Left behind and united by populism? Populism's multiple roots in feelings of lacking societal recognition

Nils D. Steiner, Johannes Gutenberg University Mainz,

steiner@politik.uni-mainz.de

Christian H. Schimpf, Université du Québec à Montréal,

schimpf.christian_henning@courrier.uqam.ca

Alexander Wuttke, Mannheim Centre for European Social Research,

alexander.wuttke@uni-mannheim.de

[Pre-registration with analysis syntax using simulated data \(prospective Stata & R code for recoding, figures, and empirical analysis\)](#)

[Reproduction material](#)

Cite as:

Steiner, Schimpf, Wuttke (2022): "Left behind and united by populism? Populism's multiple roots in feelings of lacking societal recognition", German Political Science Quarterly, (In-Principle-Accepted).

Abstract: A prominent but underspecified explanation for the rise of populism points to individuals' feelings of being "left behind" by the development of society. At its core lies the claim that support for populism is driven by the feeling of lacking the societal recognition one deserves. Our contribution builds on the insight that individuals can feel to lack recognition in different ways and for different reasons. We argue that—due to this multifaceted character—the common perception of being neglected societal recognition unites otherwise heterogeneous segments of the population in their support for populism. Relying on data from the GLES Pre-Election Cross-Section 2021, our pre-registered study investigated the multiple roots of populist attitudes in feelings of lacking societal recognition in two steps. First, our results indicate that, from rural residents to socio-cultural conservatives or low-income citizens, seemingly unrelated segments of society harbor feelings of lacking recognition—but for distinct reasons. Second, as anticipated, each of the distinct feelings of lacking recognition are associated with populist attitudes. These findings underscore the relevance of seemingly unpolitical factors that are deeply ingrained in the human psyche for understanding current populist sentiment. Overall, by integrating previously disparate perspectives on the rise of populism, the study offers a novel conceptualization of "feeling left behind" and explains how populism can give rise to unusual alliances that cut across traditional cleavages.

Keywords: left behind; societal recognition; populism; AfD; deprivation; cultural backlash.

Deutscher Titel: Abgehängt und im Populismus vereint? Die vielfältigen Wurzeln des Populismus in Gefühlen fehlender gesellschaftlicher Anerkennung

Zusammenfassung: Eine prominente, aber unterentwickelte Erklärung für den Aufstieg des Populismus verweist auf das Gefühl, von der Entwicklung der Gesellschaft „abgehängt“ zu sein. Im Kern steht die Behauptung, dass die Unterstützung des Populismus von der Wahrnehmung getrieben wird, nicht die gesellschaftliche Anerkennung zu erhalten, die man verdient. Unser Beitrag baut auf der Erkenntnis auf, dass das Gefühl mangelnder Anerkennung auf unterschiedliche Weise und aus unterschiedlichen Gründen auftreten kann. Wir argumentieren, dass – aufgrund dieses facettenreichen Charakters – die gemeinsame Wahrnehmung einer fehlenden gesellschaftlichen Anerkennung ansonsten heterogene Bevölkerungsschichten in ihrer Unterstützung für den Populismus vereint. Basierend auf Daten aus der Vorwahlbefragung der GLES zur Bundestagswahl 2021 untersucht unsere präregistrierte Studie die multiplen Wurzeln populistischer Einstellungen in Gefühlen mangelnder gesellschaftlicher Anerkennung. Erstens weisen unsere Ergebnisse darauf hin, dass – von Individuen in ländlichen Regionen über solche mit soziokulturell konservativen Einstellungen bis hin zu solchen mit niedrigem Einkommen – scheinbar unverbundene Segmente der Gesellschaft Wahrnehmungen fehlender Anerkennung teilen – allerdings aus unterschiedlichen Gründen. Zweitens ist, wie erwartet, jedes dieser distinkten Gefühle fehlender Anerkennung mit populistischen Einstellungen assoziiert. Diese Ergebnisse unterstreichen die Relevanz scheinbar unpolitischer, tief in der menschlichen Psyche verwurzelter Faktoren, um gegenwärtige populistische Stimmungslagen zu verstehen. Durch die Integration zuvor auseinanderlaufender Perspektiven auf den Aufstieg des Populismus bietet die Studie eine neue Konzeptualisierung des „Abgehängtseins“ und erklärt, wie Populismus – über traditionelle Cleavages hinweg – zu ungewöhnlichen Allianzen führen kann.

Deutsche Schlüsselwörter: Abgehängtsein; gesellschaftliche Anerkennung; Populismus; AfD; Deprivation; cultural backlash.

1. Introduction

The debates about the reasons for populism's recent upsurge in many established democracies are ongoing. One lingering puzzle common to populist movements is their success in traversing the traditional cleavages of Western societies in which they managed to assemble a diverse coalition of societal groups that cuts across ideological and socio-economic divides (Gidron and Hall 2017; Damhuis 2020; Kaltwasser and Hauwaert 2020; Nachtwey et al. 2020; Hartevelt et al. 2021). Understanding the commonality that ties together citizens from different backgrounds is thus key to understanding the rise of populism. The existing literature points to attitudinal factors such as xenophobia or sexism which may have particular value for explaining the success of nativist parties (Ratliff et al. 2019; Young et al. 2019). However, many recent populist movements do not subscribe to such positions. In this study, we propose a more broadly applicable explanation. We suggest that the common perception of being neglected societal recognition unites otherwise heterogeneous segments of the population in their support for populism.

Our argument builds on the popular thesis that supporters of populist parties feel “left behind” (Ford and Goodwin 2014; Goodwin and Heath 2016; Hobolt 2016; Gidron and Hall 2017, 2020). Despite its popularity, previous scholarship has not fully appreciated that individuals can feel “left behind” in different ways and for different reasons. Moreover, scientific progress on the “left behind” thesis has been hampered by conceptual vagueness. Drawing on the established concept of societal recognition, we therefore propose a more specific, inherently multidimensional conceptualization of feeling “left behind” as the perception of being denied the societal recognition one deserves. Our synthesis of literature from philosophy, psychology and the social sciences characterizes societal recognition as a fundamental human desire whose thwarting leads to self-defensive reactions with political implications such as populist attitudes. Because there are many ways to the perception of lacking recognition, feeling “left behind”

may unite different groups who have been characterized as supporters of populism—people in routine jobs who perceive a lack recognition for the work they do (Sandel 2021), conservatives who feel alienated by cultural changes in society (Norris and Inglehart 2019), or those living in “left behind” rural places (Broz et al. 2021; Hartevelt et al. 2021). In our pre-registered empirical analysis, we tested this proposition of lacking societal recognition as the common cause of populist sentiments in diverse segments of society.¹

To investigate the relationship between the perception of lacking societal recognition and populist attitudes, we drew on a novel four-item battery included in the GLES Pre-Election Cross-Sectional Survey 2021 (GLES 2021) that measured perceptions of societal recognition across different domains. First, we investigated the multiple roots of feeling “left behind”. We expected that feelings of lacking societal recognition are present in many societal segments, but that different feelings dominate in different segments. To test this, we compared domain-specific feelings of lacking societal recognition across distinct societal groups. We focus on a set of prototypical groups who we expected to feel being denied societal recognition in specific ways but not in others. Second, we tested the hypothesis that the domain-specific feelings of lacking societal recognition are *each* positively associated with populist attitudes.

The results of our pre-registered analyses support our argument of populism’s multiple roots to a large extent. First, distinct feelings of lacking recognition are anchored in social characteristics as expected: Individuals with low incomes are more prone to perceive a lack of recognition of their economic needs (than those with higher incomes); individuals who work in jobs that are often considered as “low-skilled” are more prone to perceive a lack of recognition for the work they do; those living in rural places are more prone to perceive a lack of recognition of their needs for basic services, and people with socio-culturally conservative attitudes are

---

¹ The pre-registration of the analyses carried out in this article is available at https://osf.io/kje48?view_only=e5266f00700a4b648ebffd9ca7d1af5f.

more prone to perceive a lack of recognition of their opinions. While membership in these social groups was thus associated as predicted with feelings of lacking recognition, we also found an unexpectedly outsized role of income and especially conservatism—which go along with lacking recognition on multiple facets. Second, as anticipated, each of the distinct facets of felt lack of recognition predict populist attitudes. Yet, in line with the idea of multiple roots, our results suggest that feeling a lack of recognition on only one of its facets may suffice to trigger populist sentiment. Overall, by pointing to the commonality of lacking recognition these findings help explain why citizens from different strands of life are all attracted to populist ideas.

Our study adds to the literature on how feelings of being “left behind”—which previous research has conceptualized, and operationalized, via subjective social status (Gidron and Hall 2017, 2020; Gest et al. 2018; Kurer 2020; Engler and Weisstanner 2021)—affect support for populism. We propose, and tested, a refined account that considers that people may feel being denied societal recognition in different ways. In doing so, we contribute to the literature on populism more broadly by showing how populism may function as an umbrella that unites citizens who feel “left behind” for very different reasons.

2. Populism’s multiple roots in feelings of lacking societal recognition

Populism is a complex phenomenon and scholars have not yet come to a consensus on why some citizens support populist parties or hold populist attitudes. Some scholars interpret populism as a revolt of the economic losers of globalization, trying to explain why blue-collar workers frequently vote for populist parties in their left or right persuasion (Betz 1993; Kitschelt and McGann 1995; Swank 2003; Kriesi et al. 2006, 2008; Oesch 2008; Doyle 2011; March and Rommerskirchen 2015; Colantone and Stanig 2018). Others question this narrative by pointing out that both blue-collar workers and small business owners regularly vote for right-wing

populist parties despite seemingly contradicting economic interests (Ivarsflaten 2008). With an eye on the over-representation of whites and males among the populist electorate, other scholars hint at cultural factors as the source of populist resentment (Norris and Inglehart 2019; Green and Shorrocks 2021). Rather than resolving the debates on the origins of populism, these studies underscore the multifacetedness of sometimes contradictory motives that bring citizens from different strands of life to unite behind populist parties and ideas. However, the question remains: Is there a connection between these segments of the societies that form the populist coalition?

Popular discourse has identified such a link that unites the adherents of populism: The feeling of being “left behind”. Ever since populism was recognized as a major electoral force, politicians, particularly in Anglo-Saxon countries, have begun catering to the “forgotten men and women” (Trump 2017) who “feel left behind” (Biden 2021). The term features regularly in scholarly writing on populism, too (Ford and Goodwin 2014; Hobolt 2016; Gidron and Hall 2017, 2020). Yet, due to its inherent vagueness, there is neither a broadly shared definition of feeling “left behind” nor a commonly accepted theoretical framework associated with the term.

The most fruitful attempts of establishing a related theoretical framework have been put forth in an emerging body of literature on subjective social status and support for populism (e.g., Gidron and Hall 2017, 2020; Gest et al. 2018; Kurer 2020). For instance, Gidron and Hall (2017, 2020) argue that support for the populist right, particularly among white working-class men, is fueled by perceptions of a declining social status—which they understand to reflect “people’s own feelings about the levels of respect or recognition they receive relative to others in society” (2017, p. 61). They propose a unifying theoretical framework in which social status perceptions mediate the effect of both economic and cultural developments on support for the populist right.

Building on this emerging literature, we propose a refined account that takes into consideration the different ways in which people may feel “left behind”. We draw on the established concept

of *societal recognition* which we argue captures those sentiments well that are associated with the feeling of being “left behind”. Because societal recognition involves multiple facets, this conceptualization highlights the many ways to feel “left behind” and may thereby help us understand the heterogenous populist coalition.²

Recognition is a central concept in the European history of thought. It took center stage in the works of British thinkers like John Stuart Mill and Adam Smith who consider acceptance in a social community a fundamental human motivation, similar to German idealism where Immanuel Kant and Georg Wilhelm Friedrich Hegel considered recognition a basic condition for developing into a rational, autonomous being (Honneth 2021). To this day, recognition is discussed both in philosophy and, often with other terms, the social sciences (McBride 2013; Fukuyama 2018). The fact that recognition has long occupied Western thinking, hints at the deep roots of societal recognition for human thriving.

Human beings evolved as social animals. The unique skill that has given humans an edge over other species is the ability to cooperate with others of our kind (Tomasello 2019). Hence, there is an evolutionary advantage in the evolved desire to seek group interaction which might be the reason for the universal, human tendency to become accepted members of human groups (Baumeister and Leary 1995; Raihani 2021). Hence, the fact that in (most) human beings social exclusion elicits profound discomfort and adverse reactions (Baumeister et al. 2007) is indicative of a potentially universal desire for recognition (Taylor 1995; Fraser and Honneth 2003).

---

² Herein lies a crucial difference to Gidron and Hall (2017, 2020) and related work. While Gidron and Hall focus on an overall perception of one’s standing in the societal hierarchy, our conceptualization and operationalization are concerned with the multiple ways of perceiving a lack of societal recognition. In particular, Gidron and Hall’s use of the “social ladder question” may capture whether citizens feel “left behind” in general, but not the different ways in which they do so. Doing so strikes us as important for understanding how different social groups may unite behind populist parties. Moreover, it is conceivable that feeling a lack of recognition in only one domain may suffice to trigger populist sentiment, whereas such individuals may not necessarily assess their general social status as low. If so, this might explain mixed findings regarding the role of subjective social status (Oesch and Vigna 2021; Richards et al. 2021).

Contemporary psychology considers the desire for recognition in concepts such as the basic psychological needs for relatedness and belonging (Baumeister and Leary 1995; Ryan and Deci 2017). Other concepts such as the desire for status (Anderson et al. 2015) or self-esteem (Gebauer et al. 2015) are related but better understood as derivatives of the desire for recognition (Vansteenkiste, Ryan and Soenens, 2020; Ryan and Brown, 2003). Recognition is more fundamental as it does not consider our standing in comparison with others but asks the basic question of whether we are in or left out.

Being denied acceptance by a group to which we seek to belong goes to the core of who we are and feels like being denied the dignity we deserve (Fukuyama 2018; Honneth 2021). It has profound implications for one's self-concept, thereby affecting a person's sense of worth and psycho-social functioning (Baumeister et al. 2007). Our need for recognition is not salient when we are treated with dignity but craving the recognition which one feels being denied feels pressing and leads to self-defensive reactions. These reactions include narcissistic and aggressive tendencies that overcompensate the lack of recognition (Honneth 2021) but also passivity, resignation and depression (Hilbert et al. 2019). While those clinical consequences underscore the deep roots of the desire for recognition, in democratic mass societies it may also affect how we think and act in our role as citizens, particularly when the reasons for lacking recognition are located in the political domain.

Ethnographic research (Cramer 2016; Eribon 2018; Arnade 2019) has repeatedly shown that groups who feel excluded from society exhibit political attitudes that fit these patterns of passive resignation or aggressive overcompensation. One form in which the consequences of lacking recognition could materialize is populist attitudes. Populist attitudes describe a moralistic world view that pits the corrupt elite against the virtuous people (cf. Mudde 2004). To those who feel to belong to the virtuous group of ordinary people, blaming the elites provides a useful narrative to explain one's exclusion from society without having to take any responsibility themselves.

A more favorable depiction of the relationship between recognition and populism is to see all social struggle as a struggle for recognition (Honneth and Anderson 1995) and to see populism as an emancipatory process of democratization that strives for the inclusion of the unrepresented into the political process (Manow 2020). From this perspective, populism is the political instrument of the excluded to make their demands heard and to push themselves back into the arena from which they feel excluded. In any case, the feeling to be denied the recognition one deserves plausibly results in populist sentiment.

Up to this point, we were careful to stress the experiential dimension of lacking recognition. Social rejection is a subjective process in which similar objective circumstances increase the probability of feeling excluded but not in a deterministic way. Even more important to the conceptualization of societal recognition is that feelings of lacking societal recognition can have multiple, almost infinite number of sources. It can result from acts of formal exclusion such as apartheid regimes but also from subtler discriminatory acts. Some citizens may react to economic exclusion, others may perceive neglect by elites for their sexual, regional or religious identities whereas for some citizens rejection in terms of their values and attitudes might underlie their feelings of lacking recognition. While no exhaustive list (see also Honneth and Anderson 1995), we can thus understand societal recognition as a multidimensional concept with cultural, economic, or regional aspects as constituent components.

From that perspective, societal recognition may account for why populism appeals to different social segments, thereby synthesizing different prominent strands of research on populism. Among the socio-economically disadvantaged, a lack of perceived societal recognition may emerge from a widespread perception that society does not care about their financial struggles. Apart from financial strain, there is another, perhaps more consequential, feeling of lacking recognition that may nurture populist sentiment among production and service workers. As stressed by Sandel (2021, p. 198), those working in jobs that require lower levels of formal

education have gained the impression that their work is “less worthy of social recognition and esteem”, and this has made them susceptible to populist mobilization (cf. Spruyt 2014). In the “cultural backlash” argument of Norris and Inglehart (2019), the rise of (authoritarian) populism reflects a counter-reaction of those with socio-culturally conservative values to a societal shift in dominant value orientations. For these authors, socio-cultural conservatives are “likely to feel that they have become estranged from the silent revolution in social and moral values, left behind by cultural tides that they deeply reject” (Norris and Inglehart 2019, p. 15). In essence, this is also an argument about perceived societal recognition, albeit of a cultural variety. Finally, the tendency of individuals in rural and declining “left-behind” regions to vote for populists (Broz et al. 2021) may reflect a sense that these places’ needs are insufficiently recognized and respected, fueling a rural variety of populist resentment (Cramer 2016; Harteveld et al. 2021). More broadly, the seemingly contradictory findings in populism research we have cited above can be resolved once we acknowledge that different segments of society feel for different reasons to be denied the recognition they deserve.

Because the need for recognition is deeply ingrained in the human psyche, we argue that the perception of lacking recognition elicits consequences already when individuals feel excluded on one central dimension of social life while enjoying high satisfaction in other domains. This proposition helps to explain why, for instance, in the United States otherwise privileged white citizens in secure economic positions exhibit strong adverse reactions once they feel rejected by society for one recognition-related facet such as their cultural way of life (Mutz 2018). In other words, societal recognition can be understood as a multidimensional concept where lacking recognition on one constituent dimension on its own is sufficient to elicit psychological and political consequences.

Based on this discussion of how distinct feelings of lacking recognition may be present in distinct social groups and how these distinct feelings of lacking recognition may in turn trigger

populist sentiment, Figure 1 visualizes the specific model that we aimed to test in this study. We focused on a set of four prototypical groups who we expected—based on the literature and reasoning discussed above—to (primarily) feel being denied recognition in one specific way: Low-income individuals, low-skilled workers, rural people, and socio-cultural conservatives. Figure 1 associates one distinct feeling of lacking societal recognition with each of these social groups, and expects each of these four distinct feelings in turn to contribute to populist attitudes.

Figure 1: The multiple roots of populist attitudes in perceptions of lacking recognition

Note: Theoretical model tested in this study, with hypotheses highlighted.

Next, we formulate (a) a set of hypotheses on the link between social group membership and distinct feelings of lacking recognition, (b) an exploratory research question on the interrelation between feelings of lacking societal recognition, and (c) a set of hypotheses on the link between feelings of lacking recognition and populist attitudes. Beginning with the first, we expected that:

H1a: Citizens with low incomes are more inclined to perceive a lack of recognition of their economic needs (than citizens with higher incomes).

H1b: Citizens working in jobs that require little formal skills are more inclined to perceive a lack of recognition for the work they do (than citizens working in jobs that require higher skill levels).

H1c: Citizens living in rural places are more inclined to perceive a lack of recognition of their needs for basic services (than citizens living in urban places).

H1d: Citizens with socio-culturally conservative attitudes are more inclined to perceive a lack of recognition of their opinions (than citizens with moderate or progressive attitudes).³

By testing these hypotheses, we aimed to demonstrate that different feelings of lacking societal recognition can be rooted in distinct social characteristics. Our goal was not to deliver an exhaustive explanation of perceived lack of recognition. For this reason, we focused on social groups that we expected to primarily perceive a lack of recognition on just *one* facet, rather than studying social markers that are likely to be connected to *several* facets of lacking recognition at once.⁴ Furthermore, we did anticipate that there might be some overlap between these social groups. For example, some people might work in low-skilled jobs, receive low incomes, hold conservative views, and live in declining rural regions. In fact, some of these conditions are connected through various mechanisms. Yet, our argument rests on the assumption that this

---

³ We note that the “socio-culturally conservatives” differ qualitatively from the other three groups: While the former are about objective socio-structural markers, conservatives are defined by their attitudes. This also means that reverse causality issues—which are almost impossible to rule out with cross-sectional observational data—are unlikely to be a major issue regarding the socio-structural groups but could be an issue regarding conservatives. While it is conceivable that a perceived lack of recognition causes conservative attitudes, H1d follows the cultural backlash argument of Norris and Inglehart (2019), and others, in implying that conservative attitudes cause the feeling of being left behind. In any case, we acknowledge the limitations regarding a causal interpretation of our findings—to which we will return in the discussion of our findings. We also note that, from a principle perspective, low perceived recognition of one’s opinion could be about holding extreme attitudes that diverge from the societal mainstream in whatever direction. Again, following the pertinent literature, H1d assumes that this is true only for extreme conservatives, not for extreme progressives.

⁴ For example, low formal education has often been associated with both feeling “left behind” and support for populism. However, we reason that low education is connected to several of the social conditions in which we expect feelings of lacking recognition to be rooted. Thus, the low-educated are likely to perceive a lack of recognition across several domains (cf. Bollwerk et al. 2021, p. 9). This may be part of the reason for strong educational divides in populist support (Spruyt et al. 2016). Yet, because of this, education is also not the most suitable characteristic for testing our argument of multiple roots (and will be studied in the appendix only, as discussed below).

overlap is far from perfect. To illustrate, socio-cultural conservatives in well-paid, high-status occupations in vibrant cities may feel being denied recognition on the cultural dimension but not in any other way. Further below we describe the empirical tests we conducted to test the validity of these considerations.

Next, we are interested in the interrelation between the different facets of lacking societal recognition. Our argument of multiple roots implies that the different facets of feeling a lack of recognition can arise independently from each other. Thus, in principle, individuals can feel marginalized in one dimension without feeling denied recognition in other domains. While we therefore generally expected low correlations between facets of recognition, some individuals may be subject to multiple simultaneous forces that instill feelings of lacking recognition on more than one dimension. Moreover, it is conceivable that feeling neglected in one way may trigger a general feeling of lacking recognition that spills-over into other domains. In line with this reasoning, factor analyses of items on perceived lack of recognition in Bollwerk et al. (2021) support a structure with three domain-specific (economy, culture, politics) factors and one superordinate factor. This lends credence to the assumption—implicit to our argument—that there are distinct (albeit correlated) facets of perceived lack of recognition. To re-assess this assumption in the context of our study we formulated the following exploratory research question: *How strong is the association between different facets of lacking societal recognition?*

Lastly, we argued above that feelings of lacking societal recognition may trigger populist sentiment. We expected this to hold for each of the four distinct feelings of lacking societal recognition we studied:

H2a: Citizens who perceive a lack of recognition of their economic needs are more likely to hold populist attitudes.

H2b: Citizens who perceive a lack of recognition for the work they do are more likely to hold populist attitudes.

H2c: Citizens who perceive a lack of recognition of their needs for basic services are more likely to hold populist attitudes.

H2d: Citizens who perceive a lack of recognition of their opinions are more likely to hold populist attitudes.

Per H2a to H2d, we expected an association of each of the four facets of recognition with populist attitudes. More tentatively, our theoretical arguments also imply a specific functional form of these interrelations as we anticipated these to operate not just additively in affecting populist attitudes. Rather, when thinking about lack of recognition as a composite concept, the deep roots of lacking recognition in the human psyche imply a logic of sufficient condition where deficiencies on one of these facets may already elicit psychological consequences. For example, the sense that one's opinion is not recognized may already trigger populist sentiment, even for an individual who feels recognized with regard to other facets. And while these elaborations imply the presence of sufficient conditions, it is also plausible that lacking recognition on multiple facets may have even somewhat stronger effects, suggesting a concept structure of sufficient conditions with weak substitutability. We thus expected:

H3: The contribution of individual facets of lacking societal recognition to populist attitudes is best captured by a logic of sufficient conditions with weak substitutability.⁵

---

⁵ This idea is still congruent with the assumed distinctiveness of the different facets because we assume independence with respect to the *underlying causes* whereas the joint presence may have consequences beyond an additive effect for the *outcomes* of perceiving a lack of societal recognition.

3. Data

We used data from the 2021 pre-election cross-sectional survey of the GLES (2021). This survey contains a novel four-item battery on perceptions of lacking societal recognition⁶—included in the GLES for the first time in 2021—that allowed us to test our hypotheses in the context of the 2021 German federal election. We think of Germany as a potentially representative case. It fulfills possible scope conditions of our argument, but not in any extreme way. For example, with the AfD there is a relevant right-wing populist party in Germany, which engages in populist mobilization of those who feel “left behind”—but it is not exceptionally strong compared to other Western democracies and it is also relatively young. Socio-economic inequalities, at the individual and regional level, have widened in Germany, but are not extreme in international comparison. While these are grounds to expect our results to travel to other country contexts, this is ultimately a question for future research to address.⁷

Next, we discuss the operationalization of the key constructs. In Table A1 of the appendix, we list all our operationalizations, including question wordings and precise coding information for all variables.

Perceived lack of societal recognition was measured with four indicators, based on five-point Likert scales, each of which tap into a constituent component (facet) of recognition: *Lacking recognition of one’s economic needs* (“The economic situation of people like me receives too little attention from society.”), *lacking recognition of one’s work* (“People like me receive too

---

⁶ This battery builds on the recently proposed “Perceived Societal Marginalization” scale (Bollwerk et al. 2021) from which some of the items have been drawn. In line with our focus on perceived lack of recognition, the scale intends to measure “people’s subjective perceptions of the insignificance and lack of recognition of their own social groups in the domains of economy, culture, and politics” (Bollwerk et al. 2021, p. 1).

⁷ Another notable feature of the German federal election in 2021 was the focus of the SPD’s campaign on “respect”, a term that is closely related to our key construct of societal recognition. Interestingly, this master narrative seems to have been inspired by some of the academic work we have also built our argument on, particularly the monograph by Michael Sandel (2020): Olaf Scholz has repeatedly referred to Sandel’s work in public (e.g. <https://twitter.com/olafscholz/status/1319542555860750336>) and the SPD “Debattencamp” in December 2020 featured a debate between Scholz and Sandel (see <https://debattencamp.spd.de/>). Like Sandel’s work, the SPD campaign has put an emphasis on work-related recognition (or “respect”).

little recognition from society for the work they do.”), *lacking recognition of one’s needs for services* (“Society pays too little attention to ensuring that people like me have access to basic infrastructures and services (e.g., post office, doctors, banks, public transportation, schools, Internet).”) and *lacking recognition of one’s opinion* (“People like me are no longer allowed to freely express their opinions in public.”). We coded these items to a 0 to 1 scale where higher values indicate a perceived lack of recognition (i.e., agreement with the statements).

Following our reasoning that the indicators tap into distinct, not necessarily strongly correlated components of perceived recognition that have distinct roots and individual effects, we analyzed these subcomponents mostly separately. In addition, we explored the role of recognition as a composite concept. To do so, we aggregated the concept’s facets (f) in a way that preserves the concept’s assumed internal structure of sufficient conditions with weak substitutability:

$$\text{Lack of recognition index} = (f_1^2 + f_2^2 + f + f_4^2)/4.^8$$

This operationalization ensures high values on the aggregated target concept already when only one of its facets is high (sufficient conditions). However, unlike the maximum, this formula considers the values of more than one subdimension in computing the aggregate score to capture the idea that lacking recognition on multiple subdimensions can at least partially reinforce or offset each other (weak substitutability).

The four prototypical social groups were operationalized as follows:

1. *Low-income individuals* are defined as those with an equivalized household income in the lowest quintile.
2. *Low-skilled workers* encompass those whose (current or former) occupation is either “unskilled and semiskilled worker” or “employee with simple duties”.

---

⁸ We divided the resulting score by four such that it varies between 0 and 1.

3. *Rural people* include individuals living in “rural villages” or “single homesteads”.
4. *Socio-cultural conservatives* are defined based on a combined factor score from five socio-cultural political issues (immigration, assimilation of immigrants, European integration, gender equality, climate change) as the quintile with the most conservative attitudes.

We measured populist attitudes using the established scale by Akkerman et al. (2014). To compute an aggregate score of populist attitudes, we multiplied the concept’s subdimensions to account for the necessary conditions of the concept (Wuttke et al. 2020).

4. Analysis plan

Our pre-registered analysis consists of three parts. First, we studied bivariate associations between our key constructs, i.e., perceived lack of recognition and populist attitudes. Second, we analyzed how perceptions of lacking recognition vary across social groups. Third, we estimated regressions with populist attitudes as the outcome variable.

To assess our exploratory research question on the association between different facets of perceived lack of recognition, we show a correlation matrix of the four facets of societal recognition along with the composite index of societal recognition and populist attitudes (Figure 2 below). The plot shows the degree to which the perception of lacking recognition on one facet of recognition is associated with the feeling of lacking recognition on another facet. Our argument that there are distinct facets of perceiving lacking recognition implies that these correlations are less than close to perfect, yet we did not hold expectations regarding the exact

strength of the associations. In addition, the plot shows univariate distributions of all focal variables, giving the reader an overview of the data.⁹

As a straightforward test of H1a to H1d, we tested for differences in the particular facet of perceived lack of recognition between the prototypical group and the residual category—i.e., low income vs. higher income, low-skilled occupation vs. other occupation, rural vs. urban, and strongly socio-cultural conservative vs. moderate or progressive. We expected to obtain statistically significant differences between the prototypical groups and the residual category in line with H1a to H1d (as summarized in Table 1).

Table 1: Expected relationship between social groups and perceived recognition

Hypothesis	Prototypical group	(Most) Relevant facet of recognition
H1a	low income	economic needs
H1b	low-skilled workers	work recognition
H1c	rural residents	need for services
H1d	conservative	opinion recognition

In addition, we also checked which lack of perceived recognition is most affected by which social marker. We expected the difference for each facet of lacking recognition to be largest when comparing its “paired” (see Table 1) prototypical group with the respective residual category. For example, we expected that the difference in perceived lack of recognition of one’s economic needs is larger when comparing the low-income group to other income groups than when comparing socio-cultural conservatives to moderates/progressives. Conversely,

---

⁹ In the appendix, we report the results of an exploratory factor analysis with the four lack of recognition items (see Table B1 in the appendix). Additionally, we replicated the correlation plot to assess whether the (potential) correlation between facets of lacking recognition is the result of respondents belonging to multiple focal groups by including only respondents that are part of a single focal group or no group at all (see Figure C2 in the appendix).

perceptions of lacking recognition of one's opinion should differ most between (strong) socio-cultural conservatives and moderates/progressives as compared to low vs. higher income, low-skilled vs. other occupation, and rural vs. urban.¹⁰ Note that this test goes beyond what is directly stated in H1a to H1d. We thereby aimed to assess the implication that distinct feelings of lacking recognition have distinct social roots from a different angle.

We utilized a dumbbell plot to assess these expectations (see Figure 3 below).¹¹ For each panel, i.e., facet of lack of recognition, we list whether we expected the difference (Δ) between the means to be relatively large, medium (see footnote 10) or small. In addition to the visualization, we conducted t-tests to assess whether the means within groups are different from one another (e.g., comparing recognition for work between low-income respondents and all other respondents). We employed a p-value threshold of 0.05. The results are displayed in the appendix (Table D1).¹² To address the potential issue of multiple group membership blurring these associations, we also (a) determined the percentage of people that are members of at least two of the social groups chosen here (see appendix C) and (b) replicated the t-tests for the

---

¹⁰ We anticipated the expected pattern to come out less clear when comparing differences in work-related and economic recognition between low vs. higher income and low-skilled vs. other occupations due to conceptual and empirical overlaps. Those who are paid poorly also have reason to feel a lack of recognition for the work they do, and those in low-skilled occupations will often have low incomes that may lead to a perceived lack of recognition of their economic needs.

¹¹ In the pre-analysis plan, we indicated adding 95% confidence intervals around the means. However, the confidence intervals turned out to be smaller than expected, reducing the readability of the graph. We thus decided not to include them for the final analysis.

¹² In additional analyses in the appendix, we, first, reproduced Figure 3 using more lenient cut-off points for the focal groups (see Figure D2). Second, we reproduced Figure 3 for three further social background characteristics that may also be associated with a perceived lack of recognition *in general*: Low formal education, immigration background, and living in the Eastern part of Germany (cf. Schneickert et al. 2019). As discussed above for education, we anticipated these background characteristics to be not as clearly linked to just one particular facet of lacking recognition. We thus anticipated these to not serve as well to support our argument. We therefore refrained from formulating expectations and relegated these exploratory analyses to the appendix (see Figure D3).

differences for respondents who are not members of any of the other three focal groups (see Table D2 in the appendix).¹³

Figure 2, the scatterplot matrix, already gives insights into the bivariate relationship between each facet of lacking recognition and populist attitudes. To provide further evidence on H2a to H2d, we conducted multivariate linear regressions with populist attitudes as the outcome variable. We run four main models. The results are reported in coefficient plots along with the models' R^2 's in the main text (Figure 4) and in regression tables in the appendix (Table E1). All regression models include basic socio-demographic control variables (education, age, gender, East-West dummy differentiating respondents according to their place of residence).

The first model includes all four lack-of-recognition measures to test whether each facet of recognition has unique predictive power when the other facets are controlled for. Generally, we expected that all facets uniquely predict populist attitudes—i.e., we expected statistically significant coefficients for each recognition variable. Yet, it is conceivable that selected facets of recognition share substantial overlap—particularly the occupation and income facet—which may limit the unique predictive power of individual facets. Formally, we tested whether the coefficients are statistically different from zero with $p < 0.05$.

In the second model, we included the composite score of lacking recognition. We thereby assessed whether the composite score—that incorporates our logic that a lack of recognition on one facet is sufficient to give rise to an overall feeling of lacking recognition—has similar explanatory power as a model where all four facets of recognition are included separately. To

---

¹³ As another way to address overlapping group membership, we regressed each of the four facets of lacking recognition on the four social group dummies simultaneously. The results are displayed in the appendix (see Figure D1 and Table D3), and we made comparisons of regression coefficients analogous to the expectations listed above. We anticipated that in case of substantial overlap, a multivariate model may better disentangle the unique effect of each group membership on one particular facet of lacking recognition, making the expected difference emerge more clearly. For example, if there are more low-income individuals among socio-cultural conservatives than among moderates/progressives, perceived lack of recognition of economic needs might be more widespread among conservatives (in the bivariate display of Figure 3) even if conservatism per se is unrelated to perceived recognition of economic needs.

assess this, we compared the R^2 's of models 1 and 2. In addition, we compared the R^2 of model 2 to a model with a simple mean index of lack of recognition, and also to a model with a score derived from a principal component factor analysis (see Table B1).¹⁴ Following H3, we expected that model 2 with our “sufficient condition” composite score leads to a better fit than a model with the mean index that assumes the facets of lacking recognition to operate purely additively.

Via models 3 and 4, we aim to approach the complex relationship between positions in society as reflected in the four prototypical groups, perceived recognition, and populist attitudes. To do so, the third model includes the four social group variables (and none of the lack-of-recognition variables) to assess whether social group memberships predict populist attitudes (with multiple memberships being taken into account). The fourth model includes both the four recognition variables and the four variables on social group membership. We expected to obtain statistically significant associations between lacking recognition and populist attitudes even when the social background variables are controlled for. We also compared the R^2 's of models 3 and 4 to assess how adding perceived recognition improves our ability to account for populist attitudes.

We used the post-stratification weight provided by the GLES that adjusts key socio-demographics to the German microcensus for our analyses (figures, t-Tests, and regressions).

5. Results

Figure 2 already conveys much of the information needed to explore feelings of lacking recognition and its implications for populist attitudes. Specifically, it reports the prevalence and correlative patterns of societal recognition's various facets among German citizens at the eve of the 2021 federal elections.

---

¹⁴ The additional comparison with the factor score was not included in the pre-analysis plan.

Figure 2: Distribution and correlations of feelings of lacking recognition and populist attitudes

We first inspect the univariate distribution of the separate indicators which are depicted in the plot's diagonal. They show that the facets of lacking recognition are distributed rather unequally. Feelings of lacking economic recognition are almost normally distributed. But only a minority of respondents feel their access to basic services denied or feel their opinion suppressed in public discourse. This already indicates that the facets of lacking recognition are not identical but tap into something distinct. The facets' uniqueness is further underscored when looking at the correlation structure between the subdimensions.

As expected, citizens who feel no respect from society for their work are particularly likely to also perceive a lack of recognition of their economic situation ($r=0.64$). On the other hand, feeling excluded for one's political opinions only weakly correlates with other facets of recognition. Several correlation coefficients hover around 0.4. Altogether, the correlation

patterns confirm our expectation that the facets of recognition are connected to each other but still reflect distinct experiences of a person's perceived relationship with society.

We argued that certain positions in society—such as low-skilled workers or residents of rural areas—correlate with certain facets of lacking recognition (H1a-H1d). Figure 3 confirms the expectation and shows that membership in these prototypical social groups predicts feelings of lacking recognition in a systematic way. In all cases, we observe the anticipated group differences (see Table D1 in the appendix): Compared to the rest of the population, citizens with low incomes report higher levels of lacking recognition of their economic situation, low-skilled workers report higher levels of lacking recognition for the work they do, residents in rural areas report higher levels of society lacking recognition of their needs for services, and socio-cultural conservatives report higher levels of lacking recognition of their opinions.

These findings are consistent with H1a to H1d, but we also observe unexpected patterns. Two unexpected peculiarities stand out. We expected that one's area of residence would make the biggest difference in whether someone feels denied access to basic infrastructure and services, but other socio-demographic characteristics are much more predictive for this facet of recognition. Moreover, socio-cultural conservatism stands out because this characteristic strongly correlates with all facets of lacking recognition and not only recognition of one's opinion.

Figure 3: Differences in perceived lack of recognition across facets and social groups

Note: Dots are weighted means.

To rule out that the findings reported in Figure 3 are blurred by respondents belonging to multiple social groups, such as low-skilled and low-income, we conducted a series of additional analyses (pre-registered). In appendix C, we show that only very few respondents meet the criteria for categorization in three or all four groups. The vast majority of citizens belong to no or only one social group that we considered predictive for the feeling of lacking recognition. Multivariate regression analysis (see Figure D1 and Table D3 in the appendix) on the recognition variables with all social groups as predictors underscore the explanatory power of cultural conservatism for lacking recognition along with income. In contrast, occupation and region of residence play a minor role.

Thus far, our findings reveal that all social positions go along with recognition in the predicted direction. But some social positions have surprisingly wide-ranging ramifications. They play a role for multiple facets of lacking recognition. For example, holding conservative views not only correlates with higher levels of lack of recognition of one's opinion, but also predicts the other three facets. Because of this, the observed results in Figure 3 often do not match our expectations regarding which social marker predicts gradients in a particular facet of lacking recognition (see the Δ s). However, we can ask instead for each social group where it makes the largest difference. For example: In Figure 3, the difference between conservatives and others is relatively large for all four facets, but it is largest for opinion recognition. In these comparisons, the anticipated pairing of social groups with particular facets of lacking recognition tend to emerge, particularly in the regression results (Figure D1 and Table D3 in the appendix). Here, we find that conservatism exhibits its largest effect on opinion recognition, that low income displays its largest effect on economic recognition, and that rural reveals its largest effect on recognition of the need for services. Thus, while low income and conservatism drive lack of recognition in more general ways than we anticipated, we also obtain support for the idea of multiple roots—in that being a member in one of the prototypical groups is especially connected to one particular facet of lacking recognition.

Altogether, the picture that emerges from the empirical data up to this point largely conforms with our theoretical arguments on societal recognition as a multidimensional concept with interrelated but distinct facets. Whether and how strongly citizens feel left behind on one of these facets has traceable roots in a person's position in society, and membership in the four prototypical groups affects lack of recognition in the respective domains as hypothesized. However, this relationship is not mechanistic and not as clearly structured as anticipated. In particular, socio-cultural conservatism and low income play an unexpectedly significant role in shaping feelings of lacking recognition in its various forms.

Does a feeling of lacking societal recognition give rise to populist attitudes? Figure 1 already gave first hints at the answer, showing modest positive correlations between populist attitudes and all four facets of recognition. The correlation is slightly stronger for recognition of one's opinions than for the other three facets. For the composite score that combines all facets into one aggregate index we observe the strongest correlation ($r=0.49$) with populist attitudes, suggesting that feeling deprived of recognition on any one facet is most predictive for whether a citizen endorses populist ideas.

To assess whether each facet of recognition has unique predictive power when the other facets are controlled for, Figure 4 shows the results of multivariate analyses. In line with H2a to H2d, we find that each facet of recognition has a role to play in explaining variance in populist attitudes. Even when mutually controlled for, each facet of perceived lack of recognition is associated with populist attitudes in a statistically and substantively significant way. These results further support our argument of populist sentiment being rooted in multiple feelings of lacking recognition.

Yet, it is worth noting that the explanatory power is much stronger for recognition of one's opinion and economic situation, and weaker for recognition of one's work and need for basic services. In combination, the four facets of recognition account for about a fourth of the variation in populist attitudes (R^2 is 0.24 in a model without any control variables, see Table E1 in the appendix), indicating that this one concept alone would often reliably predict whether someone supports populist ideas or not.

Figure 4: Coefficient plots for linear regression models with populist attitudes as dependent variable

Note: Shown are point estimates of coefficients with 95% confidence intervals. LoR=lack of recognition. All models additionally include controls for gender, age groups, East-West residence and low education and employ a post-stratification weight adjusting the sample to the microcensus.

Having established the relevance of recognition for populist attitudes, we engage with the questions of how to best capture the multidimensional concept of lacking recognition as a composite score. When we use the composite score based on the aggregation rule of sufficient conditions with weak substitutability (model 2, Figure 4), the explained variance is identical with the model that includes all facets separately (R^2 is 0.26 in both models with control variables included). Remarkably, but as anticipated, using this parsimonious representation of lacking recognition does not come with a loss in explanatory power. This is different when

using a simple mean index instead ($R^2=0.24$).¹⁵ As anticipated, model 2 with the “sufficient condition” composite score fits better than a model with an index that assumes the facets of lacking recognition to operate just additively. These results support H3, according to which the contribution of individual facets of lacking societal recognition to populist attitudes is best captured by a logic of sufficient conditions with weak substitutability.

In a final set of analyses (models 3 and 4), we approach the complex relationship between positions in society, perceived recognition, and populist attitudes. In model 3, when recognition is not included in the analysis, we find that membership in three of the four prototypical social groups is statistically associated with more populist attitudes, with those in low-skilled occupations being the exception. Cultural conservatives stand out yet again for their comparably large association with the outcome variable. Adding the four lack of recognition items to this specification (in model 4) increases the model fit—indicating how feelings of lacking recognition improves upon our ability to account for populist attitudes. Moreover, the coefficients on the four group variables all become smaller, with only conservatives being significantly more inclined to hold populist attitudes once we condition on lack of recognition. While these analyses on cross-sectional data cannot reliably trace complex causal mechanisms, the results may be interpreted as indicative evidence that low-income individuals, socio-cultural conservatives, and rural people tend to score higher in populist attitudes due to specific feelings of lacking recognition, in line with the theoretical model depicted in Figure 1.

6. Discussion and conclusion

Our pre-registered study confirmed the overarching idea of populism having multiple roots in feelings of lacking societal recognition. Distinct feelings of lacking societal recognition each

---

¹⁵ A factor score, built from a principal component factor analysis (see Table B1 in the appendix), fares even worse ($R^2=0.23$, see Table E1 in the appendix).

contribute to populist attitudes. This relationship seems to follow a logic of sufficient conditions, whereby a perceived lack of recognition in one domain suffices to trigger populist sentiment. Distinct feelings of lacking societal recognition are, in turn, systematically rooted in distinct social characteristics.

However, a few findings were surprising. Some social characteristics (low income and especially conservatism) and some facets of recognition (opinion, economic) had a disproportionately large influence on populism relative to our expectations. Hence, populism has multiple roots in distinct feelings of lacking recognition that vary in prevalence across social segments, yet some of these roots seem more important than others. However, the deviations from some of our expectations do not change our main conclusions.

Our findings point to the explanatory power of societal recognition which, despite established bodies of literature across scientific disciplines, has not received systematic attention in political science. The concept has proven useful to reconceptualize the vague term of “feeling left behind” and to unite previously disparate perspectives on the drivers of populism. More generally, the feeling of lacking societal recognition as a concept that is seemingly remote from the political domain but deeply ingrained in the human psyche, can serve as a theoretical bridge to connect macro-level socio-economic transformations with individual-level reactions. Based on our work, we see a vast avenue for future research to engage our theoretical framework and address some of the limitations of our article.

First, further work should define the conditions under which feelings of lacking recognition give rise to populist attitudes. Populist ideas are fundamentally about politics. It is an attitude about how society is and should be organized. For perceptions of recognition, which may feel very personal and remote from contemporary political debates, these feelings of lacking recognition must become politicized. In other words, citizens must establish a mental connection between the feelings of recognition and populist attitudes. Elite communication is

likely key to this process (Zaller 1992). In order for the envisaged association to materialize on the level of ordinary citizens, politicians need to offer citizens a frame of interpretation of how elites are responsible for the lack of recognition that individuals perceive. For example, we suspect politicization is one reason why recognition of one's opinion stood out in our study with higher explanatory power whereas economic and regional aspects were less important. Here, the context of our study may play a role as the alleged marginalization of culturally conservative opinions features prominently in current political debate in Germany, particularly among right-wing populist politicians. By contrast, contemporary political discourse in Germany rarely links populist tropes and socio-economic conditions.

Second, and related to the first point, future research should study populism's roots in feelings of lacking societal recognition in other countries to better understand the role of the context and elite communication. Such research may well uncover that the roots vary in importance across space and time. That being said, the prominence of the linkage between cultural conservatism and perceived lack of recognition of one's opinion, which we found in our study, features prominently in many other developed democracies, where the right-wing variety of populism that is tied to cultural issues dominates over left-wing varieties of populism that ties populism to economic issues (e.g., Norris and Inglehart 2019).

Third, some of our results might also be sensitive to how we operationalized key constructs. This could be an issue with regard to the two prototypical groups for which we found weaker connections to perceived lack of recognition, i.e., low-skilled workers and those living in rural places. In the first case, we lacked detailed occupational information¹⁶ that would have allowed us to work with modern class schemes (e.g., Oesch 2006). Alternative measures could help identify individuals who feel their work is not valued by society. In the second case, we

---

¹⁶ This information was not yet available in the first releases of the GLES survey data we had to work with for this study.

deliberately decided to focus on rural location as such—but it is conceivable that feeling a lack of recognition for one's needs for basic services results from rural deprivation, i.e., the combination of rurality and poor socio-economic conditions at the local level. Moreover, and as indicated above, there may be other important facets of perceived lack of recognition that our non-exhaustive operationalization of this complex multidimensional construct failed to tap into.

Fourth, in our article we focused on populist attitudes rather than voting. Thus, the question remains how lacking societal recognition ultimately maps onto vote choice through the support of populist attitudes. In the German case we studied, populist attitudes are strongly associated with voting, especially for the AfD (Jungkunz et al. 2021; Loew and Faas 2019; Steiner and Landwehr 2018). Thus, a path running from perceived lack of recognition over populist attitudes to populist voting is plausible in the German case. Yet, other studies show weak or contingent connections between populist attitudes and voting for parties standing on populist platforms (Jungkunz et al. 2021; Quinlan and Tinney 2019). At the same time, the societal groups we linked to lack of perceived recognition often disproportionately support populist parties—albeit this strongly varies across contexts as well (Rooduijn 2018). Our research thus indicates new pathways that may link both socio-demographic profiles and populist attitudes to vote choice through a more complex path, which may help explaining the varying outcomes in studies explaining the electoral support for populist parties.

Finally, our study remains limited in terms of causality. We were careful not to interpret the empirical evidence in a causal way because the available cross-sectional data does not permit strong inferences on the causal relationship between the variables of interest. In ex-post analyses, shown in Table F1 of the appendix we computed the robustness value to assess how sensitive the reported associations between populist attitudes and lacking recognition are to potentially omitted confounders (Cinelli and Hazlett 2020). Based on the multivariate

regression model on populist attitudes with the recognition index and several covariates as independent variables, we estimate a robustness value of 0.41. This means that unobserved confounders would need to explain at least 41% of the residual variance of both of the treatment and the outcome to bring the estimated association between populism and recognition to 0. Another angle at omitted confounders is the partial R^2 between populist attitudes and the recognition index which is 0.22. This means that an extreme confounder which explains 100% of the residual variance of populist attitudes, would need to explain at least 22% of the residual variance of the recognition index to fully account for the observed estimated effect. So how realistic is it practically that unobserved confounders overshadow the observed associations? For instance, if we had overlooked an unobserved confounder as strong as education (which is observed), this confounder would only attenuate the estimated association between recognition and populism from 0.49 to 0.47. In other words, lacking recognition likely has some role to play in explaining populist attitudes and only very strong unobserved confounders could completely wash out the observed correlation.

In sum, it has often been suggested that populism appeals to those who feel “left behind” by the development of society. Yet, a theoretical framework centered on the insight that individuals can feel “left behind” in different ways and for different reasons has been lacking. Drawing on the established and inherently multi-faceted construct of societal recognition, we aimed to contribute to the development of such a framework. The results of our pre-registered study indicate that this framework holds considerable potential to better understand how populism can unite heterogeneous segments of the population. In the context of the 2021 German federal election, we found distinct feelings of lacking recognition to dominate in different social segments, and that each of these distinct feelings of lacking recognition in turn contribute to populist sentiment. Given its promise to better understand how populism may unite seemingly unrelated groups to form powerful electoral and societal coalitions, we strongly encourage other

researchers to apply this framework to explore contextual dependencies and other features we did not focus on in our study.

Acknowledgements

We are grateful for the constructive comments we received from two anonymous reviewers and our three handling editors Marc Debus, Sigrid Roßteutscher and Anne Stroppe. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Conflict of interest

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

References

- Anderson, Cameron, John Angus D. Hildreth, and Laura Howland. 2015. Is the desire for status a fundamental human motive? A review of the empirical literature. *Psychological Bulletin* 141(3):574–601. <https://doi.org/10.1037/a0038781>.
- Arnade, Chris. 2019. *Dignity: seeking respect in back row America*. New York: Sentinel.
- Baumeister, Roy F., Lauren E. Brewer, Dianne M. Tice, and Jean M. Twenge. 2007. Thwarting the need to belong: Understanding the interpersonal and inner effects of social exclusion. *Social and Personality Psychology Compass* 1(1):506–520. <https://doi.org/10.1111/j.1751-9004.2007.00020.x>.
- Baumeister, Roy F., and Mark R. Leary. 1995. The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin* 117(3):497–529. <https://doi.org/10.1037/0033-2909.117.3.497>.
- Betz, Hans-Georg. 1993. The two faces of radical right-wing populism in Western Europe. *The Review of Politics* 55(4):663–686. <https://doi.org/10.1017/S0034670500018040>.
- Biden, Joseph. 2021. Remarks by President Biden in address to a joint session of Congress. Available at: <https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/04/29/remarks-by-president-biden-in-address-to-a-joint-session-of-congress/>. Accessed: 4 September 2021.
- Bollwerk, Michael, Bernd Schlipphak, and Mitja D. Back. 2021. Development and validation of the perceived societal marginalization scale. *European Journal of Psychological*

- Assessment*:1–13. <https://doi.org/10.1027/1015-5759/a000651>.
- Broz, J. Lawrence, Jeffery Frieden, and Stephen Weymouth. 2021. Populism in place: the economic geography of the globalization backlash. *International Organization* 75(2):464–494. <https://doi.org/10.1017/S0020818320000314>.
- Cinelli, Carlos, and Chad Hazlett. 2020. Making sense of sensitivity: extending omitted variable bias. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)* 82(1):39–67. <https://doi.org/10.1111/rssb.12348>.
- Colantone, Italo, and Piero Stanig. 2018. Global competition and Brexit. *American Political Science Review* 112(2):201–218. <https://doi.org/10.1017/S0003055417000685>.
- Cramer, Katherine J. 2016. *The politics of resentment: rural consciousness in Wisconsin and the rise of Scott Walker*. Chicago: University of Chicago Press.
- Damhuis, Koen. 2020. *Roads to the radical right: understanding different forms of electoral support for radical right-wing parties in France and the Netherlands*. Oxford: Oxford University Press.
- Doyle, David. 2011. The legitimacy of political institutions: explaining contemporary populism in Latin America. *Comparative Political Studies* 44(11):1447–1473. <https://doi.org/10.1177/0010414011407469>.
- Engler, Sarah, and David Weisstanner. 2021. The threat of social decline: income inequality and radical right support. *Journal of European Public Policy* 28(2):153–173. <https://doi.org/10.1080/13501763.2020.1733636>.
- Eribon, Didier. 2018. *Returning to Reims*. London: Allen Lane.
- Ford, Robert, and Matthew Goodwin. 2014. Understanding UKIP: identity, social change and the left behind. *The Political Quarterly* 85(3):277–284. <https://doi.org/10.1111/1467-923X.12099>.
- Fraser, Nancy, and Axel Honneth. 2003. *Umverteilung oder Anerkennung? Eine politisch-philosophische Kontroverse*. Frankfurt am Main: Suhrkamp.
- Fukuyama, Francis. 2018. *Identity: the demand for dignity and the politics of resentment*. New York: Farrar, Straus and Giroux.
- Gebauer, Jochen E., Constantine Sedikides, Jenny Wagner, Wiebke Bleidorn, Peter J. Rentfrow, Jeff Potter, and Samuel D. Gosling. 2015. Cultural norm fulfillment, interpersonal belonging, or getting ahead? A large-scale cross-cultural test of three perspectives on the function of self-esteem. *Journal of Personality and Social Psychology* 109(3):526–548. <https://doi.org/10.1037/pspp0000052>.
- Gest, Justin, Tyler Reny, and Jeremy Mayer. 2018. Roots of the radical right: nostalgic deprivation in the United States and Britain. *Comparative Political Studies* 51(13):1694–1719. <https://doi.org/10.1177/0010414017720705>.
- Gidron, Noam, and Peter A. Hall. 2017. The politics of social status: economic and cultural roots of the populist right. *The British Journal of Sociology* 68(S1):S57–S84. <https://doi.org/10.1111/1468-4446.12319>.
- Gidron, Noam, and Peter A. Hall. 2020. Populism as a problem of social integration. *Comparative Political Studies* 53(7):1027–1059. <https://doi.org/10.1177/0010414019879947>.
- GLÉS. 2022. GLÉS Cross-Section 2021, Pre-Election. GESIS, Cologne. ZA7700 data file version 2.0.0. Available at: <https://doi.org/10.4232/1.13860>.
- Goodwin, Matthew J., and Oliver Heath. 2016. The 2016 referendum, Brexit and the left behind: an aggregate-level analysis of the result. *The Political Quarterly* 87(3):323–332. <https://doi.org/10.1093/poq/87.3.323>.
- Green, Jane, and Rosalind Shorrock. 2021. The gender backlash in the vote for Brexit. *Political Behavior*. <https://doi.org/10.1007/s11109-021-09704-y>.
- Harteveld, Eelco, Wouter Van Der Brug, Sarah De Lange, and Tom Van Der Meer. 2021. Multiple roots of the populist radical right: support for the Dutch PVV in cities and the

- countryside. *European Journal of Political Research*. <https://doi.org/10.1111/1475-6765.12452>.
- Hilbert, Sven, Stephan Goerigk, Frank Padberg, Annekatrin Nadjiri, Aline Übleis, Andrea Jobst, Julia Dewald-Kaufmann, Peter Falkai, Markus Bühner, Felix Naumann, and Nina Sarubin. 2019. The role of self-esteem in depression: a longitudinal study. *Behavioural and Cognitive Psychotherapy* 47(2):244–250. <https://doi.org/10.1017/S1352465818000243>.
- Hobolt, Sara B. 2016. The Brexit vote: a divided nation, a divided continent. *Journal of European Public Policy* 23(9):1259–1277. <https://doi.org/10.1080/13501763.2016.1225785>.
- Honneth, Axel. 2021. *Recognition: a chapter in the history of European ideas*. Cambridge, UK: Cambridge University Press.
- Honneth, Axel, and Joel Anderson. 1995. *The struggle for recognition: the moral grammar of social conflicts*. Cambridge, UK: Polity Press.
- Ivarsflaten, Elisabeth. 2008. What unites right-wing populists in Western Europe? Re-examining grievance mobilization models in seven successful cases. *Comparative Political Studies* 41(1):3–23. <https://doi.org/10.1177/0010414006294168>.
- Jungkunz, Sebastian, Robert A. Fahey, and Airo Hino. 2021. How populist attitudes scales fail to capture support for populists in power. *PLOS ONE* 16(12):e0261658. <https://doi.org/10.1371/journal.pone.0261658>.
- Kaltwasser, Cristóbal Rovira, and Steven M. Van Hauwaert. 2020. The populist citizen: empirical evidence from Europe and Latin America. *European Political Science Review* 12(1):1–18. <https://doi.org/10/gjqkbbk>.
- Kitschelt, Herbert, and Anthony J. McGann. 1995. *The radical right in Western Europe: a comparative analysis*. Ann Arbor: University of Michigan Press.
- Kriesi, Hanspeter, Edgar Grande, Romain Lachat, Martin Dolezal, Simon Bornschier, and Timotheos Frey. 2006. Globalization and the transformation of the national political space: six European countries compared. *European Journal of Political Research* 45(6):921–956. <https://doi.org/10.1111/j.1475-6765.2006.00644.x>.
- Kriesi, Hanspeter, Edgar Grande, Romain Lachat, Martin Dolezal, Simon Bornschier, and Timotheos Frey (eds.). 2008. *West European politics in the age of globalization*. Cambridge, UK: Cambridge University Press.
- Kurer, Thomas. 2020. The declining middle: occupational change, social status, and the populist right. *Comparative Political Studies* 53(10–11):1798–1835. <https://doi.org/10.1177/0010414020912283>.
- Loew, Nicole, and Thorsten Faas. 2019. Between thin- and host-ideologies: how populist attitudes interact with policy preferences in shaping voting behaviour. *Representation* 55(4):493–511. DOI: <https://doi.org/10.1080/00344893.2019.1643772>.
- Manow, Philip. 2020. *(Ent-)Demokratisierung der Demokratie: ein Essay*. Berlin: Suhrkamp.
- March, Luke, and Charlotte Rommerskirchen. 2015. Out of left field? Explaining the variable electoral success of European radical left parties. *Party Politics* 21(1):40–53. <https://doi.org/10.1177/1354068812462929>.
- McBride, Cillian. 2013. *Recognition*. Cambridge, UK: Polity Press.
- Mudde, Cas. 2004. The populist zeitgeist. *Government and Opposition* 39(4):541–563. <https://doi.org/10.1111/j.1477-7053.2004.00135.x>.
- Mutz, Diana C. 2018. Status threat, not economic hardship, explains the 2016 presidential vote. *Proceedings of the National Academy of Sciences* 115(19):E4330–E4339. <https://doi.org/10.1073/pnas.1718155115>.
- Nachtwey, Oliver, Robert Schäfer, and Nadien Frei. 2020. *Politische Soziologie der Corona-Proteste*. Preprint. SocArXiv. Available at: <https://osf.io/zyp3f>. Accessed 7 July 2021.
- Norris, Pippa, and Ronald Inglehart. 2019. *Cultural backlash Trump, Brexit, and the rise of*

- authoritarian populism*. Cambridge, UK: Cambridge University Press.
- Oesch, Daniel. 2006. Coming to grips with a changing class structure: an analysis of employment stratification in Britain, Germany, Sweden and Switzerland. *International Sociology* 21(2):263–288. <https://doi.org/10.1177/0268580906061379>.
- Oesch, Daniel. 2008. Explaining workers' support for right-wing populist parties in Western Europe: evidence from Austria, Belgium, France, Norway, and Switzerland. *International Political Science Review* 29(3):349–373. <https://doi.org/10.1177/0192512107088390>.
- Oesch, Daniel, and Nathalie Vigna. 2021. A decline in the social status of the working class? Conflicting evidence for 8 Western countries, 1987–2017. *Comparative Political Studies*. <https://doi.org/10.1177/00104140211047400>.
- Quinlan, Stephen, and Deirdre Tinney. 2019. A populist wave or metamorphosis of a chameleon? Populist attitudes and the vote in 2016 in the United States and Ireland. *The Economic and Social Review* 50(2):281–324.
- Raihani, Nichola. 2021. *The social instinct: how cooperation shaped the world*. London: Jonathan Cape.
- Ratliff, Kate A., Liz Redford, John Conway, and Colin Tucker Smith. 2019. Engendering support: hostile sexism predicts voting for Donald Trump over Hillary Clinton in the 2016 US Presidential Election. *Group Processes & Intergroup Relations* 22(4):578–593. <https://doi.org/10.1177/1368430217741203>.
- Richards, Lindsay, Anthony Heath, and Noah Carl. 2021. Not just 'the left behind'? Exploring the effects of subjective social status on Brexit-related preferences. *Contemporary Social Science* 16(3):400–415. <https://doi.org/10.1080/21582041.2020.1847312>.
- Rooduijn, Matthijs. 2018. What unites the voter bases of populist parties? Comparing the electorates of 15 populist parties. *European Political Science Review* 10(3):351–368. <https://doi.org/10.1017/S1755773917000145>.
- Ryan, Richard M., and Wareen Brown. 2003. Why we don't need self-esteem: on fundamental needs, contingent love, and mindfulness. *Psychological Inquiry* 14(1):71–76.
- Ryan, Richard M., and Edward L. Deci. 2017. *Self-determination theory: basic psychological needs in motivation, development, and wellness*. New York: Guilford Press.
- Sandel, Michael J. 2021. *Tyranny of merit: what's become of the common good?* London: Allen Lane.
- Schneickert, Christian, Jan Delhey, and Leonie C. Steckermeier. 2019. Eine Krise der sozialen Anerkennung? Ergebnisse einer Bevölkerungsbefragung zu Alltagserfahrungen der Wert- und Geringschätzung in Deutschland. *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 71(4):593–622. <https://doi.org/10.1007/s11577-019-00640-8>.
- Spruyt, Bram. 2014. An asymmetric group relation? An investigation into public perceptions of education-based groups and the support for populism. *Acta Politica* 49(2):123–143. <https://doi.org/10.1057/ap.2013.9>.
- Spruyt, Bram, Gil Keppens, and Filip Van Droogenbroeck. 2016. Who supports populism and what attracts people to it? *Political Research Quarterly* 69(2):335–346. <https://doi.org/10.1177/1065912916639138>.
- Steiner, Nils D., and Claudia Landwehr. 2018. Populistische Demokratiekonzeptionen und die Wahl der AfD: Evidenz aus einer Panelstudie. *Politische Vierteljahresschrift* 59(3):463–491. <https://doi.org/10.1007/s11615-018-0083-y>.
- Swank, D. 2003. Globalization, the welfare state and right-wing populism in Western Europe. *Socio-Economic Review* 1(2):215–245. <https://doi.org/10.1093/soceco/1.2.215>.
- Taylor, Charles. 1995. The politics of recognition. In *Multiculturalism*, ed. Amy Gutmann,

- 25–74. Princeton University Press.
<https://www.degruyter.com/document/doi/10.1515/9781400821402-004/html>.
- Tomasello, Michael. 2019. *Becoming human: a theory of ontogeny*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Trump, Donald. 2017. 2017 Donald Trump inauguration speech transcript. Available at: <https://www.politico.com/story/2017/01/full-text-donald-trump-inauguration-speech-transcript-233907>. Accessed 18 July 2021.
- Vansteenkiste, Maarten, Richard M. Ryan, and Bart Soenens. 2020. Basic psychological need theory: advancements, critical themes, and future directions. *Motivation and Emotion* 44(1):1–31. <https://doi.org/10.1007/s11031-019-09818-1>.
- Wuttke, Alexander, Christian Schimpf, and Harald Schoen. 2020. When the whole is greater than the sum of its parts: on the conceptualization and measurement of populist attitudes and other multidimensional constructs. *American Political Science Review* 114(2):356–374. <https://doi.org/10.1017/s0003055419000807>.
- Young, Clifford, Katie Ziemer, and Chris Jackson. 2019. Explaining Trump’s popular support: validation of a nativism index. *Social Science Quarterly* 100(2):412–418. <https://doi.org/10.1111/ssqu.12593>.
- Zaller, John R. 1992. *The nature and origins of mass opinion*. Cambridge: Cambridge University Press.

Online Appendix

to

Left behind and united by populism?

Populism's multiple roots in feelings of lacking societal recognition

Appendix A: Operationalization	2
Table A1: Operationalizations	2
Appendix B: Exploratory factor analysis for perceived lack of recognition.....	6
Table B1: Exploratory factor analysis with the four lack of recognition items	6
Appendix C: Multiple group membership	7
Table C1: Overlap in group membership	7
Figure C2: Correlation plot of primary variables for respondents who are members of either no or only a single of the focal groups	8
Appendix D: Additional results for group differences in perceived lack of recognition	9
Table D1: T-test results for group differences in facets of lacking recognition.....	9
Table D2: T-test results for group differences in facets of lacking recognition, excluding respondents with multiple group memberships	10
Figure D1: Coefficient plots for regressing perceived lack of recognition on group memberships	11
Table D3: Regression table for facets of lacking recognition	12
Figure D2: Perceived lack of recognition in focal groups with more lenient cut-off points	13
Figure D3: Perceived lack of recognition in additional groups: low level of education, immigration background, Eastern (vs. Western) Germany	14
Appendix E: Regression tables for populist attitudes	15
Table E1: Regression table for populist attitudes	15
Appendix F: Sensitivity analyses for model 4 (figure 4)	16
Table F1: Sensitivity analysis.....	16

Appendix A: Operationalization

Table A1: Operationalizations

Constructs	Variable(s)	Coding/Measurement
<i>Populist attitudes</i>		
Populist attitudes (Akkerman et al. 2014)	q52a-f (A) “What people call compromise in politics is really just selling out on one’s principles.” (B) “The people, and not politicians, should make our most important policy decisions.” (C) “The politicians in the German Bundestag need to follow the will of the people.” (D) “Differences between the elite and the people are larger than the differences among the people.” (E) “I would rather be represented by a citizen than by a specialized politician.” (F) “Politicians talk too much and take too little action.”	Multi-dimensional concept with necessary conditions (weak substitutability): Multiplication of the concept’s subdimensions (see Wuttke et al. 2020); subdimensions: - Anti-Elitism: (F) and (D) - Popular Sovereignty: (B), (C) and (E) - Manichean Outlook: (A)
<i>Lacking societal recognition</i>		
Lacking recognition of economic needs	q47a “The economic situation of people like me receives too little attention from society.”	Recoded scale: 1: “strongly agree” 0.75: “agree” 0.5: “neither” 0.25: “disagree” 0: “strongly disagree”
Lacking recognition of work	q47b “People like me receive too little recognition from society for the work they do.”	Recoded scale: 1: “strongly agree” 0.75: “agree” 0.5: “neither” 0.25: “disagree” 0: “strongly disagree”
Lacking recognition of need for services	q47c “Society pays too little attention to ensuring that people like me have access to basic infrastructures and services (e.g., post office, doctors, banks, public transportation, schools, Internet).”	Recoded scale: 1: “strongly agree” 0.75: “agree” 0.5: “neither” 0.25: “disagree” 0: “strongly disagree”
Lacking recognition of opinion	q47d “People like me are no longer allowed to freely express their opinions in public.”	Recoded scale: 1: “strongly agree” 0.75: “agree” 0.5: “neither” 0.25: “disagree” 0: “strongly disagree”
Lacking societal recognition	Aggregation of facets (see above)	Multi-dimensional concept with sufficient conditions (weak substitutability); addition of exponentiated facets (division by 4 to scale from 0 to 1): $(f_1^2 + f_2^2 + f_3^2 + f_4^2)/4$
<i>Social groups (prototypical groups for main analysis)</i>		
Low-income individuals	d63 Household net income in categories:	Dummy:

	(1) less than 500 euros (2) 500 to less than 750 euros (3) 750 to under 1000 euros (4) 1000 to less than 1250 Euro (5) 1250 to less than 1500 Euro (6) 1500 to less than 2000 Euro (7) 2000 to less than 2500 Euro (8) 2500 to less than 3000 Euro (9) 3000 to less than 4000 Euro (10) 4000 to less than 5000 Euro (11) 5000 to less than 7500 Euro (12) 7500 to less than 10000 Euro (13) 10000 Euro or more	1: bottom quintile of equivalized household income 0: other quintile; steps: 1. Draw random number for household from uniform distribution including the respective bracket (e.g., 1250 to 1499) 2. Divide by relative household size according to OECD-modified scale scale (assigns a value of 1 to the household head, of 0.5 to each additional adult member and of 0.3 to each child, see: https://www.oecd.org/els/soc/OECD-Note-EquivalenceScales.pdf) to get at equivalized household income 3. Create dummy variable 1 -> lowest quintile 0 -> other quintile
Low-skilled workers	d11 (current profession); if missing: d12 (former profession) Worker (11) Unskilled and semiskilled worker (12) Skilled worker and crafter (13) Foreman, master, site foreman Employee (21) Foreman and head workman in employment (22) Employee with simple duties (e.g. salesperson, clerk, typist) (23) Employee under loose supervision carrying out complex tasks independently (e.g. senior clerical staff, Bookkeeper, draughtsman) (24) Employee carrying out responsible tasks independently or with limited responsibility for others (e.g. Researcher, manager, head of department) (25) Employee with wide managerial responsibilities and decision-making powers (e.g. head of organisation/ association, managing director, executive of large firm or organisation) Officials /judges / professional soldier (31) Lower grade of the civil service (up to and including "Oberamtsleiter") (32) Middle grade of the civil service (from "Assistant" to "Hauptsekretär/Amtsinspektor") (33) Upper grade of the civil service (from "Inspektor" to "Oberamtsmann/Oberamtsrat") (34) Higher grade of the civil service, judges ("Regierungsrat" and higher) Independent professional (e.g., doctor in private practice, lawyer) (41) Without employees (42) 1-9 employees (43) 10 employees and more Self-employed in trade or craft, industry, service sector, etc. (51) Without employees (52) 1-9 employees (53) 10 employees and more	Dummy: 1: 11, 22 -> Low-skilled workers 0: all other nonmissing codes -> other

	(61) Independent farmer (62) Family member assisting in family business (63) In vocational training	
Rural people	wum6 (1) Large city (2) Outskirts or suburbs of a large city (3) Medium or small town (4) Rural village (5) Single homestead or detached house in the countryside	Dummy: 1: 4, 5 -> rural 0: 1, 2, 3 -> other
Socio-cultural conservatives	from q27a-j: (A) Immigrants should be obliged to assimilate into the German culture. [0.70] (F) European unification should be pushed further. [0.61] (G) Governmental measures for gender equality in society already go too far. [0.62] q43: And what position do you take on immigration for foreigners? [0.81] q48: And what position do you take on the fight against climate change? [0.76]	Dummy: 1: Socio-cultural (strongly) conservative 0: other; steps: 1. Combine items via principal component factor analysis into one factor: items load on one factor with an eigenvalue of 2.49 and an explained variance of 0.50; see loadings in brackets behind the variables 2. Create dummy variable 1 -> most conservative quintile 0 -> other quintile
<i>Social groups (for appendix)</i>		
Low education	d7 (1) Finished school without school leaving certificate (2) Lowest formal qualification of Germany's tripartite secondary school system, after 8 or 9 years of schooling ("Hauptschulabschluss", "Volksschulabschluss") (3) Intermediary secondary qualification, after 10 years of schooling ("Mittlere Reife", "Realschulabschluss" resp. "Polytechnische Oberschule mit Abschluss 10. Klasse") (4) Certificate fulfilling entrance requirements to study at a polytechnical college ("Fachhochschulreife (Abschluss einer Fachoberschule etc.)") (5) Higher qualification, entitling holders to study at a university ("Abitur" resp. "Erweiterte Oberschule mit Abschluss 12. Klasse (Hochschulreife)") (9) Still at school (6) Other school leaving certificate, please enter: _____	Dummy: 1: 1, 2 -> low level of education missing: 6,9 0: 3, 4, 5 -> other level of education
Migration background	d42 (Citizenship: German, since Birth) d49 (Country of Birth: Germany, Parents) d50 (Country of Birth: other Country, Father) d51 (Country of Birth: other Country, Mother)	Dummy: 1: if not German citizenship since birth OR at least one parent not born on (current or former) Germany territory -> migration background 0: no migration background
East-West	ostwest2 (East/West with exact assignment of Berlin residents to East or West) (0) East (1) West	Dummy Variable: 0: 1 -> West Germany 1: 0 -> East Germany Note: Also used as covariate in regression models.

<i>Additional Covariates for Regression Models</i>		
Age	d2a Date of Birth: Year	Coded into age groups (categorical variable): 0: up to 34 1: 35 to 49 2: 50 to 64 3: 65 and older
Gender	d1 (1) Male (2) Female (3) Diverse	0: Female 1: Male The data for the category "diverse" is not available in the public release and respondents who chose the category were randomly assigned to either female or male by the GLES Project prior to the release as per the GLES Pre-Election Cross-Section documentation (page 6)

Appendix B: Exploratory factor analysis for perceived lack of recognition

Table B1: Exploratory factor analysis with the four lack of recognition items

	Loading on factor
Lacking recognition of economic needs	0.82
Lacking recognition of work	0.81
Lacking recognition of need for services	0.71
Lacking recognition of opinion	0.62

Note: Loadings on the first factor from a principal component factor analysis. One retained factor with an Eigenvalue of 2.24 and an explained variance of 0.56.

Appendix C: Multiple group membership

Figure C1: Number of prototypical groups that respondents belong to

Table C1: Overlap in group membership

Low income	Low skill	Rural	Cultural conservative	
			No	Yes
No	No	No	45.2%	8.9%
		Yes	18.8%	4.7%
	Yes	No	2.4%	0.8%
		Yes	1.3%	0.5%
Yes	No	No	6.4%	2.3%
		Yes	3.3%	1.5%
	Yes	No	2.3%	0.7%
		Yes	0.7%	0.4%

Figure C2: Correlation plot of primary variables for respondents who are members of either no or only a single of the focal groups

Appendix D: Additional results for group differences in perceived lack of recognition

Table D1: T-test results for group differences in facets of lacking recognition

Facet of lack of recognition	Group comparison	CI lower	CI upper	p-value < 0.05
Economic needs	Low income vs. other	-0.17	-0.13	Yes
	Low skilled vs. other	-0.13	-0.08	Yes
	Conservatives vs. other	-0.15	-0.12	Yes
	Rural vs. other	-0.05	-0.01	Yes
Work	Low income vs. other	-0.13	-0.09	Yes
	Low skilled vs. other	-0.11	-0.05	Yes
	Conservatives vs. other	-0.14	-0.1	Yes
	Rural vs. other	-0.05	-0.02	Yes
Need for services	Low income vs. other	-0.19	-0.15	Yes
	Low skilled vs. other	-0.12	-0.06	Yes
	Conservatives vs. other	-0.13	-0.09	Yes
	Rural vs. other	-0.06	-0.02	Yes
Opinion	Low income vs. other	-0.13	-0.08	Yes
	Low skilled vs. other	-0.069	-0.002	Yes
	Conservatives vs. other	-0.34	-0.3	Yes
	Rural vs. other	-0.07	-0.03	Yes

Note: CI: 95% confidence interval around estimated difference.

Table D2: T-test results for group differences in facets of lacking recognition, excluding respondents with multiple group memberships

Facet of lack of recognition	Group comparison	CI lower	CI upper	p-value < 0.05
Economic needs	Low income vs. other	-0.14	-0.06	Yes
	Low skilled vs. other	-0.08	0.03	No
	Conservatives vs. other	-0.1	-0.03	Yes
	Rural vs. other	0.08	0.14	Yes
Work	Low income vs. other	-0.09	-0.01	Yes
	Low skilled vs. other	-0.07	0.05	No
	Conservatives vs. other	-0.1	-0.03	Yes
	Rural vs. other	0.05	0.11	Yes
Need for services	Low income vs. other	-0.15	-0.07	Yes
	Low skilled vs. other	-0.06	0.06	No
	Conservatives vs. other	-0.03	0.04	No
	Rural vs. other	0.03	0.09	Yes
Opinion	Low income vs. other	0.0	0.09	No
	Low skilled vs. other	-0.01	0.13	No
	Conservatives vs. other	-0.34	-0.26	Yes
	Rural vs. other	0.12	0.19	Yes

Note: CI: 95% confidence interval around estimated difference.

Figure D1: Coefficient plots for regressing perceived lack of recognition on group memberships

Note: Shown are point estimates of coefficients with 95% confidence intervals. Full results in table format shown in Table D3.

Table D3: Regression table for facets of lacking recognition

	<i>Dependent variable: Lack of recognition</i>			
	Economic M1	Work M2	Services M3	Opinion M4
Low-income group	0.15*** (0.01)	0.11*** (0.01)	0.15*** (0.01)	0.08*** (0.01)
Low-skill group	0.06*** (0.01)	0.04** (0.01)	0.05*** (0.01)	0.003 (0.01)
Cultural conservative group	0.13*** (0.01)	0.12*** (0.01)	0.08*** (0.01)	0.32*** (0.01)
Rural group	0.02* (0.01)	0.02* (0.01)	0.04*** (0.01)	0.03** (0.01)
Constant	0.42*** (0.01)	0.45*** (0.01)	0.23*** (0.01)	0.21*** (0.01)
Observations	3,744	3,733	3,734	3,741
R ²	0.10	0.06	0.08	0.18
Adjusted R ²	0.10	0.06	0.08	0.18

Note: *p<0.05, **p<0.01, *** p<0.001. All models weighted to adjust the sample to the microcensus.

Figure D2: Perceived lack of recognition in focal groups with more lenient cut-off points

Note: Dots are weighted means. Figure is analogous to Figure 3 in the main manuscript, except that we use different cut-off points for the focal groups (lowest two income quintiles; two most conservative quintiles; rural additionally included “medium or small town”; low-skilled occupations additionally include: “(12) Skilled worker and crafter” and “Self-employed in trade or craft, industry, service sector, etc. (51) Without employees”).

Figure D3: Perceived lack of recognition in additional groups: low level of education, immigration background, Eastern (vs. Western) Germany

Note: Dots are weighted means.

Appendix E: Regression tables for populist attitudes

Table E1: Regression table for populist attitudes

	<i>Dependent variable: Populist attitudes</i>						
	M1a	M1b	M2a	M2b	M2c	M3	M4
Lack of Recog. - Economic	0.14*** (0.01)	0.14*** (0.01)					0.14*** (0.01)
Lack of Recog. - Work	0.06*** (0.01)	0.06*** (0.01)					0.06*** (0.01)
Lack of Recog. - Services	0.06*** (0.01)	0.04*** (0.01)					0.04** (0.01)
Lack of Recog. - Opinion	0.21*** (0.01)	0.21*** (0.01)					0.16*** (0.01)
Lack of Recog. - Index			0.49*** (0.01)				
Lack of Recog. - Mean				0.45*** (0.01)			
Lack of Recognition - PCA					0.10*** (0.003)		
Low-income group						0.03** (0.01)	-0.01 (0.01)
Low-skill group						0.01 (0.01)	0.003 (0.01)
Cultural conserv. group						0.20*** (0.01)	0.12*** (0.01)
Rural group						0.02** (0.01)	0.01 (0.01)
Constant	0.05*** (0.01)	0.05*** (0.01)	0.10*** (0.01)	0.04*** (0.01)	0.21*** (0.01)	0.15*** (0.01)	0.04*** (0.01)
Control variables?	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,761	4,562	4,562	4,562	4,562	3,647	3,601
R ²	0.24	0.26	0.26	0.24	0.23	0.18	0.32
Adjusted R ²	0.24	0.26	0.26	0.24	0.23	0.18	0.32

Note: *p<0.05, **p<0.01, ***p<0.001. Control variables adjust for gender, age groups, East-West residence, and low education. All models weighted to adjust the sample to the microcensus.

Appendix F: Sensitivity analysis for model 4 (figure 4)

We computed robustness values with the R package *sensemakr* to estimate how sensitive the observed correlations between populism and perceived lack of recognition are to potentially unobserved confounders. The first line in Table F1 refers to Model 2a in Table E1. The other results refer to Model 4 in Table E1.

Table F1: Sensitivity analysis

Recognition composite index	Partial R ²	0.2217
	Robustness value (q=1)	0.41
	Robustness value (q=1, alpha=0.05)	0.3932
Economic recognition	Partial R ²	0.023
	Robustness value (q=1)	0.1421
	Robustness value (q=1, alpha=0.05)	0.1136
Work recognition	Partial R ²	0.0055
	Robustness value (q=1)	0.0714
	Robustness value (q=1, alpha=0.05)	0.0405
Services recognition	Partial R ²	0.0027
	Robustness value (q=1)	0.051
	Robustness value (q=1, alpha=0.05)	0.0195
Opinion recognition	Partial R ²	0.0529
	Robustness value (q=1)	0.2101
	Robustness value (q=1, alpha=0.05)	0.184