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Mapping political trust and involvement in the personality space—A meta-analysis and new evidence

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Abstract

Objective: Relations between the Big Five personality dispositions and individual differences in *political trust* and *involvement in politics* have been investigated in many studies. We aimed to systematically integrate these findings and further explore the correlations at different hierarchical levels of the Big Five and political trust and involvement.

Method: We conducted a meta-analysis of 43 publications ($N_1 = 207{,}360$ participants) and estimated latent correlations at different hierarchical levels using two additional samples ($N_2 = 988$ and $N_3 = 795$).

Results: The meta-analysis revealed substantial correlations between involvement and openness (+), extraversion (+), and neuroticism (−), but only small correlations between trust and the Big Five. We also found a substantial amount of inconsistency in findings across studies. Our additional analyses showed that (a) correlations with the Big Five were larger for higher-order factors of *general political trust* (as opposed to subdimensions such as *trust in politicians*) and *general political involvement* (as opposed to subdimensions such as *political interest*) and (b) correlational patterns within each Big Five domain differed across facets.

Conclusion: Our analyses indicate that political involvement is more strongly linked to the Big Five than political trust. We discuss the theoretical and empirical relevance of hierarchical constructs.

KEYWORDS

Big Five, personality facets, personality traits, political attitudes, political involvement

1 | INTRODUCTION

Political research on the Big Five traits is only in its initial stages.

Gerber et al. (2011b, p. 284)

In the last 10 years, an impressive body of research has investigated the association between basic personality traits and political attitudes or behavior (e.g., Arzheimer, 2005; Bakker et al., 2021; Chang et al., 2020; Freitag & Ackermann, 2016; Gerber et al., 2011a, 2011b; Mondak & Halperin, 2008; Mondak et al., 2010; Osborne et al., 2021; Rasmussen & Nørgaard, 2018; Riemann et al., 1993;

Vecchione & Caprara, 2009; Vitriol et al., 2019). Many studies have focused on ideological issue preferences (especially liberalism vs. conservatism), producing robust evidence of substantial relationships, as outlined in a recent meta-analysis (Osborne et al., 2021). There is less systematic evidence, however, on the association between personality traits and individual differences in how people think and feel *about politics in general*. A large number of concepts have been introduced to touch upon these individual differences, such as political trust, interest, and partisanship (e.g., Almond & Verba, 1989/1963). Focusing on two domains in particular—political trust and political involvement—we aim to integrate the empirical evidence of their relationships with general personality dispositions. Despite a large number of studies on the association of political trust and involvement with the Big Five personality traits (e.g., Arzheimer, 2005; Gerber et al., 2011a, 2011b; Mondak & Halperin, 2008; Vecchione & Caprara, 2009; Vitriol et al., 2019), it is still an open question whether there are robust associations that generalize across boundary conditions of single studies (cf. Vitriol et al., 2019). In addition, existing studies have mostly neglected the hierarchical organization of personality traits (but see Foschi & Lauriola, 2014; Gerber et al., 2011b) and political trust and involvement (cf. Bromme & Rothmund, 2021). The present article thus aims to integrate previous findings by meta-analytical means, and to further our understanding of the relations at different levels of abstraction.

We first outline our understanding of trust and involvement as hierarchically structured political attitude domains and summarize the status quo of research linking these attitudes to the Big Five personality traits. We then discuss some implications of the hierarchical organization of personality and political attitudes for this line of research, before presenting the three empirical studies of this article.[1]

1.1 | Trust and involvement as hierarchically structured attitudes toward politics

Individual differences in political attitudes can be roughly categorized into *ideological issue preferences* (e.g., Jost et al., 2009) and what might be called *general attitudes toward politics* (Bromme & Rothmund, 2021). The latter reflect individual differences in how people generally think and feel about politics (which are often investigated within the political culture framework; Almond & Verba, 1989/1963). Two domains within this broad area of attitudes toward politics are the domains of *political trust* (i.e., whether people trust political actors, institutions, etc.) and *political involvement*

(i.e., whether people are psychologically involved in politics), both of which are assumed to fulfill important functions within a democracy (Bianco, 1994; Martín & van Deth, 2007).

In a recent paper, we have proposed that both domains are organized hierarchically, with higher-order factors subsuming more specific attitudes (Bromme & Rothmund, 2021; see also Marien, 2011; Weatherford, 1991). Various concepts have been proposed that describe individual differences in political trust, such as *trust in politicians*[2] (Halmburger, Baumert, et al., 2019), *trust in political institutions* (Marien, 2011), and *trust in the political system* (Halmburger, Baumert, et al., 2019). In addition, we argue that *external political efficacy* can also be located in this domain, because it describes people's expectation that the political system is responsive to citizens' demands (Craig et al., 1990), which is a central factor of the system's perceived trustworthiness (Halmburger, Baumert, et al., 2019). However, people do not always differentiate between these dimensions (Hooghe, 2011), but rely on more generalized expectations of trustworthiness (Rotter, 1971). We therefore proposed an overall tendency of *general political trust*, defined as "the expectation that political objects are—in general—trustworthy, in the sense that they will behave in the citizens' best interest, even in the absence of direct citizen control" (Bromme & Rothmund, 2021, p. 1075). Based on samples from various democracies, we showed that general political trust can be modelled as a higher-order factor subsuming the specific facets described above (Bromme & Rothmund, 2021).

Similarly, several concepts have been distinguished that describe individual differences in people's psychological involvement in politics, for example, *political interest* (van Deth, 1990), *internal political efficacy* (i.e., self-efficacy in the political domain, Sohl, 2014), and *political participation propensity* (i.e., the general willingness to participate in politics, Webb, 2013). We summarize these traits under the label of *political involvement* (see also Schatz et al., 1999; Weatherford, 1991). While the concepts are related to different psychological processes (i.e., interests, self-beliefs, motivations), they function inter-dependently (e.g., Bandura, 1997), and all relate to a person's self-concept. We have therefore proposed that individual differences in these concepts are reflected in a global tendency of *general political involvement*, defined as "*the degree that politics is relevant for various aspects of a person's self-concept*" (Bromme & Rothmund, 2021, p. 1074). Studies on different samples confirmed that such a general tendency can be modelled as a higher-order factor above more specific facets of involvement (Bromme & Rothmund, 2021; Weatherford, 1991).

1.2 | Previous studies mapping trust and involvement in the Big Five space

Personality has long been theorized to play a role for people's political thinking (e.g., Allport, 1929). With the rise of the Big Five framework in the 1990s, this line of research has gained new momentum (see Mondak & Halperin, 2008), first inspiring studies on ideological issue preferences (e.g., Riemann et al., 1993) and—more recently—studies including political trust and political involvement (e.g., Arzheimer, 2005; Freitag & Ackermann, 2016; Gerber et al., 2011a, 2011b; Ha et al., 2013; Mondak & Halperin, 2008; Mondak et al., 2010; Vecchione & Caprara, 2009; Vitriol et al., 2019).

It seems plausible to assume associations between personality traits and a person's political dispositions, because personality traits reflect coherent response patterns toward the social world, including the political world (Denissen & Penke, 2008; Gallego & Oberski, 2012; Gerber et al., 2011b). Empirical findings on personality correlates of ideological leaning have been integrated in comprehensive meta-analyses (Osborne et al., 2021), which revealed small but fairly robust correlations between conservatism and openness ($r = .15$), as well as conscientiousness ($r = .08$).

In contrast, studies including measures of political trust and involvement have not yet been integrated systematically. Ha et al. (2013) summarized several early studies on personality and political participation, but most research on the Big Five and political involvement was only conducted recently. A study by Vitriol et al. (2019) integrated data from 10 different political surveys and revealed some significant, but small pooled effects (e.g., $r \leq |.07|$ for political trust and $r \leq |.12|$ for political interest), which serve as preliminary evidence, that the Big Five and attitudes toward politics are systematically related. Meanwhile, they also reported great variability in size and direction of associations across samples, similar to other multi-sample investigations (e.g., Freitag, 2017; Mondak & Halperin, 2008; Weinschenk, 2017). Without a systematic integration, it therefore remains unclear, whether substantial personality associations exist in the domains of political trust and involvement, and how robust these are across study conditions.

1.3 | Implications of hierarchies in personality and attitudes toward politics

As outlined above, political trust and involvement can be conceptualized as hierarchically organized domains of political attitudes (Bromme & Rothmund, 2021). There is also broad consensus that personality traits are organized hierarchically: The Big Five (*domains*, Costa & McCrae, 1995, p. 23) can be understood as broad aggregations of more specific, inter-correlated traits (e.g., Costa & McCrae, 1995; Costa et al., 1991; DeYoung et al., 2007; Johnson, 2014; Soto & John, 2017). For instance, the Revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992) is organized in six specific *facets* for each domain, and DeYoung et al. (2007) introduced the separation of each domain into two *aspects* "representing an intermediate level of personality structure between facets and domains" (p. 880).

Conceptualizing both—political attitudes and personality traits—as hierarchically organized raises the question which level of the hierarchy to focus on when investigating their relationships. So far, most studies followed an asymmetrical pattern, assessing the Big Five factors at their broadest level, but political trust and involvement at more specific levels (e.g., distinguishing several forms of political participation, instead of assessing a latent propensity to participate; e.g., Mondak et al., 2010; Weinschenk, 2017). However, more symmetrical comparisons would also be feasible (i.e., assessing attitudes toward politics at higher levels of aggregation, or assessing the Big Five at more specific levels). The 'Brunswik principle of symmetry', states that the strongest correlation between a predictor and a criterion can be expected if both constructs are measured at the same level of aggregation, while measures from different levels of aggregation introduce irrelevant variance at one side or neglect relevant variance at the other side, attenuating the correlation (Schulze et al., 2021; Wittmann, 1988; see also Hogan & Roberts, 1996). For example, only some of the neuroticism facets reflect negative views of the external world (e.g., *anxiety*, *anger*[3]), which might generalize to negative views of political actors and thus be related to *trust in politicians*, while the more self-related facets (e.g., *self-consciousness*, *vulnerability*) might be unrelated. A "fair test" in that sense (Wittmann, 1988, p. 541) might not use a domain-level measure of neuroticism—which might be too broad to detect associations with political trust—but a facet- or aspect-level measure focusing on the relevant components of neuroticism (e.g., the *anger* facet or the *volatility* aspect; cf. DeYoung et al., 2007). Based on this idea of symmetry, we investigate two research questions, namely (a) whether different facets within the same personality domain yield differential associations with trust and involvement, and (b) whether associations with personality are strongest at the higher-order level of trust and involvement.

1.3.1 | Differential associations of personality facets

Distinguishing personality at lower levels of the hierarchy has been identified as an important step toward a refined understanding of the associations with political attitudes (Gerber et al., 2011b). There might be cases, where different facets within a domain are differentially related to a specific political attitude. For example, the conscientiousness facet *self-efficacy* might be expected to be positively related to political involvement, while the *cautiousness* facet might be negatively related, because it describes a tendency of behavioral inhibition (Costa & McCrae, 1992, p. 18). If such opposing effects within a domain exist, they will have gone unnoticed in previous research: In Big Five long scales, these associations might have cancelled each other out. In short scales, they might even have contributed to contradictory patterns of results across studies, depending on which of the two facets was represented in a short scale (cf. Bakker & Lelkes, 2018).

We are aware of three studies testing some associations at lower levels of the personality hierarchy. Gerber et al. (2011b) have explored 10 out of 30 facets regarding their effect on political interest, Foschi and Lauriola (2014) used facet-measures of extraversion and agreeableness regarding political participation, and Chen (2015) assessed the 10 personality aspects regarding participation in political campaigns. These studies yielded initial evidence that some relationships are restricted to specific facets. Meanwhile, a systematic assessment of personality facets and political trust and involvement has not been conducted, so far, and there is no systematic evidence for or against the assumption of countervailing associations within a personality domain.

1.3.2 | Associations at higher levels of political trust and involvement

So far, research on the Big Five associations has investigated political trust and involvement at the facet level (e.g., *trust in politicians*; Arzheimer, 2005) or even at item-level (e.g., *trust in the parliament*; Freitag, 2017; Gabriel & Völkl, 2005). Given the hierarchical organization of political trust and involvement, associations with the Big Five might also be located at the higher-order level. General political trust and involvement are broader than their lower-order components and constitute more general (i.e., less context- and stimulus-dependent) tendencies of political thinking and feeling, and might thus be plausibly associated with general personality traits—similar

to the established findings from the domain of ideological issue preferences, where the most robust findings are documented for the broadest level of individual differences, the liberalism–conservatism dimension (Osborne et al., 2021).

This idea is in line with the Brunswik principle of symmetry (Wittmann, 1988). For example, different facets of openness to experience might be related to different aspects of political involvement: Let us presume that *intellect* (reflecting the preference for intellectually challenging topics; Costa & McCrae, 1992, p. 17) was positively associated with political interest, while *adventurousness* ("the willingness to try different activities"; p. 17) was positively associated with political participation. The openness domain factor would then also be substantially related to general political involvement, which incorporates both, political interest and the propensity to political participation. Some researchers, on the other hand, have suggested that the specificity of different facets of trust and involvement should result in specific patterns of associations with the Big Five (e.g., social forms of participation being related to extraversion), arguing against the use of aggregated indices (e.g., Gabriel & Völkl, 2005; Mondak et al., 2010; Weinschenk, 2017). It thus remains an open question, whether associations with the Big Five are larger at the specific or the higher-order level of political trust and involvement.

1.4 | The present research

Our primary goal was to systematically review research on the empirical relation between the Big Five personality traits and attitudes toward politics. We focused especially on attitudes toward politics that have been linked to higher-order factors, namely political trust and political involvement (Bromme & Rothmund, 2021). To achieve this goal, we conducted a systematic literature review and meta-analyses (Study 1). Our second goal was to investigate potential implications of the hierarchical structure of political attitudes and Big Five personality traits for this line of research. We conducted two survey studies (Studies 2 and 3). In Study 2, we investigated whether correlations with the Big Five are larger at the higher-order level of political trust and involvement, or at the level of the specific constructs. In Study 3, we tested whether the Big Five facets within a domain yield opposite patterns of association with attitudes toward politics. Both research questions are also informative about whether relations between attitudes toward politics and personality might have been underestimated in the past.

2 | STUDY 1

We conducted a systematic literature review and meta-analysis to estimate the relations between the Big Five factors and different facets of political trust and political involvement.

2.1 | Method

For each of the facets of political trust and political involvement, we searched for studies that met the following criteria:

1. The study included a facet of political trust (or political involvement, respectively; specific inclusion criteria are documented in the online Supporting Information).
2. The study included a measure of at least one domain-level factor of the Big Five, explicitly referring to the "Big Five" or "Five Factor" framework (i.e., excluding studies that measured, for example, extraversion based on the Eysenck framework).
3. The study included a correlational estimate of the association between both measures (e.g., bivariate correlation, regression or path coefficient; excluding review articles).
4. The study was reported in English or German.

2.1.1 | Literature search

Our literature search involved two steps (see online Supporting Information for the protocol). First, using the *web of science* database (www.webofknowledge.com), we conducted a forward reference search (Cooper, 2017, p. 94) based on two key publications regarding various attitudes toward politics and the Big Five, namely the papers by Mondak and Halperin (2008) and Mondak et al. (2010). Out of the 348 database records, we identified 34 publications that fulfilled the above-mentioned criteria (including both starting point papers). Second, we conducted a keyword-based search for books and book chapters at *World Cat* (www.worldcat.org), identifying three monographs and six chapters in edited volumes. In addition, we found seven relevant manuscripts by unsystematic search processes (including unpublished manuscripts through personal contacts). In total, we identified 50 publications and manuscripts. Given a partial overlap of data, we excluded seven publications to ensure that all reported effects were independent from each other. Different studies from the same publication were included as long as they used independent surveys. If different subsets of a sample were analyzed separately (using the same measures),

we included the full sample results, or—if not reported—the results of the largest subsample. In total, we included 43 publications and manuscripts with relevant estimates based on $k = 57$ independent samples and a total of approximately $N = 207{,}360$ participants.

2.1.2 | Procedure of analysis

For each study, we extracted bivariate correlations between (a) the Big Five factors and (b) the facets of political trust and involvement. For studies where no bivariate correlations were reported, we contacted the authors to obtain the estimates or raw data. In cases where the authors were not available (after two attempts of contact) or declared not being able to provide any information, we extracted the direction of the association from other effect size estimates, such as coefficients in multiple regression models (this applied to 23% of all effect size estimates). As these estimates reflect partial, rather than bivariate correlations, we only coded their direction, but we did not include them in the calculation of pooled meta-analytical effect sizes (cf. Cooper, 2017, p. 225).

Our analyses involved two steps. First, we followed a simple *vote-counting* procedure (Cooper, 2017) to integrate the trends in the previous studies' results and assess the degree of consistency: For each effect size estimate of a measure of political trust or involvement with the Big Five factors we coded the direction (positive/null/negative) and the level of statistical certainty ($p < .05$/$p < .01$) (see Table A1 in the Appendix for political trust and Table A2 for political involvement). In order to assess whether previous findings were contingent on the specific facet or whether they generalize across facets of trust (and involvement, respectively), the effects were coded separately for each facet of trust (and involvement, respectively), resulting in 30 comparisons (5 personality factors × 6 political attitude facets). Tables 1 and 2 display the cumulated positive, negative, and null findings across studies.

Second, we estimated pooled effect sized for each of the 30 comparisons, using a random-effects meta-analytical model based on the inverse variance method (e.g., Deeks et al., 2019). In this second step, only the bivariate correlations (77% of all effect sizes) were included. The large majority of these were reported using Person's correlation coefficient r. However, Gabriel and Völkl (2005) reported their bivariate associations using Kendall's rank correlation coefficient τ_b, which we transformed into r following the recommendations by Walker (2003). In addition, two studies reported (phenotypic) bivariate correlations between the constructs of interest (Weinschenk & Dawes, 2017; Weinschenk et al., 2019) whose effect sizes were taken as Person's r without any modification. The

TABLE 1 Cross-study cumulated effects for political trust

	Political trust		
	Trust in politicians	Trust in institutions	External political efficacy
Neuroticism	− − 0 0 0 0	− − − − − − − 0 0 0	− − − − − − − 0 0 0 0 0 0 0 0 + +
Extraversion	− 0 0 0 0 +	− − 0 0 0 0 0 0 + + +	0 0 0 0 0 0 0 0 0 0 0 + + + + + + +
Openness	− − 0 0 0 +	− 0 0 0 + + + + + + +	0 0 0 0 0 0 0 0 0 0 0 0 + + + + +
Conscientiousness	0 0 0 0 + +	− − 0 0 0 0 0 0 + + +	− − − − − 0 0 0 0 0 0 0 0 0 0 + + +
Agreeableness	0 0 0 + + + +	0 0 0 0 0 + + + + + +	− 0 0 0 0 0 0 + + + + + + + + + + +

Note: "−" = negative association, "0" = no significant association, "+" = positive association.

TABLE 2 Cross-study cumulated effects for political involvement

	Political involvement		
	Political interest	Internal political efficacy	Political participation propensity
Neuroticism	− 0 0 0 0 0 0 0 0 0 +	− − − − − − − − − − − − − 0 0 0 0 0 0	− − − − − − − − − 0 0 0 0 0 0 0 0 0 0 0 0 0 0 +
Extraversion	0 0 0 0 0 0 +	0 0 0 0 0 + + + + + + + + + + + + + +	0 0 0 0 0 0 +
Openness	0 0 +	0 + + + + + + + + + + + + + + + + + + +	− − 0 0 0 0 +
Conscientiousness	0 0 0 0 0 0 0 0 0 0 +	− 0 0 0 0 0 0 0 0 + + + + + + + + + + +	− − − − − 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 +
Agreeableness	− − − − 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 + + + + + + + + + + +	− − − − − − − 0 0 0 0 0 0 0 0 0 + +	− − − − − − 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 + + + + +

Note: "−" = negative association, "0" = no significant association, "+" = positive association.

Sidik-Jonkman estimator (Sidik & Jonkman, 2005) was used to calculate the heterogeneity variance τ^2. We used Knapp-Hartung adjustments (Knapp & Hartung, 2003) to calculate the confidence interval around each pooled effect. Results are displayed in Figure 1.

2.2 | Results and discussion

In the following, we (1) summarize the associations between personality and involvement, (2) summarize the associations between personality and trust, (3) compare patterns of associations across facets of involvement and trust, and (4) describe and discuss inconsistencies in findings across studies.

2.2.1 | Substantial associations with political involvement

The meta-analysis yielded evidence for several substantial correlations of all involvement facets with openness, extraversion, and neuroticism (see Figure 1). For *openness* the pooled meta-analytical correlation with internal efficacy was $r = .23$, 95% CI [.18, .28], and slightly lower for political interest ($r = .17$ [.14, .20]) and participation propensity ($r = .15$ [.12, .19]). Similarly, *extraversion* yielded pooled correlations of $r = .21$ (.15, .26) with internal efficacy, $r = .10$ (.08, .13) with interest, and $r = .09$ (.07, .11) with participation. Third, *neuroticism* was negatively associated with internal efficacy ($r = −.15$ [−.23, −.07]), political interest ($r = −.08$
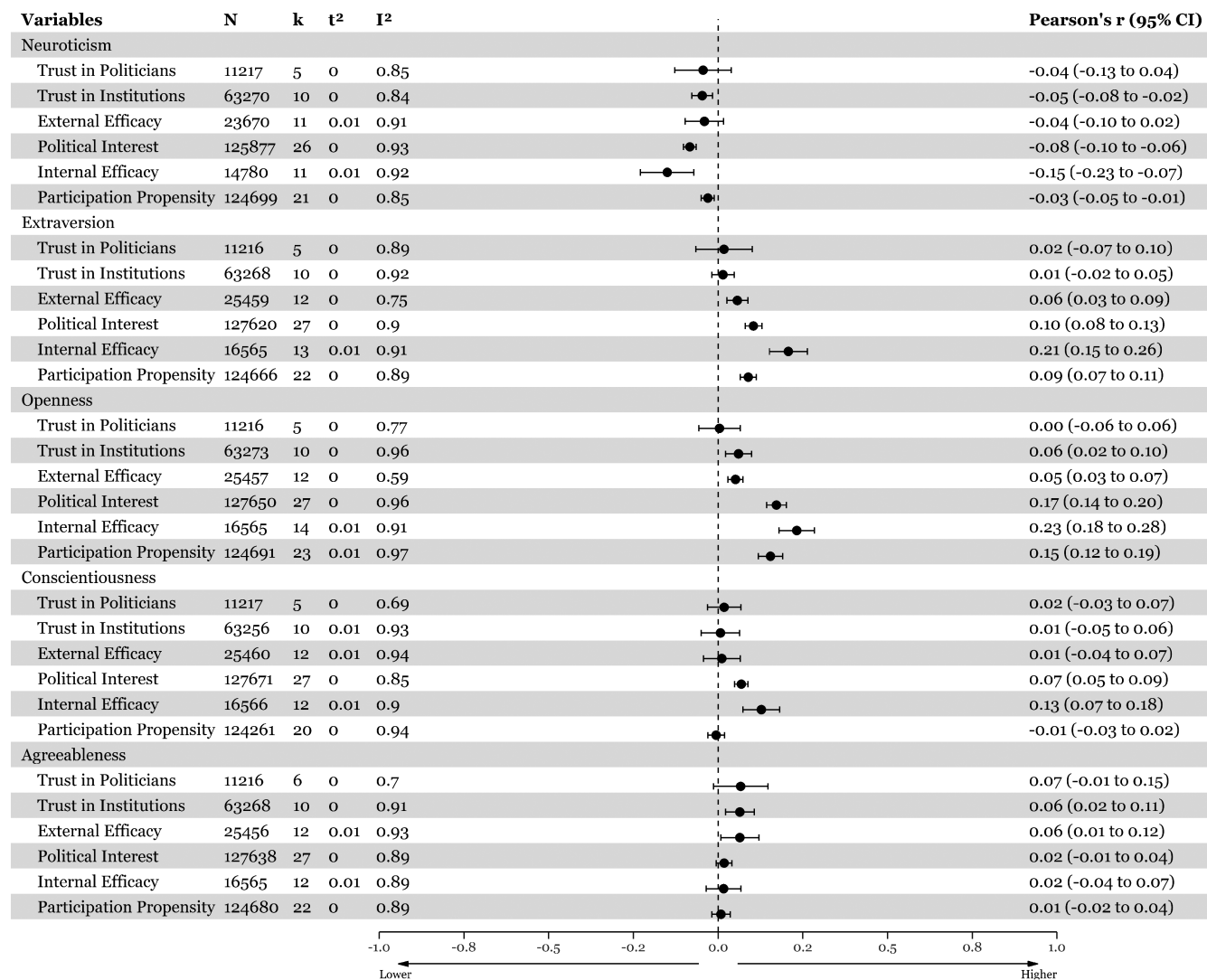
Variables	N	k	t²	I²	Pearson's r (95% CI)
Neuroticism					
Trust in Politicians	11217	5	0	0.85	-0.04 (-0.13 to 0.04)
Trust in Institutions	63270	10	0	0.84	-0.05 (-0.08 to -0.02)
External Efficacy	23670	11	0.01	0.91	-0.04 (-0.10 to 0.02)
Political Interest	125877	26	0	0.93	-0.08 (-0.10 to -0.06)
Internal Efficacy	14780	11	0.01	0.92	-0.15 (-0.23 to -0.07)
Participation Propensity	124699	21	0	0.85	-0.03 (-0.05 to -0.01)
Extraversion					
Trust in Politicians	11216	5	0	0.89	0.02 (-0.07 to 0.10)
Trust in Institutions	63268	10	0	0.92	0.01 (-0.02 to 0.05)
External Efficacy	25459	12	0	0.75	0.06 (0.03 to 0.09)
Political Interest	127620	27	0	0.9	0.10 (0.08 to 0.13)
Internal Efficacy	16565	13	0.01	0.91	0.21 (0.15 to 0.26)
Participation Propensity	124666	22	0	0.89	0.09 (0.07 to 0.11)
Openness					
Trust in Politicians	11216	5	0	0.77	0.00 (-0.06 to 0.06)
Trust in Institutions	63273	10	0	0.96	0.06 (0.02 to 0.10)
External Efficacy	25457	12	0	0.59	0.05 (0.03 to 0.07)
Political Interest	127650	27	0	0.96	0.17 (0.14 to 0.20)
Internal Efficacy	16565	14	0.01	0.91	0.23 (0.18 to 0.28)
Participation Propensity	124691	23	0.01	0.97	0.15 (0.12 to 0.19)
Conscientiousness					
Trust in Politicians	11217	5	0	0.69	0.02 (-0.03 to 0.07)
Trust in Institutions	63256	10	0.01	0.93	0.01 (-0.05 to 0.06)
External Efficacy	25460	12	0.01	0.94	0.01 (-0.04 to 0.07)
Political Interest	127671	27	0	0.85	0.07 (0.05 to 0.09)
Internal Efficacy	16566	12	0.01	0.9	0.13 (0.07 to 0.18)
Participation Propensity	124261	20	0	0.94	-0.01 (-0.03 to 0.02)
Agreeableness					
Trust in Politicians	11216	6	0	0.7	0.07 (-0.01 to 0.15)
Trust in Institutions	63268	10	0	0.91	0.06 (0.02 to 0.11)
External Efficacy	25456	12	0.01	0.93	0.06 (0.01 to 0.12)
Political Interest	127638	27	0	0.89	0.02 (-0.01 to 0.04)
Internal Efficacy	16565	12	0.01	0.89	0.02 (-0.04 to 0.07)
Participation Propensity	124680	22	0	0.89	0.01 (-0.02 to 0.04)

-1.0   -0.8   -0.5   -0.2   0.0   0.2   0.5   0.8   1.0

Lower ←   → Higher

FIGURE 1 Meta-analytic correlations. Error bars indicate the 95% confidence interval. N = Sum of participants across original studies, k = number of original studies, $t^2 = \tau^2$ = variance of effect sizes between studies (all τ^2 values are significantly different from zero, but rounded to two decimals), I^2 = percentage of variance in effect sizes that is due to between-study heterogeneity as opposed to sampling error, Pearson's r = pooled meta-analytical effect size estimate

[−.10, −.06]), and participation propensity—the latter being only slightly significant ($r = −.03$ [−.05, −.01]). Also, *conscientiousness* was positively associated with internal efficacy ($r = .13$ [.07, .18]) and political interest ($r = .07$ [.05, .09]), but not participation propensity. The vote counting analysis supported these results, with large shares of significant findings in the corresponding direction (see Table 2).

2.2.2 | Weak evidence regarding associations with political trust

In comparison, the evidence for associations between the Big Five and political trust is much weaker. While several

of the meta-analytical correlations were significant—with positive trends toward agreeableness (+), openness (+), and neuroticism (−)—none exceeded the level of $r = |.06|$ and most of their 95% CIs' lower boundaries were only slightly above 0 (see Figure 1). Similarly, the vote-counting analysis did not reveal clear tendencies of associations for most of the comparisons (see Table 1), with only some exceptions (e.g., for trust in institutions, most studies yielded negative associations with neuroticism and positive associations with openness). Thus, while several of the previous studies yielded significant associations between personality and political trust, the associations are not robust across studies and can be assumed to be contingent on specific boundary conditions (cf. Freitag & Ackermann, 2016).

2.2.3 | Consistency across facets of involvement and trust

The vote-counting analysis allows to compare patterns of findings across the different facets within each domain of attitudes toward politics. The three facets of political involvement (interest, internal efficacy, and participation) yielded mostly consistent patterns of correlations for each of the Big Five, with two exceptions: Participation propensity—in comparison to internal efficacy and political interest—yielded fewer negative findings with neuroticism, and yielded much more null findings with conscientiousness. In these regards, participation propensity appeared to yield slightly different tendencies in its personality associations, whereas internal efficacy and political interest reveal completely analogous patterns of association (see Table 2).

For political trust, the comparison of correlational patterns across facets is more tentative, given the smaller number of studies and relatively low effect sizes in these studies. That being said, some consistent patterns could also be observed when comparing the results for trust in politicians, trust in institutions, and external efficacy (see Table 1): All three facets tended to be positively associated with agreeableness and negatively associated with neuroticism, and all three facets revealed mostly insignificant findings regarding extraversion and conscientiousness, yielding some preliminary evidence for a mutual pattern that might generalize to an aggregate level of general political trust.

2.2.4 | Inconsistent findings across studies

The integration of previous studies revealed substantial correlations for political involvement, as well as consistent patterns of associations for different facets of involvement, as well as trust. At the same time, it should be emphasized that we encountered substantial inconsistencies in the size and direction of correlations across studies. This was apparent in the vote-counting analysis, where some comparisons yielded as many positive as negative findings (involvement and agreeableness; trust and conscientiousness; see Tables 1 and 2). It was also reflected in the meta-analytical models, where τ^2 was significantly greater than zero in each of the 30 models (see Figure 1), which indicates that significant between-study heterogeneity exists in the data (and that the use of a random-effects model was appropriate). The heterogeneity between studies largely surpasses the degree of heterogeneity expected by sampling error, as indicated by the large I^2 coefficients ($Md = .90$, SD = .09) (Higgins & Thompson, 2002). According to the classifications

proposed by Higgins et al. (2003), heterogeneity can be considered high ($I^2 \geq .75$) for 90% (27 out of 30) of the models and moderate ($.50 \leq I^2 < .75$) for three models (10%). This implies that the pooled meta-analytical effect sizes in Figure 1 cannot be interpreted as an estimate of the true population effect, but are "defined as the mean of the true effect size distribution" (Harrer et al., 2022, p. 139). A significant estimate tells us that the mean of the effect sizes is likely different from zero, but there might still be specific conditions where the personality traits and the political attitude are not related.

Our review revealed potential methodological reasons for this inconsistency. First, we found that 48% of effect size estimates in our review were based on Big Five scales of one or two items per factor (see Tables A1 and A2). Bakker and Lelkes (2018) have demonstrated how the use of Big Five short scales can lead to systematic underestimations of the correlations with political attitudes, which must be assumed to have happened in some of the studies on trust and involvement as well (see also Credé et al., 2012). Second, the reliability coefficients of the Big Five measures (mostly internal consistencies) ranged from .02 to .90 ($Md = .71$; SD = .35), with 21% of the coefficients below .5. Some authors argued low internal consistency to be a necessary consequence of selecting items of different content within a domain (e.g., Ha et al., 2013), which exemplifies how the trade-off between internal consistency and content validity of broad factors (see McCrae, 2015, p. 103) is especially difficult to solve for short scales. Meanwhile, we do not believe that a lack of test-power has been a relevant driver of inconsistency, because the majority of studies relied on relatively large samples (93% and 63% of the samples included $N > 300$ and $N > 1000$ participants, respectively).

Concluding, even though heterogeneity across results was large, some consistent patterns of results across facets of political involvement and political trust have been identified. For the domain of political involvement, substantial pooled effects have been identified with three of the Big Five domains, while the pooled effects for political trust were small.

3 | STUDY 2

In our second study, we aimed to determine whether associations between the Big Five and attitudes toward politics are larger at the level of generalized attitudes (i.e., higher-order political trust and involvement) or at the level of their more specific components (e.g., trust in politicians and political interest)—or, put differently, whether the associations are *located* at the general or the specific level of attitudes. So far, no study has modeled higher-order
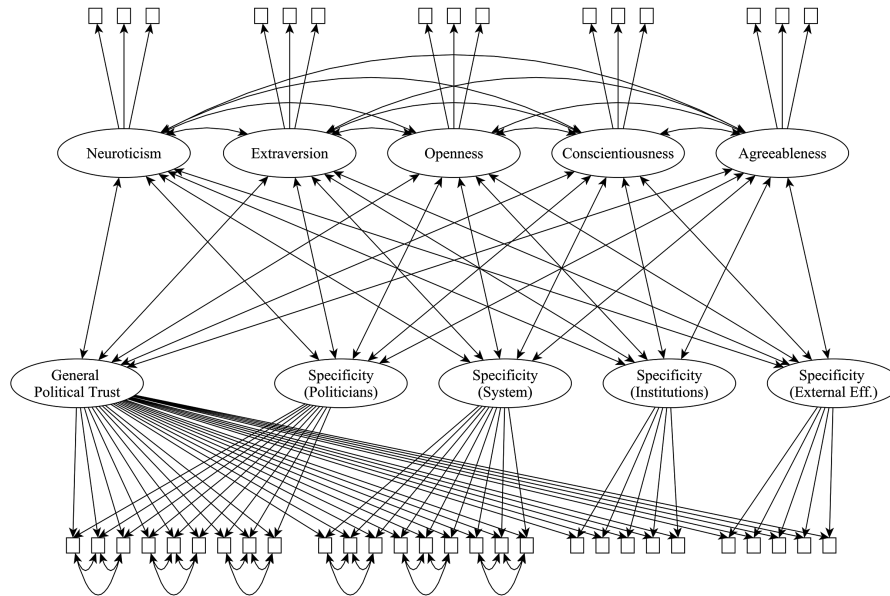
FIGURE 2 Specification of Model 1 (Big Five and bifactor model of political trust)

factors of political trust and involvement to assess their relationship with the Big Five.

3.1 | Method

Using structural equation modeling (SEM) we estimated correlations between latent variables to compensate for unreliability. In order to separate associations at the level of specific attitudes (e.g., trust in politicians) from associations at the general level (e.g., general political trust), we specified a *bifactor model* (cf. Gignac, 2008), where each item loaded on a specific factor and an orthogonal general factor. Similar to higher-order models, bifactor models "also concern situations where several correlated specific constructs make up a more general construct of interest" (Kline, 2016, p. 319). In contrast to higher-order models, however, specific factors in bifactor models can be interpreted to display only specific variance not shared with the general factor, which makes them a useful tool to distinguish the predictive validity of both hierarchical levels (Gignac, 2008). All models (including Study 3) were estimated in R (4.0.2; R Core Team, 2018), based on the lavaan package (0.6-7; Rosseel, 2012). All data and R scripts are available at https://osf.io/mrvnu.

3.1.1 | Sample

An online sample was recruited in October 2016 by the professional survey agency respondi from its online panel (www.respondi.com), applying quotas for gender, age and level of education based on the composition of the German adult population (i.e., 18 years and older). Sample size was based on a power analysis specified for the detection of small effects ($r \approx .10$) with a test power of .8. After detection and exclusion of potential careless responders (see online Supporting Information) and listwise exclusion of missing values, the sample consisted of $N = 988$ cases, with a mean age 51.6 years (SD = 16.5 years), 51.5% females, and 41.5%, 36.2%, and 22.3% with low, medium, and high levels of education, respectively. Participants gave their informed consent and received a financial incentive.

3.1.2 | Measures

We used two nine-item scales based on Halmburger, Baumert, et al. (2019) to measure *trust in politicians* and *trust in the political system*,[4] both yielding high internal consistencies (McDonald's $\omega = .94$, and $\omega = .93$, respectively). As each of these scales is theoretically assumed to contain three sub-dimensions (cf. Halmburger, Baumert, et al., 2019), residuals of the respective items were allowed to be correlated in the models (see Figure 2). We also used five items from GESIS (2015) to measure *trust in political institutions* ($\omega = .91$), and five items from Vetter (1997) and Rattinger et al. (2016), to measure *external political efficacy* ($\omega = .72$). Furthermore, we measured *political interest* using the five-item scale by Otto and Bacherle (2011; $\omega = .94$); *internal political efficacy* using the ten-item scale by Caprara et al. (2009), in the translated version by Bromme et al. (2020; $\omega = .91$); and *political participation propensity* by asking about past participation in eight different political activities (ordinal $\omega = .89$). As the participation propensity items were

highly skewed, we created four parcels for the use in SEM by combining items of high and low item-total correlation (Little, 2013, p. 24), thereby enabling maximum-likelihood (ML) based model estimation. Finally, we assessed the *Big Five domains* with three items each, using the BFI-S (Gerlitz & Schupp, 2005), which yielded internal consistencies of $\omega = .67$ (N), $\omega = .72$ (E), $\omega = .61$ (O), $\omega = .64$ (C), and $\omega = .54$ (A). All item wordings are reported in the online Supporting Information.

3.1.3 | Modelling strategy

We specified two separate models to estimate the Big Five associations with political trust and involvement, respectively, because a joint model was too complex to converge based on the available indicators. Also, not controlling for shared variance between both general attitudes comes closer to the analysis of zero-order correlations, facilitating comparison to the previous results.

In the first model, we specified a general factor of political trust, as well as four specific factors of trust in politicians, institutions, the political system, and the system's responsiveness, all of which were set to be orthogonal (see Figure 2), in order to assess each components association with the Big Five, while controlling for the other components (cf. Gignac, 2008). Based on ML estimation, model fit was acceptable (CFI = .943, RMSEA = .046, SRMR = .047). Standardized loadings on the general factor were substantially larger ($Md = .77$) than the specific factors' loadings ($Md = .24$; see online Supporting Information for all parameter estimates).

The second model was specified analogously to Model 1, but based on the measures of political interest, internal efficacy, and participation propensity. Model fit was slightly worse (CFI = .921, RMSEA = .052, SRMR = .051). Again, standardized item loadings of the general factor ($Md = .62$) were larger than the specific factors' item loadings ($Md = .50$).

In both models, much of the misspecification could be traced back to cross-loadings in the Big Five measure (e.g., items of extraversion and neuroticism loading on the latent agreeableness variable), which is an almost unavoidable problem in confirmatory factor analyses (CFA) on Big Five inventories because of the complex and partly overlapping domain factors (Costa & McCrae, 1995, p. 25; Hopwood & Donnellan, 2010).

3.2 | Results and discussion

Table 3 displays the correlations between latent variables (omitting Big Five inter-correlations; see online Supporting Information). For the domain of political trust, we found several significant correlations of small to medium effect size (cf. Cohen, 2013). First, for openness and agreeableness, significant correlations were found at the general level of political trust, but not the specific components, implying that the specificity of different trust facets does not matter for these factors. In contrast, neuroticism (−) was significantly correlated with general political trust and—in addition—several specific components of trust, indicating that some components of the neurotic domain are related to all aspects of political trust, while some of the shared variance is specific to trust in the political system and institutions (with emotionally stable people being more trusting). Finally, conscientiousness was only significantly related to the specific component of external efficacy.

Our second model yielded substantial correlations between the general factor of involvement and four of the personality traits (all but agreeableness). For the three Big Five factors most consistently associated with involvement in the literature review—openness, extraversion, and neuroticism—the latent correlations exceeded |.30|, which is substantially larger than the pooled effect sizes from the meta-analyses (see Study 1).

In comparison, the two significant correlations at the specific level of involvement (namely the specificity of participation propensity) were somewhat smaller ($\hat{\rho} = .15$ for neuroticism and $\hat{\rho} = −.21$ for conscientiousness), indicating that the association between involvement and the Big Five is mostly limited to the higher-order level. Interestingly, for the two instances where specificity did make a difference, the general involvement effect (N− and C+) and the specific effect of participation (N+ and C−) ran in opposite directions. While more conscientious people were more prone to political involvement in general, the propensity for political action seemed to be inhibited (compared to strong general involvement). A potential explanation might be the behavioral nature of participation propensity, as opposed to the more cognitive nature of interest and efficacy: some elements of conscientiousness might reflect processes of behavioral inhibition (e.g., the *cautiousness* facet) and some elements of neuroticism might reflect processes that facilitate political behavior (e.g., the *anger* facet), and these processes seem to work independently of the cognitive processes reflected by these traits.

Overall, the findings from Study 2 indicated that the higher-order factors of trust and involvement account for relations with Big Five in a more substantial way than the lower-order facets—although some facets increased explanatory power, especially in the domain of trust.

TABLE 3 Latent correlation estimates in bifactor models (Study 2)

		Neuroticism	Extraversion	Openness	Conscientiousness	Agreeableness
Model 1	**General political trust**	**−.085***	**−.028**	**.156***	**−.076**	**.096***
	Specificity of trust in politicians	−.065	.024	−.045	.030	.049
	Specificity of system trust	−.269**	.053	−.033	.032	−.071
	Specificity of institutional trust	−.269***	.062	−.043	.022	.074
	Specificity of external efficacy	−.146*	−.043	−.009	−.129*	−.086
Model 2	**General political involvement**	**−.305***	**.321***	**.406**	**.217***	**.056**
	Specificity of political interest	−.015	−.016	.019	−.027	−.008
	Specificity of internal efficacy	−.037	.004	.114	−.087	−.049
	Specificity of participation propensity	.147**	−.031	.035	−.205***	−.077

Note: General factors in bold. $N = 988$.

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

4 | STUDY 3

In our third study, we aimed to test whether the Big Five facets within a domain differ in the strength and direction of association with political trust and involvement.

4.1 | Method

Using SEM, we specified hierarchical political attitude models with general political trust and involvement as higher-order factors above the more specific constructs, and estimated the correlations between these higher-order factors and latent factors of (a) Big Five domains, and (b) Big Five facets.

4.1.1 | Hypotheses

Based on the rationale that general political trust and involvement are rather narrow traits, compared to the multifaceted Big Five domains, we expected the former to display stronger associations with some Big Five facets than with others (see Gerber et al., 2011b). In three cases, we expected associations with facets within the same domain to differ in their direction. Specifically, we predicted that

H1 within the extraversion domain, *general political trust* correlates positively with *friendliness*, but negatively with *assertiveness* (because the former requires some degree of interpersonal trust, while the later might stem from a need to control others),

H2 within the conscientiousness domain, *general political involvement* correlates positively with *self-efficacy*, but negatively with *cautiousness* (because general self-efficacy relates to political self-efficacy, while cautiousness might fulfil a self-restraining function, especially relevant in life domains with low chances of personal success such as politics),

H3 within the agreeableness domain, *general political involvement* correlates positively with *morality* and *altruism*, but negatively with *modesty* (because the former reflect norms of good citizenship, while the later implies critical self-evaluation, which might dampen beliefs of self-efficacy).

These hypotheses have been preregistered before data collection (see https://osf.io/mrvnu). While we have specified several other hypotheses in the preregistration, these do not relate to within-domain opposing effects and therefore do not essentially contribute to the present research question. Consequently, we do not further discuss them here, but refer to the preregistration for reasons of transparency.

4.1.2 | Sample

Data were collected online in Germany in December 2017 by the survey agency respondi (www.respondi.com). Applying quotas for age, gender, and level of education, we aimed to approximate the composition of the German population between 18 and 70 years (as preregistered at osf.io/mrvnu). The final sample included 49.8% females, a mean age of 44.9 years (SD = 14.4 years), and 31.4%, 32.3%, and 36.2% of low, medium, and highly educated participants, respectively. Sample size was set to detect small effect sizes ($r \approx .10$) with a test power of .8. The final sample size was $N = 795$, after detection and exclusion of potential careless responders following a preregistered procedure (see osf.io/mrvnu and online Supporting Information). Given the high number of personality items, listwise exclusion of missing values would have decreased sample size by about one third. We thus excluded cases with missing values for each analysis separately, minimizing the loss of information. All participants gave their informed consent and received a financial incentive.

4.1.3 | Measures

Due to the necessarily large number of facet items, we had to reduce the number of items measuring attitudes toward politics compared to Study 2. Based on the Study 2 measures, short scales were created by choosing items with the highest item-total correlation, but maintaining all subdimensions within multidimensional scales. We selected three items from Halmburger, Baumert, et al. (2019) to measure *trust in politicians* ($\omega = .87$), three items on *trust in institutions* (i.e., the parliament, federal government, and political parties; $\omega = .91$), the three items of *external efficacy* proposed by Vetter (1997; $\omega = .69$), but omitted the *trust in the political system* scale. Furthermore, we used three items from the *political interest* scale by Otto and Bacherle (2011; $\omega = .95$), a four-item *internal efficacy* short scale (as suggested by Caprara et al., 2009; $\omega = .84$), and four items of *political participation* ($\omega = .74$).

To measure the Big Five facets, we applied a German version of the IPIP-NEO-120 (Johnson, 2014), which was constructed to capture the same structure as the NEO-PI-R using four items for each of the 30 facets (i.e., 24 items per domain). Johnson (2014) demonstrated the inventory's construct validity. The translation is based on work by Treiber et al. (2013), with minor adjustments to some of the items by ourselves (see online Supporting Information). The neuroticism items yielded an internal consistency of $\omega = .89$, with facet level values of $\omega = [.77, .80, .85, .55, .62, .63]$. Internal consistencies for the extraversion items were $\omega = .88$ (and $\omega = [.70, .70,$

.81, .44, .84, .81]), for the conscientiousness items $\omega = .89$ (and $\omega = [.74, .85, .66, .66, .68, .81]$), and for the agreeableness items $\omega = .81$ (and $\omega = [.69, .79, .69, .69, .67, .72]$). The *liberalism* (O6) facet items did not provide a consistent scale (Cronbach's $\alpha = -.24$), raising doubts about the validity of the translated items of this facet. We thus excluded the liberalism items from the analysis. The remaining 20 items of the openness domain and its remaining facets yielded acceptable internal consistencies ($\omega = .81$ and $\omega = [.75, .72, .57, .68, .69]$).

4.1.4 | Modelling strategy

For all models, we used a preregistered CFA model to jointly estimate general political trust and involvement as higher-order factors above their respective lower-order components[5] (see osf.io/mrvnu). The joint model allows both factors to correlate, in line with findings of a positive correlation in a large number of countries (Bromme & Rothmund, 2021). Further, we had preregistered to estimate correlations with the Big Five by extracting latent factors based on exploratory factor analysis. We deviated from this plan, because we realized later that a full SEM approach would allow us to estimate latent correlations (Kline, 2016), avoiding part of the systematic underestimation that we believe to have happened in previous research (see Study 1).

Given the particular complex internal structure of facet-level Big Five inventories (Costa & McCrae, 1995), it is hardly possible to pre-specify a realistic model of all 30 facets' cross-loadings (Hopwood & Donnellan, 2010). To bypass this problem, we followed the approach by Kajonius and Johnson (2019) to model each domain separately, and used their IPIP-NEO-120 model fit as reference findings (as recommended by Hopwood & Donnellan, 2010). Estimating several separate models for each domain had the additional advantage of maintaining larger case numbers, as missings were excluded for each model separately.

For the domain-level models, the Big Five factors were specified as first-order latent variables (i.e., all 24 items loaded directly on the domain factor). Facets were represented by allowing correlated residuals within each facet-item cluster. Fit indices and domain-level correlation estimates are displayed in Table 4. For the facet-level models, we specified correlated latent variables for each facet within a domain. Fit indices and facet-level correlation estimates are displayed in Table 5. All models were estimated based on the ML estimator and parameter estimates are reported in the online Supporting Information.

Both domain- and facet-level models yielded fit indices similar to those reported by Kajonius and Johnson (2019), with median CFI = .921 and median RMSEA = .044.

While the CFI values fall below established fit criteria (cf. Hu & Bentler, 1999), this is to be expected for multidimensional personality scales, due to facets' cross-loadings and because facets are not locally independent within domains (i.e., some facets share additional variance beyond the domain variance; Hopwood & Donnellan, 2010). To test whether misspecification biased the correlations, we estimated a series of alternative models (see online Supporting Information), which resulted in largely similar correlational patterns (for an exception, see *limitations* section).

4.2 | Results and discussion

First, we examined the domain-level correlations in order to test whether the Study 2 findings for general political trust and involvement could be replicated (see Table 4).

For political trust, the correlations were only partially consistent with the results from Study 2, with extraversion, but not agreeableness being significantly related to general political trust. This deviation in findings seems to support one of the conclusions from the literature review, where (domain-level) Big Five associations appeared to be contingent on unknown boundary conditions.

For political involvement, correlational patterns were fully consistent with Study 2 results. Effect sizes, however, were unusually large ($|.30| < \hat{\rho} < |.68|$), which can be partly attributed to the latent variable modeling approach (calculating the openness-involvement correlation between observed variables would have yielded $r = .42$).

The main focus of Study 3 was on facet-level associations (see Table 5). In contrast to hypotheses H1 and H2, neither the extraversion facets and political trust, nor the conscientiousness facets and political involvement yielded opposing directions of associations.

The data did, however, yield some support for hypothesis H3, with the *modesty* facet negatively and the altruism facet positively related to political involvement (with

$\hat{\rho} = -.40$ and $\hat{\rho} = .19$, respectively). Furthermore, one unpredicted case of within-domain opposing directions of effects was observed, namely in the agreeableness domain and political trust, where *modesty* was also negatively, but several other facets positively related to political trust.

In addition, the analyses revealed several instances where facets within a domain differed substantially regarding the size and significance of correlations. For example, correlation estimates of the six neuroticism facets and political trust differed between $\hat{\rho} = .04$ and $\hat{\rho} = -.28$, four of them significantly differing from zero. Similarly, effect sizes for political involvement differed substantially within all domains, most remarkably between the openness facets, ranging from $\hat{\rho} = .07$ (*imagination*) to $\hat{\rho} = .75$ (*intellect*). Interestingly, for some instances, the pattern of correlations seemed to align with the Big Five aspects, as described by DeYoung et al. (2007). For example, the agreeableness facets *altruism*, *sympathy*, and *trust*, which were positively associated with political trust and involvement, correspond more strongly to the "compassion" aspect of agreeableness, while *cooperation*, *morality,* and *modesty* correspond more strongly on the "politeness" aspect of agreeableness (cf. DeYoung et al., 2007, p. 884). Other similarities to the aspects emerged for involvement and openness (where "intellect" is an aspect by itself) and for involvement and conscientiousness (where "orderliness" is an aspect by itself).

Comparing the results to the literature review, it appears that facet-level differences may account for some of the inconsistent results of previous research. Particularly conflicting findings had been reported for (a) trust and conscientiousness, (b) involvement and conscientiousness, and (c) involvement and agreeableness (see Tables 1 and 2). For all these comparisons, our analyses revealed differential patterns at facet-level, suggesting that the direction and size of correlations between general attitudes toward politics and the Big Five depend on the specific content represented in the Big Five measures. For instance, an indicator of agreeableness that focusses on *altruism*, *sympathy*, or *trust* (vs.

TABLE 4 Latent correlation estimates for Big Five domains (Study 3)

		General political trust	General political involvement	Model fit			
		$\hat{\rho}$	$\hat{\rho}$	N	CFI	RMSEA	SRMR
Model 1	Neuroticism	−.200***	−.383***	735	.927	.043	.056
Model 2	Extraversion	.281***	.413***	731	.893	.052	.064
Model 3	Openness	.176***	.679***	730	.936	.040	.054
Model 4	Conscientiousness	.035	.303***	723	.928	.042	.059
Model 5	Agreeableness	.014	.061	739	.906	.047	.088

Note: $\hat{\rho}$ = Latent correlation estimate.

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

TABLE 5 Latent correlation estimates for Big Five facets (Study 3)

	Facet	General political trust		General political involvement		Model fit			
		H.	$\hat{\rho}$	H.	$\hat{\rho}$	N	CFI	RMSEA	SRMR
Model 6	N1: Anxiety		−.257***		−.296***	735	.919	.045	.052
	N2: Anger		−.168***		−.180***				
	N3: Depression		−.282***		−.324***				
	N4: Self-Consciousness		−.101		−.454***				
	N5: Immoderation		.037		−.164**				
	N6: Vulnerability		−.133**		−.373***				
Model 7	E1: Friendliness	+	.269***		.349***	731	.899	.050	.057
	E2: Gregariousness		.283***		.343***				
	E3: Assertiveness	−	.202***		.439***				
	E4: Activity Level		.195**		.421***				
	E5: Excitement Seeking		.042		.157**				
	E6: Cheerfulness		.261***		.329***				
Model 8	O1: Imagination		.015		.068	730	.923	.043	.057
	O2: Artistic Interest		.199***		.540***				
	O3: Emotionality		.179***		.287***				
	O4: Adventurousness		.076		.389***				
	O5: Intellect		.146**		.746***				
	O6: Liberalism [excluded]		–		–				
Model 9	C1: Self-Efficacy		.062	+	.282***	723	.925	.042	.055
	C2: Orderliness		−.028		.068				
	C3: Dutifulness		−.092*		.148**				
	C4: Achievement-Striving		−.008		.191**				
	C5: Self-Discipline		.070		.359***				
	C6: Cautiousness		.105*	−	.300***				
Model 10	A1: Trust		.495***		.275***	739	.899	.048	.069
	A2: Morality		−.052	+	.044				
	A3: Altruism		.115*	+	.193***				
	A4: Cooperation		.073		.055				
	A5: Modesty		−.153***	−	−.397***				
	A6: Sympathy		.156***		.346***				

Note: H. = Hypothesized direction of effect. $\hat{\rho}$ = Latent correlation estimate.

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

cooperation, morality, or modesty) might produce positive (vs. null or negative) effects, which corroborates the need for caution when using Big Five short scales (cf. Bakker & Lelkes, 2018; Credé et al., 2012).

A final result that warrants discussion is the peak correlation between *intellect* (O5; $\hat{\rho}$ = .75) and political involvement. First, it should be noted that alternative model specifications (i.e., modeling all facets separately, including an acquiescence factor, or controlling for socio-demographics) did not substantially change the

correlation ($\hat{\rho}$ = .72, $\hat{\rho}$ = .74, and $\hat{\rho}$ = .67 respectively; see online Supporting Information). Second, the intellect items of the IPIP-NEO-120 do not include any political content, but represent a person's appeal to intellectually challenging topics in general (e.g., "Love to read challenging material"), ruling out inflated correlations by confounded item content. Costa and McCrae (1992) conceptualized the facet as "intellectual curiosity", "an active pursuit of intellectual interests", and "a willingness to consider new, perhaps unconventional ideas" (p.

17). Given that politics is an intellectually challenging topic (van Deth, 1990, p. 278), people who find appeal in intellectual challenges, should—in principle—find appeal in politics. The shared variance of more than 50% confirms that these individual differences are strongly interrelated, and even raises the question of how distinct both concepts are.

Concluding, Study 3 revealed that facets within the same personality domain differ substantially regarding the size of association with political trust and political involvement. Meanwhile, we observed only one case where facets also differed in the direction of association: the *modesty* facet revealed patterns of association which countervailed the rest of the agreeableness domain.

5 | GENERAL DISCUSSION

Our meta-analysis (Study 1) revealed that political involvement is substantially (meta-analytical $r \leq |.23|$) related to openness (+), extraversion (+), and neuroticism (−), and while the effect sizes differed significantly across studies, the directions of association were robust. Results were not as clear for political trust, where trends emerged toward agreeableness (+), openness (+), and neuroticism (−), but with small pooled effect sizes ($r \leq |.06|$).

Studies 2 and 3 largely corroborated these patterns of correlation. Study 2 revealed that, by and large, more substantial associations can be found at the higher-order level of trust and involvement than at the level of the specific components. Study 3 yielded evidence for within-domain facet-level differences in the strength of association, but revealed only two cases where facets within a domain yielded associations in opposite directions.

In the following, we first discuss the substantial associations between political involvement and the Big Five. Second, we summarize potential reasons for the large amount of inconsistency in previous findings, including the unclear associations between trust and personality. Third, we discuss implications for the hierarchical conceptualization of personality and political attitudes, before—fourth—summarizing some limitations and future directions.

5.1 | Substantial correlations between political involvement and the Big Five

Previous studies on political interest, internal efficacy, and participation propensity yielded relatively consistent patterns of positive correlations with openness and extraversion, and negative correlations with neuroticism. Furthermore, these associations were substantial, with meta-analytical pooled effects ranging from $r = .15$ to $r = .23$ (for openness), $r = .09$ to $r = .21$ (for extraversion), and $r = −.15$ to $r = −.03$ (for neuroticism). These estimates are larger than previous estimates by Vitriol et al. (2019; $r \leq |.12|$), and also than the personality effects of ideological leaning (Osborne et al., 2021; $r \leq |.15|$). Given the large between-study heterogeneity in these meta-analyses, the point estimates should be interpreted with caution (Harrer et al., 2022). Nevertheless, it seems possible that personality is not as strongly reflected in a person's ideological leaning, as it is reflected in whether a person gets involved with politics in the first place.

The results of our facet-level analysis give some hints on the mechanisms driving the relationship. We found the *intellect* (O5) facet to yield the largest correlation, with roughly 50% of shared variance with general political involvement, which suggests that most people who are psychologically involved in politics are attracted by its inherent intellectual challenges (see also van Deth, 1990, p. 278). If intellect was the only substantial personality correlate of political involvement, the question would have raised, whether these traits could even be distinguished, or whether general political involvement was just a manifestation of intellectual curiosity in the political domain. However, there are other facets that revealed large correlations, for example *assertiveness* (E3; $\hat{\rho} = .44$) and *activity level* (E4; $\hat{\rho} = .42$), adding social dominance and behavioral drive to the more cognitive component of intellect (cf. Costa & McCrae, 1992). Thus, different personality processes seem to be reflected in political involvement.

5.2 | Inconsistent findings across studies

One important result of the meta-analysis was the large heterogeneity of findings across studies, which significantly surpasses the amount of variability expected by sampling error. Thus, some boundary conditions must moderate the associations between personality traits and political trust and involvement. These are particularly relevant in the case of political trust, where pooled effect sizes were close to zero and where previous studies revealed several contradictory patterns of associations (e.g., positive and negative associations with conscientiousness). Some authors have proposed potential moderators in the political context. For example, Freitag and Ackermann (2016) and Ackermann (2017) showed that the perceived level of direct democracy, as indicated by the frequency of popular votes in a region, can have a moderating effect on the associations between personality traits and political trust and involvement.

We argue that some heterogeneity in previous findings might stem from the fact that they focused nearly exclusively on the broad domain-level of personality. Our third study revealed that for most domains, correlations were driven by some facets within that domain, while other facets were either unrelated or less strongly related. This implies, that the association between a personality scale and a political attitude depends on whether the right facets are represented in that scale—a problematic implication for Big Five short scales, which run a strong risk of missing the relevant content and thus producing false negative findings (cf. Bakker & Lelkes, 2018).

Furthermore, inconsistent findings of agreeableness (cf. Table 2) might be related to a general conceptual problem of the agreeableness domain in the Big Five model: Some investigations of its hierarchical structure found the *modesty* (A5) facet to be only weakly related to the agreeableness domain (e.g., John et al., 2008, p. 135). Kajonius and Johnson (2019) therefore suggested that it might rather represent the sixth factor from the HEXACO model, *honesty-humility*. This explanation seems plausible, given the facet's content—Costa and McCrae (1992) characterized modesty high-scorers as "humble and self-effacing although they are not necessarily lacking in self-confidence or self-esteem" (p. 18)—and because modesty has been shown to correlate more strongly with *HEXACO honesty-humility* than with *Big Five agreeableness* (see Ashton & Lee, 2005, Table 2). Our findings support such an interpretation, given that modesty revealed associations with trust and involvement that countervailed the other agreeableness facets' associations. The opposite directions of effects might be argued to strengthen the standpoint of HEXACO advocates and suggests that honesty-humility may play an independent role for political attitudes.

5.3 | Implications for hierarchically organized individual differences

The hierarchical organization of personality traits has been generally agreed on (Soto & John, 2017), whereas the hierarchical organization of political trust and involvement are relatively new propositions (Bromme & Rothmund, 2021; but see Weatherford, 1991). Given that large parts of the personality associations between trust and involvement were consistent across the lower-order components of trust and involvement (Study 1) and that they were more pronounced at the higher-order level compared to the specific level (Study 2) the adequacy and relevance of such a hierarchical conceptualization has gained

new support through our studies. However, these studies also showed that there are some cases, where participation propensity yielded correlational patterns slightly different from general political involvement, indicating the need for future research.

In general, we conclude that—for the study of personality and political attitudes—political attitudes should be aggregated to a broad level of generalization, while personality traits should be assessed at the level of facets (cf. Gerber et al., 2011b) or aspects (cf. Chen, 2015). This combination appears to be the most symmetrical pattern, and thus reveals the most informative correlations (cf. Wittmann, 1988), as reflected in the respective effect sizes in Studies 2 and 3. This conclusion is in line with research showing that narrow facets of personality tend to achieve higher accuracy in the prediction of specific criteria than broad domain factors (Cronbach, 1960, pp. 602–603; Paunonen & Ashton, 2001). While facet-level personality measures tend to require more items which may be difficult to include in large representative surveys, limiting items to a small number of theoretically relevant facets might still be an option worth considering.

5.4 | Limitations and future directions

First of all, our meta-analysis stopped at the point of estimating pooled effect sizes. We did not systematically test the role of moderators using meta-regression. We decided against this step for two reasons: First, the search for moderators would have needed a different theoretical scope of the article, which did not seem to leave room for the questions addresses in Studies 2 and 3. Second, meta-regression requires large numbers of studies (Cooper, 2017, pp. 251–252), a criterion that we do not believe to be met yet. Future research should make use of this tool once sufficient studies are available.

Next, the Big Five (domains and facets) are potentially correlated with response styles like acquiescence (e.g., Wetzel & Carstensen, 2017, p. 359). Since most of the political attitude items used in our studies were positively worded (in particular for involvement), it is conceivable that some of the correlations between attitudes toward politics and Big Five might have been inflated by acquiescence. To investigate this possibility, we re-estimated the Study 3 models including an acquiescence factor which we specified as a latent factor with loadings on all items, fixed to either 1 or −1 depending on whether items were reverse-coded. As reported in the online Supporting Information, correlation estimates were largely unaffected, with some exceptions: Contrary to our original models, the agreeableness domain score yielded significant positive correlations for political trust and involvement ($\hat{\rho} = .16$ and $\hat{\rho} = .33$,

respectively), and some facets yielded stronger correlations toward political involvement (strongest increases for *cooperation* [$\Delta\hat{\rho} = .25$], *cautiousness* [$\Delta\hat{\rho} = .23$], and *morality* [$\Delta\hat{\rho} = .22$]). If anything, our models might have underestimated these specific effects, rather than inflated. Meanwhile, this also speaks to the robustness of the remaining results.

Another limitation regards the indicators used to measure the Big Five in our studies. With three items per domain in Study 2 and four items per facet in Study 3, the scales meet only minimum requirements of length and might thus provoke similar criticisms as we noted regarding the previous literature. However, the results by Bakker and Lelkes (2018) showed that three- and four-item personality scales already perform substantially better than two-item scales. Moreover, both inventories have been validated (Gerlitz & Schupp, 2005; Johnson, 2014), internal consistencies were adequate (aside from the excluded *liberalism* facet scale), and the pattern of domain-level results was largely consistent across both studies.

Finally, Studies 2 and 3 were based on participants sampled from an online panel and based on quota sampling, limiting representativeness of the general population. In particular, people of high age must be assumed to be underrepresented in the samples, and people without internet access are not represented at all. Nevertheless, given that Vitriol et al. (2019) did not find systematic differences between online-only and representative samples regarding the association between political attitudes and the Big Five, there is reason to expect that our results do generalize to the general population.

5.5 | Conclusion

A large number of studies has investigated relationships between personality and political trust and involvement. Our meta-analysis revealed substantial and robust associations for political involvement, but inconclusive results for political trust. Furthermore, our additional studies yielded evidence, that (a) personality associations are most pronounced at higher-order levels of political trust and involvement and that (b) different facets of personality yield differential associations with these attitudes toward politics.

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ENDNOTES

[1] Of the three studies, only Study 3 has been preregistered before data collection. The preregistration included hypotheses, data collection, and analyses and is available at https://osf.io/mrvnu/.

[2] Definitions for the specific constructs are provided in the online Supporting Information (p. 2).

[3] We use the facet labels of the IPIP-NEO-120 (Johnson, 2014) throughout this article, which differ from the NEO-PI-R labels (Costa & McCrae, 1992), but describe the same behavioral content. For example, *anger* is labeled *angry hostility* in the NEO-PI-R.

[4] While trust in the political system has not played a role in previous personality-politics research, we included the construct to broaden the selection of lower-order constructs and increase generalizability of the results.

[5] This higher-order political attitude model has been tested and described more in depth in Bromme and Rothmund (2021), including tests based on the same data.

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SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

APPENDIX

TABLE A1 Studies of Big Five and attitudes of political trust

| Study | Direction of association | | | | | Sample | | | Trust measure | | Big Five measure | | |
	N	E	O	C	A	Country	Type	N	# Items	Rel.	Measure	# Items/Factor	Rel.
Trust in politicians													
Arzheimer (2005)	0	0	0	0	0	Germany	Random	2493–2494	1	–	NEO-FFI	12	α = .66-.84
Halmburger, Rothmund et al. (2019)	NA	NA	NA	NA	(+)	Germany	Convenience	205	9	α = .93	BFI-10	2	α = .40-.57
Mondak and Halperin (2008), Study 2	0	0	–	0	(+)	USA	(Random)	793	1	–	ad hoc	2	α = .39-.57
Pattyn et al. (2012), Study 2	0	0	0	0	0	Netherlands	Convenience	225	6	α = .82	NEO-FFI	12	α = .67-.86
N. Stürmer, J. Baur, N. Reischmann, T. Schreyner, and A. Georgiadis (unpublished data)	–	0	0	0	+	Germany	Convenience	325	9	NA	BFI-2	12	α = .60-.88
Vitriol et al. (2019), ANES 2016 data	0	0	+	+	0	USA	Random	3568	1	–	TIPI	2	NA
Vitriol et al. (2019), BES data	–	+	–	+	+	Great Britain	Random	4400	1	–	TIPI	2	NA
Trust in political institutions													
Arzheimer (2005)	0	0	+	–	0	Germany	Random	2482–2483	3	α = .74	NEO-FFI	12	α = .66-.84
Bakker and Vreese (2016)	0	0	(+)	0	0	Netherlands	Random	1174	2	α = .93	mini-IPIP	4	α = .58-.77
Caprara and Vecchione (2017), "Genzano Sample"	–	+	(+)	+	+	Italy	Convenience	534	NA	NA	NA	NA	NA
Freitag (2017), DUGS 2016 data	–	0	+	0	+	Switzerland	Random	1963	1	–	BFI-S	3	α = .41-.66
Freitag and Ackermann (2016)	–	–	0	0	0	Switzerland	Random	1094	1	–	BFI-S	3	α = .43-.59
Gabriel and Völkl (2005)	0	0	+	–	0	Germany	(Random)	1879–1910	3	NA	NEO-FFI	12	α = .66 - .84
Vitriol et al. (2019), ANES 2012 data	–	0	0	0	0	USA	Random	2651	1	–	TIPI	2	NA
Vitriol et al. (2019), LAPOP data	–	–	–	(+)	+	Latin America (24 Countries)	Random	33,270–33,288	1	–	TIPI	2	NA
Vitriol et al. (2019), LISS data	–	(+)	+	+	+	Netherlands	Random	5445	1	–	IPIP	10	NA
Vitriol et al. (2019), SELECTS data	–	(+)	+	0	+	Switzerland	Random	7188	1	–	BFI-S	3	NA
Vitriol et al. (2019), SHP data	–	0	0	0	+	Switzerland	Random	6651	1	–	BFI-10	2	NA
External efficacy													
Arzheimer, 2005	+	0	+	–	–	Germany	Random	2485–2486	3	α = .61	NEO-FFI	12	α = .66-.84
Beierlein et al. (2014)	0	0	0	0	0	Germany	Quota	539	2	ω = .72	BFI-10	2	NA

TABLE A1 (Continued)

Study	Direction of association					Sample			Trust measure		Big Five measure		
	N	E	O	C	A	Country	Type	N	# Items	Rel.	Measure	# Items/Factor	Rel.
Cooper et al. (2013)	(+)	+	+	0	+	USA	Convenience	748	4	NA	M5-50	10	$\alpha = .75-.86$
Freitag (2017), DUGS 2016 data	0	0	+	0	(+)	Switzerland	Random	1933	1	–	BFI-S	3	$\alpha = .41-.66$
Freitag (2017), PUGS 2012 data	0	0	(+)	(–)	0	Switzerland	Random	813	1	–	BFI-S	3	$\alpha = .43-.59$
Mondak and Halperin (2008), Study 1	0	0	0	–	(+)	USA	(Random)	366	1	–	ad hoc	3–6	$\alpha = .67-.75$
Mondak and Halperin (2008), Study 2	0	0	0	0	0	USA	(Random)	769	1	–	ad hoc	2	$\alpha = .39-.57$
Mondak (2010), Sample 2	0	0	0	(+)	0	USA	Random	374	1	–	ad hoc	5	$\alpha = .75-.79$
Mondak (2010), Sample 3	0	0	0	–	0	USA	Random	677	1	–	ad hoc	2	$r = .28-.53$
Rasmussen and Nørgaard (2018), Sample 1	–	+	+	0	0	Denmark	Random	2167	2	$\alpha = .78$	NEO-PI-R	12	$\alpha = .71-.84$
Rasmussen and Nørgaard (2018), Sample 2	–	+	0	0	+	USA	Convenience	1573	2	$\alpha = .67$	BFI-44	8–10	$\alpha = .81-.89$
Schoen and Steinbrecher (2013)	(–)	+	0	+	+	Germany	Random	1786	1	–	BFI-10 (selection)	1	–
Verhulst (2012)	–	0	0	0	+	USA	Twin study	729–732	10	$\alpha = .74$	BFI-44	8–10	$\alpha = .74-.86$
Vitriol et al. (2019), ANES 2010-12 data	–	0	+	0	(+)	USA	Random	1243	3	NA	TIPI	2	NA
Vitriol et al. (2019), ANES 2016 data	–	+	0	0	+	USA	Random	3566	2	NA	TIPI	2	NA
Vitriol et al. (2019), CES data	–	(+)	0	0	(+)	Canada	Random	3391	1	–	TIPI	2	NA
Vitriol et al. (2019), NZES data	–	+	0	+	+	New Zealand	Random	2099	5	NA	TIPI	2	NA
Vitriol et al. (2019), SELECTS data	0	0	0	–	+	Switzerland	Random	6124	2	NA	BFI-S	3	NA

Note: N = Neuroticism, E = Extraversion, O = Openness to experience, C = Conscientiousness, A = Agreeableness, *N* = Sample size, Rel. = Reliability coefficient, NA = not reported in the original publication; α = Cronbach's alpha, ω = McDonald's omega, BFI-10 = Ten-item Big Five Inventory (Rammstedt & John, 2007), BFI-2 = Big Five Inventory 2 (Soto & John, 2017), BFI-44 = Big Five Inventory (John et al., 2008), BFI-S = SOEP Big Five Inventory (Gerlitz & Schupp, 2005), IPIP = 50-item International Personality Item Pool inventory (Goldberg et al., 2006), M5-50 = M5-50 Questionnaire (McCord, 2002), mini-IPIP = 20-item IPIP short form (Donnellan et al., 2006), NEO-FFI = NEO Five Factor Inventory (Costa & McCrae, 1992), NEO-PI-R = Revised NEO Personality Inventory (Costa & McCrae, 1992), TIPI = Ten-Item-Personality-Inventory (Gosling et al., 2003); "(Random)" = random sampling of subpopulation (not nationally representative); Coding of associations: "–" = negative association ($p < .01$), "(–)" = negative association ($p < .05$), "0" = no significant association, "(+)" = positive association ($p < .05$), "+" = positive association ($p < .01$). Further details on the original studies are provided in the online Supporting Information.

TABLE A2 Studies of Big Five and attitudes of political involvement

| Study | Direction of association | | | | | Sample | | | Involvement measure | | Big Five measure | | |
	N	E	O	C	A	Country	Type	N	# Items	Rel.	Measure	# Items/Factor	Rel.
Political interest													
Caprara and Vecchione (2017), "Genzano Sample"	0	+	+	+	0	Italy	Convenience	534	NA	NA	NA	NA	NA
Foschi and Lauriola (2014), Study 4	(−)	0	0	(+)	+	Italy	Convenience	287	NA	$\alpha = .94$	BFI-44	8–10	$\alpha = .72{-}.80$
Freitag (2017), DUGS 2016 data	−	+	+	(+)	0	Switzerland	Random	1984	1	–	BFI-S	3	$\alpha = .41{-}.66$
Freitag (2017), FWM 2014 data	0	+	+	(+)	0	Switzerland	Random	3680	1	–	BFI-S	3	$\alpha = .41{-}.65$
Freitag (2017), PUGS 2012 data	+	0	0	0	(−)	Switzerland	Random	821	1	–	BFI-S	3	$\alpha = .43{-}.59$
Furnham and Cheng (2019)	−	+	+	(+)	+	Great Britain	Cohort	7135	1	–	IPIP	10	$\alpha = .73{-}.87$
Gallego and Oberski (2012)	−	+	+	+	0	Spain	Random	3459	1	–	BFI-10	1–2	NA
Gerber et al. (2011a)	−	+	+	+	+	USA	Quota	15,024–15,075	1	–	TIPI	2	$r = .23{-}.48$
J. Gugel, J. Hecht, C. Koch, C. Leroi, and C. Walter (Unpublished data)	(−)	+	+	0	0	Germany	Convenience	319	5	NA	BFI-2	12	$\alpha = .60{-}.88$
Johann et al. (2015), Sample 1	0	+	+	0	−	Austria	Random	3069	1	–	BFI-10	2	NA
Johann et al. (2015), Sample 2	−	(+)	+	(+)	+	Germany	Random	3691	1	–	BFI-10 (selection)	1	–
Mays (2015), Sample 1	−	+	+	+	(+)	Germany	Random	16,254	1	–	BFI-S	3	NA
Mays (2015), Sample 2	0	+	+	0	0	Great Britain	Random	7960	1	–	BFI-S	3	NA
Meng and Berezina (2020)	(−)	+	(+)	0	0	Malaysia	Convenience	200	5	NA	mini-IPIP	4	NA
Mondak and Halperin (2008)	0	0	+	0	0	USA	(Random)	365	1	–	ad hoc	3–6	$\alpha = .67{-}.75$
Quintelier and Theocharis (2013)	(−)	0	+	0	0	Belgium	Convenience	345	1	–	BFI-44	8–10	$\alpha = .74{-}.84$
Russo and Amnå (2016a)	0	+	+	+	0	Sweden	Cohort	1134	2	$r_s = .60$	BFI-44	8–10	$\alpha = .75{-}.85$
Schoen and Steinbrecher (2013)	0	+	+	+	(+)	Germany	Random	1786	1	–	BFI-10 (selection)	1	–
Vitriol et al. (2019), ANES 2010-12 data	−	0	+	+	+	USA	Random	1239	2	NA	TIPI	2	NA
Vitriol et al. (2019), ANES 2012 data	−	+	+	+	+	USA	Random	5466	1	–	TIPI	2	NA
Vitriol et al. (2019), ANES 2016 data	−	+	+	+	+	USA	Random	3573	1	–	TIPI	2	NA
Vitriol et al. (2019), BES data	−	+	+	+	0	Great Britain	Random	16,650	1	–	TIPI	2	NA
Vitriol et al. (2019), CES data	−	+	+	0	−	Canada	Random	3654	1	–	TIPI	2	NA
Vitriol et al. (2019), LAPOP data	−	+	+	+	−	Latin America (24 Countries)	Random	33,578	1	–	TIPI	2	NA
Vitriol et al. (2019), LISS data	−	+	+	+	+	Netherlands	Random	5535	1	–	IPIP	10	NA
Vitriol et al. (2019), NZES data	−	+	+	+	0	New Zealand	Random	2384	1	–	TIPI	2	NA

TABLE A2 (Continued)

Study	Direction of association					Sample			Involvement measure		Big Five measure		
	N	E	O	C	A	Country	Type	N	# Items	Rel.	Measure	# Items/Factor	Rel.
Vitriol et al. (2019), SELECTS data	−	+	+	+	0	Switzerland	Random	7208	1	–	BFI-S	3	NA
Vitriol et al. (2019), SHP data	−	0	+	0	0	Switzerland	Random	6760	1	–	BFI-10	2	NA
Wang et al. (2019)	0	+	+	+	0	Taiwan	NA	839	1	–	TIPI	2	NA
Weinschenk and Dawes (2017)	(−)	(+)	(+)	(+)	(+)	USA	Twin study	974	1	–	ad hoc	4–10	α = .58–.85
Weinschenk and Dawes (2017)	(−)	(+)	(+)	0	0	USA	Twin study	1282	1	–	BFI-44	8–10	α = .75–.87
Weinschenk et al. (2019)	0	(+)	(+)	(+)	0	Germany	Twin study	1770	1	–	BFI-S and additional items	3–7	α = .53–.81
Internal political efficacy													
Arzheimer (2005)	−	+	+	+	−	Germany	Random	2484–2485	3	α = .63	NEO-FFI	12	α = .66–.84
Beierlein et al. (2014), Sample 1	−	+	+	+	(−)	Germany	Quota	539	2	ω = .92	BFI-10	2	NA
Beierlein et al. (2014), Sample 2	−	+	+	+	0	Germany	Random	1134	2	ω = .83	BFI-10	2	NA
S. Bialy, K. Blanke, A. Pfannkuch, I. Reichelt, and L. Wörn (unpublished data)	0	+	+	0	0	Germany	Convenience	318	10	α = .91	BFI-2	12	α = .60–.88
Foschi and Lauriola (2014), Study 4	−	+	+	0	0	Italy	Convenience	287	10	α = .90	BFI-44	8–10	α = .72–.80
Freitag (2017), DUGS 2016 data	−	+	+	+	0	Switzerland	Random	1957	1	–	BFI-S	3	α = .41–.66
Freitag (2017), PUGS 2012 data	−	(+)	+	0	0	Switzerland	Random	822	1	–	BFI-S	3	α = .43–.59
Gallego and Oberski (2012)	−	+	+	(+)	0	Spain	Random	3459	2	NA	BFI-10	1–2	NA
Johann et al. (2015), Sample 1	(−)	(+)	+	0	–	Austria	Random	3069	1	–	BFI-10	2	NA
Johann et al. (2015), Sample 2	−	(+)	(+)	+	0	Germany	Random	3691	1	–	BFI-10 (selection)	1	–
Jordan et al. (2015)	NA	NA	+	NA	NA	Canada	Convenience	382	3	NA	BFI-44	8–10	NA
Mondak and Halperin (2008), Study 1	0	0	+	−	0	USA	(Random)	365	1	–	ad hoc	3–6	α = .67–.75
Mondak and Halperin (2008), Study 2	0	+	+	0	0	USA	(Random)	804	1	–	ad hoc	2	α = .39–.57
Mondak and Halperin (2008), Study 3	0	0	+	0	−	USA	Random	379	1	–	ad hoc	5	α = .75–.79
Mondak (2010), Sample 3	0	0	+	0	0	USA	Random	676	1	–	ad hoc	2	r = .28–.53
Rasmussen and Nørgaard (2018), Sample 1	−	0	+	+	−	Denmark	Random	2167	3	α = .72	NEO-PI-R	12	α = .71–.84

TABLE A2 (Continued)

Study	Direction of association					Sample			Involvement measure		Big Five measure		
	N	E	O	C	A	Country	Type	N	# Items	Rel.	Measure	# Items/Factor	Rel.
Rasmussen and Nørgaard (2018), Sample 2	−	0	+	(+)	−	USA	Convenience	1573	3	$\alpha = .74$	BFI-44	8–10	$\alpha = .81$–.89
Russo and Amnå (2016a)	−	+	+	+	0	Sweden	Cohort	1134	9	$\alpha = .93$	BFI-44	8–10	$\alpha = .75$–.85
Schoen and Steinbrecher (2013)	−	+	+	+	+	Germany	Random	1786	2	NA	BFI-10 (selection)	1	–
Wang et al. (2019)	0	+	(+)	0	−	Taiwan	NA	839	2	NA	TIPI	2	NA
Vecchione and Caprara (2009), Sample 1	−	+	+	+	+	Italy	Convenience	1353	10	$\alpha = .91$	BFQ-60	12	$\alpha = .80$–.90
Vecchione and Caprara (2009), Sample 2	NA	+	(+)	NA	NA	Italy	Convenience	71	10	$\alpha = .93$	BFQ (parent)	24	$\alpha = .70$–.73
Political participation propensity													
Ackermann (2017)	0	+	0	0	0	Switzerland	Random	1145	1	–	BFI-S	3	$\alpha = .43$–.59
Brandstätter and Opp (2014)	0	0	+	NA	−	Germany	(Random)	438	4	$\alpha = .78$	PASK5	16	$r_{tt} = .37$–.53
Chang et al. (2020)	−	+	(−)	−	(−)	Diverse (20 Countries)	(Random)	22,896	5	NA	BFI	2	NA
Foschi and Lauriola (2014), Study 4	0	0	+	0	0	Italy	Convenience	287	7	$\alpha = .70$	BFI-44	8–10	$\alpha = .72$–.80
Gallego and Oberski (2012)	0	+	+	0	−	Spain	Random	3459	4	$H = .60$	BFI-10	1–2	NA
Gerber, Huber, Doherty, Dowling, et al. (2011), CCAP Sample	−	+	+	0	+	USA	Quota	13,890–13,929	3	$\alpha = .35$	TIPI	2	$r = .23$–.48
Gerber, Huber, Doherty, Dowling, et al. (2011), CT Sample	(−)	+	+	0	0	USA	(Random)	2135	3	$\alpha = .52$	TIPI	2	$r = .06$–.29
Ha et al. (2013)	0	0	+	0	−	South Korea	Random	1525	8	$\alpha = .69$	TIPI	2	$r = .04$–.45
Lindell and Strandberg (2018)	0	0	+	0	(−)	Finland	Quota	656–665	3	NA	TIPI	2	$r = .02$–.49
Mondak et al. (2011), Sample 2	0	+	0	−	0	Venezuela	Random	1370	1	–	ad hoc	1–2	NA
Quintelier and Theocharis (2013)	0	+	+	0	0	Belgium	Convenience	345	6	NA	BFI-44	8–10	$\alpha = .74$–.84
Russo and Amnå (2016b)	NA	NA	+	NA	0	Sweden	Cohort	895	9	$\alpha = .66$	BFI-44	9–10	$\alpha = .71$–.74
Vecchione and Caprara (2009), Sample 1	0	+	+	0	0	Italy	Convenience	1353	5	NA	BFQ-60	12	$\alpha = .80$–.90
Vecchione and Caprara (2009), Sample 2	NA	0	(+)	NA	NA	Italy	Convenience	71	5	NA	BFQ (parent)	24	$\alpha = .70$–.73
Verhulst (2012)	(−)	+	+	0	0	USA	Twin study	725–728	5	$\alpha = .70$	BFI-44	8–10	$\alpha = .74$–.86
Vitriol et al. (2019), ANES 2010-12 data	−	(+)	+	0	+	USA	Random	1212	15	NA	TIPI	2	NA

TABLE A2 (Continued)

| Study | Direction of association | | | | | Sample | | | Involvement measure | | Big Five measure | | |
	N	E	O	C	A	Country	Type	N	# Items	Rel.	Measure	# Items/Factor	Rel.
Vitriol et al. (2019), ANES 2012 data	−	+	+	+	+	USA	Random	5432	9	NA	TIPI	2	NA
Vitriol et al. (2019), ANES 2016 data	−	+	+	0	+	USA	Random	3561	6	NA	TIPI	2	NA
Vitriol et al. (2019), BES data	0	+	+	−	0	Great Britain	Random	15,320	6	NA	TIPI	2	NA
Vitriol et al. (2019), CES data	+	+	+	−	−	Canada	Random	3683	10	NA	TIPI	2	NA
Vitriol et al. (2019), LAPOP data	0	+	+	+	0	Latin America (24 Countries)	Random	30,742	5	NA	TIPI	2	NA
Vitriol et al. (2019), LISS data	−	+	+	0	+	Netherlands	Random	5517	7	NA	IPIP	10	NA
Vitriol et al. (2019), NZES data	0	+	+	0	0	New Zealand	Random	2217	3	NA	TIPI	2	NA
Vitriol et al. (2019), SELECTS data	−	+	+	0	0	Switzerland	Random	7215	7	NA	BFI-S	3	NA
Wang et al. (2019)	0	(+)	0	0	0	Taiwan	NA	839	1	−	TIPI	2	NA
Weinschenk and Panagopoulos (2014)	0	+	0	−	0	USA	Convenience	724	4	$\alpha = .75$	TIPI	2	$r = .30–.55$
Weinschenk (2013), Chapter 4	NA	(+)	NA	NA	NA	USA	Cohort	2059	5	NA	ad hoc	3	$\alpha = .70$
Weinschenk (2013), Chapter 5	0	0	(−)	0	0	USA	Convenience	758	13	$\alpha = .83$	TIPI	2	$r = .21–.55$
Weinschenk et al. (2019)	0	(+)	(+)	0	0	Germany	Twin study	1770	4	$\alpha = .54$	BFI-S and additional items	3–7	$\alpha = .53–.81$

Note: N = Neuroticism, E = Extraversion, O = Openness to experience, C = Conscientiousness, A = Agreeableness, N = Sample size, Rel. = Reliability coefficient, NA = not reported in the original publication; α = Cronbach's alpha, ω = McDonald's omega, H = Loevinger's H, r_s = Spearman-Brown correlation, r_{tt} = Test-retest correlation, BFI-10 = Ten-item Big Five Inventory (Rammstedt & John, 2007), BFI-2 = Big Five Inventory 2 (Soto & John, 2017), BFI-44 = Big Five Inventory (John et al., 2008), BFI-S = SOEP Big Five Inventory (Gerlitz & Schupp, 2005), BFQ-60/BFQ (parent) = Big Five Questionnaire (Caprara et al., 1993), IPIP = 50-item International Personality Item Pool inventory (Goldberg et al., 2006), M5-50 = M5-50 Questionnaire (McCord, 2002), mini-IPIP = 20-item IPIP short form (Donnellan et al., 2006), NEO-FFI = NEO Five Factor Inventory (Costa & McCrae, 1992), NEO-PI-R = Revised NEO Personality Inventory (Costa & McCrae, 1992), PASK5 = Persönlichkeits-Adjektiv-Skalen: Fünf Faktoren Modell (Brandstätter, 2009), TIPI = Ten-Item-Personality-Inventory (Gosling et al., 2003); "(Random)" = random sampling of subpopulation (not nationally representative); Coding of associations: "−" = negative association ($p < .01$), "(−)" = negative association ($p < .05$), "0" = no significant association, "(+)" = positive association ($p < .05$), "+" = positive association ($p < .01$). Further details on the original studies are provided in the online Supporting Information.