Wealth of Tongues: Why Peripheral Regions Vote for the Radical Right in Germany

DANIEL ZIBLATT   *Harvard University, United States, and WZB, Germany*
HANNO HILBIG   *University of California, Davis, United States*
DANIEL BISCHOF   *Aarhus University, Denmark*

*W*hy is support the radical right higher in some geographic locations than others? This article argues that what is frequently classified as the "rural" bases of radical-right support in previous research is in part the result of something different: communities that were in the historical "periphery" in the center–periphery conflicts of modern nation-state formation. Inspired by a classic state-building literature that emphasizes the prevalence of a "wealth of tongues"—or nonstandard linguistic dialects in a region—as a definition of the periphery, we use data from more than 725,000 geo-coded responses in a linguistic survey in Germany to show that voters from historically peripheral geographic communities are more likely to vote for the radical right today.

INTRODUCTION

Why is support for the radical right higher in some geographic locations than others? Some scholars emphasize the economic roots of the political geography of radical-right support, showing how regions with a declining manufacturing base and heightened economic hardship leave them more vulnerable to the appeals of the radical right (Autor et al. 2016; Broz, Frieden, and Weymouth 2020; Colantone and Stanig 2018b). Other scholarship highlights how radical-right support reflects an urban–rural divide, noting that it can emerge in rural regions due to heightened resentment over the countryside's (self-)perceived marginality (Cramer 2012; 2016; Cremaschi et al. 2022), a different constellation of social values in sparsely populated areas (Maxwell 2019; 2020; Rodden 2019), or the politicization of place-based identity in rural regions (Bolet 2021; Fitzgerald 2018; Fitzgerald and Lawrence 2011; Munis 2020)

This article proposes an alternative perspective on the spatial bases of radical-right voting. Rather than only reflecting contemporary economic dynamics or urban–rural differences, we emphasize the enduring impact of the historical "center–periphery" conflict that emerged out of the nineteenth-century nation-state formation process (Hechter 1972; Hooghe and Marks 2016; Lipset and Rokkan 1967; Weber 1976). Regions that were historically in the periphery during

the building of nation-states possessed low-status cultural markers—chief among them local dialects and languages; or as Weber (1976) put it a "wealth of tongues"—that left citizens defensive of their local communities and alienated from the national political community (Rokkan 2009; Rokkan and Urwin 1983). We revive these arguments and extend them by suggesting that what appears to be mainly a "rural" phenomenon of radical-right support in recent research is at least in part significantly anchored in something different: communities that were in the historical "periphery" during the center–periphery conflicts that shaped the formation of modern nation-states (Lipset and Rokkan 1967).

Our main contention is that voters from historically peripheral geographic communities are more likely to vote for the radical right today. The mechanism behind this proposition is that citizens from geographic regions with persistent and clearly identifiable lower-status cultural markers such as a nonstandard dialect or language are today more prone to feel "left behind" with higher levels of anti-elite sentiment and out-group resentment. This motivates voting for challenger parties such as radical-right populist parties. We expect also that this pattern becomes even stronger in moments in which the perception of cultural threats'—such as the large influx of refugees—emerges, and especially so if populist radical-right parties frame the influx of refugees as such a threat.

We highlight the role of one attribute that classic works on state formation (Hechter 1972; Lipset and Rokkan 1967; Scott 1998) identify as a hallmark of peripheral communities, but that political scientists to date have not sufficiently explored: dialect and dialectal distance from a national standard language. We also draw on insights from the field of sociolinguistics that show that language or dialect are a source of place-based social identity (Becker 2009; Labov 1963; Remlinger 2009). Regions that are, in dialectal terms,

Corresponding author: Daniel Ziblatt, Eaton Professor of the Science of Government, Department of Government, Harvard University, United States, and Director, Transformation of Democracy, WZB, Germany, dziblatt@g.harvard.edu.

Hanno Hilbig ⓘD, Assistant Professor, Department of Political Science, University of California, Davis, United States, hhilbig@ucdavis.edu.

Daniel Bischof ⓘD, Associate Professor, Department of Political Science, Aarhus University, Denmark, bischof@ps.au.dk.

"closer" to the national standard language reflect the accumulation of a history of greater economic interaction and cultural exchange with the political center. By contrast, residents in regions with more distinctive dialects are likely to be culturally distant from the political core and part of geographically circumscribed social networks that do not extend far beyond their place of residence, and as a result are likely to possess stronger local place-based cultural markers. Focusing on the German case—a country rich in dialects—we rely on dialectal data of more than 725,000 geo-coded responses stemming from work by Elspaß (2005) and Leemann, Derungs, and Elspaß (2019), which then enables us to measure how distinct a given regional dialect is compared to standard German.

We test our argument by studying the electoral rise of the radical-right *Alternative für Deutschland* (AfD) party in the 2010s in Germany. We combine the Leemann, Derungs, and Elspaß (2019) dialectal distance measure with county-level electoral results from the 2017 federal elections and individual public opinion data from the German Longitudinal Election Study (GLES). We find support for the hypothesis that peripheral communities with a higher prevalence of nonstandard German are more predisposed to radical-right parties. In both county-level and individual data, greater dialectal distance to standard German is associated with a significant and substantively meaningful increase in voting for the radical-right AfD party. We then present evidence, consistent with existing theory (Enos 2014), that out-group hostility is activated in these communities by an external threat: the correlation between dialectal distance and radical-right voting is strongest when refugee inflows were at their peak during the recent so-called refugee crisis. In terms of mechanisms, our analyses reveal that residents in peripheral counties on average place themselves lower on a social status scale and are significantly more likely to support strict limits to migration (out-group hostility) and to hold populist attitudes driven by a rejection of the political elite (anti-elitism).

Further, we conduct a range of additional tests. We show that our results are robust to the inclusion of standard economic and demographic covariates, both on the aggregate level and the individual level. Our results remain unchanged when we control for nationalism, attachment to the locality, urbanization, migration, geographical isolation, and historical patterns of racism and Anti-Semitism, among a range of other controls. In addition, we include increasingly fine-grained fixed effects to demonstrate that unobserved regional heterogeneity does not underlie our findings. Following Imbens (2003), we conduct sensitivity analyses by estimating how strong an omitted confounder would need to be to control away the main finding (Cinelli and Hazlett 2020). We show that a hypothetical omitted variable as twice as strong as the unemployment rate would not change the substantive conclusions of our analysis. Taken together, these additional tests suggest that our results are not a result of unmeasured confounding.

Our article makes three key contributions to the current literature on the emergence of the radical right. First, our argument joins a growing literature (Bolet 2021; Cramer 2012; Fitzgerald 2018; Munis 2020; 2021) that allows us to move beyond the simplified dichotomy between "urban" and "rural" communities by demonstrating that the historical position and experiences of rural communities in the nation-state formation process have varied in important ways. This then results in a more nuanced theoretical and empirical perspective on the role of the "periphery" in politics and how it continues to link with political elites, outsiders, and voting behavior today. In particular, we build on Munis (2020) in emphasizing how place-based identity fuels radical-right support.

Second, to the best of our knowledge, we provide a new and unique measure for the center–periphery conflict by using nonstandard dialects—a direct correlate of this conflict—in our research design. While dialects are particularly pronounced in the German language, they are present in important ways in other languages. We draw on findings in sociolinguistics (Becker 2009; Labov 1963; Remlinger 2009) that link dialect to place-based identity, suggesting avenues for research on questions of local political cultures.

Third, an implication of our finding is that periods of radical structural change—such as processes of nation-building, re-unification, or even separation—have long-running consequences for how the affected perceive their status within their domestic community. While political scientists often take a "snapshot" view of politics in which we look for causes temporally proximate to outcomes, drivers of our politics may often be rooted in ruptures deep in the past (Pierson 2011). Past conflicts' resolutions (e.g., center–periphery conflict), in turn, may get reactivated by exogenous shocks such as war and immigration waves. While research in economics has already integrated some of these ideas (Alesina, Giuliano, and Nunn 2013; Voigtländer and Voth 2012), political science still stands at the beginning of understanding how the persistence of deep-rooted local culture affects political perceptions and behavior (Acharya, Blackwell, and Sen 2016; Haffert 2022; Munis 2021).

WHY THE RADICAL RIGHT CLUSTERS IN SPECIFIC GEOGRAPHIC LOCATIONS?

A large amount of research on the radical right weighs the importance of alternative individual correlates of voter support of radical-right parties (Fitzgerald 2018; Gidron and Hall 2017; Guiso et al. 2020; Inglehart and Norris 2016). But recently, there has also been attention to the fact that the populist radical-right parties' electoral support clusters in specific geographic locations (Bolet 2021; Cremaschi et al. 2022; Eliasoph 2017; Fitzgerald and Lawrence 2011; Munis 2021). Scholars have observed, for example, that in Europe and North

America, economically thriving cities are locations of "cosmopolitan" attitudes, and also show less support for the radical right. By contrast, the countryside and regions in economic decline appear to be locales where radical-right parties do well electorally and where the Brexit movement found a great deal of its support in 2016. One popular account portrays this as the divide between cosmopolitan "anywheres" who are not connected to any particular location and parochial "somewheres" who are deeply attached to their home communities (Goodhart 2017). Whatever is driving these spatial patterns, a growing point of convergence across this literature is that important determinants operate at the level of geographically specific *areas* and not just individuals (Broz, Frieden, and Weymouth 2020).

Two sets of explanations have emerged to explain these geographic patterns. One strand of research highlights how economic shocks triggered by globalization have asymmetrically affected some regions within countries more than others. For example, Autor, Dorn, and Hanson (2013) and Autor et al. (2016) demonstrate that American local labor markets that experienced higher unemployment due to China-related trade shocks were also regions that showed greater support for Donald Trump in 2016. Similar patterns have been on display in Europe where radical-right support (Colantone and Stanig 2018b) and Euroskepticism in the United Kingdom are disproportionately found in regions harder hit by China imports (Colantone and Stanig 2018a).

Additional work by Broz, Frieden, and Weymouth (2020) highlights how long-term de-industrialization—more advanced in some locations within countries than others—has had downstream effects on labor force participation rates, youth out-migration, declining property values, local tax revenue shortfalls, and even the prevalence of the opioid epidemic and public health outcomes. And, communities marked with these conditions show higher support for populist right-wing parties. Relatedly, Cremaschi et al. (2022) show that the decline of public service in rural regions increases support for the radical right.

But because the economic drivers of radical-right voting are inherently intertwined with cultural developments, a second strand of literature has zeroed in on a different facet of this problem: the escalation of an urban–rural split in electoral politics. Rodden's (2019) evidence points to the sharp and growing partisan divide between rural regions and cities, suggesting that over the course of the twentieth century in many established democracies, economic development has not led to the decline of this geographic split but rather to its growth. Today, in the United States, population density is a stronger predictor of voting patterns than at the beginning of the twentieth century (Rodden 2019, 4). The drivers of this phenomenon are closely related to the economic developments described above. Technological change, the decline of manufacturing, and the rise of the knowledge economy all contribute.

But in these accounts focusing on the urban–rural divide, scholars have emphasized a variety of causal pathways linking geography to radical-right support. One channel emphasized by Cramer's (2016) important ethnographic work on rural communities in the Midwest of the United States is that residents in rural communities experience resentment over rural communities' economic dislocation and political marginality vis-à-vis urban decision-makers. Other work emphasizes the importance of a strong sense of place-based identities in the countryside (though not confined there) that also make populist appeals attractive (Bolet 2021; Fitzgerald 2018; Fitzgerald and Lawrence 2011; Munis 2020; 2021). A third channel linking the urban–rural divide to radical-right voting is embedded in conflicting social values and associated political attitudes. According to Rodden (2019), for example, in dynamic knowledge-based cities in which high-skilled workers increasingly live, distinctively "cosmopolitan" values, lifestyles, and political preferences are found that sharply diverge from the less secular and more traditional values prevalent in the rural areas inhabited by lower-skilled workers who feel "left behind" by the global economy (see also Iversen and Soskice 2020).

One example of work that clarifies how a clash in social values rooted in the urban–rural divide is driving politics in advanced democracies in Europe is offered in Maxwell (2019; 2020), who highlights the contrast between positive attitudes toward immigration in large "cosmopolitan" cities and more negative attitudes in the "nationalist" countryside. Maxwell, more systematically than others, also attempts to sort out the sources of the attitudinal or "values" gap on this key issue that activates the radical right. He asks: Is the urban–rural divide on attitudes toward immigration contextual (i.e., something about living in cities makes people feel more positive about immigration)? Or is it compositional (i.e., something about the types of people who live in cities)? Maxwell's evidence supports the latter position. Using panel data in which he traces voters' residential mobility and social attitudes over time, he demonstrates that individuals moving to cities (i.e., context) do not directly become more cosmopolitan. Rather, preexisting attitude differences between urban and rural residents and self-sorting (i.e., composition) explain much of the urban–rural social values gap (see also Iversen and Soskice 2020). As a result, Maxwell concludes that his "main takeaway message" is that the geographical clustering of attitudes toward immigration is usefully conceptualized as a "second-order manifestation of deeper demographic and cultural divides" (Maxwell 2019, 473).

But, what exactly are these "deeper" cultural divides? And how do we study them? For example, are they best understood as the result of shared local identity and history, or rather are they the consequence of individual-level characteristics? Here is where we reach the limits of existing literature. Contemporary economic change and the growing urban–rural gap are clearly important drivers of the regional clustering of radical-right voting in economically "left behind" regions. But this literature itself suggests there are also longer-standing historical-cultural divides that preceded recent economic developments that may

continue independently to shape where the radical right clusters. Even if research engages with these ideas (e.g., Fitzgerald 2018; Fitzgerald and Lawrence 2011), it is not fully clear whether these factors operate at the individual or community level. Thus, the precise content of these cultural and historical divides—and how to study them empirically—has remained elusive.

CULTURAL DIVIDES BETWEEN CENTER AND PERIPHERY

One answer to the question of the source of these regional divides is suggested in the pioneering work of Lipset and Rokkan (1967), who argued that in the historical process of nation-state formation, a variety of political cleavages emerged to shape contemporary politics. One such important cleavage is the historical "center–periphery" division between the centralizing core that pursued the homogenizing project of nation-building and the culturally distinctive outlying areas of the nation-state that were peripheral to it.[1]

In this framework (Alonso and da Fonseca 2012; Hooghe and Marks 2016; Rokkan 2009; Rokkan and Urwin 1983), during state formation, citizens in historically peripheral regions often carried lower status cultural markers—such as language, the local dialect, religion, dress, and customs. These community-level attributes provided the raw materials for a collective self-perception of marginality vis-à-vis the larger national political community. Lipset and Rokkan (1967, 13) described these peripheral regions as "bastions of primordial local culture." In Weber's (1976, 67) classic work on French state-building, *Peasants into Frenchmen*, for example, Parisian primary school inspectors and tax authorities as late as the early twentieth century viewed the periphery as a land of "savages," where civilization was absent and a "wealth of tongues" (i.e., regional dialects) hindered the operation of officialdom.

Indeed, the periphery in nation-states was usually defined by two features: their low social status within the nation-state and the prevalence of identifiable cultural markers such as dialect or nonstandard language that reinforced that status. In Scott's (1998; see also Gellner 1993) account of state-building, for example, the state's efforts to make society "legible" were hindered by peripheral regions' linguistic diversity. Further, these regions were targets of what Laitin (1992, 10–4) has called state-directed "language rationalization" efforts and that Hechter (1972) has more pointedly described as "internal colonialism"—a process of subjugation and standardization of cultural differences that aimed at stamping out nonstandard regional languages (1972, 191–205).

In this sense, "peripherality" is a community-level variable. Nonetheless, empirically its effects should play out and influence individuals living in the periphery. Citizens in such locations in the past and today believe they suffered distributive injustices in terms of power, wealth, and prestige. This in turn prompted a "politics of cultural defense" (Lipset and Rokkan 1967, 12), shaping residents' perception of themselves, elites, and outsiders. Scholarship has contended that this center–periphery divide began to recede in salience in the middle of the twentieth century, but also that it can be activated—and some scholarship has shown—it has re-emerged in some settings in recent years as a salient political cleavage (Alonso and da Fonseca 2012), in part explaining the emergence of regional political parties across Europe.

There are empirical and theoretical reasons to believe that the lower self-perceived status of citizens in these historically and culturally fringe regions—Rokkan's "periphery"—can be enduring, which leads to support for anti-establishment and anti-immigrant radical-right political parties today. First, an extensive literature in sociolinguistics finds that regional dialects are more persistent than modernization theory might predict (Edwards 2013, 69) and that speakers of historically low-status dialects—again, especially low-status *regional* dialects—continue to suffer discrimination in housing, employment, wages, and negative evaluations in terms of perceived prestige, skill, trustworthiness, and education (Du Bois 2019, 93; Edwards 2009; Purnell, Idsardi, and Baugh 1999; Segrest Purkiss et al. 2006). While dialect may not always connote lower status, it has been repeatedly demonstrated that in the German setting, speakers of nonstandard regional dialects still suffer prejudice in housing and labor markets (Rakić, Steffens, and Mummendey 2011) and actually suffer a "wage penalty" when compared to speakers of standard Germany (Grogger, Steinmayr, and Winter 2020). This status of peripherality or "marginality"—especially if is still subjectively felt by residents of these regions today—may make people susceptible to appeals from political parties that challenge "central" elites and the political establishment.

In addition, scholarship has demonstrated that at the individual level, lower social status generates support not only for anti-establishment parties but also for radical-right anti-immigrant political parties (Gidron and Hall 2017; Kurer 2020). As a literature in psychology clarifies, status threats, especially when coupled with even weak cultural markers (like dialect), can provoke strong out-group hostility (Enos 2014; Kustov 2021; Tajfel 1978; Tajfel, Billig, and Bundy 1971). Given these findings, we expect that residents in what amounts to low-status regions will have a propensity to vote for challenger and radical-right populist parties via two additional mechanisms: anti-elite sentiment (having experienced a history of exclusionary policies) and hostility toward outsiders, including refugees and immigrants.

Finally, we then also expect that this pattern becomes stronger in moments in which the perception of "cultural threats"—such as the large influx of refugees—

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[1] While existing research by Haffert (2022) focuses on the impact of the church-state divide, we isolate the impact of a different Rokkanian cleavage (center–periphery), which has not received sufficient attention to date. We engage with Haffert (2022) in more detail in Section A.1 of the Supplementary Material.

emerges. The key mechanism behind this is that the perceived "uncontrolled" influx of refugees activates and further intensives feelings of lower status and outgroup hatred, as well as resentment of political elites—the individual-level mechanisms of our macro-level argument. Existing research demonstrates how "contact" can provoke anti-immigration reaction (Enos 2014). Additionally, during the so-called refugee crisis, the public debate centered on elite failure (Harteveld et al. 2018; Mushaben 2020). Thus, if populist radical-right parties frame the influx of refugees as such a cultural threat—as the AfD did during the influx of refugees starting in 2015—one can expect this triggering effect to take hold. Similar arguments have been proposed and developed elsewhere for the German case during the so-called refugee crisis (Cantoni, Hagemeister, and Mark 2017; Choi, Poertner, and Sambanis 2019).

DATA

How can we study these cultural divisions, and how do we get an empirical grip on the historical center–periphery divide? We focus on one characteristic of localities we elaborated in our theoretical discussion above: language, more precisely dialects. A dialect is a subvariety of a language that differs from other subvarieties along three dimensions: vocabulary, grammar, and pronunciation (Edwards 2009, 63). Our strategy is to measure the strength of a dialect in a given region. As we have noted, the state-building and political development literature makes clear that a strong regional dialect that departs from the standard variant of a language is a key descriptive characteristic of the historical periphery (Rokkan and Urwin 1983; Weber 1976). Based on further research in sociolinguistics, we know that nonstandard dialects are enduring and remain a source of a variety of social identities (including place-based identity) and can also provide cultural markers that citizens continue to use to evaluate each other's origins and capabilities (Labov 1963; Remlinger 2009; 2017).

We employ two data sources to measure how distant a given regional dialect is compared to standard German. One of them is based on contemporary data collected by the German magazine *Der Spiegel* (see Elspaß et al. 2018; Leemann, Derungs, and Elspaß 2019), while the second relies on a linguistic survey of about 40,000 schools in the late nineteenth century (Lameli et al. 2014). We use the contemporary dialect data as a proxy for regions that were in the historical periphery in our main analyses. The historical data serve as evidence for the validity of the contemporary dialect data.

Contemporary Dialectal Data

The most comprehensive mapping of current regional German dialects is a unique online survey conducted by the German magazine *Der Spiegel* (see Elspaß et al. 2018). In 2015, *Der Spiegel* created a publicly accessible

dialect quiz, where individuals answer a number of questions related to regional differences in dialect.[2] Quiz respondents are shown a description of a verb, noun, or adjective. They are then asked to select the regional version of the word from a list of choices that they use. An example is a question on the informal version of the verb "to chat": in East Germany, the majority of respondents use "quatschen," speakers closer to the North-Western coast employ "schnacken," and Bavarians use "ratschen."[3] In total, respondents answer 24 questions, each aimed at the regional version of a specific noun, verb, or adjective. Importantly, these 24 questions relate to differences in pronunciation, grammar, and vocabulary, and therefore capture all relevant dimensions of what constitutes a dialect. While the quiz was not created for strictly social scientific purposes, the 24 questions are directly based on a prior linguistic research project aimed at describing regional differences in German dialects, the *Atlas der Deutschen Alltagssprache* ("Atlas of Colloquial German," see Elspaß 2005).

After completing the quiz, a predictive algorithm estimates the region where the person is from. Finally, respondents are asked to evaluate the accuracy of the prediction and can enter their hometown.[4] About two-thirds of all respondents enter their hometown, allowing us to trace responses to a specific location. In total, about 725,000 respondents indicate where they are from. We use this information to create a county-level measure of dialectal distance between a given county and region of Hannover, the area that is most strongly associated with standard German (for more elaboration on standard German and its relation to the Hannover dialect, see Mills 1985, 142; Polenz 2009, 123). Given the large sample, the number of respondents in each county is high. As we show in Figure SI.1 in the Supplementary Material, the majority of counties have more than one thousand respondents. In a first step, we obtain the most common (modal) answer in each county for each of the 24 dialect questions that are part of the *Spiegel* quiz. For each county i, the modal answer to quiz item k takes on the value X_i^k. In the following, we will refer to the modal answer in each county as a county-specific dialect characteristic. Depending on the dialect characteristic, X_i^k can take between 2 and 24 different values. In standard German, the kth dialect characteristic takes on the value $X_{\text{Standard German}}^k$. We

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[2] The questions of the quiz itself is no longer available online. However, a related article can be found at https://www.spiegel.de/wissenschaft/mensch/alltagssprache-bulette-oder-frikadelle-bolzen-oder-kicken-a-1109490.html. Our data span the period from April 2015 – June 2019, when we received the data. We have no information on the date of each quiz response.

[3] The *Spiegel* quiz is partially based on a similar quiz created by the *New York Times*. In the American context, an example of a regional lexical difference is the use of the words 'pop' and 'soda' to refer to a sweetened carbonated drink.

[4] We expect that respondents will usually indicate the place where they grew up rather than their current place of residence if the two are not the same. We base this assumption on the design of the online quiz and research that is based on the quiz—we discuss this in more detail in Section A.9 of the Supplementary Material.

define the distance between a given regional dialect and standard German as follows:

$$d_i = 24 - \sum_{k=1}^{24} 1\left(X_i^k = X_{\text{Standard German}}^k\right). \qquad (1)$$

The sum on the right-hand side counts the number of times a region shares a dialect characteristic with standard German, which can be at most 24. We then reverse this measure such that d_i measures dialectal distance between a given county and standard German. It can range from 0 (a dialect that is equal to standard German) to 24 (shares no characteristics with standard German). We chose this measure of dialectal distance in accordance with prior work on the effect of dialects, chiefly Falck et al. (2012), who use the same definition of distance in conjunction with the nineteenth-century data described in the section "Historical Dialectal Data."
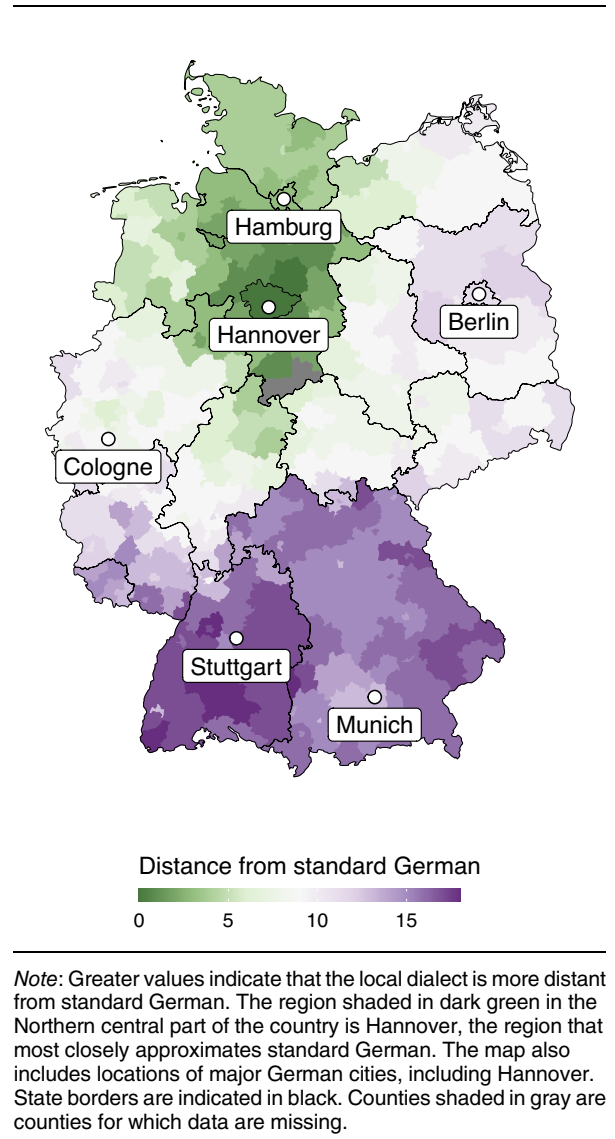
A potential drawback of our method is that it requires dialect characteristics to be exactly the same to count toward the distance measure. To ensure that the results are not driven by our choice of the dialectal distance measure, we also calculate the dialectal distance using the average Jaro–Winkler distance between the prototypical characteristics. The Jaro–Winkler distance accounts for cases when dialect characteristics are similar, but not exactly the same (for more details, see Cohen, Ravikumar, and Fienberg 2003). The two measures are highly correlated and our main results are similar across the two dialectal distance measures.

In Figure 1, we present the county-level distance from standard German across Germany. Unsurprisingly, the counties surrounding the Hannover region (shaded in dark green) are most similar to standard German. We also observe a pronounced North–South divide: Southern German dialects are markedly more different from standard German than in the Northern part of the country. The two Southernmost states, Bavaria and Baden-Wuerttemberg, exhibit the greatest distance to standard German.

Through the use of a supplementary dataset on individual-level dialect use, we corroborate that our aggregate measure broadly corresponds to individual patterns of dialect use (we describe these data in more detail in Section A.8 of the Supplementary Material). We find that self-reported dialect usage is much more common in areas that are more distant from standard German, using our aggregate measure. We can, therefore, confirm that individuals are likely aware of the aggregate-level dialectal distance, as individuals in distant regions (as measured by our aggregate variable) and are much more likely to know and use dialects.

Figure 1 suggests that physical distance to Hannover, as well as North–South or East–West divides, are correlated with dialectal distance. We address this directly by including state fixed effects in all our specifications. The fixed effects imply that we only compare differences in dialectal distance *within* federal states, rather than across states. This ensures that our results are not

FIGURE 1. Dialectal Distance from Standard German by County (Landkreis)

Distance from standard German

0   5   10   15

Note: Greater values indicate that the local dialect is more distant from standard German. The region shaded in dark green in the Northern central part of the country is Hannover, the region that most closely approximates standard German. The map also includes locations of major German cities, including Hannover. State borders are indicated in black. Counties shaded in gray are counties for which data are missing.

driven by East–West or North–South divides. What is more, we also control for the physical distance between counties and their respective state capitals. Finally, we present additional robustness checks (see the section "Robustness" and Table A.11 in the Supplementary Material) to show that controlling for physical distance to the German border or to Hannover itself does not change our substantive conclusions. We note that the correlation between aggregate-level dialectal distance and population density is close to zero (it is −0.06), indicating that the center–periphery divide is not simply reducible to the urban–rural divide. These steps ensure that our dialectal distance variable does not simply pick up on urban–rural divides or geographic peripherality.

In an additional supplementary analysis, we examine potential correlates of dialectal distance, based on survey- and aggregate-level data (see Section A.4 of

the Supplementary Material). We observe that stronger dialects correlate with lower integration into surrounding areas, increased skepticism toward outsiders, and stronger suspicion of elites. Generally, these patterns corroborate that dialectal distance is indicative of center–periphery divides.

Historical Dialectal Data

As a secondary data source, we use historical dialectal data from the *Deutscher Sprachatlas* ("Atlas of the German Language," see Falck et al. 2012; Lameli et al. 2014), a survey conducted in the late nineteenth century. These data allow us to validate the contemporary dialect data. In addition, the data serve as a closer approximation for historical patterns of the center–periphery divide, as it was measured prior to the turbulent twentieth century.

To create the *Deutscher Sprachatlas*, the linguist Georg Wenker surveyed over 40,000 elementary schools across the German Empire, asking students and teachers to translate 40 German sentences into their local dialects. Akin to the 24 dialect characteristics in the *Der Spiegel* data, Wenker's successor Ferdinand Wrede used Wenker's surveys to identify 66 "prototypical characteristics" of the German language. Much like the 24 characteristics in the Leemann, Derungs, and Elspaß (2019) data, we can use those 66 characteristics to construct a nineteenth-century distance measure between county-level dialects and standard German.[5]

Before turning to our main results, we use the historical dialectal data to validate our contemporary measure. We emphasize that the contemporary measure, while based on linguistic research (Elspaß 2005), was intended to serve mainly journalistic purposes. In contrast, the historical measure was the result of one of the most significant linguistic surveys ever conducted (Lameli et al. 2014). To ensure the quality of the data collected through the *Der Spiegel* online survey, we examine the correlation between the contemporary and the historical dialectal distance. While we expect that dialects change over time, they will likely not diverge completely. Indeed, the correlation between the nineteenth-century Wenker data and the *Spiegel* quiz data is 0.84. We visualize the relationship between the two measures in Figure A.2 in the Supplementary Material. The high correlation confirms that the contemporary dialectal distance indeed picks up on variation in dialects as measured in prior linguistic research.

EMPIRICAL STRATEGY

Our empirical strategy proceeds in three steps, relying on aggregate- as well as individual-level data. First, we assess the relationship between dialectal distance and county-level AfD support in the 2017 general election.[6]

These models include a number of relevant covariates as well as fixed effects to account for unexplained regional heterogeneity. We focus on potential confounders that have previously been shown to predict voting for radical-right parties, including population density, socioeconomic indicators, and distance to the border.

Second, we complement the aggregate-level election results with individual-level data from the GLES. In contrast to the aggregate-level analysis, the GLES data allow us to control for a set of key alternative explanations on the individual level, such as socioeconomic background, education, nationalism, and local attachment. The outcomes we use are a binary measure of AfD vote intentions as well as an 11-point AfD likability scale.[7] Given the high frequency at which the data are observed—18 waves between 2013 and 2018—we can further use these data to study how the relationship between dialects and radical-right support varies over time.

Finally, we shed light on the mechanisms that underlie our proposed argument through additional analysis of survey data that measure perceived status, antielitism, and anti-immigrant attitudes. The goal of this final exercise is to provide support for the individual-level mechanisms that animate our macro-level argument.

Throughout the "Results" section, we estimate a set of linear models that can be described as follows:

$$y_{i,j} = \alpha + \gamma_j + \tau d_{i,j} + \beta' X_{i,j} + \varepsilon_{i,j}, \qquad (2)$$

Here, $y_{i,j}$ is the outcome of interest for unit i in state j, which is either radical-right voting or individual attitudes. Our main independent variable is $d_{i,j}$, the dialectal distance between a given county i and standard German. We always standardize $d_{i,j}$ such that coefficients can be interpreted as the effect of a one-standard-deviation increase in dialectal distance. We also include a vector of covariates $X_{i,j}$ as well as state fixed effects γ_j.[8] For all county-level models, we control for regional GDP/capita, average wages, population density, unemployment rates, total population, % Catholic, the share of commuters, the physical distance to the state capital, and the CDU/CSU vote share in the 2013 general election. We provide summary statistics

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[5] We elaborate more on the details of the Wenker data in Section A.10 of the Supplementary Material.

[6] The year 2017 is the first year that the AfD ran on an explicit anti-immigration platform. Between 2013 and 2017, the party significantly

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changed its personnel—getting rid of the mostly Eurosceptic but not radical-right leader Lucke and replacing it with the anti-migration, more right-wing colleague Petry—and its platform as carefully laid out and empirical shown in Cantoni, Hagemeister, and Mark (2017, 28–9). In Table A.6 in the Supplementary Material, we also present results for the 2013 and 2021 elections. In the 2013 general election, the AfD was most strongly associated with Eurosceptic and economics issues.

[7] We note that the GLES survey data cover all 299 electoral districts, that is, they contain respondents from all 299 electoral districts.

[8] The notation we use refers to counties, which form the basis for our main result. For counties, the level of observation is the same as the level at which dialectal distance is measured. Given the structure of the GLES data, the dialectal distance for survey analyses is measured at the level of the electoral district—survey respondents are nested within districts.

for all outcomes and explanatory variables in Table A.1 in the Supplementary Material.

Causal identification is difficult in the context of our research question. We rely on the assumption that dialectal distance is independent of the potential electoral outcomes, conditional on county covariates and fixed effects. The strongest threat to identification is omitted variable bias, namely that unobserved factors drive our findings. In a series of robustness checks, we address confounding through additional control variables, more fine-grained geographical fixed effects, a design-based weighting approach, as well as a sensitivity analysis. We particularly highlight the results of the sensitivity analysis. We demonstrate, even if there was an unobserved confounder with a partial correlation that is twice as strong as the one between the unemployment rate and AfD support, its inclusion would not change our substantive conclusions. Given that we control for a host of relevant explanatory factors, the existence of an unobserved confounder of this magnitude appears extremely unlikely. As we elaborate in the section "Robustness," the additional analyses thus suggest that our main results are not merely due to unobserved confounding.

RESULTS

Aggregate Electoral Results

In Table 1, we demonstrate that there is a significant and positive association between dialectal distance from standard German and the electoral success of the AfD. Depending on the specification, a one-standard-deviation increase in distance from standard German is associated with a 0.78–1.17 percentage-point increase in the voting for the AfD. The observed effect corresponds to an increase of about 0.2 standard

deviations in AfD voting, confirming that dialectal distance is a substantively meaningful correlate of radical-right voting. This relationship holds both when comparing across German states (model 1, no state fixed effects) and within states (model 2, including state fixed effects).

Crucially, controls for population density, commuting, and distance to state capitals ensure that we are not simply picking up on urban–rural divides. What is more, we account for time-invariant state-level differences by including state fixed effects. After including fixed effects, the remaining variation in dialectal distance stems solely from within-state differences. Therefore, our model implies comparisons between, for example, counties with stronger and weaker dialects within Bavaria, but never between Bavaria and Saxony. State fixed effects ensure that our results are not confounded by (i) physical distance to Hannover, (ii) differences between West Germany and the territory of the former German Democratic Republic, and (iii) differences between Southern and Northern Germany. To alleviate further concerns about geographic confounders, we present additional specifications that control for the physical distance to the German border and the city of Hannover in Table A.11 in the Supplementary Material.

In a supplementary analysis in Table A.7 in the Supplementary Material, we show that stronger dialects are negatively correlated with electoral support for the Green party, while point estimates are not significant for the other major German parties. The fact that stronger dialects correlate with AfD gains and Green party losses appears sensible, as these parties hold opposing views along a number of relevant policy areas. We further assess the relationship between dialectal distance and AfD support in the 2013 and 2021 elections in Table A.6 in the Supplementary Material. We find no results in 2013, which is consistent with the

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TABLE 1. Dialectal Distance and Radical-Right Voting in 2017

	DV: AfD vote share, 2017			
	Contemporary data		Historical data	
	(1)	(2)	(3)	(4)
Dialectal distance	0.778***	1.172***	0.898***	0.478**
	(0.264)	(0.354)	(0.188)	(0.230)
Mean of DV	13.39	13.33	13.4	13.34
N	400	392	399	391
R^2	0.021	0.828	0.028	0.825
R^2 (adj.)	0.019	0.818	0.026	0.814
State FE		✓		✓
Covariates		✓		✓

Note: Standard errors are shown in parentheses. The dialectal distance is standardized. The first two models use the contemporary dialectal distance measures, whereas the latter two models use the nineteenth-century measure. The county-level covariates are GDP/capita, average wages, population density, unemployment rate, total population, % catholic, commuters per capita, distance to Hannover, and distance to the respective state capital. The full version of this table with control coefficients is given in Table A4 in the Supplementary Material. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

activation mechanism which we describe in more detail in the section "Individual-Level Results." For the recent 2021 election, we find very similar results to 2017.

In the next step, we examine the relationship between the nineteenth-century dialect data and radical-right voting in models 3 and 4. We find comparable results, both in terms of direction and magnitude.[9] The fact that results are similar using the nineteenth-century data is reassuring, as it may be better suited to pick up on *historical* center–periphery divides. Taken together, the results suggest that dialectal distance is a significant and substantially meaningful predictor of radical-right voting.

Given its history as a divided country, patterns of radical-right voting differ between East and West Germany. Since the fall of the Berlin Wall in 1989, the East has voted in higher numbers for radical-right parties—such as the "Nationaldemokratische Partei Deutschlands" and the "Republikaner"—and a similar pattern holds true for the AfD. This might suggest that the relationship between dialectal distance and AfD voting is particularly strong in East Germany. However, as we show in Table A.8 in the Supplementary Material, this is not the case. Splitting the sample into East and West shows that the association between dialectal distance and AfD voting holds in both parts of the country, although the effect is less precisely estimated given the lower sample size in East Germany.

Individual-Level Results

We now examine the relationship between dialectal distance and political preferences on the individual level. We begin with panel evidence of the GLES (see Schmitt-Beck et al. 2010). We use the survey data to complement the aggregate electoral results discussed in the previous section. We reiterate that our core theoretical argument works at the community level. However, our argument has implications at the individual level, since it speaks to individual-level voting decisions. What is more, the individual-level analysis allows us to account for key alternative explanations unaccounted for in the aggregate analysis. For instance, we can control for individual-level factors discussed in previous research on the radical right such as nationalistic attitudes (Rydgren 2008), local attachment (Fitzgerald 2018), and various other factors potentially accounting for the observed correlation between dialectal distance and voting for the radical right. A second advantage is that there are 18 panel waves between 2013 and 2018. This allows us to gauge whether place-based identities were "activated" as communities experienced an unprecedented influx of outsiders during the 2010s' "refugee crisis."

The GLES survey includes information on the electoral districts where respondents reside. Accordingly, we aggregate the Elspaß et al. (2018) dialect quiz responses to the level of the electoral districts. There are 299 electoral districts in Germany, which means that each district contains, on average, about 1.3 counties. Aside from the changing level of aggregation, the definition of the dialectal distance measure remains the same as discussed in the section "Contemporary Dialectal Data." From the GLES, we select (1) one item asking about vote intentions in the next general election and (2) an item that asks respondents to report positive or negative feelings toward the AfD party. The vote intention items simply ask respondents to indicate their most likely vote choice for both the district candidate and the party vote choice in the next general elections.[10] The party attitude item asks respondents to rate the AfD party on an 11-point scale.[11] In a first step, we pool 18 GLES waves between June 2013 and March 2018. We then estimate the effect of dialectal distance on individual vote intentions and attitudes toward the AfD party.

We present the results from the pooled sample in Table 2. Across 18 waves of the GLES, we find that dialectal distance predicts an increase in the likelihood to vote for the AfD. Likewise, respondents are more likely to rate the AfD favorably when dialects in their electoral district are stronger. We control for respondents' gender, age, education, employment status, income, the urbanity of their location, and separately also for their self-rated nationalism. The addition of the controls addresses the possibility that aggregate-level dialects are a mere proxy for individual-level characteristics. If our results were driven by the fact that more linguistically distant places are composed of low-income or low-education individuals, then we would not find results after conditioning on these individual-level variables.[12] The results in Table 2 are statistically different from zero and mirror the findings in the section "Aggregate Electoral Results," where we document similar patterns on the aggregate level.

We emphasize that our conclusions remain unchanged when we control for a key alternative explanation: nationalist attitudes. In two GLES waves, respondents are asked to share their opinion on three items relating to nationalistic ideology. To form a composite scale of nationalism, we sum those three items.[13] By controlling for nationalism among the GLES respondents, we verify that we are not merely

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[9] We stress that all covariates and the state boundaries used for the fixed effects are post-treatment with respect to the historical dialectal distance measure. Therefore, the results in model 4 should be treated with caution.

[10] Below, we focus only on the party choice. The effects are similar in size and significance for the candidate vote choice.

[11] The exact wording is "Was halten Sie so ganz allgemein von [der Afd]?" which translates to "What do you think of/what is your attitude toward the AfD party." Respondents answer on an 11-point scale, ranging from very negative to very positive.

[12] We present an extended version of this table that includes covariate coefficients in Section A.7.3 of the Supplementary Material. In Table A.5 in the Supplementary Material, we present correlations between the variables.

[13] The index is a 15-point scale based on three questions. The questions are (1) "how important is being German for your identity," (2) "how likely are you to use the word 'we' versus 'they'

TABLE 2. Dialectal Distance, Radical-Right Voting Intentions and Likability

	AfD vote intentions			AfD scalometer		
	Party vote			Range: 1–11		
	(1)	(2)	(3)	(4)	(5)	(6)
Dialectal distance	0.008** (0.004)	0.016** (0.007)	0.009* (0.005)	0.141*** (0.047)	0.157*** (0.060)	0.130** (0.051)
Nationalism scale (1–5)		0.066*** (0.007)			0.781*** (0.061)	
Local attachment (1–5)			−0.004 (0.006)			−0.054 (0.055)
National attachment (1–5)			−0.003 (0.007)			0.072 (0.063)
Mean of DV	0.09	0.14	0.09	3.32	2.94	3.22
N	26,841	3,414	4,975	33,104	3,581	5,265
Unique respondents	2,061	1,992	2,012	2,089	2,065	2,073
R^2	0.02	0.07	0.03	0.05	0.12	0.06
R^2 (adj.)	0.019	0.071	0.023	0.049	0.121	0.054
East–West FE	✓	✓	✓	✓	✓	✓
Covariates	✓	✓	✓	✓	✓	✓

Note: The table contains coefficient estimates from six linear models. Models 1–3 predict the AfD vote intentions for party votes in the AfD in the next general election. Models 4–6 predict the positive attitudes toward the AfD party. The main independent variable is dialectal distance to standard German, aggregated to the level of electoral districts. We pool 18 waves of the German Longitudinal Election Study. Standard errors, clustered by respondent, are shown in parentheses. The covariates are respondent gender, age, education, employment status, income, nationalistic attitudes, and urbanity of the place of residence. We present an extended version of this table, which includes covariate coefficients, in Section A.7.3 of the Supplementary Material. We further present an alternative specification that uses voting for any radical-right party as the outcome in Section A.7.4 of the Supplementary Material. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

picking up on nationalist attitudes. Our results remain substantively meaningful even when we condition on nationalism. Similarly, the correlation between dialectal distance and voting for the AfD remains significant if we control for local attachment—a factor well established to predict radical-right voting outside of Germany (Fitzgerald 2018).[14]

Finally, we utilize the panel structure of the GLES data to better understand how the correlation between dialectal distance and favorable attitudes toward the AfD varies across time. We focus on a pivotal time period in recent German history, the refugees crisis. Instead of pooling all 18 waves, we estimate model 3 from Table 2 separately for each GLES wave. In Figure 2, we report the association between dialectal distance to standard German and favorable attitudes toward the AfD, across all 18 waves.

We find suggestive evidence for a stronger correlation between dialectal distance and favorable attitudes toward the AfD as the refugee crisis becomes more salient. This is consistent with a broader literature that

shows that latent resentments can be activated with direct contact with perceived "outsiders" such as migrants (Choi, Poertner, and Sambanis 2019; Enos 2014). In 2013, political elites and the media did not heavily engage with questions of migration, the term "refugee crisis" was not yet topical at the time. In our results, we find that the effect of dialectal distance in 2015 is more than twice as large as in 2013.[15] The first public reports about a large influx of refugees to Europe and Germany started in 2014 when the number of asylum-seekers started to increase significantly in comparison to 2013 with 627,000 people seeking asylum across Europe. Thus, the findings we report here can be read as suggestive evidence in line with the mechanism that the increase in "outsiders" and the perception of crisis leads to a stronger relationship between place-based identity and voting for radical-right parties. In addition, we note that refugees in Germany are assigned to counties in proportion to county population. Therefore, there is little meaningful variation in actual exposure to refugees across counties. In contrast, our results suggest that *perceptions* of the influx differentially activated support for the radical right across regions.

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when speaking of the German people," and (3) "how well does the adjective 'German' suit you?" Each item allows respondents to pick from five answer categories, each measuring different levels of agreement with the survey question. As a result, our composite index ranges from 1 to 15, with greater values indicating higher degrees of nationalism.

[14] We elaborate more on the distinctions between nationalism and national attachment in the final paragraph of Section A.2.2 of the Supplementary Material.

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[15] To formally test this, we run an interaction model with a dummy variable indicating the waves surveyed prior (up until wave 7) and during the "refugee crisis." We find a significant difference between the coefficients prior to the "refugee crisis" and the first wave during it.

FIGURE 2. Standardized Dialectal Distance and AfD Likability over Time
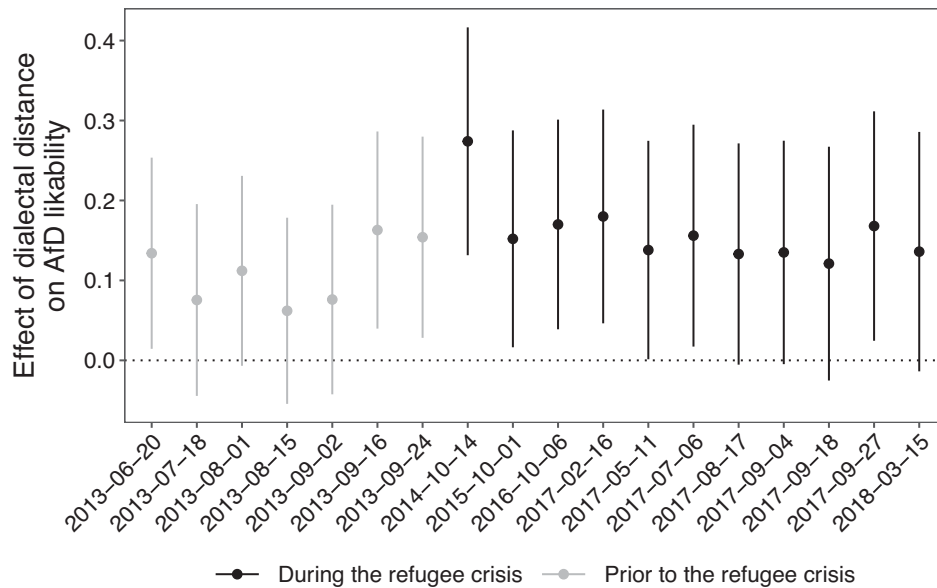
Note: We plot coefficients and 95% confidence intervals from models estimated separately for each GLES wave. On the *x*-axis, we indicate the first day of data collection for each wave. The models follow the specification in model 5 in Table 2.

Our final piece of individual-level evidence is an analysis that relies on self-reported measures of dialect knowledge and usage from the German Socio-Economic Panel Survey (SOEP), which were first used by Grogger, Steinmayr, and Winter (2020). We discuss the data, estimation, and results in more detail in Section A.8 of the Supplementary Material. We find there is no correlation between being able to speak a dialect and AfD support, but we do find that using a dialect in a work setting is correlated with greater AfD support. In other words, merely knowing a dialect is less important than using it every day in a formal setting, consistent with our interest in dialect as a broadly sociological, and not an individual-level phenomenon. Importantly, these associations are robust to controlling for education and socioeconomic status as well as to an additional instrumental variables strategy. We note, however, that these data only cover 30% of all German counties, or about 44.7% of the German population. As a result, the geographic scope of the SOEP dialect data is smaller than that of the data we use for our main analyses. In addition, counties covered by the SOEP dialect data tend to be larger, more densely populated and have higher wages and GDP/capita (see also Figure A.6 in the Supplementary Material. Therefore, the results from this analysis are likely not directly comparable to our main results discussed in the section "Aggregate Electoral Results."[16]

## Micro-Level Mechanisms: Lower Subjective Social Status, Anti-Elitism, and Outsider Resentment

Beyond the main effect of dialectal distance, our theoretical argument discussed three key individual-level mechanisms which facilitate voting for the radical right in peripheral communities: lower subjective social status, which should fuel *anti-elitism* and *hostility toward outsiders*—particularly migrants and refugees. In Figure 3, we present associations between dialectal distance and a set of individual-level variables from the SOEP and the GLES survey measuring these dimensions.

In the top panel, we report a correlation between our dialectal measure with subjective social status. Respondents in communities with stronger dialects are more likely to rank themselves lower if asked to place themselves on a social status or "social importance" ladder. Importantly, this subjective assessment holds even conditional on a variety of important objective measures of individual well-being such as income, education, or employment status (see Section A.11 of the Supplementary Material for more information on the covariates).

Regarding anti-elitism, we find that respondents in peripheral communities are also significantly more likely to exhibit populist attitudes.[17] This correlation

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[16] The individual-level dialect data and the IV strategy were first employed by Grogger, Steinmayr, and Winter (2020), who we follow

in the construction of the instrument. We discuss this in more detail in Section A.8 of the Supplementary Material.

[17] The populism scale is a question battery consisting of eight questions with a five-point response scale on (a) politicians talk too much and do too little; (b) normal people are linked by good and honest characters; (c) the people should have the last say on important policy

FIGURE 3.   Dialectal Distance, Self-Perceived Social Status, Anti-Elitism, and Out-Group Hostility
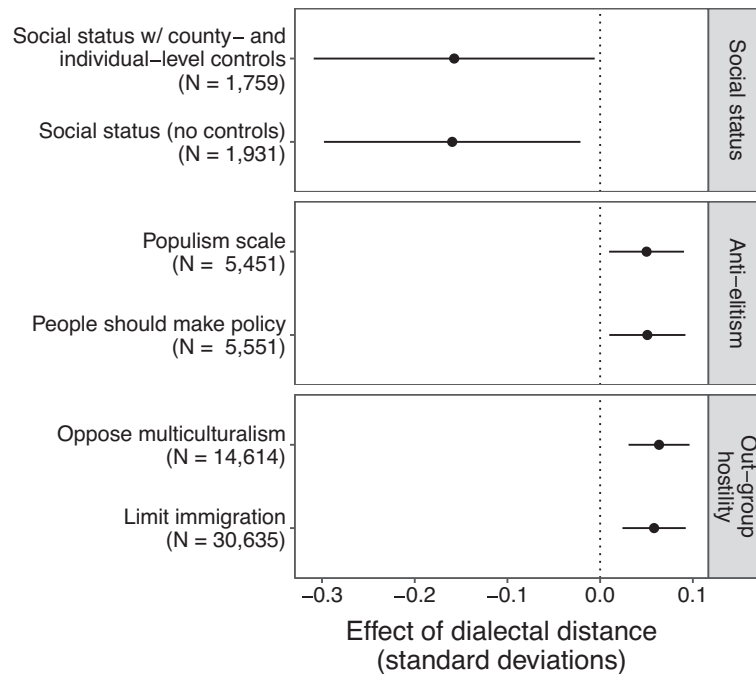
Note: We plot coefficients and 95% confidence intervals from six models, where we estimate the association between standardized dialectal distance and standardized measures of self-perceived social status, anti-elitism, and out-group hostility. Outcomes and sample sizes are indicated on the *y*-axis. Self-perceived social status comes from 2018 wave of the SOEP survey, while the other outcomes are taken from multiple pooled waves of the GLES survey. All outcomes are standardized, that is, the coefficients are changes in standard deviation for a one-standard-deviation change in dialectal distance. The models for the elitism and hostility outcomes follow the specification in model 1 in Table 2. For more information on the social status outcome, the associated estimation, and control variables, see Section A.11 of the Supplementary Material.

is driven by the anti-elite dimension of the populist scale included in the GLES, more specifically by the claim that *"people should make key policy decisions and not political elites."*

Turning to attitudes toward outsiders, we observe that strong nonstandard dialects are associated with a rejection of multiculturalism as well as calls for limits to immigration. A one-standard-deviation increase in dialectal distance is associated with a 0.07-standard-deviation increase in *"support of stronger limits to immigration."* We observe similar effects for opposition toward multiculturalism. Taken together, these findings are consistent with the proposed mechanisms which underlie the finding that peripheral regions are more supportive of the radical-right AfD party.

ROBUSTNESS

In addition to the main results, we conduct several additional checks to ensure that our results are not

driven by unobserved confounding, idiosyncrasies in the sample, the choice of covariates, the model specification, or the operationalization of the outcome.

In a first step, we show that the results are robust to including two additional controls. To ensure that our measure of dialectal distance is not confounded by a history of nationalism or racism, we add an indicator for a history of pogroms in the 1920s (taken from Voigtländer and Voth 2012) and the NSDAP (Nazi party) vote share in 1933 as additional controls. In columns 2 and 3 of Table A.8 in the Supplementary Material, we show that the effect size and significance remain unchanged when we include these controls.

Second, we demonstrate that our results are robust to an alternative operationalization of the outcome. As shown in the section "Contemporary Dialectal Data," our dialectal distance measure requires exact matches between characteristics of regional dialects and standard German. We relax this requirement in Table A.9 in the Supplementary Material. Here, we instead use the Jaro–Winkler distance, which takes into account words that are similar, but not exactly the same.[18] We

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decisions; (d) normal people work together for a common cause; (e) the differences between people and elites are larger than differences within the people; (f) people, not politicians, should make most important policy decisions; (g) parliamentarians should follow the will of the people; and (h) normal people share the same values and interests.

[18] See Cohen, Ravikumar, and Fienberg (2003) for a precise definition. As before, we calculate the distance for each of the 24 dialect characteristics and then average them, such

show that the choice of dialectal distance measure does not change our conclusions. Substantively, the effect sizes are similar to what we show in our main specification in Table 1.

Third, we use additional controls and fixed effects to alleviate concerns of unobserved spatial confounders. First, we add fixed effects for *Regierungsbezirke* ("administrative districts"), the administrative level below federal states.[19] While state fixed effects likely already account for a large degree of unobserved regional heterogeneity, the smaller administrative districts allow us to account for an even greater amount of spatial differences. As we show in Table A.10 in the Supplementary Material, adding administrative district fixed effects does not change our substantive conclusions. Second, we present results from alternative specifications that control for (i) the physical distance to Hannover and (ii) the physical distance to the German border (see Table A.11 in the Supplementary Material). We again find that the main result remains unchanged.

Fourth, we use a bootstrap approach to examine whether our results are affected by uncertainty in the measurement of our dialectal distance variable. As mentioned before, the county-specific dialectal distance measure is based on a sample of dialect quiz respondents who are from the county in question. To incorporate measurement uncertainty, we re-sample from all quiz respondents and then calculate all county-specific dialectal distances using the resulting five hundred bootstrap samples. We then re-estimate our main models for each bootstrap sample. In Section A.7.1 of the Supplementary Material, we show that incorporating measurement uncertainty in this manner does not change our conclusions

Fifth, we address post-treatment bias through the use of the sequential g-estimator (see, e.g., Homola, Pereira, and Tavits 2020, in a similar setting). As stated before, the majority of our control variables are likely measured after "treatment," that is, after the development of local dialects. In Section A.7.2 of the Supplementary Material, we demonstrate that our conclusions remain unchanged when accounting for post-treatment bias.

Finally, we use an alternative, design-based approach to estimate treatment effects. In doing so, we rely on the covariate balancing propensity score (CBPS) for continuous treatments (see Imai and Ratkovic 2014) to (1) estimate a propensity score model for treatment assignment and (2) obtain covariate balancing weights. The propensity score uses all covariates and state fixed effects that we include in our main model. While the dialectal distance treatment remains correlated with some of the covariates, CBPS weighting greatly improves balance. In Section A.12 of the Supplementary Material, we present the results. In the weighted models, the estimated coefficient for the relationship between dialectal distance and AfD voting is comparable in magnitude and significance to our base models.

Sensitivity to Unobserved Confounding

As an alternative approach to address confounding, we implement a sensitivity analysis (Imbens 2003). Although we already control for several social, demographic, and economic variables, it is impossible to account for *all* possible confounders. One alternative approach would be to find a suitable instrument for our dialectal measures. Yet finding an instrument that fulfills the exclusion restriction for dialectal distance —which has deep cultural and historical roots—seems unlikely.

Instead, we implement a sensitivity analysis to gauge how strong an unobserved confounder would have to be to invalidate our findings (for a more in-depth discussion of such methods, see Imbens 2003). We implement the sensitivity analysis using the method and package developed by Cinelli and Hazlett (2020). We use the main results from the second model in Table 1 as the baseline model for the sensitivity analysis.

In Figure 4, we present the results of the analysis. A point in the plot represents a hypothetical unobserved confounder. The x-coordinate represents the partial R^2 of the confounder with respect to the treatment (dialectal distance) and its y-coordinate represents the partial R^2 with respect to the outcome (radical-right voting). For reference, we have included the partial R^2 values for the unemployment rate as well as a hypothetical confounder that is twice as strong as the unemployment rate (see also Table A.13 in the Supplementary Material, where we show the same quantities for all covariates). The numbers shown next to the variable names in the plot indicate the effect size if an unobserved confounder with the same strength was included in the model. If we had failed to include a confounder that is as twice as strong as the unemployment rate—by far the strongest county-level predictor in our models—the estimated effect size would drop to 0.73. To put it differently, even if there was an unmeasured confounder as twice as strong as the unemployment rate, adding it would not change the substantive conclusions of our article.

CONCLUSION

Recent scholarship has made great strides in understanding how individual-level characteristics shape the proclivity for supporting the radical right (Gidron and Hall 2017; Hangartner et al. 2019; Inglehart and Norris 2016). Recent work in political science has begun to give equivalent attention to the question of how the local communities *where* voters reside shape their predisposition to vote for the radical right (but see also Bolet 2021; Eliasoph 2017; Fitzgerald and Lawrence

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that $d_i^{\text{J-W}} = \frac{1}{24} \sum_{k=1}^{24} d^{\text{J-W}}(X_i^k, X_{\text{Standard German}}^k)$, where $d^{\text{J-W}}$ is the Jaro–Winkler distance.

[19] The "administrative district" unit only exists in the four large states of Bavaria, Northrhine-Westfalia, Hesse, and Baden-Wuerttemberg. For all other states, the "administrative district" unit is not distinct from the federal state. Taken together, there are 31 administrative districts.

FIGURE 4. Sensitivity Analysis
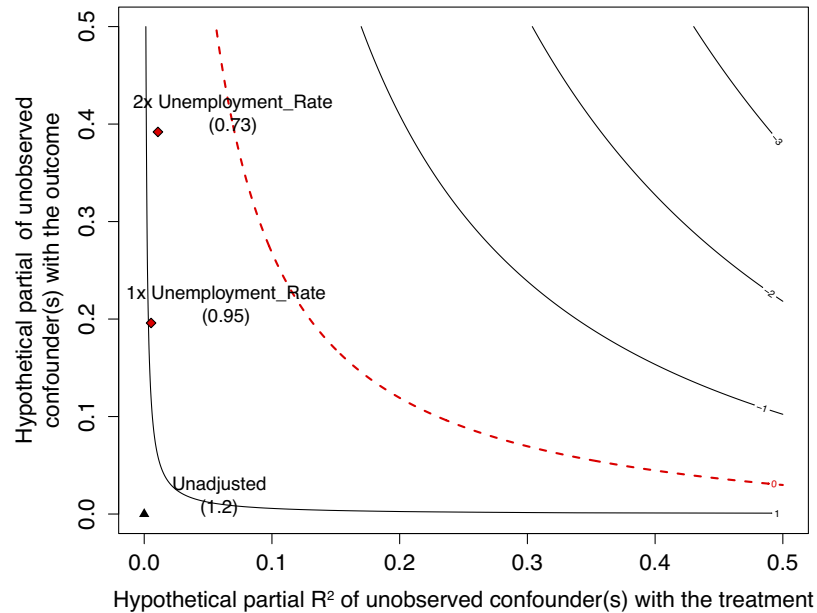
Notes: Results from the sensitivity analysis proposed by Cinelli and Hazlett (2020). The plot indicates how strongly confounders would have to be correlated with the treatment and the outcome to reduce the estimated effect size to zero (dashed red line). The original effect size from Table 1 is shown in the bottom-left corner—the scenario where there is no unmeasured confounding. The red diamond shape indicates partial correlations for unemployment rates and a hypothetical confounder that is twice as strong as the unemployment rate. The interpretation of the figure is as follows: if we were to include a confounder as strong as the unemployment rate, the estimated effect size would drop to 0.95. For a confounder that is twice as strong as the unemployment rate, the estimated effect of dialectal distance on radical-right voting would drop to 0.73.

2011; Munis 2021). We seek to speak to this question by studying how deeper, historical center–periphery dynamics voting for the radical right.

We argue that communities that were in the historical "periphery" during the center–periphery conflicts that shaped the formation of modern nation-states are more likely to vote for the radical right (Lipset and Rokkan 1967). This is because being in the periphery of a nation-state gives rise to identifiable and enduring lower status markers such as diverging social norms and dialects—which also correlate today with lower self-ranking on a social status scale, anti-elite sentiment, and outgroup hostility. This persistent feeling of being "left behind" renders voters susceptible to anti-elite and anti-immigrant political party appeals.

Empirically, we approximate peripheral communities by using original data on dialects in Germany, based on a unique online dialect survey of 725,000 respondents and a nineteenth-century linguistic survey. We then show that peripheral communities are indeed more likely to vote for the radical right—both on the aggregate level and the individual level. We also demonstrate that this correlation is unlikely to be driven by omitted variable biases.

Before moving on, we highlight two empirical caveats of our analysis. Given the topic at hand, we cannot make use of a quasi-experimental or experimental strategy to assess the effect of aggregate-level dialectal distance. While our sensitivity analysis

suggests that our results are unlikely to be driven by unobserved confounding, we nevertheless stress that our results are correlational in nature. Second, our main independent variable (dialectal distance) was not purposefully collected to measure county-level dialectal distance. For smaller counties, this may result in some measurement error, even though the total number of respondents is very large. We partially address this through a bootstrap approach in Section A.7.1 of the Supplementary Material and through validation using the historical data in Section A.5 of the Supplementary Material. Yet we cannot completely rule out that our aggregate dialectal distance indicator is subject to measurement error for small counties.

Our focus on how dialect reflects Lipset and Rokkan's (1967) classical cleavage between center and periphery represents a new perspective in the study of electoral behavior. A long-standing field of sociolinguistics has repeatedly demonstrated that speaking is more than a linguistic act; it is a social act and correlates with different patterns of self-presentation, and identification (Labov 1963). We have demonstrated that language can be political too. Given the enduring importance of regional dialects in many national settings around the world (Garrett 2010; Upton and Widdowson 2013, 200–24), the electoral consequences of location-specific dialects are a promising area of research.

This line of research, we believe, is relevant, furthermore, because one of the emerging dynamics within established democracies is the "return" of geography (Rodden 2019). The drivers of radical-right populism, it has become clear, do not always unfold evenly across a country's territory but instead have a spatial component—some locations are more prone to political radicalization than others (Charnysh and Finkel 2017; Charnysh and Peisakhin 2022; Patana 2020). Existing research has made clear the economic roots of this (Autor et al. 2016). Likewise, in established democracies, growing economic inequality, it has been argued, has activated the type of reactionary identity politics that fuels nativism and right-wing radicalism (Piketty 2020). Less appreciated, however, to date is how economic geography interacts with non-material social patterns—local patterns of social identification, culture, and norms—that predispose certain communities to vote more for the radical right than others. As this article has made clear, understanding the interaction of economic geography and these less-studied cultural attributes of local communities in cross-national perspective remains a promising area for future research.

SUPPLEMENTARY MATERIAL

To view supplementary material for this article, please visit https://doi.org/10.1017/S0003055423000862.

DATA AVAILABILITY STATEMENT

Research documentation and data that support the findings of this study are openly available at the American Political Science Review Dataverse: https://doi.org/10.7910/DVN/MP1AKL.

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CONFLICT OF INTEREST

The authors declare no ethical issues or conflicts of interest in this research.

ETHICAL STANDARDS

The authors affirm this research did not involve human subjects.

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