




Implicit and explicit populist and anti-immigrant attitudes and their explanatory power for populist radical-right party support

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Abstract

Based on the assumption that disclosing explicit populist radical-right (PRR) attitudes and voting intentions for PRR parties may be inhibited by a social desirability bias, this paper aims at developing a measure for implicit populist attitudes (IAT) and at assessing its explanatory power for the prediction of PRR party support. Using data from a German online survey ($N=898$), the populism-IAT is tested against corresponding direct measures of populist attitudes and anti-immigrant attitudes to predict voting propensity for the German PRR party *Alternative für Deutschland* (AfD). Results reveal that social desirability concerns indeed restrict the likelihood of reporting a high propensity of PRR vote; however, direct measures turn out as best predictors for self-reported voting intentions. Inconsistencies between implicit and explicit attitudes may indicate sensitivity to social (un-)desirability perceptions, when attitudes are displayed on the implicit but not on the explicit level. We find such incongruencies for 9% of our respondents regarding populist attitudes, and for 21% regarding anti-immigrant attitudes, indicating that the latter are considered even more undesirable. In light of our findings, we discuss the potential explanatory power of implicit attitudes for less deliberate forms of political behavior and the assumption of populist and anti-immigrant attitudes still being regarded as socially undesirable in Germany.

Keywords Populist attitudes · Anti-immigrant attitudes · Explicit attitudes · Implicit attitudes · Survey

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Introduction

Recent years have seen the rise of populist radical-right (PRR) parties in national parliaments around the world, including Europe. In a number of European countries, PRR parties have become part of the government or even hold an electoral majority. Examples can be observed in France (National Front), Germany (Alternative for Germany), the Netherlands (Freedom Party), and Switzerland (People's Party)—to name just a few. Moreover, PRR parties have also succeeded in West European countries such as Germany and Sweden that observers had previously imagined to be immune to right-wing populism for historical or cultural reasons. These successes seem to be founded on “tectonic changes” Western democracies are facing, e.g., “increased hostility toward immigration, strong distrust of elites, the rise of nationalism, the rejection of the European Union and supranational organizations in general” (Noury and Roland 2020, p. 422). PRR parties exploit these sentiments with populist rhetoric promising to restore power from “the corrupt elite” to “the pure people” (Mudde 2007, p. 23) and with nativist messages promising to defend the nation against external threats (for an extensive literature review Noury and Roland 2020). Therefore, PRR parties are located at the far right of the ideological spectrum. However, in contrast to extremist right-wing parties, they promote democratic reforms such as increased direct democracy, whereas right-wing extremists reject democracy and deny democratic constitutions as a whole (e.g., Jesse and Panreck 2017; Tillman 2021). The worldwide success of PRR parties has consequently attracted significant scholarly attention, one of the most pressing questions being: Which citizens support PRR parties, and how big is the potential electoral support?

Prior research highlights several important factors explaining PRR party support: With respect to socio-demographic variables, members of the old middle and working classes, less educated and males are more likely to vote for PRR parties (e.g., Rico and Anduiza 2019; Spruyt et al. 2016). Also, personality traits such as authoritarianism or social trust affect PRR support (e.g., Berning and Ziller 2017; van Hauwaert and van Kessel 2018). Regarding political attitudes, it is straightforward to assume that anti-elite attitudes and nativist attitudes are highly relevant as skepticism towards “other” groups within the own society but also external outgroups constitute the “ideational core of populism” (Hameleers 2018, p. 2171), i.e., the opposition between the good people and corrupt elites on the one side and the people and threatening, e.g., cultural outgroups on the other side.¹ In sum, there is a growing

¹ Rooduijn (2014) in his pioneer work argues that the latent construct PRR attitudes contains the three dimensions populism, nativism, and authoritarianism. We fully acknowledge this conceptualization and its relevance. However, in this article, we focus on populist and nativist attitudes for two reasons: First, research has shown that populist and nativist claims are often presented together (e.g., Hameleers 2018; Schmidt 2020). So, it seems consequential that such strategic frames also have effects on the formation of corresponding populist and nativist attitudes. This is also in line with current research which has found consistent correlations between populist and nativist attitudes but more mixed findings regarding authoritarianism (e.g., Rothmund et al. 2020). Second, we regard authoritarianism more as a personality trait than as an attitudinal construct. And third, this paper aims at exploring the feasibility and potential of conceptualizing and measuring populism and nativism as explicit and implicit attitudes predicting PRR party support (see text below). In this first attempt, we focus on the two attitudinal predictors which have gained strongest support in the literature so far. Of course, if successful, this approach can be complemented by adding the facet of authoritarianism at a later stage.



body of research linking citizens' (explicit) attitudes to the electoral success of PRR parties. (e.g., van Hauwaert and van Kessel 2018; Rothmund et al. 2020).

However, assessing the full potential reach of these parties is challenging: Research has shown that respondents tend to systematically overreport socially desirable behaviors and attitudes while underreporting socially undesirable ones, and that misreporting is especially common when surveys address sensitive topics (e.g., racist attitudes or voting behavior; Krumpal 2013). Assurances of anonymity and confidentiality in surveys may improve participants' willingness to disclose socially undesirable attitudes and behaviors, however, the effect of such assurances is rather small (Singer et al. 1995), and so inaccurate responses still occur (Ong and Weiss 2000). Thus, whenever perceptions of social (un)desirability of attitudes may affect explicit survey responses, authors such as Gawronski and Bodenhausen (2006) recommend measuring citizens' *implicit attitudes* in addition to the explicit attitudes that they report in surveys. We assume this to be the case for PRR attitudes and expect that respondents will be reluctant to express explicit support for such parties or their policies (see, e.g., Bos et al. 2018). Hence, latent support for PRR parties may be higher than explicit party support (John and Margetts 2009) leading in consequence to a systematic underestimation of the number of citizens attracted to PRR ideology and an underestimation of the electoral success of PRR parties (Hooghe and Reeskens 2007) in public opinion polls and surveys. Consequently, our paper promotes the notion of also assessing PRR attitudes at an implicit level and therefore aims at developing a suitable indirect measure.

Theoretical assumptions on the interplay between implicit and explicit attitudes

The distinction between explicit and implicit attitudes is based on the theoretical framework of dual-process models in social and cognitive psychology (e.g., the Associative–Propositional Evaluation Model by Gawronski and Bodenhausen 2006, see for an overview Smith and DeCoster 2000). Dual-process models propose two distinct mental processes that result in qualitatively different attitudinal responses to an object, which accordingly must be assessed with different measures (see, e.g., Greenwald et al. 2009; Smith and DeCoster 2000): (1) In propositional processes, individuals consciously evaluate new information and integrate their conclusions into their attitude towards the object. The resulting explicit attitudes are relevant for reflective processes, controlled behavior and deliberate decision making, and can be measured directly, for instance via self-report in surveys.² (2) By contrast, associative processes occur automatically and cannot be regulated consciously. The resulting implicit attitudes are relevant for impulsive and uncontrolled behavioral reactions to an object (“gut reactions”, Matthes and Schmuck 2017, p. 558), and are effectively assessed with indirect methods (e.g., the Implicit Association Test [IAT] by Greenwald et al. 1998; the Affective Misattribution Procedure [AMP] by

² Note that we distinguish between “explicit” and “implicit” attitudes, but call the methods used for their measurement “direct” and “indirect.”



Payne et al. 2005; for a summary regarding the validity of implicit measures see, e.g., Greenwald et al. 2009).

Propositional and associative processes are related to each other in the sense that individuals may use their spontaneous associations with an object to form deliberative evaluative judgments regarding the object, leading to a consistency between implicit and explicit attitudes (see e.g., Arcuri et al. 2008). However, implicit and explicit attitudes may also differ from each other. Typically, people are aware of their explicit attitudes and can report them, which means that they can also consciously withhold or misrepresent attitudes to avoid revealing socially undesirable beliefs (e.g., in surveys; see Gawronski et al. 2015; Ksiazkiewicz and Hedrick 2013; Maier et al. 2015). In contrast, implicit attitudes reflect associative processes of attitude formation, that occur automatically, so citizens cannot control them. Thus, since the mid-1990s, research on attitudes in psychology has been shaped by the implicit–explicit dualism and has empirically taken the distinction between both into account (Gawronski and Brannon 2019).

Measuring explicit populist radical-right attitudes

The success of PRR parties has inspired a large body of research on the support for these parties, and scholars have recently developed effective direct measures of populist (Schulz et al. 2018) and nativist attitudes (Matthes and Schmuck 2017). Populism is considered a “thin-centered” ideology that views politics as a struggle between a pure, homogeneous people and a corrupt, manipulative elite (Mudde 2007, p. 23). Studies show that such anti-elite attitudes correlate with increased support for PRR parties (e.g., Akkerman et al. 2014; Bélanger and Aarts 2006). Nativism is a belief that “states should be inhabited exclusively by members of the native group (‘the nation’)” (Mudde 2007, p. 20) which becomes visible, e.g., in anti-immigrant attitudes. These also relate strongly with support for PRR parties (e.g., Berning and Ziller 2017; Ivarsflaten 2008). However, as argued above, an important question is whether direct measures can capture the full potential support for PRR parties. On the one hand, studies show that economic and societal developments in the past ten years have left certain segments of German citizens feeling marginalized, “left behind,” and alienated from mainstream politics. Findings show that these segments are likely to be attracted to PRR party ideology and thus openly express their support for the *AfD*. This is most common among males, citizens with low income, low or medium levels of education, unemployed citizens, and East Germans. In addition, the so-called “refugee crisis” has led to an increased explicit voicing of anti-immigrant and in particular anti-Muslim attitudes in these segments (e.g., Dostal 2015; Kemper 2015).

On the other hand, prior studies suggest that surveys often underestimate PRR parties’ electoral support (Bos et al. 2018; Hooghe and Reeskens 2007; John and Margetts 2009) as respondents may be reluctant to indicate socially undesirable attitudes (esp., anti-immigrant attitudes). Due to the historical context, we expect the social undesirability bias of PRR attitudes and PRR party support to be especially relevant for Germany. This assumption is underpinned by findings showing



that most Germans feel ashamed when being confronted with right-wing extremist viewpoints and reject openly voicing any feelings or thoughts that may lead to them being misunderstood as right-wing extremists or neo-Nazis (e.g., Miller-Idriss and Rothenberg 2012; Rieger et al. 2013). Thus, assessing only *explicit attitudes* may lead to underestimating the true extent of these attitudes and of potential PRR party support within the German general public.

Measuring implicit populist radical-right attitudes

As described above, implicit attitudes can differ systematically from citizens' explicit attitudes: With regard to PRR parties, citizens might express ambivalent or even negative explicit attitudes towards these parties, if they do not (want to) agree with their agenda, but still might "feel some sympathy at an automatic level" (Bos et al. 2018, p. 71). Thus, by including indirect measures along with direct measures in this socially sensitive domain, research might estimate the share of the population holding PRR attitudes more correctly.

In the context of analyzing political attitudes and voting behavior in general, a number of studies have already demonstrated how indirect measures may help to overcome typical limitations resulting from a social desirability bias in self-reported data (for early studies see, e.g., Friese et al. 2007; Galdi et al. 2008; for current works, e.g., Gonzalez 2020; Raccuia 2016; for critical assessments see, e.g., Friese et al. 2012, 2016; Jost et al. 2009). Consequently, the perceived usefulness of indirect measures has also led to the development of indirect measures assessing PRR support. For example, Bos et al. (2018) recently introduced an instrument assessing implicit attitudes towards the Dutch populist radical-right Party for Freedom (*PVV*). By using a Single-Target IAT, the authors attempted to predict the probability to vote for the *PVV*. In their analysis, they find partial evidence among Dutch respondents that implicit attitudes towards the *PVV* predict vote likelihood, and that the explanatory power of the indirect measure persists (in one of two models) when controlling for traditional direct attitude measures.

Objectives and hypotheses of the present study

Considering the value of indirect measures for studying the support for PRR parties, we follow Bos et al. (2018) in attempting to measure implicit as well as explicit PRR attitudes. Hence, the main goal of our study is to develop an indirect measure for populist attitudes using an IAT. Yet, going beyond the study by Bos et al., we conceptualize populist radical-right attitudes independently from the evaluation of a specific party, i.e., by NOT using a specific party's name or symbols. In addition, we focus on the ideational core of populism in developing our measure: Taking on a Manichean outlook, populism is ultimately defined as an ideology that emphasizes the antagonism between (corrupt, manipulative) elites on the one hand and the (good) people on the other hand (Mudde 2004, 2007; Hawkins and Rovira Kaltwasser 2017). Thus, we propose that our measure captures the conceptual substance of populism. This newly developed implicit measure advances the state of research,



by (a) allowing to measure the existence of populist tendencies within a population without referring to a specific party and (b) by facilitating longitudinal and cross-country comparisons.

A further objective of our study is to examine the relationship between the new indirect measure and an existing direct measure of populist attitudes, following the recommendation by Friese et al. (2012). Therefore, we compare our IAT with the populism scale constructed by Schulz et al. (2018), which also includes a specific anti-elitism dimension. Previous research has shown that corresponding indirect and direct measures typically show moderate positive correlations: For instance, findings from a meta-analysis by Hofmann et al. (2005, p. 1376) revealed a significant average correlation of 0.24 between implicit attitudes and their corresponding explicit attitudes assessed via self-report. Therefore, we hypothesize:

H1 The implicit populism score (IAT) will show a moderate correlation with the populism scale developed by Schulz et al. (2018) and especially with its anti-elitism dimension.

Apart from populism, PRR ideology also includes a nativist facet. Therefore, we aim at investigating the interplay and relationship of populist attitudes and anti-immigrant attitudes on the implicit and explicit level. In the explicit realm, we expect that these facets will show moderate-to-strong correlations for two reasons: First, explicit attitudes require a certain degree of elaboration (e.g., Gawronski and Bodenhausen 2006; Ksiazkiewicz and Hedrick 2013). As research has shown that populist and anti-immigrant positions are presented together very often in public discourse (e.g., Hameleers 2018) citizens who have formed an attitude towards one facet will also be likely to have developed a corresponding opinion on the other. Second, participants who are willing to disclose their explicit support for one dimension should also be willing to do so for the other dimension. However, correlations should not be too strong, as populism and anti-immigrant attitudes are theoretically distinct concepts. Thus, we propose:

H2a Direct measures of populist and anti-immigrant attitudes will show moderate correlations.

In the implicit realm, we expect the link between the implicit attitudes to be weaker than between their explicit counterparts. We base this expectation firstly on the theoretical assumption, that implicit attitudes reflect spontaneous reactions more than elaborated thoughts towards an object. Thus, due to their impulsive and uncontrolled nature implicit attitudes should be less strongly related to each other (see Gawronski and Brannon 2019). Secondly, we derive our assumption from findings of studies assessing the relations between indirect measures across attitudinal domains (see, e.g., Bar-Anan and Nosek 2014). Correlations between different indirect measures are rather low with some correlations not differing “reliably from zero” (Hofmann and Schmidt 2008, p. 209; for a critical overview see Schimmack 2021). Therefore, we propose:



H2b The correlation between populist attitudes and anti-immigrant attitudes in the implicit realm will be weaker than for the direct measures.

Beyond this analysis of the structure of implicit and explicit populist and anti-immigrant attitudes, we are interested in the predictive power of the indirect measures to explain PRR vote. Distinguishing between different conceptual facets of PRR attitudes and analyzing their interrelationships will help us to answer the question why exactly people vote for PRR parties (Bos et al. 2018). In doing so, we also assess the added contribution of our new measure for predicting PRR party support, showing the relevance of sensitivity to social (un)desirability perceptions as an important moderating factor at the individual level.

In the last 20 years, scholars have examined whether indirect measures add explanatory power to studies of self-reported political behavior beyond direct measures, which is a relevant concern given the relatively high costs of using indirect attitude tests (for a summary see Friese et al. 2016). The research shows that direct measures of political attitudes usually have higher predictive power than indirect measures, but indirect measures slightly add to the overall explanatory power of the models predicting self-reported voting behavior. However, Friese et al. (2012) show that implicit attitude tests did not have additional predictive power beyond standard direct measures when applying a stricter test to the incremental validity of the indirect measures by including more indicators for explicit attitudes. Friese et al. (2012, 2016) therefore emphasize the necessity to test the predictive power of indirect measures thoroughly by including all relevant direct measures in the models. Accordingly, our analysis aims at replicating parts of the study by Bos et al. (2018) while putting the indirect measures to an even stricter test by including corresponding direct measures in our models explaining self-reported propensity to vote for the German PRR party *AfD*. We expect that:

H3a The indirect measure for populist attitudes will have incremental validity for the propensity to vote for the *AfD* over and above the corresponding direct measure.

H3b The indirect measure for anti-immigrant attitudes will have incremental validity for the propensity to vote for the *AfD* over and above the corresponding direct measure.

Research findings show that implicit attitudes add more explanatory power under two conditions, which are relevant in this study: first, in situations in which political attitudes or behavior are perceived to conflict with social norms (social undesirability); second, for citizens who express ambivalent attitudes (e.g., indecision regarding their vote choice). The special relevance of indirect measures in the context of socially undesirable attitudes and behaviors was already shown in early studies analyzing the effects of implicit attitudes on voting behavior. For example, a study in Germany showed that the effect sizes of indirect measures were strongest for the leftist Party of Democratic Socialism (PDS), which might stem from that party's association with the former East German communist



regime (Friese et al. 2007). This interaction of perceived social undesirability and implicit attitudes has also been demonstrated in many studies as well (for summaries see Bos et al. 2018; Gawronski et al. 2015; Ksiazkiewicz and Hedrick 2013). In consequence, implicit attitudes should be especially useful for measuring support for PRR parties when considering individuals' tendency to comply with social norms and we assume:

H4a The relation between the indirect measure for populist attitudes and the propensity to vote for the *AfD* is moderated by social desirability. The effect is stronger if the individual tendency to respond with a social desirability bias is high.

H4b We expect the same relation for anti-immigrant attitudes.

As mentioned above, some studies have found indirect measures to also be especially useful for predicting the vote choice of *ambivalent or undecided voters* (e.g., Arcuri et al. 2008; Bos et al. 2018; Galdi et al. 2008; or contrary results see Friese et al. 2012).³ Therefore, we are also interested in the effect of ambivalence in the explicit realm on the predictive power of the indirect measures. As we have argued above, citizens with extreme explicit attitudes are more likely to have deliberated about the respective issues. In such cases, explicit attitudes should be the best predictor for behavior or behavioral intentions. However, in cases in which citizens hold ambivalent or uncertain explicit attitudes, the probability is higher that behavior or behavioral intentions will be affected more strongly by implicit attitudes. In consequence, we assume:

H4c The relation between the indirect measure for populist attitudes and the propensity to vote for the *AfD* is moderated by participants' explicit populist attitudes. The effect is stronger if individuals express moderate explicit populist attitudes.

H4d We expect the same relation for anti-immigrant attitudes.

Methods

Data for this study were collected in an online survey, which included two indirect measures of PRR attitudes, one IAT, and one AMP. The IAT measures the ideational core of populist attitudes, namely, the antagonism between *the people* and *the elite* (Mudde 2004). The AMP measures attitudes towards foreigners as proxy for nativism.⁴ The two indirect measures as well as the corresponding direct measures are used as predictors of the propensity to vote for PRR parties.

³ Note that, theoretically, attitudinal ambivalence can also stem from perceptions of social (un)desirability. So, the both contexts discussed here have some theoretical overlap.

⁴ Populist attitudes are measured with an IAT as it seems less feasible to measure the construct based on pictures which is necessary for an AMP. For anti-immigrant attitudes, however, we rely on the established picture-based AMP developed by Schmuck and Matthes, officially published in 2019.



Survey and sample

The survey was conducted in July 2017 by the market research company X, in cooperation with Project Implicit. Participants for the study were recruited from an online access panel with 700,000 members in Germany. The sample was randomly drawn within quotas regarding gender, age, education, and region representative for the German online population.⁵

Participants completed the questionnaire on a desktop or laptop computer. As research findings indicate that indirect measures are especially sensitive to contextual variations (see, e.g., Gschwendner et al. 2008), we chose to measure implicit populist and anti-immigrant attitudes first and assess the corresponding explicit attitudes thereafter. A total of 1340 participants completed the questionnaire. Prior to the analysis, data quality was thoroughly checked (see the Appendix A for details) and as a result, 898 cases were included in the following analyses.

Measures

We measured PRR vote likelihood using the propensity to vote question in order to encourage participants to show tendencies towards certain parties instead of asking for the absolute party preference. Descriptive analysis shows that 10.7% of our respondents can be considered supporters of the party (scoring 8 or higher on a 11-point scale), while 63.9% of our participants stated that they “would never vote for this party” (see Appendix B.1 for all descriptive details).

As a *direct* measure for populist attitudes, we used the 9-item populism scale by Schulz et al. (2018) with the three sub-dimensions (1) anti-establishment attitudes, (2) demand for popular sovereignty, and (3) belief in the homogeneous virtuousness of the people (see Appendix B.1 and B.2 for detailed descriptive statistics and item wordings). Overall, we found a widespread agreement with populist statements in our sample. Furthermore, 17.5% of our sample achieved scores higher than 5.2 regarding the complete 6-point scale and 20.7% achieved scores higher than 5.9 regarding the anti-elitism dimension indicating strong explicit populist, resp. anti-elite attitudes (i.e., one standard deviation above the respective mean value).

In order to assess populist attitudes *indirectly*, we focused our measure on the antagonism between (corrupt, manipulative) political and other societal elites on the one hand and the (good) people on the other hand as the ideational core of populism (see Mudde 2004).⁶ Hence, our IAT measured the strength of implicit attitudes

⁵ In the sample, the distribution of gender is similar to the general German population with 54.3% females (50.7% in the population). Participants were between 18 and 84 years old; 29.6% were between 20 and 39 years (24.5% in the population); 38.1% between 40 and 60 years (29.4% in the population); 31.1% were older than 60 (27.6% in the population). The distribution of education levels shows a slight overrepresentation of people with higher education: 27.6% no/low degree, 34.7% middle degree, 16.1% higher education entrance qualification, and 21.5% university degree. (DESTATIS, <https://www.destatis.de>).

⁶ In order to represent the mindsets of those sympathizing with PRR ideologies more broadly, we decided to include economic actors and the media as part of the elite in addition to political actors in our IAT as research shows that (1) German citizens have one of the lowest confidence levels towards banks



Table 1 Items for target and attribute categories

Target categories	
Ordinary people	Elites
Citizen	Politician
Employee	Businessman
Worker	Banker
Taxpayer	Manager
Voter	Media
Attribute categories	
Positive	Negative
Good	Bad
Honest	Dishonest
Hard-working	Lazy
Modest	Arrogant
Upright	Corrupt

towards *elites* versus *ordinary people*. Participants had to classify words appearing in the middle of the screen into four paired categories by pressing specific computer keys (Greenwald et al. 2003). Two of those categories were the target categories *ordinary people* and *elites*, and the other two were *positive* and *negative* attributes (see Table 1; see Appendix B.4 for a detailed description of the procedure). Categorization should be faster when the pairing of a target with an attribute reflects a stronger association in memory.

We assessed implicit populist attitudes using the D scores produced by an online version of the IAT (Greenwald et al. 2003). D scores may range from -2 to $+2$ with positive values indicating an automatic association of *ordinary people* with *positive* attributes and negative values implying an automatic association of *elites* with *positive* attributes. Overall, our sample showed a slightly stronger automatic association of *ordinary people* with *positive* attributes than of *elites* with *positive* ones (see Appendix B.1). Furthermore, 16.0% of our sample achieved an IAT-score higher than 1.0 indicating a strong automatic association of ordinary people with positive attributes.

In order to assess the congruency between implicit and explicit populist attitudes, we grouped both variables with regard to center point of the scale and cross-tabulated both variables. Results show congruent implicit and explicit populist attitudes for 72.1% of our respondents. However, 19.0% of our participants reported stronger populist attitudes on the explicit level, while 8.9% displayed stronger populist attitudes on the implicit level.

Footnote 6 (continued)

and stock markets as a result of the financial crisis in 2008 (see e.g., Roth 2009), and (2) citizens with strong populist attitudes tend to hold hostile media perceptions (see, e.g., Schulz et al. 2020; Stier et al. 2020).



Explicit nativist attitudes were measured by using the 3-item Anti-Immigrant Attitudes scale by Matthes and Schmuck (2017), while we included an Affective Misattribution Procedure (AMP; Payne et al. 2005) measuring attitudes towards foreigners as introduced by Schmuck and Matthes (2019) in order to assess *implicit* nativist attitudes (see Appendix B.1). In the AMP, reactions towards symbols presented in pictures associated with Islam are used as an indicator for anti-immigrant attitudes.⁷ Based on the general idea of misattribution (Murphy and Zajonc, 1993), it is assumed and has been empirically corroborated (Payne et al. 2005) that the valence of the prime pictures shapes the response to an ambivalent target. The more positively (negatively) a person evaluates a prime (automatically), the higher the probability of striking the key signifying “positive” (or “negative”) in response to the subsequent target. Automatic evaluations after the presentation of a Western or Muslim prime in the AMP were dummy coded, labeling positive evaluations with ‘1’ and negative evaluations with ‘0’ (see Appendix B.5 for a detailed description of the procedure). The resulting scores may range between -1 and $+1$ with positive values indicating a preference for the Western over the Muslim prime and negative scores showing a preference for the Muslim over the Western prime. On the whole, our samples shows a moderate preference for the Western over the Muslim primes; 25.1% of our participants achieved a score higher than 0.5 in the AMP, indicating a strong preference for the Western over the Muslim primes.

Again, we looked into the congruency of explicit and implicit nativist attitudes by grouping both variables with regard to the center point of the scale and cross-tabulating both variables. Congruent implicit and explicit nativist attitudes can be stated for 63.0% of our respondents. 16.0% reported stronger nativist attitudes explicitly and 20.9% displayed stronger nativist attitudes implicitly.

Social desirability

In surveys addressing sensitive topics, respondents may be eager to appear being “good citizens” (Kemper et al. 2012, p. 25). Participants’ tendency to behave in such a socially desirable manner was assessed using the KSE-G scale by Kemper et al. (2012). The KSE-G scale measures the Gamma factor of social desirability, a moralistic bias leading to an overly positive impression management and a tendency to distort self-descriptions to be consistent with the expectation of others. The scale measures participants’ tendency to overstate positive attributes and understate negative attributes as two distinct aspects of the Gamma factor (see Appendix B.3).

⁷ It must be noted that the direct and indirect measures assessing anti-immigrant attitudes focus on slightly different targets: While the Anti-Immigrant Attitudes scale by Matthes and Schmuck (2017) takes immigrants in general into account, the AMP (Schmuck and Matthes 2019) concentrates on Muslim immigrants only (see Appendix B.5 for more information on our decision to rely only on Muslim pictographs as primes in the AMP).



Table 2 Pearson correlations between the indirect and direct measures of populist and anti-immigrant attitudes

	1	2	2a	2b	2c	3	4
IAT: Implicit populist attitudes (1)	–	0.13***	0.18***	0.07*	0.05	0.12***	0.09**
Explicit populist attitudes scale (2)		–	0.68***	0.83***	0.72***	0.18***	0.41***
Anti-elite attitudes (2a)			–	0.43***	0.19***	0.15***	0.30***
Demand for sovereignty of the people (2b)				–	0.39***	0.20***	0.37***
Belief in the homogeneity of the people (2c)					–	0.05	0.25***
AMP: Implicit attitudes towards foreigners (3)						–	0.29***
Explicit anti-immigrant scale (4)							–

(1) positive scores point to an automatic association of ordinary people with positive attributes, whereas negative scores imply an automatic association of elites with positive attributes. (2, 2a, 2b, 2c) scores range from 1 to 6 with high scores representing strong populist attitudes, (3) scores range von -1 to 1 with negative scores showing an automatic preference for the Muslim over the Western prime and positive score indicating an automatic preference for the Western over the Muslim prime, (4) scores range from 1 to 5 with high scores representing strong anti-immigrant attitudes

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Strategy of analysis

We used the Pearson correlation coefficient to examine whether the populism-IAT correlates with the direct measure developed by Schulz et al. (2018; H1) and whether populist attitudes and anti-immigrant attitudes are empirically distinct concepts (H2a, H2b). In a next step, we examined the predictive power of the indirect measures for explaining the self-reported propensity to vote for the *AfD* applying multiple linear regression analyses (H3a, H3b). Third, we conducted moderation analyses in order to test whether social desirability and ambivalence of explicit attitudes moderate the effects of our indirect measures on the self-reported propensity to vote for the *AfD* (H4a, H4b, H4c, H4d).

Results

In order to test our hypotheses H1, H2a, and H2b, we computed zero-order correlations between the indirect and direct measures of populist and anti-immigrant attitudes. The results are shown in Table 2.

The relations between the corresponding indirect and direct measures are in line with our assumptions, though the correlations are somewhat lower in size than expected. For instance, the IAT D score showed modest correlations with the complete populism scale by Schulz et al. (2018) ($r = 0.13$, $p < 0.001$). Plausibly, the developed indirect measure corresponds in particular with the anti-elitism dimension ($r = 0.18$, $p < 0.001$), while showing no substantial correlations with the other



two sub-dimensions (demand for sovereignty of the people: $r=0.07$, $p<0.05$; belief in the homogeneity of the people: $r=0.05$, $p>0.05$; see Appendix C.1 for details on correlations at item level). Hence, Hypothesis **H1** is confirmed by our findings.

As expected in **H2a**, our results revealed a strong correlation between the explicit anti-immigrant scale by Matthes and Schmuck (2017) and the explicit populist attitudes scale by Schulz et al. (2018; $r=0.41$, $p<0.001$). Significant, yet also distinctly weaker correlations were found for the anti-immigrant AMP with the populist attitudes scale ($r=0.18$, $p<0.001$) and its anti-elitism dimension ($r=0.15$, $p<0.001$). As expected in **H2b**, the positive relation between the indirect populist measure (IAT) and the indirect anti-immigrant-measure (AMP) was significant yet also weak ($r=0.12$, $p<0.001$). In addition, our results showed a significant moderate correlation between the AMP and its corresponding direct measure, the explicit anti-immigrant scale ($r=0.29$, $p<0.001$).

In our next set of analyses, we examined the incremental validity of both indirect measures for the propensity to vote for the *AfD* over and above the corresponding direct measures (**H3a** and **H3b**). Therefore, we ran multiple linear regression analyses by stepwise adding predictor variables. In Model 1, the propensity to vote for the *AfD* was regressed on the IAT only. In Model 2, the anti-foreigners AMP was included as a second predictor to the model. Model 3 assessed the predictive value of our direct measures by regressing the propensity to vote for the *AfD* on the explicit anti-elite attitudes measure and the explicit anti-immigrant measure. Indirect and direct measures were both combined in Model 4, while additionally including age, gender, and education in Model 5. Table 3 presents the results of the multiple linear regression models.

Model 1 reveals that the populism-IAT ($\beta=0.069$, $p=0.038$) indeed significantly predicts the propensity to vote for the *AfD* as long as no other variable is included. However, it is only a very weak predictor, accounting for just 0.5% of the explained variance. When the anti-foreigners AMP is added in Model 2 ($\beta=0.143$, $p<0.001$), the IAT is no longer significant. However, the AMP is also a rather weak predictor explaining 2.0% of variance. Models 3, 4, and 5 reveal that the propensity to vote for the *AfD* is best explained by explicit anti-immigrant attitudes (see e.g., Model 5: $\beta=0.407$, $p<0.001$). Furthermore, male ($\beta=-0.068$, $p=0.023$) and younger participants ($\beta=-0.101$, $p=0.002$) in our study report a higher probability of voting for the *AfD*. Therefore, indirect measures are only significant when corresponding direct measures are not considered. So, different than assumed in **H3c** and **H3d**, indirect measures have no additional predictive power for the propensity to vote for the *AfD*.

In Hypotheses **H4a** and **H4b**, we expected social desirability to moderate the effects of our indirect measures on the self-reported propensity to vote for the *AfD*. We tested the hypotheses via moderated multiple regression analyses. Prior to analysis, all predictor variables and the moderator variable were mean centered. Contrary to our expectations, we found that social desirability concerns *did not* moderate the effect of implicit populist attitudes (measured with IAT) on the propensity to vote for the *AfD* (**H4a**, left part of Table 4: $\beta=0.015$, $p=0.659$). Regarding implicit anti-immigrant attitudes (measured with the AMP), our analyses revealed that social desirability concerns indeed *did* moderate the effect on the



Table 3 Multiple linear regression analyses examining the effect of indirect and direct measures of populist and anti-immigrant attitudes, age, gender, and education on the self-reported propensity to vote for the AfD ($N = 898$)

Predictors	Model 1		Model 2		Model 3		Model 4		Model 5				
	B	SE(B) β	B	SE(B) β	B	SE(B) β	B	SE(B) β	B	SE(B) β			
IAT: Implicit populist attitudes	0.389	0.187	0.069*	0.187	0.053		0.133	0.174	0.024	0.185	0.174	0.033	
AMP: Implicit attitudes towards foreigners			1.422	0.331	0.143***		0.259	0.317	0.026	0.308	0.315	0.031	
Explicit anti-elite attitudes					0.122	0.100	0.103	0.101	0.033	0.140	0.101	0.045	
Explicit anti-immigrant scale					1.178	0.091	0.411***	1.155	0.094	0.403***	1.166	0.095	0.407***
Age													
Gender													
Education													
Constant	1.693		1.386		-1.476		-3.092			-0.020			
R ²	0.005		0.025		0.180		0.181			-0.433			
ΔR^2			0.020		0.001		0.001			0.003			
Fchanges	(1.896)	4.319	(1.895)	11.416	(2.895)	98.240	(2.893)	0.683		(3.890)	5.423		
p	0.038		<0.001		<0.001		<0.001			0.001			

IAT positive scores point to an automatic association of ordinary people with positive attributes, whereas negative scores imply an automatic association of elites with positive attributes, AMP scores range from -1 to 1 with negative scores showing an automatic preference for the Muslim over the Western prime and positive score indicating an automatic preference for the Western over the Muslim prime, *Explicit anti-elite attitudes* scores range from 1 to 6 with high scores representing strong anti-elitism attitudes, *Explicit anti-immigrant attitudes* scores range from 1 to 5 with high scores representing strong anti-immigrant attitudes, *Gender* 0 = male, 1 = female, *Education* 1 = low, 2 = middle, 3 = high

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$



Table 4 Multiple linear regression analyses examining the moderation of the effect of indirect measures of populism and anti-immigrant attitudes on the self-reported propensity to vote for the AfD by social desirability ($N=898$)

Predictors	<i>B</i>	SE(<i>B</i>)	β	Predictors	<i>B</i>	SE(<i>B</i>)	β
IAT: Implicit populist attitudes	0.217	0.105	0.069*	AMP: Implicit attitudes towards foreigners	0.505	0.104	0.160***
Social desirability scale	- 0.301	0.105	- 0.096**	Social desirability scale	- 0.322	0.105	- 0.102**
Social desirability \times IAT	0.046	0.103	0.015	Social desirability \times AMP	- 0.207	0.103	- 0.066*
Constant	1.862			Constant	1.884		
R^2	0.014			R^2	0.038		
$F(3, 894)$	4.220			$F(3, 894)$	11.917		
p	0.006			p	<0.001		

IAT positive scores point to an automatic association of ordinary people with positive attributes, whereas negative scores imply an automatic association of elites with positive attributes, AMP scores range from - 1 to 1 with negative scores showing an automatic preference for the Muslim over the Western prime and positive score indicating an automatic preference for the Western over the Muslim prime, Social desirability scores range from 1 to 5 with high scores representing strong tendency to respond with a social desirability bias

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

propensity to vote for the AfD (H4b, right part of Table 4; $\beta = - 0.066, p = 0.046$). However, the direction of this interaction was contrary to our expectations (see Figure S1 in Appendix C): participants with a strong tendency to behave in a socially desirable manner showed no correlation between preference for Western culture and the propensity to vote for the AfD, whereas participants scoring low on social desirability did show a positive correlation (see Appendix C2 for partial effects in models excluding the interaction terms.). In sum, hypotheses H4a and H4b are both rejected as the interaction terms between the indirect measures for implicit populist and anti-immigrant attitudes and social desirability did not predict AfD vote in the expected way.

In Hypotheses H4c and H4d, we expected the relation between the indirect measures and the propensity to vote for the AfD to be moderated by the explicitly expressed attitudes. To test these hypotheses, we included the direct measures as moderator variables in the linear regression analyses. Since we assumed the moderation effect to be stronger for individuals expressing moderate explicit attitudes, we also included the direct measures as squared variables. The results are shown in Table 5 and indicate that the self-reported propensity to vote for the AfD is explained by explicitly expressed anti-elitism ($\beta = 0.276, p < 0.001$) and anti-immigrant attitudes ($\beta = 0.501, p < 0.001$). In both cases, we find no significant moderation effect of the explicitly expressed attitudes (IAT \times explicit anti-elite attitudes: $\beta = 0.074, p = 0.076$; AMP \times explicit anti-immigrant: $\beta = 0.014, p = 0.663$) and there is also no evidence in our data that the effect is stronger for individuals expressing moderate explicit attitudes (IAT \times explicit anti-elite attitudes squared: $\beta = 0.065, p = 0.182$;



Table 5 Multiple linear regression analyses examining the moderation of the effect of indirect measures of populism and anti-immigrant attitudes on the self-reported propensity to vote for the AfD by the ambivalence of explicit populist and anti-immigrant attitudes ($N = 898$)

Predictors	B	SE(B)	β	Predictors	B	SE(B)	β
IAT: Implicit populist attitudes	0.017	0.123	0.005	AMP: Implicit attitudes towards foreigners	0.028	0.137	0.009
Explicit anti-elite attitudes	0.869	0.135	0.276***	Explicit anti-immigrant attitudes	1.579	0.109	0.501***
IAT \times explicit anti-elite attitudes	0.233	0.131	0.074	AMP \times explicit anti-immigrant attitudes	0.045	0.104	0.014
Explicit anti-elite attitudes (squared)	0.331	0.073	0.198***	Explicit anti-immigrant attitudes (squared)	0.601	0.098	0.221***
IAT \times explicit anti-elite attitudes (squared)	0.089	0.067	0.065	AMP \times explicit anti-immigrant attitudes (squared)	0.058	0.096	0.029
Constant	1.501			Constant	0.028		
R^2	0.054			R^2	0.219		
F (5, 892)	10.128			F (5, 892)	50.086		
p	<0.001			p	<0.001		

IAT positive scores point to an automatic association of ordinary people with positive attributes, whereas negative scores imply an automatic association of elites with positive attributes. AMP scores range -1 to 1 with negative scores showing an automatic preference for the Muslim over the Western prime and positive score indicating an automatic preference for the Western over the Muslim prime. *Explicit anti-elite attitudes* Scores range from 1 to 6 with high scores representing strong anti-elite attitudes, *Explicit anti-immigrant attitudes* scores range from 1 to 5 with high scores representing strong anti-immigrant attitudes

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

AMP \times explicit anti-immigrant squared: $\beta=0.029$, $p=0.545$). Consequently, Hypotheses H4c and H4d must also be rejected.

Discussion

The aim of this paper was to develop and test a measure of implicit populist attitudes and to test its explanatory power for predicting PRR party support against explicit populist attitudes and against existing indirect and direct measures of anti-immigrant attitudes. In doing so, we hoped to contribute to the question of why people vote for PRR parties. Furthermore, this study set out to contribute to efforts in analyzing the full potential support of such parties, recognizing that some respondents might not be willing to indicate explicit PRR party support in surveys. For instance, due to historical reasons, explicitly expressing support for PRR parties such as the *AfD* is considered to be socially undesirable in Germany. Accordingly, almost two-thirds of our respondents (63.9%) stated that they would never vote for the *AfD*.

To measure implicit populist attitudes, we used an online version of the IAT (Greenwald et al. 2003) which compared the valence and strength of implicit attitudes towards *elites* versus *ordinary people*. For our sample, we found that positive implicit attitudes towards the ordinary people were more common than positive implicit attitudes towards elites. About 16% of respondents displayed strong positive automatic associations with ordinary people, a predisposition that we would refer to as implicit populism. As expected, our populism-IAT showed modest correlations with the populism scale by Schulz et al. (2018) and its anti-elitism dimension.

Our analysis found that—in line with the literature—direct measures are generally better predictors of PRR voting probability than indirect measures (see e.g., Schimmack 2021). However, in this context, it seems necessary to critically discuss our choice of propensity to vote as dependent variable, which has been previously elaborated on in the literature. Even though it is a classic dependent variable in this field of research and of course highly relevant, researchers have acknowledged that it is not the best choice when illustrating the potential of indirect attitude measures in the political realm. For example, Friese et al. (2016, p. 189) have argued that voting behavior seems a “decisively deliberate, intentional, conscious, and controllable behavior performed without any obvious situational constraints that would limit its controllability.” This characteristic limits the explanatory potential of indirect measures, which should be higher for more impulsive behavior such as interpersonal behavior and maybe also information behavior in the private environment. Consequently, the fact that the predictive power of indirect measures was limited in this study does not mean that they are not socially or politically relevant. Instead, indirect measures may prove to be more promising for explaining less deliberate dependent variables than voting.

Contrary to our expectations, we did not find the assumed interaction effects between the indirect measures for populist and anti-immigrant attitudes and social desirability on vote probability for a PRR party. Also, there was no significant moderation effect of the ambivalence of explicitly expressed attitudes for the power of the indirect measures to predict PRR vote. Two limitations of our



study may have contributed to this finding: First, with the KSE-G scale by Kemper et al. (2012), we chose to use a standard procedure that measures respondents' tendency to overstate positive attributes and understate negative attributes on a rather general level. We suspect that KSE-G scale may have been a too broad and unspecific measure for our purpose. Therefore, it may be promising for future research to consider a more specific approach to the social desirability bias by assessing whether participants perceive their PRR attitudes and support for PRR parties to be in line or deviant from their social environment. Second, another point that calls for further research is whether populist and nativist attitudes can (still) be regarded as socially undesirable in Germany as we assumed due to the historical context. Societal developments such as the so-called "refugee crisis" have motivated some segments of German citizens to vent their frustrations of feeling "left behind," to show their support for the *AfD* as a PRR party, and to express populist and anti-immigrant attitudes more openly. Other than expected, this may apply to a broader German public, as the agreement with the items of the explicit populist scale used in the study proved to be quite strong, especially for the anti-elite attitude items. Achieved mean values for the entire scale and its anti-elitism dimension were well above the center point of the scale and about one-fifth of our respondents reported above average approval with populist items (populist attitude scale: 17.5%, anti-elitism dimension: 20.7%). In contrast, 16% of the respondents displayed strong implicit, but no explicit populist attitudes. Additionally, congruency of implicit and explicit attitudes was considerably higher for populist attitudes (72.1%) than for nativist attitudes (63.0%). Especially with regard to attitudes being displayed stronger on the implicit rather than on the explicit level, our results hint at nativist attitudes (20.9%) being noticeably more socially undesirable than populist attitudes (8.9%). Therefore, the distribution of explicit and implicit populist attitudes in general populations and its further development calls for additional scholarly attention, possibly also from a comparative perspective, for instance in different countries. As recent years have shown the rise of populist radical-right (PRR) parties in national parliaments around the world, we assume that our findings may be transferable, at least to other Western democracies. Since our developed measure of implicit populist attitudes is constructed independently from a specific party, future research may use our measure to conduct such cross-country comparisons.

Current research has already identified a number of variables relating to PRR support and PRR attitudes (e.g., socio-demographic variables, authoritarianism, social trust). However, future research may focus on additional variables in completing the picture of PRR support: Recent studies by Eberl et al. (2021), Schulz et al. (2020), and Stier et al. (2020) show that conspiracy beliefs, distrust in mainstream media, and specific patterns of media usage are well in line with populist's anti-elitism stance and are therefore connected to populist attitudes. Moreover, in looking at populism as a certain "style of political performance" (Bucy et al. 2020, p. 636) using simplification and emotionalization as communicative strategies, populist parties, and politicians may be especially appealing to citizens with a strong need for predictability and a more heuristic style of information processing. Thus, taking enduring needs such as the need for cognitive closure



(Webster and Kruglanski 1994) or need for cognition (Cacioppo and Petty 1982) into account could prove to be a promising addition.

Finally, we find that attitudes towards immigrants affected *AfD* support in Germany in 2017, while populist attitudes did not. This finding adds to the extensive evidence showing a link between (explicit) anti-immigrant attitudes and PRR party support (Norris 2005; Ivarsflaten 2008; Dunn 2015), while there is less work examining the link between populist attitudes and PRR party support (Akkerman et al. 2014; Bos et al. 2018). This area of research is new but growing, and further research using direct and indirect measures of populism is crucial—especially as the political agenda and citizens' issue salience have changed significantly since 2017: The developments during the Corona-crisis might have shifted the weight more towards anti-elite attitudes.

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Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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