Registered report

Interpersonal accuracy in a political context is moderated by the extremity of one's political attitudes[☆]

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ABSTRACT

The political orientation of others can be perceived above chance level from looks alone. However, the effect is usually small and there is considerable interpersonal variance. We propose that the ability to accurately perceive others' political orientation is highest for those who hold more extreme political views themselves, as compared to people with more moderate views. This is because more extreme persons have a higher need to establish clear group boundaries and distinguish between political allies and adversaries. In six studies we investigate the proposed relationship, using participants from three different countries and two different sets of politicians as targets. In line with our hypothesis, attitude extremity was associated with higher accuracy. The robustness of our findings is supported by a small-scale meta-analysis over our studies. An alternative account that attitude strength in general – of which attitude extremity is a sub-facet – would lead to higher accuracy was not supported. Implications and suggestions for future research on interpersonal accuracy are discussed.

Accurately perceiving others is an important social skill (Ambady, Bernieri, & Richeson, 2000; Hall, Andrzejewski, & Yopchick, 2009). Being able to recognize whom we can trust or who may harm us, whom to approach and whom to avoid, or who is friend and who is foe is undoubtedly of advantage in social interactions. Thus, it is not that surprising that inferences from brief exposures to persons' looks are often more accurate than would be expected by chance alone (Alaei & Rule, 2016; Ambady & Rosenthal, 1992; Hall et al., 2009; Tskhay & Rule, 2013). Above chance accuracy has been shown in a variety of socially relevant domains, such as inferences about affective states (Carney, Colvin, & Hall, 2007), personality traits (Borkenau & Liebler, 1993; Naumann, Vazire, Rentfrow, & Gosling, 2009; Vogt & Randall Colvin, 2003), intelligence (Zebrowitz, Hall, Murphy, & Rhodes, 2002), and—importantly—group memberships (Tskhay & Rule, 2013): Sexual orientation of gay vs. straight men was correctly identified from portrait pictures (Rule & Ambady, 2008) and similar results were obtained even for a highly complex social category like religious affiliation (Rule, Garrett, & Ambady, 2010). Additionally and pertinent to the current paper, there is substantial evidence that a person's political orientation can be perceived from facial portraits. Studies from various countries, using different targets and approaches, consistently found above chance

accuracy (Benjamin & Shapiro, 2009; Berggren, Jordahl, & Poutvaara, 2010; Carpinella & Johnson, 2013; Jahoda, 1954; Olivola, Sussman, Tsetsos, Kang, & Todorov, 2012; Rule & Ambady, 2010; Samochowiec, Wänke, & Fiedler, 2010; for a review s. Wänke, 2015).

Although remarkably robust, the effect is usually rather small (Tskhay & Rule, 2013; Wänke, 2015). Moreover, and presumably a reason for the small effect size, there is considerable inter-individual variance in detecting political attitudes accurately: A re-analysis of data from Samochowiec et al. (2010, Study 2) shows that only 53.3% of the participants in the study perceived the political orientation of Swiss politicians significantly above chance level.[1]

Against this backdrop, we look at inter-individual differences in accurately identifying others' political orientation. We argue that recognizing whether another person holds similar or opposing political views would be more of an issue for those who themselves hold more extreme views. For those on the extremes in-group/out-group boundaries would be clearer and presumably more important compared to moderates who can find ideological common ground with people from both sides. As a consequence, accuracy in detecting political orientation should be higher for those with more extreme political attitudes as compared to moderates.

[1] This percentage was calculated by determining the lowest correlation which would be deemed significant, with p < .05 (given 39 degrees of freedom in the study). This value is $r = 0.309$. In other words, 53.3% of the participants had a value above $r > 0.309$.

1. Inter-individual differences in accurate person perception

When it comes to the organization of our social environment, attitudes allow for the categorization of others into good/bad or friendly/hostile (Katz, 1960; Maio, Olson, & Cheung, 2012; Vogel & Wänke, 2016), especially when little information about a target is available (Fazio & Williams, 1986; Stern, West, Jost, & Rule, 2013). We generally like those with similar attitudes and dislike those with opposing attitudes (Byrne, 1971; Chen & Kenrick, 2002; Rosenbaum, 1986). In this regard, political attitudes are a prime example that people show intolerance towards diverging opinions and distance themselves from the "other" political camp independent of whether they are left or right-oriented (Brandt, Reyna, Chambers, Crawford, & Wetherell, 2014; Chambers, Schlenker, & Collisson, 2013). Given the actual (Iyengar & Westwood, 2015) and perceived (Westfall, Van Boven, Chambers, & Judd, 2015) high polarization and rising partisanship in politics, political attitudes and their underlying beliefs seem to represent a meaningful dimension along which people categorize themselves and others (Koch, Imhoff, Dotsch, Unkelbach, & Alves, 2016). If so, one may also expect that people acquired the skills to identify cues that distinguish between the political camps. They do so by paying attention to characteristics defining out-group members and thereby acquire knowledge about distinguishing cues that facilitate accurate categorization (Lindzey & Rogolsky, 1950). This has been termed the "Vigilance-Hypothesis" (Castano, Yzerbyt, Bourguignon, & Seron, 2002). Indeed, accurate perception can be learned: Familiarity with homosexuals increased accuracy, when assessing a target's sexual orientation (Brambilla, Riva, & Rule, 2013). Likewise, receiving training led to increased accuracy in deception detection and the accurate assessment of emotional states (Blanch-Hartigan, Andrzejewski, & Hill, 2012).

Importantly, one could also expect higher vigilance the more relevant the distinction between the in- and out-group is for somebody. Indeed, higher accuracy was found for those highly identified with their in-group or those who wanted to distance themselves from out-group members (Blascovich, Wyer, Swart, & Kibler, 1997; Dorfman, Keeve, & Saslow, 1971). Overall, categorizations are more precise, when the task has higher self-relevance for the judge: Heterosexual women were more accurate in differentiating between heterosexual and homosexual men, when they were interested in engaging romantically with a stranger (Rule, Rosen, Slepian, & Ambady, 2011). People, for whom trustworthiness was very important, showed higher precision when distinguishing between cheaters and cooperators in a prisoner's dilemma game (Shoda & McConnell, 2013). Recently, Bjornsdottir, Alaei, and Rule (2017) argued that making correct personality judgments and categorizations in their social environment is more relevant for low social class individuals, because they need to rely more on their social environment for support than their high social class counterparts. Accordingly, they found that those lower in subjective socio-economic status had higher interpersonal accuracy in general and, relevant to this research, also when it came to the identification of the political orientation of fellow college students.

In the political arena it is certainly self-relevant to know who the political enemy is, but also on whom one might rely as a political ally. People with high attitude extremity are more likely to see those from the other side of the political spectrum as a threat (Crawford, 2014; Crawford & Pilanski, 2014). Hence, it becomes more important to be accurate when categorizing both in- and out-group members. As for moderates, they should feel less threatened, because they can identify with views from both sides of the political spectrum. Accordingly, the need to recognize dissenting views from faces should be less pronounced.

So far, some studies have already looked at the role of perceivers' political orientation in relation to accuracy and did not find differences in accuracy between left- and right-wing participants (Rule & Ambady, 2010; Samochowiec et al., 2010). This may suggest that people on both sides have equally strong reasons to be able to distinguish between

Table 1
Studies overview.

#	N	Participants	Targets	No. of targets
1a	399	German and Swiss online sample	Swiss Politicians	82
1b	77	French university students	Swiss Politicians	82
2	75	French university students	French Politicians	268
3	153	German online sample	French Politicians	268
4a	118	German online sample	French Politicians	267
4b	105	German university students	French Politicians	268

Note. N = final number of participants included in the analysis; no. of targets = number of Politicians used as targets in the respective study overall. The number of politicians presented to any one participant varied, since in some studies targets were divided into several blocks in order to reduce strain on the raters. The number of ratings provided by participants is given in the study descriptions; Study 1a is a reanalysis of data published by Samochowiec et al. (2010, Study 2).

those who share their political views and those who do not. Additionally, several studies also reported a response bias: Perceivers were more likely to categorize targets as out-group members than in-group members (Samochowiec et al., 2010; Wilson & Rule, 2014). This so called in-group over-exclusion effect (Leyens & Yzerbyt, 1992) was stronger for perceivers with more extreme political attitudes, suggesting that it is highly relevant for them to distance themselves from the out-group. Assuming higher relevance for people with more extreme political attitudes in conjunction with findings showing more accuracy as a result of higher relevance, we propose an advantage of attitude extremity (no matter whether left- or right-wing) over moderate attitudes when it comes to the correct identification of others' political attitudes.

2. Methodological approach

The first four studies had a similar procedure; therefore, we will summarize the methodology first (see also Table 1). A more detailed account of the experimental setup is provided in the according sections. We report all studies, which were conducted as part of this research project, as well as all measures, manipulations, and exclusions in these studies. No additional data were collected once data analysis was started.

In order to test our hypothesis, we first re-analyzed a previously published dataset (Samochowiec et al., 2010). We then conducted three conceptually similar studies (Studies 1b, 2 & 3). The four studies used two different sets of politicians as targets, a Swiss (Studies 1a & 1b) and a French (Studies 2 & 3) sample. Ratings were given by participants from Switzerland (Study 1a), Germany (Studies 1a & 3) and France (Studies 1b & 2). Studies 1a, 1b, and 2 examined attitude extremity as a moderator for the accuracy in identifying the political orientation of others. In addition, Study 3 also introduced interest in politics, or in other words expertise, as an alternative moderator. Two additional studies (Studies 4a & 4b) were carried out with German participants and French politicians as targets in order to explore an alternative explanation for the obtained results. Namely, since attitude extremity is a facet of attitude strength, it could be that our results are better explained by this broader concept. In all six studies, participants had to identify the political orientation of politicians from a portrait alone. The politicians were always presented one at a time and in a randomized order. When participants indicated that they recognized the politician the corresponding trial was excluded from analysis. Political attitudes of the participants were measured using self-report items.

We did not perform a formal a priori power analyses. Since we test a novel predictor it is not clear which effect size should have been expected. Nonetheless, using the software program GPower (Faul, Erdfelder, Lang, & Buchner, 2007) we calculated the sample size that would have been required in order to detect a small-to-medium effect

($f^2 = 0.065$), with an alpha significance criterion = 0.05 (two-tailed) and power = 0.80. Under these parameters at least 123 participants would have been necessary in each individual study. In the end, sample size in each study was determined by the availability of participants, which led to only two out of six final sample sizes exceeding this value (s. Table 1). We address this circumstance twofold: First, for each study we report a sensitivity power analysis, with an alpha significance criterion = 0.05 (two-tailed) and power = 0.80. This returns the minimal effect size that could have been detected under the aforementioned parameters and given the sample size of the study. In order to make comparisons with the actually found effect sizes easier, we transformed the results from the sensitivity power analyses from f^2 to r. Second, because single studies can be burdened with low statistical power (Cumming, 2014; Tuk, Zhang, & Sweldens, 2015), we additionally report a small-scale meta-analysis across all studies (Braver, Thoemmes, & Rosenthal, 2014; Goh, Hall, & Rosenthal, 2016).

3. Study 1a[2]

For a first test of the proposed relationship between the extremity of a person's political attitudes and their interpersonal accuracy a dataset from Samochowiec et al. (2010, Study 2) was reanalyzed.

3.1. Method

3.1.1. Participants

Of the original 403 participants 4 did not provide their political orientation, which results in a final sample of 399 participants (54.3% female, $M_{age} = 26.38$, $SD = 7.46$). They were recruited online and most were either Swiss (205) or German (175), with 19 participants from other countries. Entering the final sample size into a sensitivity power analysis, we would have been able to detect a minimal effect size of $r = 0.14$, given $\alpha = 0.05$ (two-tailed) and power = 0.80 (for all subsequent sensitivity power analyses, we use the same parameters).

3.1.2. Materials

As targets, we used 82 politicians (19 females). All were members of the national parliament of Switzerland in the year 2006. The pictures had been downloaded from the official parliament website. They were all in color and taken in front of a white to beige background. All politicians wore standard business attire. The basis for the criterion was the politicians' actual voting behavior in parliament on various topics (e.g. tax or immigration policies), which had been recorded for the year 2006 and combined into a left-right scale (s. Hermann, 2006). It was then transformed to a placement on a left- (1) to right-wing (7) continuous scale by Samochowiec et al. (2010, Study 2). This allows for a more precise judgment of the politicians' actual ideological stance than a dichotomous criterion of political party membership. Participants rated the targets' political orientation on a seven-point scale (1 = *extremely left-wing*, 7 = *extremely right-wing*). Participants' gave their own political orientation on the same seven-point scale (1 = *extremely left-wing*, 7 = *extremely right-wing*).

3.1.3. Procedure

Each participant rated a total of 41 out of 82 politicians. They were presented with one politician at a time and the presentation order was randomized. After finishing this task, participants indicated their own political orientation and provided demographic data.

3.2. Results and discussion

3.2.1. Political attitudes

Participants had on average left-leaning political attitudes ($M = 3.035$, $SD = 1.211$, Range 1–7 on a seven-point scale).

3.2.2. Accuracy

Since both the criterion and the ratings were continuous, accuracy was operationalized as the correlation between those two values. More specifically, for each participant the correlation between his or her ratings and the objective measure was calculated. This resulted in one value for each participant, showing his or her individual mean accuracy in regard to all 41 politicians. Values above 0 indicate above chance accuracy, whereas a value of 0 would be the result of random guessing. Values below 0 indicate that a participant systematically made false judgments about the politicians' political orientation. The mean correlation for all participants was significantly different from 0 ($r = 0.30$, $SD = 0.21$, Range from $r = -0.27$ to $r = 0.79$), $t(398) = 28.283$, $p < .001$, d = 1.43.[3]

3.2.3. Attitude extremity

To test our hypothesis that higher attitude extremity, independent of the direction, would lead to higher accuracy, we calculated an "extremity-index" (Krosnick, Boninger, Chuang, Berent, & Carnot, 1993): The item assessing participants' political orientation was transformed so it represents the distance to the midpoint of the scale (in this case 4). In line with our hypothesis, the extremity-index was positively associated with higher correlation scores (r), $b = 0.051$ (0.012), $t(397) = 4.183$, $p < .001$, $r = 0.21$, indicating that with higher extremity participants became more accurate.[4] To verify the robustness of these results, we conducted a series of further studies using a different set of politicians as targets and/or participants from other countries.

4. Study 1b

In Study 1b, we tested the same effect with the same materials, but different participants. In fact, we used participants from another country in order to test the generalizability over different political landscapes and cultures. The main focus of this study pertained to a different research question (Delmas, Muller, Colpaert, Bruno, & Demoulin, in prep), but the study assessed accuracy of political categorization and participants´ political attitudes as well.[5]

4.1. Method

4.1.1. Participants

In this study 80 French university students took part. Three participants failed to provide their political orientation and hence were excluded from the analysis, which brings the final sample to 77 participants (87.01% female, $M_{age} = 21.137$, $SD = 3.963$). Sensitivity power analysis gives a minimal detectable effect size of $r = 0.31$ for $N = 77$.

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[2] A detailed description of the original study is given in the paper by Samochowiec et al. (2010, study 2).

[3] This is the main finding already reported in Samochowiec et al. (2010, Study 2). Note that because we excluded four participants prior to analysis and – differently from the original analysis – did not adjust for the gender of the politicians, there is a minor discrepancy to the originally reported statistical values.

[4] One could wonder whether these results could generalize not only to other participants, but also to other stimuli (see Judd, Westfall, & Kenny, 2012). To test this, we relied on a mixed model having both participants and stimuli as random factors. This analysis led to the same conclusion.

[5] After the accuracy task presented in the present method section also the level of prototypicality of the politicians was assessed. In a later phase of the study a second set of politicians that were not left-wing or right-wing was presented and again classification and prototypicality were assessed. The accuracy task presented here always came first.

4.1.2. Materials

The same 82 Swiss politicians from Study 1a were used as targets. Ratings of their perceived political orientation were given on a seven-point scale (1 = *left-wing*, 7 = *right-wing*). Participants rated their own political orientation on a nine-point scale (1 = *Extreme left*, 9 = *Extreme right*).

4.1.3. Procedure

The accuracy task was programmed with the software E-Prime 2.0 (Schneider, Eschman, & Zuccolotto, 2012). Participants were presented with all 82 portraits, one at a time in random order. For each politician they were instructed to indicate his or her political ideology. After completing the accuracy task, participants provided demographic data and also indicated their political orientation.

4.2. Results and discussion

4.2.1. Political attitudes

Again participants had on average left-leaning political attitudes (M = 4.065, SD = 1.704, Range 1–9 on a nine-point scale). Since the sample consisted entirely of university students, this is not surprising.

4.2.2. Accuracy

The same correlation value as in the previous study was calculated as an index for accuracy. It was significantly different from 0 ($r = 0.11$, SD = 0.13, Range from $r = -0.31$ to $r = 0.48$), $t(76) = 7.196$, $p < .001$, d = 0.85.

4.2.3. Attitude extremity

Once again participants' political orientation predicted how accurately they were able to identify the political orientation of the targets: The extremity-index was positively associated with higher correlation scores (r), $b = 0.039 (0.013)$, $t(75) = 3.109$, $p = .003$, $r = 0.34$.[6]

These findings replicate the results by Samochowiec et al. (2010) showing above chance accuracy in identifying politicians' political orientation from portraits with a different population of participants. More importantly, in line with our hypothesis higher attitude extremity led to higher accuracy. But a potential criticism might be that the results depend on the materials used (i.e., the 82 Swiss pictures). The following studies address this concern.

5. Study 2

This study was a conceptual replication of the previous ones. To rule out the possibility that the effect is an artifact of the specific politicians presented, the following studies used a different set of politicians as targets. In contrast to Studies 1a and 1b, the actual ideological stance of these politicians was unknown and we relied on political party membership as the criterion. Accordingly, a different accuracy criterion was calculated as the dependent variable. Specifically, we employed signal detection theory (Macmillan & Creelman, 2004). The important parameters in signal detection theory are *sensitivity* (d′) and *response bias* (c). While sensitivity deals with the ability to distinguish two sets of stimuli from one another (i.e., left-wing politicians from right-wing politicians), response bias accounts for people being more prone to categorize targets a certain way (e.g. when in doubt categorize a target as left-wing; i.e., an in-group over-exclusion bias). Using signal detection analysis allows for the statistical disentanglement of these two parameters. Accordingly, while *lnβ* is an often reported parameter for bias in the literature, we opt to report c (as also recommended by Macmillan & Creelman, 2004), because *lnβ* is not independent of *d′* (Macmillan &

Creelman, 2004; Stanislaw & Todorov, 1999). The use of signal detection theory and the distinction between sensitivity and bias addresses a possible concern with Studies 1a and 1b that higher accuracy among politically more extreme participants may simply reflect an in-group over-exclusion effect.

5.1. Method

5.1.1. Participants

79 French university students took part in the study. Three participants were excluded because they did not perform the task seriously. They systematically alternated their responses, indicating left, right, left, right, etc. all along the study. Because one participant did not provide his political orientation the final sample consisted of 75 participants (85.3% female, $M_{age} = 20.08$, SD = 1.71). Sensitivity power analysis gives a minimal detectable effect size of $r = 0.31$ for $N = 75$.

5.1.2. Materials

268 Portraits of French politicians from two major parties (at the time the study was conducted) representing the left-right political spectrum (left-wing: *Parti Socialiste*; SP & right-wing: *Union pour un movement populaire*; UMP now called *Les Républicains*, LR) were used as the stimulus material. Well known national parliament members were excluded to minimize possible effects of recognition. Furthermore, only Caucasian males wearing standard business attire were included. This was done in order to reduce possible bias due to more obvious cues which might be stereotypically associated with one side of the political spectrum. The photographs were obtained from the official parliament website and were similar in style. They were in color with the same blue-white background for every picture. We assessed participants' political orientation on a nine-point scale (1 = *Extreme left*, 9 = *Extreme right*).

5.1.3. Procedure

Again *E*-Prime 2.0 was used to program the experiment (Schneider et al., 2012). All 268 pictures were presented to each participant, one portrait at a time. The presentation order was randomized. For each politician a dichotomous choice was made, whether the person shown is *left* or *right*. Additionally, it was possible to indicate whether a politician seemed familiar.[7] Trials in which a politician was marked as familiar were excluded from the final analysis. After completing the task participants answered some demographic questions and also indicated their political orientation.

5.2. Results and discussion

5.2.1. Political attitudes

As in the previous studies participants positioned themselves as slightly left-leaning (*M* = 4.43, *SD* = 1.88, range 1–8 on a nine-point scale).

5.2.2. Sensitivity and response bias

The categorical answers (*left* or *right*) were submitted to a signal detection analysis. For each participant, hits, false alarms, misses and correct rejections were determined. From this, sensitivity (d') and response bias (c) were calculated (according to formulas by Macmillan & Creelman, 2004, p. 369f). Sensitivity was above 0 ($M_{d'} = 0.155$, SD = 0.19), $t(74) = 6.913$, $p < .001$, d = 0.82 Hence, French participants recognized the political affiliation of French politicians above chance level from their pictures alone.

Signal detection analysis also revealed a response bias towards

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[6] Again, to be able to generalize also to other stimuli, we relied on a mixed model having both participants and stimuli as random factors. This analysis led to the same conclusion

[7] As part of Delmas et al. (in prep.), we also measured judgments on 12 dimensions (e.g., trustworthy, smart, honest) regarding these 268 French politicians, as well as right-wing and left-wing politicians in general.

politicians being categorized as right-wing (M_c = 0.13, SD = 0.27), t (74) = 4.235, p < .001. This bias became weaker the more right-wing a participant was, as indicated by a significant negative correlation between the political attitudes of the participants and the response bias, r = −0.283, p = .014. In other words, the more right-wing oriented participants were the more they tended to categorize a politician as left-wing. This represents an in-group over-exclusion bias, as had already been reported by Samochowiec et al. (2010). As stated above, participants in the current study were slightly left-leaning, hence we expected a response bias > 0. The mean of the bias was in the expected direction, as well as the relationship with participants' political attitudes.

5.2.3. Attitude extremity

Importantly, the focal finding from the previous studies was also replicated. Participants with more extreme political attitudes showed higher sensitivity in discriminating left and right politicians as indicated by a positive association between the extremity index and sensitivity (d') values, b = 0.043 (0.02), t(73) = 2.002, p = .049, r = 0.23.

Thus far, three studies show that people with higher attitude extremity exhibit higher interpersonal accuracy in the domain of politics. This relationship holds for participants from different countries and when using different sets of targets. While the relationship between attitude extremity and categorization accuracy seems to be robust, it might also be the case that the degree of attitude extremity is not the only factor distinguishing good judges from bad ones. The following study addresses a potential difference: How much interest one has in politics.

6. Study 3

A possible confound might be that those with more extreme views are also more interested in politics and as a consequence they are more familiar with politicians' looks. Previous research demonstrated that familiarity with a group (or in other words expertise) fosters categorization accuracy (Brambilla et al., 2013). Accordingly, in Study 3, we include interest in politics as an alternative predictor for sensitivity. One may assume, those people with higher interest in politics might be exposed to politicians more often and therefore have a better chance to (implicitly) learn which facials cues are informative of political affiliation. However, it should also be noted that those who are more informed seem to be the ones who pay less attention to looks and are also less prone to use them in their decision making process (Lenz & Lawson, 2011). Therefore, it is actually not that clear what role interest in politics plays for judgments based on looks.

6.1. Method

6.1.1. Participants

A total of 153 participants (63.4% female, M_{age} = 25.12, SD = 5.59) were recruited online through social media platforms, bulletin boards and through posters at their local university. They completed an online-questionnaire in exchange for individual feedback on their accuracy in the categorization task. Local students could also receive partial course credit. No participants were excluded from the analysis. 95.6% of participants were German citizens. Importantly none of the remaining participants were of French nationality. A minimal effect size of r = 0.22 could have been detected according to a sensitivity power analysis for N = 153.

6.1.2. Materials

Targets were the same as in Study 2, that is, 268 French politicians. Different from Study 2, the political orientation of the participants was assessed on a seven-point scale ("Where do you see yourself politically on the following left-right scale?", seven-point scale: 1 = *Very left-wing*, 4 = *middle*, 7 = *very right-wing*). Additionally, we asked them how

interested they were in politics ("I am interested in politics", seven-point scale: 1 = *Does not apply at all*, 4 = *partly*, 7 = *does apply completely*).

6.1.3. Procedure

Whereas in Study 2 each participant rated every picture, in this study we reduced the strain on participants by randomly dividing the 268 Portraits into three separate blocks of roughly equal size. Accordingly, each participant rated one third of the available portraits. Otherwise the procedure for the accuracy task was the same as in the previous study. After completing the accuracy task, participants additionally guessed from which country the politicians were.[8] Finally, participants answered some demographic questions and also indicated their political orientation and how interested they are in politics.

6.2. Results

6.2.1. Political attitudes

Overall, participants positioned themselves as slightly left-leaning (M = 3.19, SD = 1.19, range 1–6 on a seven-point scale). This might be due to the substantial number of students in the sample.

6.2.2. Sensitivity and response bias

Sensitivity was above chance ($M_{d'}$ = 0.084, SD = 0.31), t (152) = 3.317, p = .001, d = 0.27. Accordingly, German participants were able to indicate the political affiliation of French politicians above chance level from a photograph alone. The response bias was overall towards categorizing politicians as right-wing (M_c = 0.144, SD = 0.30), t(152) = 5.902, p < .001. But it was also dependent on participants' political attitudes, as indicated by a significant correlation between response bias and participants' political attitudes, r = −0.39, p < .001. The more right-wing a participant was, the more they tended to categorize politicians as being left-wing. These values for response bias and its relationship with a person's political attitudes are again in line with the in-group over-exclusion bias found in previous research (Samochowiec et al., 2010).

6.2.3. Attitude extremity

When we regress sensitivity (d') on the extremity-index, they are positively associated, b = 0.084 (0.03), t(151) = 2.738, p = .007, r = 0.22. Those with high attitude extremity were more likely to correctly identify the political orientation of French politicians. Thus replicating the central finding from the three previous studies and further supporting our hypothesis.

6.2.4. Interest in politics

Interest in politics was moderately high (M = 4.64, SD = 1.77, Range 1–7 on a seven-point scale), with the average being significantly above the mid-point of the scale, t(152) = 4.471, p < .001. The correlation of interest with the extremity-index was significant, r = 0.277, p = .001. Participants with moderate political attitudes (closer to the mid-point of the scale) reported lower levels of interest in politics, than those participants with more extreme views.

To rule out the alternative explanation that people who are simply more interested in politics would perform better on the accuracy task, interest in politics was entered as a predictor into a regression with sensitivity (d') as the dependent variable. This predictor turned out to be non-significant, b = −0.002 (0.01), t(151) = 0.136, p = .892. More importantly, when both interest in politics and attitude extremity were used as predictors, the former remained non-significant, b = −0.014 (0.02), t(150) = −0.935, p = .351, while the latter still predicted

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[8] Of the 153 participants only four guessed correctly that they were presented with French politicians. Excluding those participants from the analysis did not change the results. Hence, their data was kept in the analysis.

sensitivity significantly, $b = 0.092 (0.03)$, $t(150) = 2.889$, $p = .004$.

6.3. Discussion

Interest in politics did not influence sensitivity. Only the extremity of one's political attitudes did. This is in line with the reasoning that to be accurate is most important for those who have potentially the highest need to distinguish between in-group and out-group members. Politically more extreme people are more likely to see those on the other side of the spectrum as a potential threat and are therefore better attuned in detecting their political stance.

Moderates can identify ideologically with both sides of the political spectrum and thus have less need to establish boundaries. However, one may argue that there are also other differences between moderates and extremes. Extremity is one facet of attitude strength and is often correlated with other aspects of attitude strength such as attitude importance, self-relevance, and certainty (Krosnick et al., 1993; Wegener, Downing, Krosnick, & Petty, 1995). One might assume that for those people for whom their political attitudes are central and important, establishing boundaries is also more important. Moreover, such attitudes tend to be more accessible and hence they might be more likely to be used for categorizing others (Smith, Fazio, & Cejka, 1996). Finally, for those who are certain where they stand their in-group and the out-group are clearer defined. All of this leads to a more general hypothesis: It is not the extremity of one's attitudes which leads to higher accuracy, but the strength of those attitudes of which extremity is only one facet. If so one may hold politically moderate positions, but because one feels highly identified with this position and considers political attitudes as very important one tends to categorize others according to their political view and therefore have developed the skills to do so. Alternatively, because of moderates' smaller ideological distance to either side of the political spectrum they are less likely to define in-group and out-group according to political stance and are less practiced in recognizing political attitudes from looks than people with more extreme views. The following two studies investigate whether the more general hypothesis applies, or attitude extremity prevails as a factor for interpersonal accuracy in politics.

7. Study 4a

The literature identifies extremity as a dimension related to strong attitudes (Petty & Krosnick, 1995). But strong attitudes are also reflected by greater knowledge about a topic, higher accessibility, higher certainty and lower ambivalence about them and higher self-relevance (Krosnick et al., 1993; Wegener et al., 1995). As mentioned previously, attitudes are important when it comes to how relations between social groups are organized. Strong attitudes have more impact on perceptions and behaviors (Petty & Krosnick, 1995). Transferred to political ideology, one might hypothesize that people, whose political positions are important and highly accessible to them, would be more accurate when asked to determine the ideology of others from their faces alone. But, although not mutually exclusive, one does not have to be invested in politics per se, to be sure where on the political spectrum one sees themselves (Jost, 2006) and have this concept on their mind, when evaluating others. People might call themselves left- or right-wing, without much further investment in this self-labeling. Indeed, research on the dimensionality of attitude strength reveals that its facets are distinct from one another and do not have to align perfectly in one direction on any given topic (Krosnick et al., 1993; Miller & Peterson, 2004). Accordingly, in Study 4a we directly investigated the role of other facets of attitude strength and whether they can explain variations in accuracy above and beyond mere attitude extremity.

7.1. Method

In this study, we chose to separate the measures of attitude strength

and accurate perception by about two weeks. This was meant to safeguard against a confounding of the two measures: It is conceivable that participants base their answers on the attitude strength measure on how they subjectively judge their performance in the accuracy task. In other words, a participant might think that they (can't) have strong political attitudes, because they feel that they did (not) perform well on the accuracy task (regardless of their actual performance).

7.1.1. Participants

Participants were recruited online on various messaging boards. Of the initial 307 participants 127 completed both questionnaires. Eight participants failed to provide their political orientation and one person indicated that he did not take the study seriously and answered at random. They were excluded from the final analysis, which brings the sample to 118 participants (53.2% female, 0.8% other, $M_{age} = 26.02$, $SD = 8.334$). Sensitivity power analysis gives a minimal detectable effect size of $r = 0.25$ for $N = 118$.

7.1.2. Materials

The same 268 French politicians were used as targets as in Studies 2 and 3. One politician was excluded due to a programming error; hence only 267 pictures were rated.

Participants reported their own political orientation on an item from a German Political Panel Study (Breyer, 2015; "Where would you place yourself if 1 was *left* and 11 was *right*?", eleven-point scale: 1 = *left*, 11 = *right*).

To assess attitude strength, we adopted a German ten-item scale from Vetter and Kutzner (2016), which measures six aspects of the construct: knowledge (one item, "How well informed are you about the topic?"), certainty (three items, e.g., "How certain are you, that your opinion about politics is correct?"), importance (two items, e.g., "How important is the topic of politics to you?"), personal relevance (one item, "How relevant is the topic of politics for you personally?"), elaboration (one item, "How much have you thought about the topic before?"), and subjective ambivalence (two items, e.g., "Concerning the topic of politics,… I have a distinct opinion vs. I don't have a distinct opinion"). Each question was rated on a seven-point scale with semantic anchors at the end points (e.g. for knowledge: 1 = *not at all well informed*, 7 = *very well informed*). Items were recoded so higher scores reflect higher attitude strength and then averaged into one value for each participant. Internal consistency was high ($α = 0.85$).

7.1.3. Procedure

First, participants completed the measures of political orientation and attitude strength. They provided demographic information and we asked them to leave their *E*-Mail address, so we could contact them about the second part of the study. After one to two weeks all participants who had provided an E-Mail address were contacted and invited to participate in the accuracy task, which had the same procedure as Study 3. All trials in which participants recognized a politician were excluded from the final analysis. After finishing the accuracy task, participants again provided demographic information and their political orientation.

7.2. Results and discussion

7.2.1. Political attitudes

As in the previous studies participants positioned themselves as left-leaning ($M = 5.017$, $SD = 2.26$, Range 1–11 on an eleven-point scale) at the first measurement time. The same participants reported slightly deviating political attitudes at the second measurement time right after the accuracy task ($M = 4.91$, $SD = 2.11$, Range 1–10 on an eleven-point scale), but the correlation between both measurement times was very high, $r(116) = 0.891$, $p < .001$. This indicates a high retest reliability of the item used to asses participants' political attitudes.

7.2.2. Sensitivity and Response Bias

As in previous studies, sensitivity was above chance ($M_{d'} = 0.081$, $SD = 0.29$), $t(117) = 3.009$, $p = .003$, d = 0.28. Once again, there was a significant response bias in the expected direction ($M_c = 0.114$, $SD = 0.36$), $t(117) = 3.424$, $p = .001$. Also, the correlation between participants' political attitudes and the response bias was again negative, indicating that the more right-wing a participant was, the more they tended to have a bias towards categorizing a politician as left-wing, $r = -0.252$, $p = .006$.

7.2.3. Attitude extremity

To test the main hypothesis, we regressed sensitivity (d') on the extremity-index. The regression coefficient did not reach conventional levels of significance, $b = 0.027$ (0.02), $t(116) = 1.369$, $p = .174$, $r = 0.12$.

7.2.4. Attitude strength

The mean on the attitude strength scale was high ($M = 5.08$, $SD = 0.917$, Range 1.90–6.70 on a seven-point scale), indicating that participants overall held strong political views (mean was significantly different from the mid-point of the scale, $p < .001$). Attitude strength and the extremity of participants' political attitudes were correlated, $r = 0.456$, $p < .001$. This is in line with the conceptualization of attitude extremity as a facet of attitude strength (Krosnick et al., 1993). Entering the attitude strength scale as an additional independent variable did not lead to a significantly better prediction of the sensitivity values, $b = 0.031$ (0.03), $t(115) = 0.936$, $p = .351$, $r = 0.08$. Also, when using the attitude strength scale as the sole predictor, the regression coefficient was not significant, $b = 0.041$ (0.03), $t(116) = 1.46$, $p = .147$, $r = 0.13$.

Different from all previous studies, attitude extremity did not significantly moderate sensitivity (although the relationship was in the expected direction). However, the alternative account, that attitude strength would play a role could not be confirmed either. It is not entirely clear, why this is the case, but a potentially problematic aspect of the current study is that almost 59% of the participants dropped-out between the two measurement times.

We cannot rule out that there was a systematic reason behind a person's decision to complete the study or not. Although a comparison of the most obvious factors like participants' attitude strength and political orientation did not reveal a pattern, we decided to replicate the study, but not involve two measurement times. Previously raised concerns that the accuracy task might influence participants' political attitudes were alleviated by the very high retest reliability of the measure found in this study.

8. Study 4b

Different from Study 4a, Study 4b was conducted in the laboratory, so a more controlled environment was guaranteed. Also, all variables were assessed in one setting in order to avoid the possibility of large parts of the sample dropping out after only taking part in one part of the study.

8.1. Method

8.1.1. Participants

111 participants provided complete data. Three were excluded because they commented that they had answered randomly on the accuracy task. Three additional participants were excluded because they were not native speakers and indicated to the experimenter that they had difficulty understanding the tasks. Hence, the final sample consisted of 105 participants (58.1% female, $M_{age} = 21.78$, $SD = 2.86$). This sample size allows for the detection of a minimal effect size of $r = 0.27$, according to a sensitivity power analysis.

8.1.2. Materials

The same 268 French politicians were used as targets as in Studies 2, 3 and 4a.

Participants' political orientation was measured with the same item as in study 4a (Breyer, 2015; "Where would you place yourself if 1 was *left* and 11 was *right*?", eleven-point scale: 1 = *left*, 11 = *right*). Also, the same adapted ten-item scale as in the previous study was used to measure participants' attitude strength. Internal consistency was high ($\alpha = 0.86$), hence items were recoded and combined into one value for each participant, with higher scores reflecting higher attitude strength.

8.1.3. Procedure

The accuracy task was programmed with the software OpenSesame (Mathôt, Schreij, & Theeuwes, 2012). Portraits were randomly divided into two separate blocks of equal size. Accordingly, each participant rated a total of 134 politicians. Pictures were presented one at a time in randomized order. Additionally, after each picture they could indicate if they thought that the person seemed familiar. These trials were excluded from the final analysis. Following the accuracy task, participants provided their political attitudes, filled out the attitude strength questionnaire and finally provided demographic data.

8.2. Results and discussion

8.2.1. Political Attitudes

As in the previous studies, participants positioned themselves as left-leaning (M = 4.34, SD = 1.85, Range 1–9 on an eleven-point scale).

8.2.2. Sensitivity and Response Bias

Again participants were better than chance, when discriminating between left- and right-wing politicians. Sensitivity (d') was significantly > 0 ($M_{d'} = 0.068$, $SD = 0.25$), $t(104) = 2.760$, $p = .007$, d = 0.27. There was a bias towards categorizing politicians as right-wing ($M_c = 0.128$, $SD = 0.33$), $t(104) = 3.924$, $p < .001$. The correlation between the response bias and participants' political attitudes was significant and in the expected direction, $r = -0.214$, $p = .028$.

8.2.3. Attitude extremity

To test the main hypothesis that more extreme political attitudes will result in better performance in the accuracy task, we once again entered the extremity-index as the independent variable and sensitivity (d') as the dependent variable. They were positively associated, $b = 0.048$ (0.02), $t(103) = 2.454$, $p = .016$, $r = 0.23$. Accordingly, the expected relationship between participant's political attitudes and their ability to correctly identify the political orientation of politicians was again found.

8.2.4. Attitude strength

The mean on the attitude strength scale was high ($M = 4.79$, $SD = 0.995$, range 2.20–6.60 on a seven-point scale), indicating that participants overall held strong political views (mean was significantly different from the mid-point of the scale, $p < .001$). Unexpectedly, while the correlation between attitude strength and attitude extremity was positive, it did not reach significance, $r = 0.143$, $p = .146$.

To test whether attitude strength would be a significant predictor of sensitivity (d') in addition to attitude extremity, both the extremity-index and the attitude strength score were entered into a regression as independent variables. On the one hand, attitude extremity again was a significant predictor for sensitivity, $b = 0.049$ (0.02), $t(102) = 2.454$, $p = .016$, $r = 0.24$. On the other hand, attitude strength did not significantly predict sensitivity (d'), $b = -0.006$ (0.03), $t(102) = 0.025$, $p = .801$, $r = 0.025$. Taken together with Studies 3 and 4a, attitude extremity has a distinct role from other facets of attitude strength when it comes to the recognition of political attitudes of others.

9. Meta-analysis

Our studies are conceptual replications of each other, hence materials and procedures varied between them. In order to further test the robustness of our findings and whether or not we measured the same underlying effect, we conducted a small-scale meta-analysis over our six studies. A meta-analysis is more reliable in detecting an effect and it also reveals heterogeneity in effect sizes between studies, which hints at unaccounted moderators (Cumming, 2014). By employing a random-effects model, we can test whether we measured the same underlying effect or need to take characteristics of individuals studies into account, when interpreting the results (Borenstein, Hedges, Higgins, & Rothstein, 2010).

Effect sizes of the individual studies were converted into Pearson's correlation coefficients. We used the R package METAFOR (Viechtbauer, 2010) to apply a random-effects model. In order to evaluate the consistency of the meta-analytic effect, we used Cochran's Q and I^2 as test statistics for heterogeneity (Higgins, Thompson, Deeks, & Altman, 2003), with $I^2 > 50\%$ as a criterion for heterogeneity (Braver et al., 2014).

9.1. Attitude extremity

For the central variable, our small-scale meta-analysis revealed a significant effect in the expected direction. As shown in Fig. 1, participants with higher attitude extremity had higher accuracy scores, $N = 927$, $r = 0.216$, 95% $CI = [0.15, 0.28]$, $Z = 6.88$, $p < .001$, Q (5) = 2.53, $p = .77$, $I^2 = 0.00\%$. This result indicates that the effect of attitude extremity on the accuracy scores is robust. Additionally, since there is no heterogeneity the underlying effect size does not vary between studies and hence is not dependent on characteristics like the set of politicians used, the participants' country of origin or whether the studies were conducted in the lab or online. A case could be made, that the low heterogeneity also means that at least in this set of studies there are no untapped moderators, which would be an additional argument against an influence of other indicators of attitude strength above and beyond attitude extremity.

As we had more left- than right-leaning participants in all studies (s. Table 2), we need to rule out that the effect is a statistical artifact reflecting a possibly higher ability of left-wing participants to identify political orientation. One might argue that due to their lower numbers even if it were the case that right-wing participants were less accurate than left-wing participants, we could still find an effect of attitude extremity (driven only by left-wing participants). In other words, is accuracy as hypothesized really purely driven by attitude extremity independent of the direction of a person's extremity? To test this, we z-standardized the values for participants' political orientation in each

study and entered this as the predictor for their accuracy scores into the regression model. Higher values still represent a more right-wing attitude. Additionally, we also added the quadratic term of this z-standardized variable into the model. If attitude extremity independent of direction is responsible for higher performance in the accuracy task, we should find a u-shaped relationship or in other words a quadratic trend. If however, the reported attitude extremity effect is only due to extremely left-wing (or right-wing) participants, we would expect to only find a linear trend and no rise in accuracy scores for extremely right-wing (or left-wing) participants.

9.2. Linear trend

A significant linear trend was revealed by the meta-analysis, $N = 927$, $r = 0.13$, 95% $CI = [0.04, 0.22]$, $Z = 2.80$, $p = .005$, Q (5) = 8.82, $p = .12$, $I^2 = 42.43\%$. The corresponding test statistics reveal moderate but not disproportionate heterogeneity. Still, this opens up the possibility that additional variance could be explained by adding the quadratic term.

9.3. Quadratic trend

And indeed, additional variance is explained through a quadratic term, while controlling for the linear trend, $N = 927$, $r = 0.18$, 95% $CI = [0.12, 0.24]$, $Z = 5.65$, $p < .001$, $Q(5) = 2.28$, $p = .81$, $I^2 = 0.00\%$. The linear trend is qualified by the quadratic trend. The significant linear trend can be attributed to the unbalanced sample in regard to political orientation. There were more left-leaning participants than right-leaning ones. Hence, the effect for right-wing participants is based on fewer cases and is less stable. The linear trend accordingly comes from more cases producing a more stable effect with smaller error. If examined more closely, we see that it is more accurate to say, that there is a fall off towards more moderate participants and there are not enough right-wing participants to fully cancel out the downward linear trend. The significant quadratic trend can alleviate this by showing that the data is better described in a non-linear fashion (s. Fig. 2). In summary, the small-scale meta-analysis reveals that the impact of attitude extremity on accuracy in detecting political orientation of others from faces is robust and most likely found on both sides of the political spectrum.

10. General discussion

Six studies demonstrated a relationship between one's own political attitudes and the ability to detect the political attitudes of politicians from their faces alone. Specifically, the more extreme one's attitudes are, the higher the accuracy scores. This result was found with
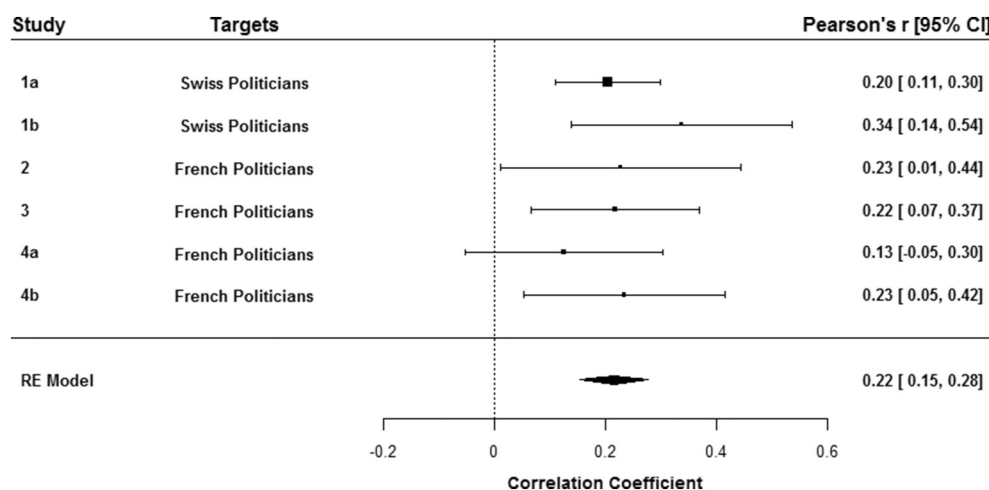

Study	Targets		Pearson's r [95% CI]
1a	Swiss Politicians		0.20 [0.11, 0.30]
1b	Swiss Politicians		0.34 [0.14, 0.54]
2	French Politicians		0.23 [0.01, 0.44]
3	French Politicians		0.22 [0.07, 0.37]
4a	French Politicians		0.13 [-0.05, 0.30]
4b	French Politicians		0.23 [0.05, 0.42]
RE Model			0.22 [0.15, 0.28]

Correlation Coefficient

Fig. 1. Forest plot of the effect of attitude extremity on performance in the accuracy task. Positive effects reflect higher accuracy scores the higher attitude extremity is. For each included study, the target type, Pearson's r value, and the corresponding 95% confidence interval (black lines) are reported. The effect sizes are illustrated with squares whose sizes are representing the relative weight of each study in the random-effects meta-analysis. The diamond depicts the effect size of the meta-analytic estimate and its 95% confidence interval.

Table 2
Overview of participants' political extremity in each study.

#	−5	−4	−3	−2	−1	0	1	2	3	4	5	Range	Center	M	SD
1a			30	117	125	76	39	11	1			1–7	4	3.04	1.21
1b		5	8	19	14	15	10	5	0	1		1–9	5	4.06	1.70
2		2	9	18	13	11	8	9	5	0		1–9	5	4.43	1.88
3			8	37	55	30	17	6	0			1–7	4	3.19	1.19
4a	4	7	27	18	14	19	9	10	7	2	1	1–11	6	5.02	2.26
4b	2	11	27	29	7	13	9	4	3	0	0	1–11	6	4.43	1.85

Note. Numbers in the cells −5 to 5 denote frequencies based on the final sample in each study. A participant's placement was calculated as their deviation from the midpoint of the scale (answer of participant – midpoint), with values < 0 left-of-center orientation and > 0 right-of-center orientation; range = Lowest and highest possible answer of the item measuring participants' political orientation. Higher (lower) values always indicate a more right-wing (left-wing) orientation; center = Midpoint of the item measuring participants' political orientation; M & SD = Mean and standard deviation of the scale (not of the extremity).

participants from Germany, Switzerland and France, both online and in the laboratory. Also two sets of targets, French politicians and Swiss politicians, were used. A small scale meta-analysis supports the generalizability of the results: The meta-analytic effect was significant and homogeneous; hence it did not depend on variations between studies. Contrary to these findings there was no evidence in our studies to support a more general hypothesis that people with stronger political attitudes would have an advantage over people for whom politics are less important (Studies 4a & 4b). Also, it was not the case that potentially having more interest in the topic (which can be construed as having more expertise) made somebody a better judge (Study 3). The results agree with the notion that performance is better for those for whom it is potentially important to establish clear group boundaries (Blascovich et al., 1997; Dorfman et al., 1971). Partisanship is on the rise and brings about negative consequences, when it comes to the way people engage across ideological lines. Hostile feelings towards the political adversary are commonplace and group boundaries are strict (Iyengar & Westwood, 2015). For those with more extreme political views it becomes highly self-relevant to be able to distinguish between friend and foe. Hence, the notion put forward by the "vigilance hypothesis" (Castano et al., 2002; Lindzey & Rogolsky, 1950) that people carefully examine the characteristics distinguishing in- from out-group and this in turn facilitates accurate categorization agrees with our findings.

Also the fact that we repeatedly found that participants tended to categorize targets as out-group members rather than in-group members suggests that political ideology was a meaningful group boundary for our participants. As such a tendency to categorize people as belonging to the out-group may under some circumstances (e.g. more targets of the out-group than in-group) produce correct categorizations. But we employed signal detection analysis to distinguish between sensitivity and bias (Macmillan & Creelman, 2004; Ruben, Hill, & Hall, 2014). In all studies sensitivity was significantly above 0. More importantly, sensitivity correlated with political extremity as predicted.

In regard to the concept of attitude strength, our results agree with Krosnick et al. (1993): Although different dimensions of attitude strength are related to each other, the construct seems to be multi-dimensional with distinct facets that can have a distinct impact on thoughts and behavior. In Studies 4a and 4b attitude strength taken as a monolithic construct did not predict accuracy. Only one facet, attitude extremity, did so consistently. The other six facets (e.g., importance) were not significantly connected to accuracy (all ps > 13). Therefore, it is important to look at their individual impact and identify conditions under which a certain facet guides perception and behavior (Miller & Peterson, 2004).

Additionally, a minor point can be made about the cross-cultural ability to infer traits from portraits (s. Sussman, Petkova, & Todorov, 2013): We used politicians from France and Switzerland. Participants were recruited from Germany, France and Switzerland. In all studies, except Study 2 (and partially Study 1a) participants rated politicians
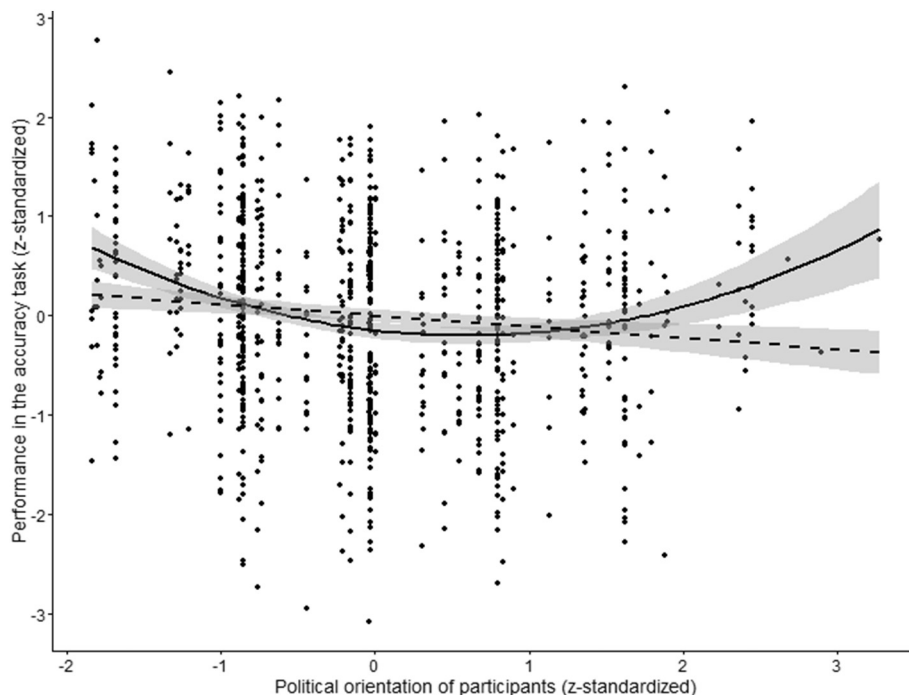

Fig. 2. Plot of the relationship between participants' political orientation and their performance in the accuracy task in all six studies. Both variables are z-standardized to make studies comparable. Lower values on the x-axis represent a more left-wing orientation. Each dot represents one participant (N = 927). Dashed line is a fitted linear regression line. Solid line is a fitted quadratic regression line. Grey area around each regression line depicts its 95% confidence band.

from another country. Hence, our findings imply that at least in western European societies the political orientation of an unfamiliar person can be determined across borders.

10.1. Limitation and directions for future research

In the following, we point out short-comings of our studies and also what we believe to be avenues for future research. First, there was an imbalance in political orientation. The majority of participants self-identified as left-wing, with few indicating a right-wing political orientation (s. Table 2). But as our argument rests on the role of attitude extremity, this is not a severe limitation. We propose the need to differentiate in-group members from out-group members as the driving factor behind our findings. As pointed out earlier, this need is expected to be equally pronounced among people with extreme attitudes, no matter the direction (Brandt et al., 2014; Chambers et al., 2013). Additionally, the results of our small-scale meta-analysis reveal a significant quadratic trend, which speaks for the effect being independent of the direction of one's extremity. Nonetheless, there is also a rich body of research on ideological asymmetries (Jost, 2017), which suggests that people on the political right have a higher need to associate with others from their political spectrum than people on the political left. This might suggest that those on the right would be better in detecting the political ideology of others. Our sample size does hardly allow for a comparison between ideologies as this was not our original research question but future studies might want to recruit a more balanced sample.

Second, we did not test the proposed underlying reasons for extremists higher accuracy, namely, that they are more motivated to distinguish between friend and foe, because they feel threatened by the other side (Crawford, 2014; Crawford & Pilanski, 2014). Future studies should include such measures, while taking into account that different kinds of threat can be important for left- and right-wing people respectively (Crawford, 2014).

Third, although we did not find an influence of general attitude strength on accuracy, this does not rule out the possibility that some of its facets might play a role in interpersonal accuracy. Maybe a self-report scale is not the optimal tool to evaluate this. Other researchers found better content specific interpersonal accuracy, if related concepts were highly accessible (Shoda & McConnell, 2013). Future research might focus on either measuring (e.g. through reaction times) or manipulating the accessibility of participant's political attitudes (e.g. through an attitude rehearsal task, s. Roese & Olson, 1994).

Fourth, it has been suggested that such judgments can be more accurate merely by relying on the base-rate of the traits (Olivola & Todorov, 2010). If more extreme participants have more accurate knowledge about the base-rate this could explain their advantage. However, in our studies we did not use the real distribution of right- and left-wing politicians in the respective countries but an equal amount of left- and right-wing politicians. Using the actual base-rate of the country therefore would not have helped to achieve a more accurate result. Moreover, for a 50:50 base-rate using the base-rate leads to low accuracy (Olivola & Todorov, 2010).

Furthermore, Todorov, Olivola, Dotsch, and Mende-Siedlecki (2015) argue that political ideology cannot be inferred from facial features directly. Instead people rely on superficial cues like age, gender etc. because they know from the real world, that these cues differ in their distribution between left- and right-wing parties. Indeed, we cannot fully rule out that there was some sort of difference which made the distinction obvious (to our participants). However, we took care to minimize obvious cues by only using male Caucasian looking politicians in business attire in Studies 2–4b (we even excluded red ties). In addition, the latter factor was previously investigated directly and it was found that while clothing is used as a cue, accuracy is still above chance when it is removed (Samochowiec et al., 2010). Also when controlling for age and gender of the politicians, the effects remained significant.

More importantly for the present research question, while many cues might account for accuracy in general, it is harder to see, how it would affect the impact of attitude extremity on accuracy. It could be argued that according to the "vigilance hypothesis" more extreme participants are more sensitive to distinguishing cues, such as age or other obvious features. Indeed, we did not investigate the specific cues people might have used in order to make their judgments. Future research might address this by recording which cues participants use for categorization and whether this differs as a function of attitude extremity. Additionally, photographs can be altered digitally in order to selectively manipulate the manifestation of specific facial characteristics suspected to drive inferences about a person's personality traits or political orientation (one such method was developed by Walker & Vetter, 2009). Participants with more extreme attitudes should be able to use more subtle (or less) cues to make an accurate judgment.

An additional point can be made, that by using real pictures of actual politicians we created a less artificial test. Participants were able to use real cues, from real faces to make their categorization decision. While this opens up the possibility that participants relied on some obvious facial feature that has different base-rates depending on the political leanings of a politician, from an ecological rationality standpoint (Goldstein & Gigerenzer, 2002) this would not go against our main conclusion. As stated above, accuracy itself is not the focus of this paper, but for whom it is most important to be accurate. Accordingly, if specific cues are of interest, future research might focus on whether individuals with a more extreme political orientation pay attention to more and/or different cues than those with a moderate political orientation and on whether this plays a role in their heightened ability to accurately detect political orientation from faces. This would be an interesting test of the seminal lens model by Brunswik (1952). There is already evidence that depending on a person's political leaning different personality traits are ascribed to politicians and that these stereotypes are utilized (to some success) to make judgments about their political orientation (Wilson & Rule, 2014).

11. Conclusion

Interpersonal accuracy in a political context is moderated by the extremity of one's political attitudes. Although extremity is one facet of attitude strength, other facets (e.g. interest in politics) don't seem to contribute significantly beyond it. Those already high in partisanship (i.e., more extreme political attitudes) are the ones who can best distinguish between their political friends and foes. As more and more information about the political process is put into a visual format (e.g. televised or available through online-platforms like YouTube) politicians' looks may be used to a larger extent to form judgments about them (Lenz & Lawson, 2011). This might be worrisome, because instead of being open minded in new encounters and maybe even engaging in a fruitful exchange of ideas, people with more extreme political attitudes might be the ones turned off by the first impression.

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