (ΔR^2)	.059 (.005)		.121 (.003)	
Facets of Neuroticism				
Anxiety	**−.111****	**−.196 (.068)**	.028	.011 (.015)
Depression	**−.109****	**−.191 (.067)**	−.064	−.025 (.015)
Emotional volatility	**.087***	**.151 (.066)**	−.001	.000 (.014)
R^2 (ΔR^2)	.075 (.020)		.121 (.002)	
Stepwise analyses including all 15 facets				
Significant facet predictors (in order entered into regression model)	1. Aesthetic Sensitivity 2. Depression 3. Intellectual Curiosity 4. Organization 5. Creative Imagination 6. Energy Level		1. Aesthetic Sensitivity 2. Responsibility 3. Intellectual Curiosity	

Note: The regression coefficients displayed here are taken from Step 2 of the hierarchical regression analysis, after controlling for demographics (age, gender, and education) in Step 1. Bolded fonts emphasize significant findings.

$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

.81 for Agreeableness, .87 for Conscientiousness, .91 for Neuroticism, and .82 for Openness to Experience. Alphas for the facet scales ranged from .66 to .85, with a mean of .76.

5.2.2 | Political orientation

Political orientation was assessed via two measures adapted from the American National Election Studies (ANES; see http://electionstudies.org). The first was a single-item conservative ideological self-placement measure ("In political matters, people talk of 'the left' and 'the right.' How would you place your views on this scale, generally speaking?") scored on a 7-point scale from "Left" to "Middle" to "Right." The second measure asked participants to report their attitudes regarding eight specific political issues (see https://osf.io/ud9bh for a list of all items). This measure included four items assessing social issues (e.g., "I believe that same-sex couples should be allowed to marry.") and four assessing economic issues (e.g., "The government should make incomes more equal."). Participants rated each item on a 5-point scale ranging from "Disagree strongly" to "Agree strongly." The items were aggregated to form social conservatism (4 items, $\alpha = .66$), economic conservatism (four items, $\alpha = .81$), and overall conservatism (8 items, $\alpha = .82$) scales.

5.2.3 | Preregistration

The main hypotheses and planned analyses for Study 4 were also preregistered prior to data analysis at https://osf.io/d4sf2.

5.3 | Results

5.3.1 | Correlations between personality, political orientation, and demographics

Correlation analyses (Table 6 for descriptives; Table 9 for correlations) showed that the two political orientation measures were highly correlated with each other (*r*s from .56 to .91). Demographically, conservative orientation was weakly correlated with younger age (*r*s from −.01 to −.05), being female (*r*s from −.02 to −.10), and having less education (*r*s from −.11 to −.21). At the domain level, the political conservatism measures were generally negatively correlated with Openness to Experience (*r*s from −.18 to −.23), Neuroticism (*r*s from −.03 to −.13,), Agreeableness (*r*s from −.09 to −.11), and positively correlated with Conscientiousness (*r*s from .09 to .11) and Extraversion (*r*s from .02 to .04). Facet-level analyses indicated that the measures of political orientation were significantly correlated with most of the 15 facets.

5.3.2 | Regression analyses examining the personality predictors of political orientation

The regression analyses that separately examined each BFI-2 domain's three facets (Table 10) found that almost all facets were significant predictors of the political conservatism measures. Focusing on predictors with βs > .05, the most consistent facet predictors of conservatism were lower Aesthetic Sensitivity (βs from −.167 to −.214), Intellectual Curiosity (βs from −.076 to −.168), Compassion (βs from −.125 to −.181), and Depression (βs from −.057 to −.100), and higher Creative Imagination (βs from .052 to .067), Productiveness (βs from .055 to .108), Respectfulness (βs from .080 to .108), and Assertiveness (βs from .010 to .074).

Finally, we conducted stepwise regressions examining all 15 BFI-2 facets (significant predictors in Table 10; full results at https://osf.io/d4sf2). Across the four measures of political orientation, the most consistent facet-level predictors of political liberalism were higher Aesthetic Sensitivity (absolute βs from .14 to .17), Intellectual Curiosity (absolute βs from .07 to .16), and Compassion (absolute βs from .09 to .15).[4]

5.4 | Summary

In Study 4, we again found evidence that Openness to Experience and Conscientiousness were the most consistent domain-level predictors of political conservatism. At the facet level, the most robust predictors of liberalism were the Aesthetic Sensitivity and Intellectual Curiosity facets of Openness to Experience, as well as the Compassion facet of Agreeableness. The Aesthetic Sensitivity and Intellectual Curiosity findings replicate the results of Studies 1 to 3 in a large, international sample. The Compassion finding replicates previous work (e.g., Hirsh et al., 2010; Osborne et al., 2013). Taken together, these results suggest that more conservative ideologies are motivated by a lower preference for novelty and aesthetics (or their converse: a higher preference for convention, familiarity, and order). Furthermore, more liberal orientation was positively associated with Compassion, suggesting that liberals more greatly value showing empathy and care toward vulnerable others.

An examination of social versus economic conservatism found a pattern similar to the Study 2 results involving RWA versus SDO (which have been proposed as indicators of social and economic conservatism, respectively; e.g., Duckitt et al., 2002). RWA/social conservatism was primarily predicted by lower Openness to Experience, while SDO/economic conservatism was predicted by lower Openness and Agreeableness

TABLE 9 Correlations between political orientation, demographics, and personality in Study 4

	Political conservatism	Social conservatism	Economic conservatism	Conservative ideological self-placement
Age	−.02***	−.03***	−.01*	−.05***
Gender	−.07***	−.02***	−.10***	−.09***
Education	−.18***	−.21***	−.11***	−.16***
Openness to Experience	−.23***	−.23***	−.18***	−.20***
Intellectual curiosity	−.19***	−.23***	−.13***	−.16***
Aesthetic sensitivity	−.25***	−.22***	−.22***	−.23***
Creative imagination	−.09***	−.10***	−.06***	−.07***
Conscientiousness	.11***	.09***	.10***	.10***
Organization	.09***	.09***	.08***	.09***
Productiveness	.10***	.07***	.10***	.10***
Responsibility	.07***	.06***	.07***	.06***
Agreeableness	−.11***	−.09***	−.11***	−.09***
Compassion	−.17***	−.12***	−.17***	−.15***
Respectfulness	−.01*	.01***	−.02***	−.01***
Trust	−.09***	−.10***	−.07***	−.06***
Extraversion	.02***	−.01***	.04***	.04***
Sociability	.01**	−.00	.02***	.02***
Assertiveness	.04***	−.01*	.06***	.05***
Energy level	.00	−.02***	.02***	.03***
Neuroticism	−.09***	−.03***	−.13***	−.10***
Anxiety	−.09***	−.04***	−.12***	−.10***
Depression	−.09***	−.03***	−.12***	−.10***
Emotional volatility	−.06***	−.01	−.09***	−.07***

*$p < .05$; **$p < .01$; ***$p < .001$.

(for more detailed discussions on these relationships, see Sibley & Duckitt, 2008).

6 | DISCUSSION

In all four studies, the most consistent Big Five domain predictors of political orientation were Openness to Experience and Conscientiousness, and to a lesser extent Neuroticism and Extraversion. More importantly, extending beyond past work, we found that a number of lower-level traits emerged as significant and independent predictors of political orientation, while others did not. In certain cases, lower-level traits within the same trait domain predicted political orientation to different degrees, or even in opposite directions. Overall, it appears that, compared to their more conservative counterparts, liberals tend to be more open to aesthetic experiences and new ideas, but are more prone to sad affect, and are less orderly, productive, and assertive.

As one of the first efforts to systematically examine how lower-level traits relate to political ideology, these studies possess a number of strengths. These include: large, independent (and in some cases nationally representative) samples, multiple measures of personality and political orientation, and preregistered hypotheses and analyses. The current studies also benefit from the use of longer measures of personality, which tend to yield stronger and more consistent associations between personality and political ideology (Bakker & Lelkes, 2018).

Does examining the lower-level personality predictors of political orientation provide additional information beyond broad Big Five domains? After all, many of the effect sizes, as well as directions, of the lower-level predictors were similar to those of their corresponding superordinate domains. Such data suggest that domain-level personality measures may often be adequate and appropriate tools for prediction, especially when participants' response burden is a concern (e.g., in large, national surveys involving numerous items).

We argue, however, that the present results still advance our understanding of personality and political attitudes. For lower-level personality traits that have distinctive relations with political attitudes (e.g., Agreeableness), they indicate

TABLE 10 Regression results summary for analyses conducted in Study 4

	Political conservatism		Social conservatism		Economic conservatism		Conservative ideological self-placement	
	β	*b* (*SE*)	*B*	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)
Trait-level personality predictors								
Openness to Experience	**−.209*****	**−.268 (.004)**	**−.208*****	**−.270 (.004)**	**−.167*****	**−.267 (.005)**	**−.187*****	**−.465 (.007)**
Conscientiousness	**.117*****	**.119 (.003)**	**.111*****	**.115 (.003)**	**.097*****	**.124 (.004)**	**.111*****	**.221 (.006)**
Agreeableness	**−.118*****	**−.148 (.004)**	**−.078*****	**−.100 (.004)**	**−.125*****	**−.197 (.005)**	**−.092*****	**−.226 (.007)**
Extraversion	**.045*****	**.045 (.003)**	**.025*****	**.025 (.003)**	**.052*****	**.065 (.004)**	**.062*****	**.120 (.006)**
Neuroticism	**−.080*****	**−.070 (.003)**	**−.023*****	**−.020 (.003)**	**−.110*****	**−.120 (.004)**	**−.078*****	**−.132 (.006)**
R^2 (ΔR^2)	.122 (.081)		.114 (.064)		.092 (.068)		.103 (.068)	
Facets of Openness to Experience								
Intellectual curiosity	**−.133*****	**−.162 (.004)**	**−.168*****	**−.208 (.004)**	**−.076*****	**−.116 (.005)**	**−.110*****	**−.261 (.008)**
Aesthetic sensitivity	**−.214*****	**−.183 (.003)**	**−.167*****	**−.145 (.003)**	**−.207*****	**−.221 (.004)**	**−.203*****	**−.338 (.006)**
Creative imagination	**.062*****	**.062 (.003)**	**.052*****	**.052 (.003)**	**.058*****	**.072 (.004)**	**.067*****	**.130 (.007)**
R^2 (ΔR^2)	.109 (.068)		.113 (.063)		.073 (.049)		.091 (.055)	
Facets of Conscientiousness								
Organization	**.036*****	**.027 (.003)**	**.049*****	**.037 (.003)**	**.018*****	**.017 (.003)**	**.041*****	**.059 (.005)**
Productiveness	**.095*****	**.083 (.003)**	**.055*****	**.048 (.003)**	**.108*****	**.118 (.004)**	**.097*****	**.165 (.007)**
Responsibility	**.040*****	**.038 (.004)**	**.042*****	**.041 (.004)**	**.030*****	**.036 (.004)**	**.032*****	**.060 (.007)**
R^2 (ΔR^2)	.061 (.020)		.064 (.014)		.043 (.018)		.056 (.020)	
Facets of Agreeableness								
Compassion	**−.176*****	**−.178 (.003)**	**−.125*****	**−.129 (.004)**	**−.181*****	**−.228 (.004)**	**−.164*****	**−.322 (.007)**
Respectfulness	**.104*****	**.111 (.004)**	**.108*****	**.116 (.004)**	**.080*****	**.106 (.005)**	**.081*****	**.168 (.007)**
Trust	**−.053*****	**−.049 (.003)**	**−.078*****	**−.073 (.003)**	**−.022*****	**−.025 (.004)**	**−.009***	**−.016 (.006)**
R^2 (ΔR^2)	.071 (.031)		.072 (.022)		.052 (.028)		.057 (.022)	
Facets of Extraversion								
Sociability	**−.013*****	**−.009 (.003)**	−.004	−.003 (.003)	**−.018*****	**−.016 (.003)**	**−.012****	**−.018 (.005)**
Assertiveness	**.051*****	**.041 (.003)**	**.010****	**.008 (.003)**	**.074*****	**.074 (.004)**	**.056*****	**.087 (.006)**
Energy Level	**.009***	**.008 (.003)**	−.002	−.001 (.003)	**.015*****	**.017 (.004)**	**.032*****	**.054 (.006)**
R^2 (ΔR^2)	.043 (.002)		.050 (.00007)		.030 (.005)		.040 (.005)	
Facets of Neuroticism								
Anxiety	**−.037*****	**−.029 (.003)**	**−.017*****	**−.014 (.003)**	**−.045*****	**−.043 (.004)**	**−.024*****	**−.037 (.006)**

(Continues)

TABLE 10 (Continued)

	Political conservatism		Social conservatism		Economic conservatism		Conservative ideological self-placement	
	β	*b* (*SE*)	*B*	*b* (*SE*)	*β*	*b* (*SE*)	*β*	*b* (*SE*)
Depression	**−.087*****	**−.066 (.003)**	**−.057*****	**−.043 (.003)**	**−.094*****	**−.088 (.004)**	**−.100*****	**−.146 (.006)**
Emotional Volatility	**.013****	**.009 (.003)**	**.024*****	**.018 (.003)**	.001	.000 (.004)	.004	.006 (.006)
R^2 (ΔR^2)	.052 (.011)		.053 (.003)		.040 (.016)		.048 (.013)	
Stepwise analyses including all 15 facets								
Significant facet predictors (in order entered into regression model, with $\Delta R^2 > .001$)	1. Aesthetic Sensitivity 2. Productiveness 3. Compassion 4. Intellectual Curiosity 5. Depression 6. Trust 7. Respectfulness		1. Aesthetic Sensitivity 2. Intellectual Curiosity 3. Productiveness 4. Compassion 5. Respectfulness 6. Trust		1. Aesthetic Sensitivity 2. Productiveness 3. Compassion 4. Depression 5. Intellectual Curiosity		1. Aesthetic Sensitivity 2. Productiveness 3. Compassion 4. Intellectual Curiosity 5. Depression	

Note: The regression coefficients displayed here are taken from Step 2 of the hierarchical regression analysis, after controlling for demographics (age, gender, and education) in Step 1. Bolded fonts emphasize significant findings.

$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

that we need hierarchical personality measures to fully capture the links between traits and attitudes. For lower-level traits with relations similar to their superordinate domains (e.g., Openness to Experience), it suggests that the domains are, indeed, most important, and brief personality measures may be sufficient to capture these relationships. Taken together, our findings suggest that brief, domain-level measures can provide a general understanding of trait-attitude links, but that hierarchical measures can provide a more full and nuanced understanding. We further argue that lower-level analyses not only offer more detailed personality descriptions, but also provide a window into different underlying psychological processes that contribute to political differences.

6.1 | Openness to Experience: Aesthetic appreciation versus idea generation

The most robust lower-level predictors of political orientation were the aspects/facets of Openness to Experience. This suggests that, in general, liberals tend to be more receptive to novel, aesthetic, and complex stimuli. Exposure to such experiences can introduce a person to new ideas and concepts, and may encourage the adoption and acceptance of new changes. These changes may extend to the political realm, and potentially promote the endorsement of policies that involve significant changes to the status quo (Xu et al., 2016).

Note, however, that while the two lower-level traits that most consistently related to liberalism pertain to an appreciation for aesthetic and intellectual endeavors, the Creative Imagination facet, which deals with *generating* new ideas, was largely unrelated to political orientation. In other words, it appears that while liberals (relative to conservatives) place higher subjective value on creativity, liberals themselves are not necessarily more creative.

6.2 | Orderliness and political orientation

Another noteworthy finding from Studies 1 and 2 is that higher scores on the Orderliness aspect of the BFAS were consistently related to conservatism. This finding was to some degree also found with the Organization facet of the BFI-2 (more so in Study 3 than Study 4). Although the two personality measures did not conform perfectly (perhaps due to differences in the number of items assessing Orderliness/Organization in each scale), it appears that characteristics related to the maintenance of order, tidiness, and routine play an important role in predicting political conservatism (Hirsh et al., 2010; Xu et al., 2016).

What might explain this specific link? Recent work has found that Orderliness is more closely related with specific mediators of the link between Conscientiousness and political

orientation, such as consumption of different amounts and types of cultural and media products (Xu et al., 2013). Similarly, higher Orderliness is associated with higher disgust sensitivity (Robinson et al., 2019; Xu et al., 2020), which has consistently been linked to conservatism (e.g., Inbar et al., 2012). Other findings indicate that conservatives tend to score higher on epistemic needs, that is, needs for closure, structure, and intolerance for uncertainty and ambiguity (e.g., Jost et al., 2003). These needs bear more similarity to dispositions described by Orderliness/Organization than other lower-level traits of Conscientiousness (e.g., Industriousness). Thus, conservatives, more so than liberals, may be motivated to maintain an orderly and organized environment, both physical and societal. Thus, focusing more closely on lower-level traits such as Orderliness/Organization can foster a more precise understanding of the processes through which the broad domain of Conscientiousness relates to political orientation (Xu et al., 2016).

6.3 | Withdrawal, assertiveness, and political orientation

Across studies, we found that the overall association between Neuroticism and political orientation was primarily driven by the lower-level trait of Withdrawal/Depression. Thus, analyses at the lower level of traits helps to pinpoint one specific way in which liberals and conservatives differ in their experiences of emotion. The lower-level trait of Withdrawal/Depression focuses primarily on internalizing negative emotions, especially sadness. This link to internalizing emotions (see also Burton et al., 2015) may help to explain the finding that conservatives tend to report higher levels of happiness and life-satisfaction than liberals do. That is, a lower tendency to internalize negative emotions may help people feel happier and more satisfied with their day-to-day lives (Steel et al., 2018).

In the present studies, conservative individuals were generally more assertive than their liberal peers. This difference in Assertiveness resonates with recent findings, which have found that a key dimension of conservatism, "Libertarian Independence," is characterized by the need to assert one's dominance and independence (Xu et al., in press). The combination of higher Assertiveness and lower Withdrawal/Depression may contribute to this dimension of conservatism: In order to be competitive in a dominance hierarchy, one needs to assert oneself effectively, and to avoid being inhibited by negative emotions.

6.4 | Agreeableness and political orientation

Although Agreeableness showed no overall relationship to political orientation at the domain level, its lower-level traits were associated with political orientation in opposite directions. Compassion predicted greater liberalism, whereas Politeness/Respectfulness predicted greater conservatism. Past work has suggested that the link between Politeness and conservatism is partially explained by higher value placed on social norms and traditions, whereas the link between Compassion and liberalism is mediated by higher value placed on egalitarianism (Hirsh et al., 2010). This is consistent with data indicating that one of the two core dimensions of political conservatism is tolerance of inequality, which may be related to lower levels of compassion for individuals with few resources and low status (Jost et al., 2003).

6.5 | Limitations and future directions

The present studies provide a descriptive account of the lower-level trait predictors of political orientation. However, they also possessed important limitations. For example, both of the personality measures used here (the BFAS and the BFI-2) operationalize a particular trait model: the Big Five. Other recent research has examined personality-outcome associations using alternative trait frameworks, such as the HEXACO model and the Dark Triad (Ashton & Lee, 2007; Moshagen et al., 2018). Therefore, future research is needed to test how political attitudes relate with domain and facet-level traits beyond the Big Five.

Beyond documenting trait-attitude associations, it will also be important for future research to test potential mechanisms that might underlie these relationships, and to document behavioral implications. For instance, different personality traits may predispose people to support different values (Caprara et al., 2009) or consume different media products (Xu et al., 2013), which, in turn, foster differences in political beliefs and votes for different candidates (Xu et al., in press). More detailed investigations of these contributing mediators and mechanisms would allow us to obtain a better understanding of the psychological mechanisms that contribute to political attitudes.

The present studies provide evidence that the predictive strength of personality on political ideology increased as the measures of political orientation became more detailed. The amount of variance explained by personality variables in predicting political orientation was much larger for multi-item political measures compared to single-item measures. This suggests that although the effect of personality on single-item measures of overall political identification may be small, its effect on aggregates of specific political positions can be substantial. It is worthwhile to note that even small effects, when scaled up to larger populations, are often sufficient to play determining roles in political events, including close, national elections.

Finally, one might reasonably ask, given that personality variables are, by definition, relatively resistant to change over

short periods of time, how might such knowledge actually facilitate political discourse? We suggest that an individual differences approach offers a robust and psychometrically valid window into underlying motivational and affective processes. In an era of high political polarization, a better understanding of such processes can reduce the problem of "talking past each other" and facilitate meaningful discourse. For example, Feinberg and Willer (2013) demonstrated that the left-right gap in environmental attitudes can be reduced by messages that appeal to conservatives' higher dispositional disgust sensitivity. In an analogous vein, future researchers should investigate whether policy gaps can be closed by crafting more targeted messages that appeal to different audiences' different constellations of lower-level personality traits.

7 | CONCLUSION

Taken together, the present findings extend past research on the links between personality traits and political orientation by examining the role of lower-level traits. Specifically, they show that liberal political orientation was predicted by greater openness to aesthetics and new ideas, but also increased propensity toward negative internalizing emotions, as well as decreased preference for order and organization, and lower assertiveness. This pattern suggests that better understanding of the lower-level personality predictors can help provide a more complete picture of the behavioral and motivational factors that underlie ideology.

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CONFLICT OF INTEREST

Christopher J. Soto is a copyright holder for the Big Five Inven- tory–2 (BFI-2), which was used in the present research. The BFI-2 is freely available for research use at http://www.colby.edu/psych/per-sonality-lab.

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ENDNOTES

[1] We also conducted analyses using the three subscales of the ACT Scale (Conservatism, Traditionalism, and Authoritarianism). These results are available on OSF at https://osf.io/bxrjd.

[2] Although the BFI-2 uses the domain labels Negative Emotionality and Open-Mindedness, for continuity we use the labels Neuroticism and Openness to Experience throughout the present paper.

[3] To check the robustness of these results, we repeated the stepwise regressions while restricting the BFI-2 to the 10 facets that most closely parallel the BFAS aspects (Soto & John, 2017). The results of these analyses were very similar to those reported in the main text.

[4] As in Study 3, we checked the robustness of these results by repeating the stepwise regressions while restricting the BFI-2 to the 10 facets that most closely parallel the BFAS aspects. The results of these analyses were again very similar to those reported in the main text.

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