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Personality's Influence on Political Orientation Extends to Concrete Stances of Political Controversy in Germany – Cross-Nationally and Consistently

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Abstract

Growing evidence suggests that the general personality structure predisposes the political or ideological orientation. Here, we first replicated findings of associations between Big Five factors openness, agreeableness and conscientiousness, and self-reported political orientation in a large German sample. However, the new aspect of our study is the addition of Wahl-O-Mat (WoM; a prominent voting advice application) as a measure of concrete policy-positions. Here, a score of accordance between a participant’s and the several German parties’ stances on current and relevant policy-issues is computed. Given that political science identifies trends towards a dealignment of voters with political parties and a decreasing significance of socio-structural factors, an issue-based approach to vote choice may become critical in the future. Therefore, we investigated whether personality’s influence on political orientation also extends to stances about specific issues and, thus, is not restricted to self-placements. As expected, WoM-scores also showed meaningful correlations with personality traits: accordance with right-of-center-parties is negatively related to openness and agreeableness and positively related to conscientiousness. Finally, we recruited smaller samples in the United States, Denmark, Sweden, Turkey, Spain, Australia, and Bulgaria and showed that the associations mentioned above are cross-nationally replicable. We conclude that personality influences not only self-perceived political identity but also attitudes towards current issues of political controversy. In both cases, the effects of personality were mediated by Right-Wing-Authoritarianism and Social Dominance Orientation.

Keywords: ideology, political orientation, personality, Voting Advice Application, RWA, SDO

Recent and unforeseen developments in international politics renewed scientific interest in the intra- and extrapersonal factors influencing political decision making in democratically constituted states. While traditional Rational-Choice-Approaches (e.g., Merrill & Grofman, 1999) leave scholars puzzled when facing electoral decisions which seem to be economically and socially "irrational" for the majority of voters—as for Brexit in Great Britain or neoliberal policies pushed forward by the Trump-Administration in the United States—, macro- and micro-sociological approaches reach their boundaries when trying to explain individual differences in ideology, party-identification...
or certain policy-positions within homogenous social groups (Hibbing, Smith, & Alford, 2014). Besides their limitations in predictive validity, these theories may also be criticized conceptually: they often posit that political orientation is a distinct variable being influenced by distinct factors, which have little to no effect on people's decisions in nonsocial or smaller-scale interpersonal domains such as romantic or occupational relationships (Alford & Hibbing, 2007).

This is clearly at odds with psychological attempts to explain individual differences in political orientation. From *The Authoritarian Personality* (Adorno, Frenkel-Brenswik, Levinson, & Sanford, 1950) to most modern, neuroscientific approaches (Jenke & Huettel, 2016; Jost & Amodio, 2012), all of these theories share the assumption, that political orientation is predisposed by fundamental forces that permeate to one's behavior in most if not any aspect of life.

There is a vivid discussion on the question of how political ideology is defined. In the following, we adopt the definition of Tedin, stating that "political ideology is (...) an interrelated set of attitudes and values about the proper goals of society and how they should be achieved" (Tedin, 1987, p. 65). The two core factors of political orientation can be described as attitudes towards social change vs. tradition and attitudes towards equality vs. hierarchy representing liberalism vs. conservatism or a left- vs. right-wing-orientation (Jost, Glaser, Kruglanski, & Sulloway, 2003).

These core differences between proponents of conservative vs. liberal political orientations can be traced back to differing motivational forces, referred to as Right-Wing-Authoritarianism (RWA; Altemeyer, 1981) and Social-Dominance-Orientation (SDO; Pratto, Sidanius, Stallworth, & Malle, 1994). The theories of RWA (Altemeyer, 1981) and SDO (Pratto et al., 1994) both are partially grounded in the authoritarian personality theory (Adorno et al., 1950). Instruments assessing both dimensions were developed to overcome the various flaws in the original F-scale, meant to assess the authoritarian personality. When developing a scale for RWA, Altemeyer (1981) focused on three of the nine clusters of the F-scale: Authoritarian conventionalism, authoritariansubmission, and authoritarian aggression. People scoring high on RWA thus can be characterized as sticking to tradition, being obedient and submissive to authorities, and aggressive towards elements that represent threats to the established order.

SDO, on the other hand, refers to whether one prefers intergroup relationships to be more hierarchical or more equal. The SDO-scale seems to tap different clusters of Adorno's original theory, especially the need for maintenance of power, destructiveness, cynicism, and anti-intraception (Duckitt & Sibley, 2010). Thus, people scoring high on SDO can be characterized as refusing the imaginative, subjective, and aesthetic, as depreciating and generally hostile towards others (Adorno et al., 1950).

There are different answers to the question of whether RWA and SDO represent personality traits or attitudes. As both show higher correlations with measures of attitudes and values than with established instruments assessing the Big Five, Duckitt and Sibley (2010) propose RWA and SDO to be persistent motivational goals, made chronically salient to the person by particular worldviews which are in turn shaped by socio-structural factors and core personality traits. Thus, RWA and SDO directly tap the stable motivational basis for the two core aspects of political orientation mentioned above: Attitudes towards change should be motivated by RWA, attitudes towards inequality by SDO. So, according to the dual-process motivational model of ideology, political outcomes can be traced back to both ideological attitude-systems, which are driven by views of the world as a dangerous place or a competitive jungle, respectively. These worldviews, in turn, stem from personality traits labeled social conformity
and tough-mindedness (Duckitt, 2001). Personality's influence on political orientation measures is thus likely to be mediated by both constructs, albeit to differing degrees.

Given that social conformity corresponds to a combination of low openness and high conscientiousness in Big Five terms, while tough-mindedness equals the negative pole of agreeableness (Cichocka & Dhont, 2018), it is not surprising that relationships between these traits and political orientation have been reported consistently and cross-culturally (see Table 1): Openness is consistently negatively and conscientiousness positively related to conservatism. Generally, openness describes the extent to which people like to deal with new experiences and impressions. Conscientiousness encompasses self-organization, occupational motivation, self-discipline, reliability, and success-orientation (Kandler & Riemann, 2015). Specifically, openness shows negative relationships with both core aspects of political orientation because open people tend to challenge the status quo and support social and economic equality (Schoen, 2012). By contrast, conscientiousness exerts its influence on political orientation predominantly via RWA, i.e., conscientious people tend to stick to traditions and show lower tendencies to question social structures and norms. On the other hand, conscientiousness is less predictive for the support of economic or social inequality (Carney, Jost, Gosling, & Potter, 2008; Gerber, Huber, Doherty, Dowling, & Ha, 2010; Vecchione et al., 2011).

Table 1
*Prior Studies on the Relationship Between Personality and Political Orientation*

| Measures of PO | Openness | Conscientiousness | Extraversion | Agreeableness | Neuroticism |
|----------------|----------|-------------------|--------------|--------------|------------|
| **Sibley et al., 2012, N = 71.895 (meta-analysis), correlation coefficients** |          |                  |              |              |            |
| 1. Self-Placement (liberal-conservative) | -.18*    | .10*             | -.01         | -.02         | -.03       |
| **Fatke, 2017, N = 27.384 (21 countries), regression coefficients (fixed effects)** |          |                  |              |              |            |
| 1. Self-Placement (right-left) | .04*     | .03*             | .02*         | .02*         | .02*       |
| 2. Economic attitudes (2 items) | -.01     | -.02*            | -.01         | .01          | .03*       |
| 3. Social attitudes (2 items) | .02*     | -.08*            | .03*         | -.02*        | .02*       |
| **Bakker, 2017, N = 3612 (Denmark), regression coefficients (first order)** |          |                  |              |              |            |
| 1. Economic Ideology (2 items; liberal-conservative) | -.04     | .24*             | -.03         | -.51*        | -.28*      |
| 2. Social Ideology (7 items; liberal-conservative) | -.58*    | .15*             | .13*         | -.26*        | .07*       |
| **Bakker, 2017, N = 10.979 (United Kingdom), regression coefficients (first order)** |          |                  |              |              |            |
| 1. Economic Ideology (1 item; liberal-conservative) | -.02     | .13*             | .07          | -.13*        | -.13*      |
| 2. Social Ideology (5 items; liberal-conservative) | -.29*    | .13*             | .08*         | .01          | .09        |
| **Bakker, 2017, N = 5.914 (United States), regression coefficients (first order)** |          |                  |              |              |            |
| 1. Economic Ideology (2 items; liberal-conservative) | .21*     | .14*             | .09*         | -.06         | -.07*      |
| 2. Social Ideology (3 items; liberal-conservative) | -.24*    | .05              | .02          | .04          | .00        |
| **Furnham & Fenton-O’Creevy, 2018, N = 3854 (United Kingdom), correlation coefficients** |          |                  |              |              |            |
| 1. Self-Placement (Right-Left) | .17*     | -.09*            | -.03*        | .07*         | .04*       |
| **Krieger et al., 2019, N = 29.015 (Germany), correlation coefficients** |          |                  |              |              |            |
| 1. Self-Placement (liberal-conservative) | -.07*    | .06*             | .01          | -.04*        | -.04*      |

*p < .05.

In line with the dual-process model, newer studies found agreeableness to be the second significant predictor of the latter, predicting support for social justice and policies of redistribution (Kandler, Bleidorn, & Riemann, 2012; Schoen, 2012; Sibley & Duckitt, 2008). Agreeableness describes differences between people in social behavior,
encompassing help- and trustfulness, cooperativeness and compassion vs. egocentrism, distrust, and competitiveness (Kandler & Riemann, 2015).

For the missing two traits of the Big Five, the evidence is less conclusive. Extraversion seems to be widely unrelated to political orientation, while neuroticism seemingly exerts some influence on specific political attitudes while leaving direct self-ratings of political orientation widely unaffected. An overview of recent studies on the relationship between personality and political orientation is given in Table 1.

In light of this impressive and (at least partially) consistent body of research, what is the advantage of our study? Most crucially, most studies relied on a single-item for measuring political orientation. Those that distinguish between several dimensions of political orientation represent the exception to the rule and rely on a rather minimal number of items for each dimension. It is imperative to mention that the unidimensional conceptualization of political orientation has been criticized sharply. Two- and multidimensional concepts have been proposed to distinguish between distinct dimensions, for example, sociocultural and economical, which were shown to be differentially affected by dispositional factors (Federico & Malka, 2018).

Nevertheless, the dimensions have repeatedly been shown to be not independent of each other (Benoit & Laver, 2006), making the single left/liberal-right/conservative-dimension a parsimonious instrument to assess political orientation (Jost, 2006). An important caveat seems to be the question, what exactly is the status quo that conservatives strive to defend (Aspelund, Lindeman, & Verkasalo, 2013). However, most people—at least in western cultures—are willing and able to give self-ratings in these terms, which in turn show massive predictive power concerning actual voting-decisions (Jost, 2006). Therefore, unidimensional self-ratings are not suspicious of being invalid. On the other hand, findings showing significant discrepancies between self-ratings on an abstract left-right-dimension and attitudes towards concrete policies (Stimson, 2004) need to be taken seriously. Additionally, specific political attitudes evade classification on standard dimensions (Hooghe & Marks, 2009). So, unidimensional self-ratings should undoubtedly be supplemented by additional measures.

Furthermore, self-reports implicitly assume a consistent comprehension of the labels conservative and liberal or left and right in public, which may be contradicted as terms as Neoliberalism or The Authoritarian Left spread. Also, the labels may mean different things to different age-cohorts and may be connoted differently across cultures (Anderson, Mellor, & Milyo, 2005). Alternative, issue-related measures such as the Wilson-Patterson-C-Scale (Robertson & Cochrane, 1973) suffer from low generalizability - locally and temporally. Most crucially, these instruments are purpose-built to assess conservatism by asking for one’s stances on prototypic issues as capital punishment, which may give rise to tautological reasoning by leading to the investigation of personality’s influence on what psychologists define as conservative. This may replace the varying individual conceptions of certain labels in self-placements by a universal, inflexible, and not necessarily more valid one. To us, a combination of self-ratings with voting advice applications (VAA's), measuring the participant’s stances on timely and relevant policy-issues and being consistently updated, seems to be a promising, complementary way to measure political orientation and to gain insights regarding the presumably universal influence of personality on it. WoM constitutes such an instrument. It comprises items that were not intentionally picked to mirror conservatism but to give an overview of the German parties’ stances on specific, timely, and relevant issues. In turn, these parties can be easily ascribed to their respective positions on the ideological continuum by political experts and even by common sense (Rothmund & Arzheimer, 2015). So, if we can show personality-scores of people across the globe to be comparably predictive of their accordance with German parties on the WoM’s items, this would represent evidence for a uniform, psy-
chologically tangible entity called political orientation while preventing possible tautologies as well as misconceptions of the labels left and right.

Below, we present four additional and more specific arguments for using VAAs in research on the link between personality and political orientation. The basic functionality of VAAs is simple: They compare voters’ policy positions with those of parties or candidates and calculate scores of accordance (Schultze, 2012; see methods).

1. The empirical argument: Political science identifies trends towards "dealignment" and an increase of floating voters throughout Europe (Dalton & Wattenberg, 2002). Formerly powerful predictors of vote choice—traditional party ties and socio-structural factors—lose predictive validity (Aardal & Van Wijnen, 2005). Therefore, it is conceivable that issue positions will gain importance as an explanatory factor (Downs, 1957) of vote choice, as reflected in several studies (Alvarez & Nagler, 2000; Schoen & Weins, 2014). Of note, this does not imply that people’s issue positions are purely rational, unbiased, or deduced systematically. By opposite, error-prone heuristics and a myriad of intra- and extra-personal factors are certainly involved (Achen & Bartels, 2017). However, identifying the predictors of issue-positions, while paying attention to these biases, will presumably become more important for predicting actual vote choices. That may especially apply to increasingly fragmented, multi-party-systems, while in two-party-systems like the United States, issue-positions, ideological self-placements, and party affiliations may be harder to disentangle. Nevertheless, the potential upcoming of issue-voting calls for the investigation of personality antecedents of issue-positions, as the importance of the latter for predicting vote choice, may rise steadily.

2. The normative argument: Citizens who engage in searching for information about political issues and compare their stances to those of parties or candidates represent the ideal voter in normative theories of democracy. Klein (2006) explicitly points out that VAAs approximate this ideal mode of vote choice. So, while most people still are not "perfect" issue-voters, such a state of affairs represents the democratic ideal. Knowing which influence personality would have on political outcomes in such an ideal system is valuable.

3. Knowing to which extent personality influences VAA results is of value on its own. Carefully constructed VAAs have been shown to yield a multitude of positive effects. Most importantly, a substantial share of VAAs users indicates that the VAA influenced their vote choice (Ladner, Fivaz, & Pianzola, 2012). Vassil (2011) pointed out that especially those who are most unlikely to use VAAs may be influenced by their advice the most. So, as VAAs spread, their influence on vote choice may even rise. Besides, VAAs have been demonstrated to increase political expertise and political participation: Schultze (2014) showed that the German WoM enhanced political knowledge about party-positions, a Finnish VAA has been described as the most important source of election-related information in the country, and the majority of Swiss and German VAA users indicated that the instrument improved their information base and stimulated political discussions and personal research. Since political expertise is lower in non-voters, increased knowledge may mediate the association of VAA-usage and voter turnout. This mobilizing capacity is especially promising because it particularly affects groups, which have been chronically underrepresented at the ballots: The young and those with low socioeconomic status (Ladner & Pianzola, 2010; Marshall, 2005; Vassil, 2011). Related to Argument 2, higher political knowledge and higher turnout indisputably enhance democratic representation. Lastly, VAAs may change the way voters and parties approach the act of voting: VAAs have been described as focusing exclusively on a special type of party-voter-relations, i.e., matches of issue positions (following a proximity-logic predominantly; Downs, 1957), while other components, such as competence, trustworthiness, and sympathy are ignored. Also, outcome-oriented reasoning concerning
possible coalitions, for example, is not supported (Wagner & Ruusuvirta, 2012). Thereby, as VAAs spread, especially small parties could profit (Walgrave, Nuytemans, & Pepermans, 2009). Given their high prevalence among the young, VAAs will presumably enhance issue-voting in the future. Also, VAAs offer transparency, improving the accountability of parties or candidates (Ladner & Pianzola, 2010). These developments will presumably affect political campaigns and shift the political discourse in a—normatively spoken—right way (see Argument 2). However, this may open the doors for new, more issue-based forms of micro-targeting in political campaigns. Campaign managers could use personality profiles—extracted from social network profiles, for example—to decide which issue position should be presented to whom (Cadwalladr & Graham-Harrison, 2018). Knowing this danger in advance may sensitize people to ask for the whole picture.

4. Using VAAs in respective research projects will inform us of how ecologically valid assumptions about the influence of personality on political orientation are. Does personality only predict self-placements in abstract terms, or can preferences regarding particular political issues be derived from these often-shown associations? Empirical studies point to an interesting paradox: While citizens are generally able to place themselves and major parties on a broad left-right or liberal-conservative scale, they have little political knowledge of specific positions. However, these are relatively easy to deduce from the parties’ ideological positions (Schultze, 2014). By contrast, Wagner and Ruusuvirta (2012) showed, that left-right placements of parties, which were extracted from VAAs, match those of political scientists, which rely on comparative manifesto analysis or expert surveys, very well.

To sum up, examining personality’s influence on VAA outcomes represents a promising approach because it informs us about (a) how personality will affect political outcomes in the possibly more issue-oriented future, (b) how strong personality’s influence on political outcomes would be in ideal democratic systems (c) how political campaigns may enhance micro-targeting techniques and possibly even how we can protect ourselves and (d) how ecologically valid findings on the association between personality and political outcomes actually are and probably will be in future.

So, in the present study, we first try to replicate findings from various countries concerning the relationship between the self-assessed political orientation and broad personality traits in a German sample. We hypothesize that conscientiousness should be positively and openness and agreeableness negatively related to conservative political orientations. Second, we examine whether these relationships hold, when political orientation is not assessed by direct self-report, but by the WoM as a prominent and prototypical example of VAAs. We tested for mediational effects of RWA and SDO on these relationships, as proposed by the dual-process model. Finally, to test for the stability of our results across national contexts, all hypotheses were tested in six further samples from the United States, Denmark, Sweden, Turkey, Bulgaria, and Australia. Comparing the effect sizes across nations, we expected them to vary rather slightly, suggesting that the influence of personality on political orientation is a stable phenomenon.

**Participants and Method**

Data from 1891 participants were assessed, comprised of the following samples: Germany (N = 1219), United States (N = 156), Bulgaria (N = 70), Spain (N = 108), Turkey (N = 74), Denmark (N = 132), Australia (N = 77) and Sweden (N = 55).
All instruments described in the following were presented in a web-based format to all participants, who were recruited via online and offline advertisements. The samples used are not representative of the respective countries but represent convenience samples. Because participants were primarily recruited from universities in the respective countries, substantial restrictions of variance in educational levels, age, gender, and political orientation need to be taken into account, which representing a permanent problem in psychological science.

Questionnaires and Wahl-O-Mat

NEO-FFI

We administered the NEO-Five-Factor-Inventory (NEO-FFI; Costa & McCrae, 1992) in its German translation (Borkenau & Ostendorf, 2008) to assess the Big Five. The NEO-FFI is based on the five-factor-model of personality. Each factor is measured by twelve items. Validation-studies with German samples yielded favorable psychometric properties (Borkenau & Ostendorf, 2008). Kanning (2009) reports internal consistencies (Cronbach's α) from .72 to .82, and test-retest-reliabilities after two years range from .65 to .81. The factorial structure has often been confirmed, even in cross-cultural studies.

RWA and SDO

RWA was assessed using a shortened form, the Balanced Short Scale of Authoritarian Attitudes (B-RWA-6). Here, each of the subscales mentioned above is assessed by two items, one of which is poled reversely. Several findings demonstrate the scales’ reliability and validity (Aichholzer & Zeglovits, 2015). Participants had to indicate their support for the six statements on a five-point Likert-scale.

SDO was assessed by the original SDO-scale (Pratto et al., 1994). As in the B-RWA-6, half of the 16 items were reversely poled. Participants had to indicate their support for the 16 statements on a seven-point Likert-scale.

Wahl-O-Mat 2013/2017

The Wahl-O-Mat (WoM) is a web-based VAA offered by the federal agency for political education (bpb) in Germany. Initially constructed in 2002, it is consistently updated before elections on the state, federal, or European levels. The instrument nowadays consists of 38 statements, chosen and formulated by an invited council, comprised of first- and second-time voters, political scientists, statisticians, journalists, and representatives of the bpb. Exemplary statements of the actual version used here are “In Germany, a legal minimum wage should be introduced” or “Video surveillance should be expanded in public space” (see Supplementary Materials for the full list). Concordance is coded following the city-block method (Garzia & Marschall, 2012): Both parties and participants can indicate agree, disagree, or neutral for each of the 38 statements. If the participant agrees with a thesis and the party disagreed, proximity is minimum (zero points). If participant and party share the same opinion, proximity is maximum (two points). If one of them is neutral and the other either agrees or disagrees, one point is given. Participants (but not parties) have the opportunity to skip certain statements and to indicate which statements are especially important to them. For the latter, points are doubled. For every participant, the number of accordance points with each party is calculated, divided by the maximum possible number (given individual skips and weightings) and multiplied by 100, resulting in a percentual score of accordance. We applied the original algorithm but restricted it to the most important political parties in Germany. Those are the Alternative für Deutschland (AfD), a party ascribed to right-wing-populism, the Freie Demokratische Partei (FDP), a party known for its economic liberalism, the Christlich-Demokratische/Christlich-Soziale-Union (Union), the traditional conservative party of Chancellor Angela Merkel, the Sozialdemokratische Partei Deutschlands (SPD), Germany’s social democratic party, Bündnis 90/Die
Grünen, a green party, and Die Linke, a party confessing to the aim of democratic socialism (bpb, 2013). So, we obtained six scores of percentual accordance – expressed as a percentage – with each of the mentioned parties per participant.

To create an additional, concise WoM-score, we referred to the results of Infratest dimap (2015). We weighted the individual accordance-scores by the relative position ascribed to the parties on a left-right-dimension before averaging them. Higher values in the resulting WoM-total variable represent more rightist attitudes. We used the specific version of the WoM, that was created before the federal election in 2013 because the most actual version of the WoM (2017) was not available at the beginning of data collection. The WoM2013 has been used 13.300.000 times before the election in 2013, proving its acceptance in German society. For German participants, additional WoM2017 data could be obtained, leading up to 699 WoM2013- and 764 WoM2017-datasets in Germany. To avoid expectancy-effects and party-identification processes that could lead participants to answer the questions in line with what they think are the positions of their preferred party, we did not inform our participants that they were answering the WoM. Instead, it was presented as a measure of “societal attitudes”.

Self-Placements

Participants were asked to indicate their political orientation on a scale with a seven-point Likert-scale ranging from left to right.

Where necessary, the items of all instruments were translated by a professional interpreter or a native speaker and subsequently retranslated by independent native speakers. Retranslations were compared to the original items and modified then. In international samples, any references to Germany in the WoM-items were removed. Participants were instructed to answer the items as if the country they were living in was affected.

Statistical Methods

After inspecting the questionnaire-measures for reliability (Cronbach’s α), the mutual relationships between political self-placements, NEO-scales, the WoM-accordance-scores per party, and the WoM-total-scores, were investigated using Pearson’s correlation coefficients and hierarchical regression analyses. Meditational analyses were applied to test for possible mediations of the Big Five trait’s effect on political variables by RWA and SDO. As a measure of mediational effect size, completely standardized indirect effects are reported, supplemented by confidence intervals obtained from bootstrapping analyses (Hayes, 2017). Standard demographic variables (age, gender, educational status) were controlled for. All analyses were computed with IBM SPSS Statistics v. 24 and the PROCESS-Macro for SPSS (Hayes, 2017). Z-tests were used to test for the equality of correlations across samples, supplemented by sensitivity-analyses done with G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) to obtain estimates of the effect sizes reliably rejected with a β-error probability of 5%.

Results

Descriptive Statistics

Age and gender-distributions of all samples are presented in Table 2. Descriptive statistics and internal consistencies are depicted in Table 3.
Table 2

**Distribution of Gender and Age in All Samples**

| Sample     | N   | male (%) | female (%) | Age M (SD) |
|------------|-----|----------|------------|------------|
| Germany    | 1219| 37.2     | 62.8       | 29.82 (12.04) |
| United States | 156 | 36.5     | 63.5       | 25.15 (8.88)   |
| Bulgaria   | 70  | 48.6     | 51.4       | 31.37 (9.77)   |
| Spain      | 108 | 29.6     | 70.4       | 25.02 (9.23)   |
| Turkey     | 74  | 44.6     | 55.4       | 28.15 (10.93)  |
| Denmark    | 132 | 67.4     | 32.6       | 27.88 (8.90)   |
| Australia  | 77  | 48.1     | 50.6       | 35.97 (15.40)  |
| Sweden     | 55  | 40.0     | 60.0       | 29.42 (10.68)  |

Table 3

**Descriptive Statistics and Internal Consistencies**

| Variable                  | M             | SD             | α  |
|---------------------------|---------------|----------------|----|
| **NEO-FFI, N = 1891 (1219)** |               |                |    |
| Neuroticism               | 2.82 (2.77)   | 0.71 (0.69)    | .88 (.88) |
| Extraversion              | 3.24 (3.25)   | 0.56 (0.55)    | .81 (.82) |
| Openness                  | 3.64 (3.61)   | 0.55 (0.54)    | .77 (.77) |
| Agreeableness             | 3.64 (3.66)   | 0.50 (0.49)    | .76 (.79) |
| Conscientiousness         | 3.62 (3.66)   | 0.58 (0.57)    | .85 (.85) |
| **RWA, N = 1891 (1219)**  |               |                |    |
| Total                     | 15.73 (15.87) | 4.08 (4.00)    | .71 (.73) |
| **SDO, N = 1891 (1219)**  |               |                |    |
| Total                     | 2.54 (2.59)   | 1.06 (0.99)    | .92 (.92) |
| **WoM2013, N = 1371 (699)** |             |                |    |
| Total                     | -54.69 (-54.94) | 12.91 (13.05) |    |
| **Accordance with…**      |               |                |    |
| CDU/CSU                   | 43.78 (45.98) | 10.01 (10.15)  |    |
| SPD                       | 62.39 (63.91) | 8.37 (7.96)    |    |
| FDP                       | 50.19 (51.73) | 8.69 (8.74)    |    |
| Die Grünen                | 66.48 (67.10) | 10.94 (11.28)  |    |
| Die Linke                 | 67.56 (67.71) | 12.33 (12.61)  |    |
| AfD                       | 45.33 (46.67) | 10.19 (10.25)  |    |
| **Self-Placement, N = 1891 (1219)** |          |                |    |
| Left-Right                | 3.26 (3.25)   | 1.26 (1.09)    |    |

*Note.* Numbers in brackets refer to German participants only.

Gender difference significant at *p < .05. **p < .01. ***p < .001. n.s. = non-significant.

Analyses of gender effects on political and NEO-variables are presented in detail in Table 3.

Age correlated significantly, albeit negligibly, with self-placement (r = .09, p < .001), while educational status did not (r = .01, p = .557). However, age correlated with the WoM-total-score (r = .18, p < .001), while educational status did not (r = -.03, p = .325).
Personality's Influence on Political Orientation in Germany

As expected, significant results were obtained for the relationships between openness, agreeableness, and conscientiousness on the one side and the political self-placement on the other. See Table 4 for zero-order correlations.

Table 4
Correlations Between Personality and Political Outcomes in All Samples

| Self-Placement and… | Germany | United States | Bulgaria | Spain | Turkey | Denmark | Australia | Sweden |
|----------------------|---------|---------------|----------|-------|--------|---------|-----------|--------|
| Openness             | -.30*** | -.34*** (0.52)| -.14 (-1.37) | -.26** (-0.40) | -.27* (-0.21) | -.13 (-2.00*) | -.33** (0.30) | -.29* (-0.07) |
| Agreeableness        | -.20*** | -.20* (-0.04) | -.14 (-.50) | -.34*** (1.50) | -.47*** (2.48**) | -.13 (-0.75) | -.25* (0.45) | -.34* (1.05) |
| Conscientiousness    | .18***  | .20* (-0.22) | .02 (1.27)  | .01 (1.64*)   | -.15 (2.70**) | -.04 (2.42**) | .05 (1.07)  | .14 (0.30)  |

| WoM-Total and…      | Germany | United States | Bulgaria | Spain | Turkey | Denmark | Australia | Sweden |
|----------------------|---------|---------------|----------|-------|--------|---------|-----------|--------|
| Openness             | -.34*** | -.35*** (0.12)| -.04 (-2.48**) | -.39*** (0.58) | -.46*** (1.19) | -.28* (-0.87) | -.30** (-0.32) | -.07 (-1.97*) |
| Agreeableness        | -.32*** | -.23* (-1.05) | -.29* (-0.21) | -.43*** (1.35) | -.32* (-0.03) | -.31** (-0.08) | -.35** (0.35) | -.26 (-0.46) |
| Conscientiousness    | .17***  | .23* (-1.24) | .26* (3.44***)| .16 (0.08)    | -.11 (2.34**) | .01 (1.70*) | .03 (1.16)  | .24 (-0.49) |

Note. Numbers in brackets are z-scores of the comparison between the depicted correlation with the respective one in Germany. *p < .05. **p < .01. ***p < .001.

Associations between personality traits and the political self-placement are mirrored and partially exceeded when considering the WoM-outcomes instead of selfplacements in light of the ideological position of the respective parties in Germany’s political landscape (see Figure 1).

Figure 1. Correlations between individual WoM- and trait- scores in the German sample.
*p < .05. **p < .01. ***p < .001.
Next, we performed hierarchical regression analyses to assess whether personality traits are meaningful regressors of political orientation variables beyond demographics. Age, educational status and gender were entered in the first block, followed by openness, conscientiousness and agreeableness in the second block. For the self-placement as regressand, the first model reached significance, $F(3, 1209) = 3.49, p = .015$, adj. $R^2 = .01$, however, explained variance was significantly increased, when openness ($\beta = -0.24, p < .001$), agreeableness ($\beta = -0.20, p < .001$) and conscientiousness ($\beta = 0.20, p < .001$) were added, $F(6, 1206) = 35.63, p < .001$, adj. $R^2 = .15, \Delta R^2 = .14$.

Replacing the self-placement by the WoM-total variable, led to even more pronounced results: Adding openness ($\beta = -0.25, p < .001$), agreeableness ($\beta = -0.29, p < .001$) and conscientiousness ($\beta = 0.18, p < .001$) to the purely demographic first model, $F(3, 695) = 19.32; p < .001; \text{adj. } R^2 = .07$, substantially increased explained variance, $F(6, 692) = 41.74; p < .001; \text{adj. } R^2 = .26, \Delta R^2 = .19$.

As Table 5 shows, WoM-scores and the self-placement are associated but clearly not identical to one another.

Table 5

| WoM            | Self-Placement (Left-Right) |
|----------------|----------------------------|
| Total          | .67*** (.59***)             |
| CDU/CSU        | .54*** (.49***)             |
| SPD            | -.32*** (-.34***)           |
| FDP            | .26*** (.28***)             |
| Die Grünen     | -.62*** (-.52***)           |
| Die Linke      | -.67*** (-.58***)           |
| AfD            | .55*** (.51***)             |

Note. $N = 699$ German participants (1371 participants across all samples).

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

To directly test whether WoM-results are indeed equally—or even to a larger extent—influenced by personality traits as the self-placement, partial correlations (again controlling for gender, age, and educational status) were compared by z-tests for dependent samples ($N = 699$). The correlations between openness and the self-placement vs. openness and WoM-total did not differ significantly from each other ($z = 0.31; p = .378$), neither did conscientiousness’ ($z = -0.20; p = .421$) correlations with these two variables. By contrast, agreeableness ($z = 2.43; p = .008$) showed significantly higher correlations with WoM-total than with the self-placement.

To further investigate these relationships, we—following the rational of the dual-process model—performed mediation analysis to see whether openness does exert its influence on political variables via RWA and SDO simultaneously, while the effects of conscientiousness and agreeableness are predominantly mediated by RWA and SDO respectively. Analyses were done for the self-placement first and WoM-total subsequently, entailing one or both mediators. Age, gender, and educational status were entered as covariates in all models. The results of the dual mediator models are presented in Table 6. As expected, the influence of openness on the political self-placement was entirely mediated by RWA and SDO jointly. Regarding conscientiousness’ effect on the self-placement, RWA turned out as the more important mediator, while for agreeableness, the opposite was the case.
### Table 6
Parallel Mediation Models

|                         | Total Effect Model | Indirect Effect | 95% Bootstrap-Interval |
|-------------------------|--------------------|-----------------|------------------------|
| **Y = Self Placement**  |                    |                 |                        |
| Model Summary           | \( F(4,1208) = 30.97, p < .001, R^2 = .09 \)     | -.30***         |                        |
| X: Openness             |                    |                 |                        |
| M1: RWA                 | -.14               | -.18; -.12      |                        |
| M2: SDO                 | -.11               | -.14; -.09      |                        |
| Contrast                | -.03               | -.08; .01       |                        |
| **Y = WoM-Total**       | \( F(4,694) = 35.97, p < .001, R^2 = .17 \)     | -.31***         |                        |
| X: Openness             |                    |                 |                        |
| M1: RWA                 | -.14               | -.18; -.11      |                        |
| M2: SDO                 | -.15               | -.19; -.11      |                        |
| Contrast                | .01                | -.05; .07       |                        |
| **Y = Self-Placement**  | \( F(4,1208) = 13.81, p < .001, R^2 = .04 \)     | .19***          |                        |
| X: Conscientiousness    |                    |                 |                        |
| M1: RWA                 | .07                | .05; .09        |                        |
| M2: SDO                 | .04                | .02; .06        |                        |
| Contrast                | .03                | .01; .05        |                        |
| **Y = WoM-Total**       | \( F(4,694) = 21.58, p < .001, R^2 = .11 \)     | .19***          |                        |
| X: Conscientiousness    |                    |                 |                        |
| M1: RWA                 | .06                | .04; .09        |                        |
| M2: SDO                 | .04                | .00; .07        |                        |
| Contrast                | .03                | -.01; .06       |                        |
| **Y = Self-Placement**  | \( F(4,1208) = 14.73, p < .001, R^2 = .05 \)     | -.20***         |                        |
| X: Agreeableness        |                    |                 |                        |
| M1: RWA                 | -.05               | -.08; -.03      |                        |
| M2: SDO                 | -.13               | -.16; -.10      |                        |
| Contrast                | .07                | .04; .11        |                        |
| **Y = WoM-Total**       | \( F(4,694) = 32.72, p < .001, R^2 = .16 \)     | -.30***         |                        |
| X: Agreeableness        |                    |                 |                        |
| M1: RWA                 | -.04               | -.07; -.01      |                        |
| M2: SDO                 | -.17               | -.21; -.13      |                        |
| Contrast                | .13                | .08; .18        |                        |

Note. \( Y = \) Criterion; \( X = \) Predictor; \( M = \) Mediator. Standardized coefficients and completely standardized indirect effects are reported. Age, gender, and educational status were entered as covariates in all models.

* \( p < .05 \). ** \( p < .01 \). *** \( p < .001 \).

Lastly, in the subsample of 245 German participants, who had filled out the WoM2013 as well as the actualized version WoM2017, we checked whether partial correlations between the respective WoM-total-scores and the trait-measures as well as the self-placement differed significantly across the different WoM-versions. The intercorrelation of the total-scores of both WoM-versions was .80 (\( p < .001 \)). The correlations between openness and
WoM-total and between openness and WoM2017-total did not differ significantly from each other ($z = -0.16; p = .437$), the same was true for agreeableness ($z = -0.80; p = .212$), conscientiousness ($z = -1.61; p = .054$), the self-placement ($z = 0.00; p = .500$) and SDO ($z = -0.73; p = .232$). The only significant difference was found for RWA ($z = 3.23; p = .001$), which showed a significantly stronger partial correlation with the WoM17-total-score ($r = .68; p < .001$) than with the WoM-total-score ($r = .58; p < .001$).

**International Comparisons**

Table 7 depicts the zero-order correlations between personality-scores and political outcomes for each of the international samples.

As for German participants, the associations between dispositional variables and the political self-placement are widely mirrored and often exceeded when the WoM-total variable replaces the self-placement in the international samples (see Figure 2).

Regression analyses following the same approach as for the German data showed larger and more consistent effects of personality on WoM-total compared to the self-placement across samples (see Supplementary Materials).

As for the German data, partial correlations (controlling for gender and age) of either the self-placement or WoM-total and all trait-measures were compared by $z$-tests for dependent samples (see Table 7). Differences did not reach significance for the most part. Acknowledging the unrepresentative nature of the international samples, these results per se should only be interpreted in conjunction with other studies focusing on international stability of personality’s influence on political orientation specifically, e.g., (Fatke, 2017). Here, they should primarily serve as a hint to the possibility of the WoM not only being a measure of political orientation, which is equally or even more sensitive to the influence of personality and persistent motivational goals than the self-placement, but also equally stable across national contexts. In addition to these comparisons of correlations, we conducted sensitivity-analysis using G*Power. Thereby, critical effect sizes ($q$) can be calculated, based on sample sizes and $\alpha$- and $\beta$-error probabilities. Maintaining an $\alpha$ of .05, we set the power ($1-\beta$) to .95 to see which effect-size can be rejected with an appropriate error-probability of 5%. Of note, these estimates are likely to be too conservative as we refrained from manipulating $\alpha$ while—when testing for differences—a $\beta$ of .20 is usually accepted. Also, we opted for critical
q's for two-tailed tests. Conventionally, a q of .10 is regarded as small, those of .30 and .50 as medium and large effects. For Germany's comparisons with the international samples, the following estimates were achieved: .31 (United States), .45 (Bulgaria), .37 (Spain), .44 (Turkey), .33 (Denmark), .43 (Australia) and .51 (Sweden). Accordingly, in most cases where no significant differences were found, medium to large effects can be rejected.

![Figure 2. Correlations between individual WoM- and trait-scores across international samples.](image)

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

**Discussion**

The present study aimed to investigate whether the relationships between political orientation and personality in Germany and various further countries with quite different historical backgrounds are restricted to self-placement measures of political orientation or do extend to measures based on stances on particular political issues. Therefore, political orientation was operationalized not only by self-reports but also by utilizing Germany's most prominent VAA. As the WoM asks for the participant's stances on concrete, timely, and relevant policy-issues, we think of it as a more "textual" measure of political orientation, which of course does not necessarily represent a "truer" measure, but undoubtedly a more specific instrument focusing on the "issues"-side of political orientation, leaving out "identity"-related phenomena as party-affiliation (Jenke & Huettel, 2016). Given the latter's decline of importance for predicting vote choice, knowing the effects of political orientation on (aggregated) policy stances is crucial. Also, while the "perfect" issue-voter represents a democratic ideal, our results imply that issue-voting is not insensitive towards the influence of fundamental traits. These influences are not problematic per se, but there certainly is potential for abuse, which may take the form of Big-Data inspired micro-targeting techniques or
targeted launches of fake news. Knowing that these dangers would probably persist even in an ideal society of “perfect democrats” is a prerequisite for protection-efforts.

Additionally, our results hint to a substantial ecological validity of previous findings on the relationship between personality and political orientation, who often suffered from extremely parsimonious operationalizations of the latter. Also, as the WoM is not purpose-built to contain prototypically conservative issues but to give an overview of the German party’s stances on issues relevant in Germany, comparable patterns of relationships between personality and attitudes and the WoM-outcome across different countries represent strong counter-evidence for culture-deterministic and purely anti-dispositional (e.g., rational-choice) accounts of political orientation while strengthening psychological theories which describe a “match” or “elective affinities” between traits, motifs, worldviews and needs on one side and political orientation on the other side (Jost, Federico, & Napier, 2009). Of course, our results here are based on limited international data sets and should be interpreted only in conjunction with studies focusing explicitly on intercultural comparability (e.g., Fatke, 2017). Lastly, our results add to the growing literature on VAA. Given their promising effects—encompassing political mobilization, enhancing political interest and knowledge, and, crucially, increases in voter-turnout—knowing the influence of personality traits and motivational goals on VAA results, is of value on its own.

Considering our results in detail, we first were able to replicate findings of a positive correlation between conscientiousness and a more conservative (self-reported) political orientation and between openness as well as agreeableness and a more liberal political orientation (Sibley, Osborne, & Duckitt, 2012) in a German sample. Strikingly, just like the left-right self-placement, the WoM-scores showed an equal pattern of correlations with these three traits. The issue-related accordance with Right-of-Center-Parties was negatively related to openness and positively to conscientiousness, while the accordance with Left-of-Center-Parties showed the opposite pattern. As the WoM-scores are the result of a comparison between the participant’s and the German party’s stances on concrete policies, it seems justified to state, that personality’s influence on political orientation is not restricted to broad, abstract and general political goals, but seems to affect daily political business. This is in sharp contrast to the long-held assumption that political beliefs are messy, virtually meaningless, and more or less random (Campbell, Converse, Miller, & Stokes, 1960). Our results, along with many prior findings, instead suggest that a general left vs. right orientation is at least partially grounded in personality and does affect one’s opinion towards issues as concrete as a general speed limit on highways or income splitting.

On to the question, how personality does influence one’s general political orientation and thereby one’s stance on particular issues, our results are feasible to strengthen the conception of RWA and SDO as persistent motivational goals, sitting in between core personality traits and the political orientation (Duckitt & Sibley, 2010). We did show that a model of RWA and SDO mediating the effects of core personality traits on political orientation is statistically plausible. Openness’ effect on the general political self-placement is completely mediated by RWA and SDO in a parallel mediation model. Concordantly, the effects of openness on the WoM-total-score is entirely mediated by RWA and SDO. The pattern of these results is in line with previous theoretical and empirical work on RWA: According to Duckitt and Sibley (2009), RWA is associated with a view of the world as dangerous and threatening. As attitudes towards social change vs. tradition have been identified as one core-aspect of political orientation (Jost et al., 2003), the mediational effect of RWA on the self-assessed political orientation is hardly surprising, while the virtually same effect on the WoM-total variable surely is. The pattern of correlations between openness, RWA, SDO and the basal WoM-accordance-scores depicted in Figure 1 and Figure 2 may explain how this effect comes about (also see Supplementary Materials). RWA’s by far strongest negative correlations
were found for the accordance with the two parties on the left side of the political spectrum, Die Grünen and Die Linke. So, we would argue, that the liberal worldview of these parties, their confession to the necessity of societal change and their admonitions to help people in need irrespective of their descent, is reflected in their answers to the concrete WoM-statements, leading to low accordance-scores for people low in openness and high in RWA. These are more attracted to the conservative parties, whose skepticism about change and the strange in general is reflected in their stances on particular issues. Interestingly, RWA showed its weakest correlation with the WoM-FDP-score. The FDP generally cannot be called a “traditionalist” party as the Union or the AfD. Its position in the political spectrum—to the right of the CDU/CSU—is, therefore, due to its libertarian orientation and not reflective of socially protectionist attitudes (Decker, 2018). Distinct from RWA, SDO is related not to a threatening but a social-darwinistic worldview (Duckitt & Sibley, 2009). As our analyses showed coexistent mediational effects of RWA and SDO on the effect of openness on the political self-placement as well as the WoM-total-score, we would argue that there are distinct portions of the shared variance between openness and political variables. One of these is grounded in a preference for known, structured and safe environments and the reluctance against strangers and changes to the known and proved, while the other one is caused by general attitudes of dominance and superiority that also lead to skepticism about anything, that may change the current system. These two ways by which (low) openness exerts its influence on political orientation may be labeled the weak and the strong way, as the first one seems to reflect a desire for safety, order, and structure grounded in a general feeling of threat, while the second one seems to reflect the depreciation of the strange and new based on a general sense of superiority. Seen this way — compared to RWA — stronger correlations of SDO with WoM-scores for neoliberal vs. socialist parties (FDP and Die Linke) and weaker correlations with WoM-scores for socially protective vs. progressive Parties (Union, AfD, Die Grünen) make sense. Of course, this interpretation is highly speculative and should be tested in future studies using qualitative analysis techniques.

Mediational effects on the relationship between conscientiousness and political outcomes were weak for SDO but quite pronounced for RWA. Reasonably, this is due to the match of the RWA subscales submission and conventionalism, which—according to (Duckitt & Sibley, 2010)—should be interpreted as stable motivational tendencies and the facets “dutifulness” and “order” of the conscientiousness-domain. Tracing back competitive (SDO-) motivational tendencies to conscientiousness, on the other hand, is intuitively less plausible. The positive total effect of conscientiousness on a more conservative political orientation has been sensibly interpreted in terms of conscientious people sticking to traditional political values as competence, individual achievement, conformity, and duty (Caprara, Schwartz, Capanna, Vecchione, & Barbaranelli, 2006). For the effect of agreeableness on the political outcome variables, a reversed image emerged: Here, SDO was a much stronger mediator. It is intuitively plausible that agreeable tendencies, worldviews, and motifs run counter the social-darwinistic perspective of people scoring high in SDO, whereas, for RWA, mutually compensatory relationships are conceivable: Agreeableness is certainly negatively associated with the aggression-facet but presumably less so with the conventionalism- and the submission-facet (see Supplementary Materials).

Besides replicating findings on the relationships between openness, conscientiousness, RWA, SDO, and political orientation, the present study is of additional value when one of the most pertinent criticisms about RWA- and SDO-related research is taken into account: the potential predictor-criterion-inflation in prior studies (Schumann, 1990). As we operationalized political orientation by self-placements and the WoM-scores, overlaps in item-content do not seem to be a viable alternative explanation, especially as we could show the relations between personality, attitudes, and the WoM-scores to be highly stable across different versions of the WoM, which feature different specific questions.
Generally, the predictive value of Big Five traits as well as RWA and SDO for the WoM, an instrument that was not intentionally designed to be a measure of conservatism or liberalism but compares the positions of several parties and the participant on timely and concrete political issues, in our opinion shows once more, that the conservative-liberal or right-left dimension is not a purely theoretical framework with no relevance in actual political decisions anymore. Instead, it is reflected in every political act.

In our opinion, this thesis is strengthened by the finding that the relationship between personality and the self-placement, but especially the WoM-scores, were unexpectedly stable across international samples, albeit our results here certainly call for replication with larger and more representative international samples. However, especially regarding the WoM-scores, these results are in sharp contrast to anti-dispositional accounts of all kinds.

There are several limitations to the present study to be addressed. First and foremost—as outlined above—our samples were not representative for the entirety of voters in the respective countries: Consistently, the average educational status was quite high, mean age relatively low, and women were frequently overrepresented. These are permanent problems in psychological science. Also, samples were mostly skewed to the right with regard to the political orientation, i.e., participants with a rather left-wing political orientation were overrepresented (see Table 3). However, we suspect that a more representative sample would rather strengthen than diminish the relationships between political orientation and dispositional variables. Our sample was not unusually large compared to prior studies investigating the association between personality and political orientation. However, one should keep in mind that most previous studies not only used very few items to assess political orientation but also frequently applied very brief measures of personality. Many questions are still open to future research. For example, as we could show, that personality’s influence on political orientation becomes evident across different methods of assessing the political orientation, we are confident to show more known effects of political orientation to extend to issue-based measures as the WoM, proving the replicability of results as well as the psychological merits of studying political orientation in general.

Synoptically, the current study replicated prior findings on the relationships between core personality traits, persistent motivational goals, and political orientation. It showed these relationships to be invariant across different methods to assess political orientation. In fact, the often stronger and more pronounced results found for the WoM compared to the self-placement may give rise to the presumption, that personality’s influence on political orientation has been rather under- than overestimated. Furthermore, the present study delivered preliminary data, suggesting that these effects may hold across different national contexts. To us, these results corroborate the idea of the political orientation being deeply seated in the human condition.

**Conclusion**

The present results show that personality influences our political orientation and that this effect is not restricted to abstract terms of left and right but (possibly even more) extends to political issue positions. Therefore, as issue-stances become more and more relevant to explain vote choice, personality’s influence on the latter will remain or even increase. The past has shown that personality profiles were misused by profit-oriented companies to influence elections by customizing political messages to voters’ personality. So, while an electorate of issue-voters represents a democratic ideal, even this state of affairs would not supersede political and civic education and independent media as necessary weapons against micro-targeting and fake news.
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Competing Interests
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Supplementary Materials

The Supplementary Materials contain the following items (for access see Index of Supplementary Materials below):

1. Table A1. Gender-Specific Descriptive Statistics Including RWA Subscales
2. Table A2. Big Five’s Correlations (Zero-Order) With Political Outcomes (Including SDO and RWA With Subscales) in the German Sample
3. Table A3. Zero-Order Correlations of all WoM-Scores and Self-Placement, RWA & SDO
4. Table A4. Statistics on the Dual Predictor Models
5. Table A5. Correlations Between Personality, RWA, SDO and Political Outcomes in all Samples
6. Table A6. Hierarchical Regression Analyses Including RWA and SDO as Second-Block predictors
7. Table A7. Complete Mediation Models
8. WoM Items
9. WoM SPSS Syntax File

Index of Supplementary Materials

Grünstehme, T., & Reuter, M. (2020). Supplementary materials to "Personality's influence on political orientation extends to concrete stances of political controversy in Germany – Cross-nationally and consistently" [Additional information, analyses, and code]. PsychOpen. https://doi.org/10.23668/psycharchives.4200

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