A Categorization Theory of Issue Voting: How the Center Divides the Political Space

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Abstract

We present a categorization theory of spatial voting, which postulates that voters care whether parties are on their side of the ideological scale. Accordingly, we identify discontinuities in party preferences, reflecting coarse categories separated by the political center. We argue that these categories are defined by the geometric middle of the scale, rather than the perceived status quo of public policy, as a directional logic would imply. When such a categorization is insufficient to distinguish between parties, voters need an additional decision rule, and we find that voters apply a proximity criterion in these cases. Consistent with this two-stage logic, proximity is twice as important when categorization does not provide a clear vote choice. Our findings suggest that voters' evaluations of parties are characterized by a non-trivial identity component, generating in-group biases that are not captured by the existing spatial models of voting.

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Politics is about sides. It is about knowing your friends and your opponents; it is about groups, sharing goals and values. The most general groups are defined by their side of the center. We thus speak of liberal and conservative voters; left- and right-wing parties.[1] Commentators do so as a matter of course; it would be strange if voters were any different. Yet, none of the existing theories of spatial voting captures this logic. The dominant proximity theory simply posits that voters will prefer the party closest to themselves (e.g., Downs 1957; Westholm 1997). The alternative directional theory (Rabinowitz and Macdonald 1989) divides the political space into two directions of policy change, but, as we show here, its theoretical underpinnings are substantively different and consequently it fails to capture the effect we hypothesize.

We offer a categorization theory of issue voting, starting from the observation that humans routinely categorize the objects they perceive, as a way to simplify the world (e.g., Edelman 1992; Kelly 1955). We argue that voters operate with general ideological categories that require significantly less information than the estimation of more exact spatial positions. Several lines of research have shown that categorization tends to influence how objects are perceived. In particular, individuals tend to minimize the differences between observations falling in the same category and maximize the differences between those falling in different categories (e.g., Tajfel and Wilkes 1963). Social identification theory extends this idea to social categorizations, holding that individuals in part derive their identities from group memberships and therefore exaggerate the differences between group insiders and outsiders (e.g., Tajfel 1982). We argue this also applies to spatial voting: Ideological categorization is not just practical; self-categorization is also an expression of identity. As a consequence, we predict that voters form their party preferences based in part on whether parties fall into the same broad category as themselves.

Such categorical thinking challenges and qualifies existing spatial theories, which treat the political space as a continuum. Parties falling in the same category as voters receive a bonus, beyond what would be predicted by other spatial theories. However, as categorization is an insufficient selection criterion when voters have multiple parties on their side, voters are often forced to apply more specific criteria. In our analyses, we find a clear proximity pattern on top of the categorization effects. Furthermore, we find that the proximity effect is almost twice as strong for parties on the same side as voters. This is in line with our expectations, as the need to make finer distinctions mainly exists for these parties that are plausible contenders for an individual's vote.

We begin by presenting the main theories of spatial voting, but only briefly, given the vast

[1] Employing European data, we focus on parties, but we might as well have presented our argument in terms of individual candidates in a two-party setting.

existing literature. We then introduce our categorization theory and show how other models fail to capture the effects we predict. Next, we present visual analyses demonstrating clear discontinuities of the kind we hypothesize. As a way of more systematic testing of categorization theory, we first provide evidence based on critical cases that distinguish unambiguously our predictions from those of other theories. We then run a set of full-sample regression analyses, showing that categorization qualifies the impact of other spatial criteria. Before we conclude, we investigate empirically two theoretical implications of our model. The first relates to the conceptualzation of the neutral point in survey issue scales. The second refers to the way endogeneity between issue perceptions and party preferences should manifest itself empirically, given the presence of categorization effects. The conclusion elaborates on the implications of our findings.

Existing Theories

Spatial theories of voting share the assumption of rational voters who choose the alternative that gives them the highest utility based on spatial considerations. They differ, however, in the utility functions that translate the policy positions of voters and parties into utility losses. The most straightforward model of vote choice, the"proximity model" (Davis, Hinich and Ordeshook (1970); Downs (1957); Enelow and Hinich (1990)), holds that individuals vote for the parties whose positions are the most similar to their own. For a given political dimension, we calculate the *Proximity Term* for voter i and party j as the absolute distance between the position of the voter (v_i) and the position of the party as perceived by the voter (p_{ij}), i.e. $|v_i - p_{ij}|$.[2] This term is expected to have a negative coefficient, as it captures distances that voters are expected to penalize. The utility curve implied by the model peaks where voters and parties are at the same position. This is shown in the left panel of figure 1, which displays the utility for parties located at 2, -1 and -3, on a dimension from -5 to $+5$ as a function of an individual's position along the same dimension.

[2] An alternative to the absolute or "city-block" distances between v_i and p_{ij} is to use squared "Euclidean" distances, i.e. $(v_i - p_{ij})^2$. However, this alternative tends to give a worse fit than absolute distances. In a study of candidate ratings, for example, Merrill (1995, 283) notes that "the linear proximity function outperforms the quadratic function in all cases ... suggesting that the linear form may be preferable" (see also Lewis and King 1999, 24, fn. 5). As can be seen in figures 4 and 5 below, this is also the case here. Therefore, we focus on the specification with absolute distances. The alternative would not give substantially different results, however.

Rabinowitz and Macdonald (1989) present a competing "directional model", drawing on earlier work on issue perception and symbolic politics (Rabinowitz 1978; Sears et al. 1980; Stokes 1963). The authors argue the assessment of political parties or candidates reflects two considerations. The first is "whether the individual and candidate are in agreement about the direction public policy should take" (Rabinowitz and Macdonald 1989, 96). If individuals and parties prefer the same direction, this will contribute positively to party assessment, if they do not, the contribution will be negative. Second, the authors argue that the strength of the contribution to party assessment will be an interaction of the intensities with which the voter and party is emphasizing a given direction. The further they both are from the "neutral point", the stronger the response. We discuss the concept of the neutral point in a later section. For now, suffice it so say that it is the point at which no desired policy change is implied.

Following Rabinowitz and Macdonald (1989), we thus calculate the *Directional Term* as $v_i \times p_{ij}$, where the notation is the same as above, and v_i and p_{ij} are centered on the neutral point. As shown in the right panel of figure 1, for a given party at a given position, an individual's directional utility of voting for the party is a linear function of the individual's own position. If the party is at the neutral point, the utility is constant at 0. If the party is at a given side, the utility will increase linearly as an individual moves towards that side, crossing 0 when the individual crosses the neutral point. The role of the party positions is to change the slope of the function: The further the party moves from the neutral point, the steeper the slope. The same holds for individuals' positions, of course: They change the slope of the utilities as a function of party positions.[3]

Both in theoretical discussions and empirical studies, the intensity aspect of directional theory has overshadowed the directional aspect. The motivation behind most work in this area has been to solve the puzzle of the "empty center": The question of why parties and candidates appear to be more extreme than voters (Iversen 1994*a*). This emphasis on the intensity part of the model has also motivated the accumulation of numerous mixed models of spatial voting. Perhaps most important among these is Grofman's (1985) discounting

[3] Rabinowitz and Macdonald (1989) also qualified their model, suggesting that parties located outside the region of acceptable policy platforms will be punished by directional voters for being too extreme. However, as Westholm (1997) has noted, it is problematic to conceptualize the region of acceptability within a directional framework: The idea that parties are too extreme is inherently based on a proximity logic. Moreover, few empirical studies have taken this idea into account. Even the originators of directional theory abandoned this idea in their more recent research (Macdonald, Rabinowitz and Brasher 2003; Macdonald, Rabinowitz and Listhaug 2007). We thus leave this issue aside here.

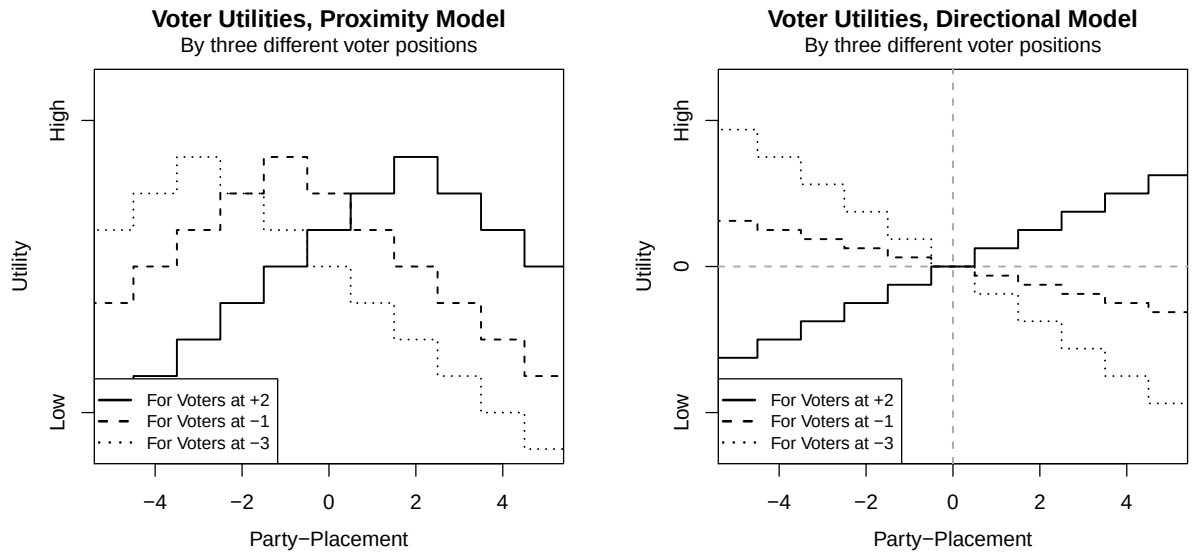

Figure 1: Voter Utilities according to the Proximity and Directional Model.

model (Merrill and Grofman 1999), further elaborated by Iversen's representation model (Iversen 1994*b*). The key idea is that parties are unable to fully implement their proposals, due to within-party dynamics (Iversen 1994*b*) or due to systemic constraints in multiparty systems with coalition governments (Kedar 2005). Thus, voters are led to prefer parties more extreme than themselves to get the amount of policy change they would like. These models are all based on a proximity calculus, adjusted to take into account the gap between parties' policy proposals and their actual policies (Adams, Bishin and Dow 2004; Adams, Merrill and Grofman 2005; Fiorina 1992).[4] We leave these additional models aside here, as they do not capture the effects we hypothesize to any greater extent than the two main theories that we focus on.

In addition to the development of mixed models, a vast literature has emerged, trying to assess the relative merits of the proximity theory and the directional theory (e.g., Macdonald and Rabinowitz 1998; Macdonald, Rabinowitz and Listhaug 1998, 2001, 2007; Pardos-Prado and Dinas 2010; Westholm 1997, 2001). Lewis and King (1999) argue, however, that arguments about which theory fits best tend be based on assumptions that are hard or impossible

[4] Merrill and Grofman (1997, 1999) follow the alternative strategy of a "unified" model, encompassing a squared proximity term, as well as directional components, separating the intensity part and a purely directional part. The authors trace the purely directional component back to Matthews (1979), and implement it as the cosine of the angle between voter and candidate.

to test (see also Merrill and Grofman 1999). Recently, several experiments have brought the debate forward, concluding overwhelmingly in favor of proximity theory. Claassen (2007) reports an experiment, "vindicating Downs's assertion that proximity matters and direction does not." Tomz and Van Houweling (2008) draw a similar conclusion, as do Lacy and Paolino (2010, 469), who find it "remarkable that all three [studies] point to the same conclusion." There is little doubt that proximity theory has considerable predictive power in voting behavior. We believe, however, that the existing theories of spatial voting, including proximity theory, overlook an important pattern, reflecting categorization effects.

Categorization Theory

Research in cognitive science has repeatedly demonstrated that humans use coarsened perceptual schemas that simplify information processing (Goldstone 1995; Keil 2003; Mermillod, Guyader and Chauvin 2005). It is also well established that merely placing objects in categories may influence individuals' perceptions and evaluations of these objects (e.g., Krueger and Rothbart 1990; Newcombe and Liben 1982; Stangor et al. 1992; Taylor et al. 1978).[5] Experimental evidence supports this view. In conditions of uncertain information individuals seem to choose the most likely category given the observed data and ignore alternative categories (Malt, Ross and Murphy 1995; Murphy and Brian 1994; Murphy and Andrei 2004). Accentuation theory further holds that individuals minimize the differences between observations falling in the same category (assimilation) and maximize the differences (contrast) between those falling in different categories (e.g., Eiser and Stroebe 1972; Tajfel 1959, 1969; Tajfel and Wilkes 1963).

A study by Krueger and Clement (1994) illustrates such effects nicely. When asked to estimate the temperature in Providence, Rhode Island, subjects showed no general pattern of over- or under-estimation. However, they showed a remarkable tendency to shift their estimations disproportionally when the month changed. Thus, between two equally spaced days, the average difference in estimated temperatures was smaller when both days were in same month than when they were in adjacent months. As suggested by Mullainathan (2002, 7), the intuitive explanation of this pattern is that the subjects used the month as a category of reference in their estimates.

Accentuation theory has also been extended to social categorization effects through social identification theory, based on the observation that individuals also categorize people, including themselves (see e.g., Huddy 2001). Social identification theory holds that individuals

[5] Such effects have more recently also been formalized and explored in economics (e.g., Mullainathan 2002; Mullainathan, Schwartzstein and Shleifer 2008).

in part derive their identities from self-perceived group memberships, and will attach value and feelings to such memberships. This in turn leads them to focus on, and exaggerate, the differences between group members and outsiders (e.g., Tajfel 1982). Widespread findings of in-group favoritism support this theory (e.g., Brewer 1979).[6]

We argue that these findings are relevant to spatial voting, because voters operate with basic mental categories representing the sides of the political center. Psychological models of associative thinking emphasise the role of mental categories in how indivudals perceive political stimuli (Becker 2008). Categories provide rich descriptions of parties' traits (Mullainathan, Schwartzstein and Shleifer 2008). In particular, this applies to the most important political dimension in a given political system, yielding two encompassing categories. In the American setting, this is illustrated by the commonplace categorization of candidates as liberal or conservative. In a two-party setting, such as the American, the distinction between parties and ideological sides may not make much of a difference, as candidates tend to self-select into one of two parties (Levendusky 2009; McCarthy, Poole and Rosenthal 2006). In a multi-party setting, however, the general groups defined by their side of the center may contain several parties and their respective supporters. In such systems, it is thus common to speak of left- and right-wing parties.

The categorization of political actors according to their perceived side of the ideological scale is likely to involve the use of prototypes (Lakoff 1987; Rosch 1978; Spencer et al. 1998; Turner et al. 1987). A prototype left-wing actor, for example, may emphasize social and economic equality and express a willingness to use public policy to promote these values, while a right-wing actor may emphasize individual responsibility and freedom from government intervention. Theories of party branding exemplify this logic. Voters are assumed to perceive parties' placements in salient dimensions not as point in continua, but as signals of their prototypes, i.e. what parties stand for (Lupu 2013). Their evaluations are then based on a such coarsened comparative fit: ingroup affinities and outgroup differences (Turner 1999). Employing such basic categories requires significantly less information and deliberation than a more accurate estimation of spatial positions, which would also imply more detailed rankings of different actors. Nevertheless, especially among low-information voters, this coarse categorization process is still likely to also be facilitated by cues from better-informed sources (Popkin 1991; Sniderman, Brody and Tetlock 1991).

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[6] While categorization effects have generally received little attention in political science, it is possible to trace the idea that social identification plays a role in shaping party preferences back to Campbell et al. (1960). This perspective has also more recently proven useful for understanding American partisanship (Green, Palmquist and Schickler 2002; Greene 1999, 2004). Here, however, we focus on the larger categories defined by their side of the center.

We expect voters to assess and be conscious of their own side of the ideological center. As ideological positions tend to be highly consistent over time (Sears and Funk 1999; Zuckerman, Kotler-Berkowitz and Swaine 1998), we further assume that these self-categorizations matter for voters' identities, expressing some of their most fundamental values and attitudes. As a consequence, we expect voters to assess whether a given party falls in the same category as themselves, in other words, whether the party is on their side – thus being one they broadly agree with and potentially could vote for. Our main hypothesis is that voters on a given side of the center will favor parties on the same side as themselves. Allowing for the existence of a neutral center category, we also expect voters to penalize parties on the opposite side, more than those in the center.

This parsimonious model has several interesting implications. The first relates to the utility function applied to link political issues with party preferences. As is further explicated in the next section, our categorization theory implies effects not captured by previous theories of spatial voting. The second implication involves the notion of the neutral point. While both our categorization theory and directional theory involves a neutral point, they differ in how this point is conceptualized. The neutral point is a crucial, but also an ambiguous part of the directional model. In his precursor to current directional theory, Matthews (1979) explicitly let the policy status quo define directions of policy change. However, Rabinowitz and Macdonald (1989) refer instead to the neutral point, whose relation to the status quo is less clear. According to their theory, being on a given side of the neutral point signifies the desired direction of policy-making, which seems to imply that the neutral point is equal to the perceived policy status quo. Nevertheless, most studies have followed Rabinowitz and Macdonald in using the geometric center of the scale, at least in part because relevant measures of the status quo hardly exist. The exceptions are a few studies that use the incumbent's policy position as the neutral point (Cho and Endersby 2003; Dow 1998). This may be preferable, but it seems the ideal operationalization according to directional theory would directly capture the policy status quo as perceived by voters (Lewis and King 1999).

In contrast, the policy status quo plays no role in our model. The effects we hypothesize are due to mental categorizations, and we expect voters to apply these to survey scales in a symmetric fashion. The categorization model only requires voters to distinguish between the two sides, representing different categories of political visions or basic values. That is to say, we assume that party- and self-placements along ideological continua largely capture "absolute" rather than "relative" policy preferences, to use the terms of the dynamic representation literature (Erikson, MacKuen and Stimson 2002; Wlezien 1995). It is quite rare for parties or candidates to be perceived to shift sides along a key political dimension. If it does happen, it is most likely because they signal a change in their position, and not because the status quo moved past them, redefining their position. Using a dataset explicitly tailored

to distinguish the two competing claims, we find support for our conceptualization of the neutral point.

Third, in contrast to prior theoretical accounts that treated spatial voting as a building block of rational choice models of voting (e.g. Clarke et al. 2004), our theory postulates that spatial voting involves a nontrivial identity-based element that makes voters perceive their political alternatives in a discontinuous fashion. For a moderate left-wing voter, a radical left party may be preferable to moderate right-wing party, even when distance alone would predict otherwise. According to our theory, this is not because the former advocates policy change in a leftist direction with higher intensity, as directional theory would suggest, but because one party fits the left as a reference category, while the other does not. In this respect, our study joins new social-identity based theories of party branding, which reconcile the Michigan—identity-based— conceptualization of party identification with attitudinal updating and partisan lability (Lupu 2013). By the same token, categorization points to the role of group-oriented thinking in issue voting.

Fourth, the conclusion that voters think in terms of categories reconciles the logic of spatial voting with the possibility of reverse causation from preferences to party perceptions. A common challenge to analyses of proximity voting relates to a phenomenon known as projection or rationalization bias, which entails two processes: Rather than opting for the party closest to them, individuals might bring their preferred party closer to their own ideal point (assimilation effects); and/or they might adopt the position of this party (persuasion effects). Given the utility maximization principle of spatial models, these endogenous processes complicate the identification of issue voting effects. In the current setting, however, the issue of reverse causation is embedded within the theoretical framework of categorical thinking, which seeks to identify the lenses through which voters understand politics. While it is possible that some voters bring parties they like over to their side to justify their preferences, this would only confirm that voters do think in terms of these broad categories. In effect, if our theory is correct, we should observe side-effects in the presence of projection bias. Our empirical analyses confirm this expectation.

The Empirical Model

If voters truly care whether parties are on their side or not, then some steps along the ideological scale will be more significant than others. In other words, we expect party preferences, as functions of party and voter placements, to exhibit discontinuities at the center of the scale. The expected discontinuous effects of being on same- and opposite sides are most easily illustrated keeping either voter or party positions fixed. If we keep voters' positions fixed, for example, a party's status of being on the same side as the voters will

simply be a function of the party's placement on a given dimension. Figure 2 illustrates the expected pattern for voters who place themselves left of center.

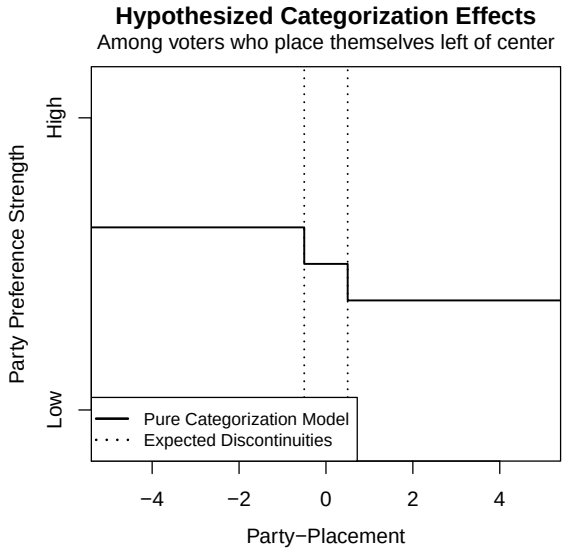

Figure 2: Hypothesized Categorization Effects.

Assuming the existence of a neutral category, we believe the effect of being on the same side may be different from that of being on opposite sides. In the parametric set of our analyses, we therefore employ two dummy variables to capture the states of relevance. Indicator S captures *Same Side* status: $S = \{1 \text{ if } v_i \times p_{ij} > 0; 0 \text{ if } v_i \times p_{ij} \leq 0\}$, while indicator O captures *Opposite Side* status: $O = \{1 \text{ if } v_i \times p_{ij} < 0; 0 \text{ if } v_i \times p_{ij} \geq 0\}$, where the voter and party positions (v_i and p_{ij}) are centered on the geometric middle of the scales. Implementing the categorization model as a regression equation, we get:

$$Y_{ij} = \beta_0 + \beta_1 S_{ij} + \beta_2 O_{ij} + \varepsilon_{ij}, \tag{1}$$

where β_0 denotes the average utility in the neutral category, β_1 and β_2 are the effects of same and opposite side status, and ε_{ij} is an error term.

It should be clear by now that the dominant models of spatial voting fail to capture the effects we hypothesize. The directional comes the closest, as it is meant to capture agreement on the direction of policy change by yielding a score that is positive if voters and parties prefer the same direction, and negative if they do not. This will create a correlation between the directional model and the categorization model, depending on the operationalization of the directional neutral point (as discussed above). However, as shown in figure 1, for a given voter (or party) position, the utilities of the directional model continue across the center of the scales in a linear fashion, increasing as long as the party (or voter) moves towards the

extreme. According to the directional model, a step that moves a voter or party across the neutral point has the same marginal effect on voter utilities as a step of similar length that maintains the status of being on a given side. This argument also applies to the proximity model and the discounting model.

Still, in a setting with many parties, a pure categorization model is unlikely to be adequate on its own. After a basic categorization in terms of sides, voters may thus have to attempt a more finely grained assessment, applying additional functions of party and voter positions. This implies a model of this kind:

$$Y_{ij} = \beta_0 + \beta_1 S_{ij} + \beta_2 O_{ij} + f(v_i, p_{ij}) + \varepsilon_{ij}, \tag{2}$$

where $f(v_i, p_{ij})$ is an unspecified function providing further distinctions.[7] If voters were to apply a proximity logic based on absolute distances, we would get a pattern like that in the left panel of figure 3, while a directional logic would yield a pattern like that in the right panel. For now, however, we remain agnostic about which other functions voters may apply.

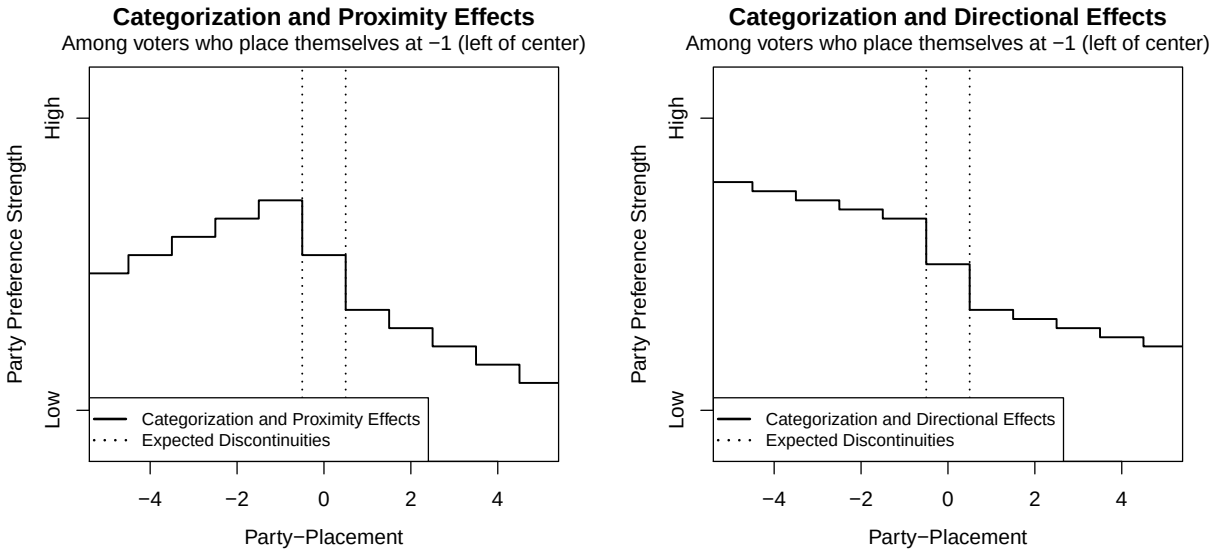

Figure 3: Categorization Effects with Proximity and Directional Effects.

We can, however, make one more prediction about the role of any such additional criteria. It is clear that the need for voters to make further distinctions is greater when several parties

[7] Analytically, we may think of $f(v_i, p_{ij})$ as a baseline function, from which we seek to isolate the impact of categorization. Theoretically, however, we believe categorization is a more fundamental process, taking place before finer distinctions are drawn, which is why we refrain from using the term baseline.

are on their side. Voters need to pick a winner of their vote, not a loser. Thus, whichever additional function voters apply, we may expect its effect to be stronger, when voters and parties are on the same side. The less information is provided by categorization in differentiating between parties, the more voters need to apply additional criteria. Using the insights of categorical thinking, voters are assumed to first choose the category most likely given their available information. Since categories can collapse different underlying types, however, categorical thinking is not sufficient to distinguish between these types (Mullainathan 2002). This is where more fine-grained rules are needed. To incorporate this expectation, equation (2) needs to be augmented by the inclusion of appropriate interaction terms:

$$\begin{aligned} Y_{ij} = \beta_0 \quad &+ \quad \beta_1 S_{ij} + \beta_2 O_{ij} + f(v_i, p_{ij}) \\ &+ \quad \beta_3 (S_{ij} \times f(v_i, p_{ij})) \\ &+ \quad \beta_4 (O_{ij} \times f(v_i, p_{ij})) + \varepsilon_{ij}, \end{aligned} \tag{3}$$

The empirical analysis is divided into four main sections. First, we present a set of illustrative results, making no assumptions about $f(v_i, p_{ij})$. Thus, without imposing a specific spatial utility function, we explore the presence of categorization effects using specific scenarios of party and individual ideological placements. These analyses are then accompanied by further tests of the categorization model, based on the selection of critical cases, whereby the predictions of categorization theory differ from the predictions of the proximity and directional model. Taken together, these sets of results clearly speak in favor of a combination of categorization and proximity effects. For this reason, our third analysis focuses on this combination, investigating the two-step process that our theory predicts. We then examine empirically two further implications of our theory. The first relates to the conceptualization of the neutral point. Our analyses show that voters tend to apply categories defined by the center of survey scales, as we predict, rather than the policy status quo, as directional theory implies. The second alludes to the presence of projection bias. Again, in accordance to our predictions, we find significant side-effects in voters' tendency to misplace parties in conjuction to their non-ideology based party preferences.

Data and Operationalization

To test the role of categorization as a general feature of spatial voting, we use data from the European Election Study (EES 2011), which covers a wide range of countries. We focus on the dominant ideological dimension in these countries, which is the left-right continuum. The EES includes 11-point measures of left-right positions (scales from 0 to 10) for

both voters and parties.[8] To ensure homogeneity in the meaning attached to this scale, we concentrate on established democracies.[9] We thus base our analysis on 15 EU countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the United Kingdom.[10]

To measure utilities, we use the respondents' ratings of the parties, expressed as their likelihood of ever voting for them.[11] This "propensity to vote" (PTV) question facilitates cross-national comparisons and is often used to capture voters' party preferences (van der Eijk and Franklin 1996; van der Eijk et al. 2006). We refer to the answers to this question as either voter utilities or party preferences. It also needs to be noted that our unit of analysis is neither voters, nor parties, but rather combinations of voters and parties. We thus transform our dataset to one consisting of party $\times$ individual observations.

We expect voters to use category 5 on the 11-point scales as a neutral category defining two broader categories on each side. To ease the construction and interpretation of the

[8] 11-point scales have been found to have higher validity than other left-right measures (Kroh 2007). This particular question was phrased the following way: "In political matters people talk of 'the left' and 'the right'. What is your position? Please indicate your views using any number on a scale from 0 to 10, where 0 means 'left' and 10 means 'right'. Which number best describes your position?" With regard to party positions, the order of the parties was rotated across respondents.

[9] A voluminous literature has emphasized the differences in the content attached to ideological labels in new democracies (Evans and Whitefield 1998; Shabad and Slomczynski 1999; Whitefield 2002; Zechmeister 2006).

[10] In all these countries, data were collected using phone interviews and all samples contain 1000 respondents. Coverage was national, and the sampled universe was the general population, aged 18 and over. The sampling procedure was RDD, selecting the individuals with the most recent birthday within selected households. Fieldwork was carried out between June 5 and July 9, 2009. The response rate was lowest in the Netherlands (.109) and highest in Portugal (.464), while the UK had the median response rate among the relevant countries (.179). These response rates are calculated as RR1, according to the *AAPOR Standard Definitions*: $\frac{I}{(I+P)+(R+NC+O)+(UH+UO)}$.

[11] The question was phrased this way: "We have a number of parties in [this country] each of which would like to get your vote. How probable is it that you will ever vote for the following parties? Please specify your views on a scale where 0 means 'not at all probable' and 10 means 'very probable'." The order of the parties was rotated across respondents.

relevant terms, we center the scales on 5, giving them a minimum of −5 and a maximum of +5. It is important to note, however, the survey questions and answer categories do not in any way involve a neutral point, middle, or sides defined by a threshold. They are presented as continuous scales that would seem more for fit employing a pure proximity logic. Thus, if voters are found to understand such a scale in terms of broader categories, without being asked to do so, this will be valuable evidence against a pure proximity logic.

Non-Parametric Analysis

Choosing to be agnostic about the possible additional utility functions voters apply, we begin with visual analyses, imposing no parametric restrictions. Our analyses are based on local sample means, conditional on party and voter placements. As discussed above, keeping voter positions fixed, the status of being on same or opposite sides becomes a deterministic function of party positions, and vice versa. As before, we would expect discontinuities on each side of the center.

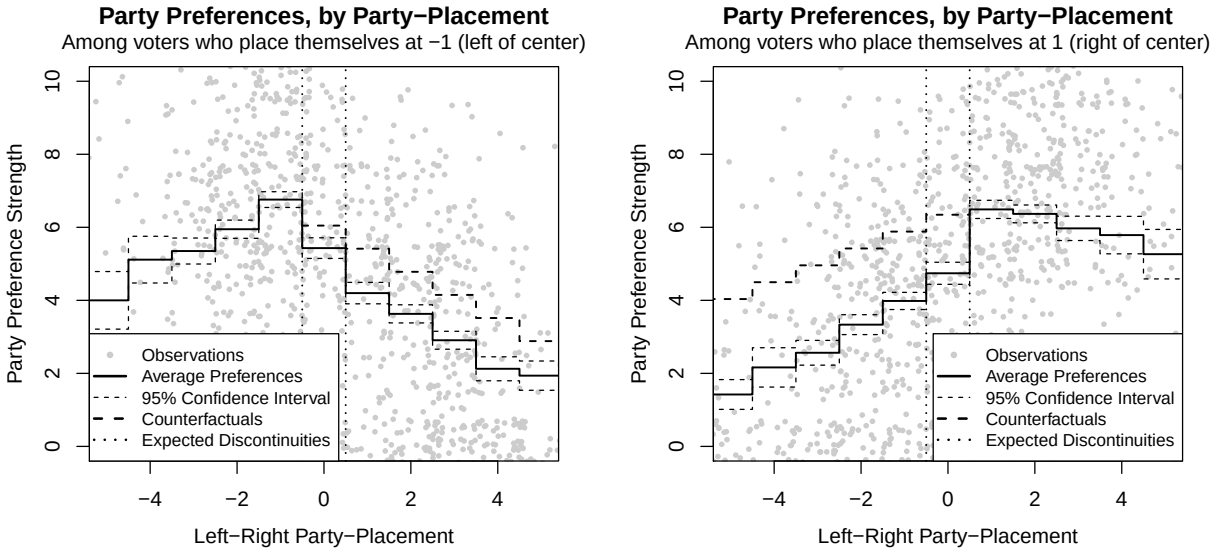

Figure 4: Categorization Effects for Two Voter Placements.
Note: The dots are jittered and represent a random subsample of 1000 observations.

The left panel of figure 4 shows the average party preferences of voters placed at −1 (left of center) over different party positions, while the right panel shows the same for a voter at +1 (right of center).[12] As the figure shows, there are clear discontinuities as we

[12] In these plots, we only include observations (party × individual combinations) where

move from parties on one side of the center to the other side. This would not be expected based on a pure directional or proximity model. The discontinuities come in addition to a pattern of finer distinctions, which in both panels of the figure are almost perfect examples of what the proximity model with absolute distances would predict. We have therefore added "counterfactual" lines, according to an absolute proximity pattern, to illustrate what categorization adds to this pattern.

Figure 5 shows the same, but keeping parties fixed rather than voters. The panel on the left shows the average party preferences of voters placing the party in question at -1 (left of center), over voters' own positions. The panel on the right does the same for parties at $+1$ (right of center). We see clear categorization effects in the left panel, with a particularly large drop moving from a voter on the same side, to one that is neutral. Moving to a voter on the opposite side appears to have less effect in this case, but the strong effect of being on the same side, means the total effect of moving from same to opposite sides is still considerable. For parties at $+1$, the effects are less clear, but they still seem to be there, albeit with a lower magnitude. In sum, these model-free analyses yield two conclusions: First, we find discontinuous categorization effects in voters' party preferences. Second, in addition to categorization in terms of sides, voters appear to apply a proximity function with absolute distances.

Formalized Tests of Categorization

To strengthen the inference that categorization matters, we also conduct more formalized tests, carefully selecting the observations to be compared. As Tomz and Van Houweling (2008, 305) point out, while the set of possible permutations of individual and party positions may seem endless, only a small portion of them help us distinguish between the main models of spatial voting, as they often produce the same predictions. We face a similar challenge in identifying categorization effects, albeit to a lesser degree, as we focus on preferences for multiple parties, rather than the ranking of two alternatives. Still, our model would in many cases lead to quite similar predictions as one or both of the other models we consider. The cases we must rely on for proper inference are the other "critical cases," where the models

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the parties are placed on the same side as the parties' median placements across their respective survey samples. We further exclude minor parties, defined as parties with an average preference below 3. This makes the pattern somewhat clearer, as observations of minor parties contain more noise. Unless otherwise staed, later analyses include all observations to estimate more general effects.

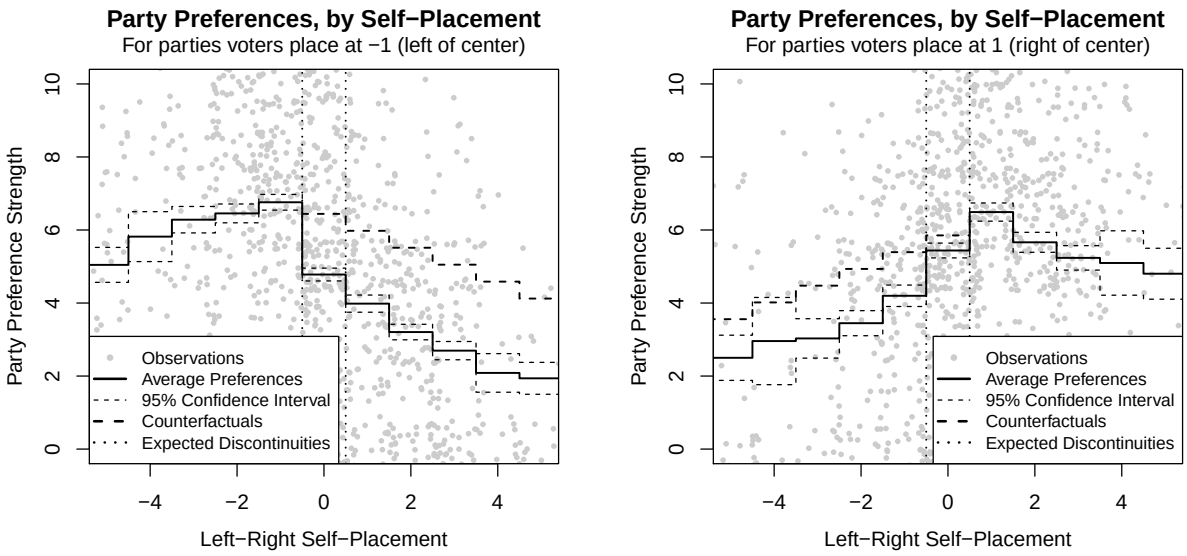

Figure 5: Categorization Effects for Two Party Placements.
Note: The dots are jittered and represent a random subsample of 1000 observations.

produce clearly diverging predictions.[13]

Our goal is to distinguish our model from the directional model, while neutralizing the influence of the proximity model. We conduct four tests, each involving a pair-wise comparison of two scenarios. We thus have eight scenarios, each involving one voter position, and two party positions. As illustrated in figure 6, the "treatment" scenario of comparison 1 (1_T) involves a voter (V) at -1, a party (P_A) at -3, and another party (P_B) at 1. The parties are at an equal distance (2 points) from the voter, so according to the proximity model, the voter should be indifferent with regard to the parties ($2 - 2 = 0$). According to directional theory, however, V should prefer P_A. The directional scores are 3 and -1 for party A and B, respectively. The difference between the scores is positive ($3 - (-1) = 4$), which is in A's favor. The "control" scenario of comparison 1 (1_C), is created by moving the positions two steps left on the scale. V is now at -3, P_A is at -5, and P_B is at -1. According to proximity theory, nothing has changed, and the voter should still be indifferent. According to directional theory, however, things are now much more clear-cut: The directional values are 15 and 3 for party A and B, respectively. While the difference in the directional scores

[13] To be sure, some of these cases may favor one model whereas others favor a different model. If some permutations are more frequent than others, the conclusion regarding which model performs better will be dependent on the distribution of these "critical cases" within a given sample (Tomz and Van Houweling 2008).

for P_A and P_B according to the directional theory was 4 in scenario 1_T, it is 12 in scenario 1_C. If directional theory is correct, we should expect V to prefer P_A to P_B to a higher degree in the second rather than the first scenario.

Our categorization model produces a different prediction. In scenario 1_T, party A is on the same side as the voter, while party B is on the opposite side. In scenario 1_C, both parties are on the same side as the voter. Hence, according to the categorization model, V should prefer P_A over P_B to a greater extent in scenario 1_T than in 1_C – in contrast to the predictions of the directional and proximity models. As figure 6 shows, we also investigate scenarios that replicate the ones just presented, but on the right side of the scale. The scenarios are all constructed so that the theoretical models yield the same predictions for each comparison: The proximity model predicts no effect, the directional model a negative effect, and the categorization model a positive effect.

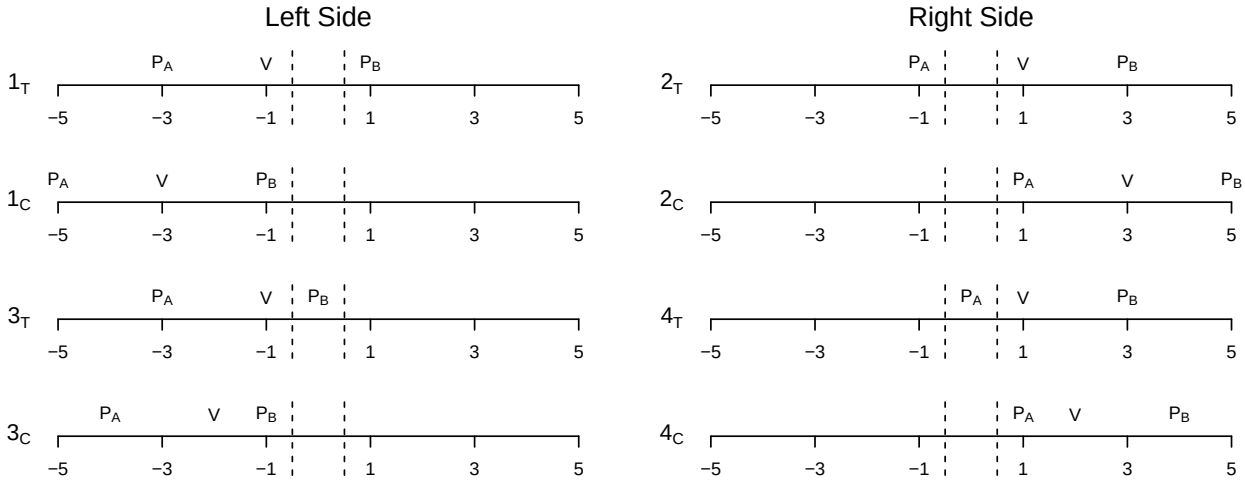

Figure 6: Four Comparisons of Scenarios with and without Categorization.
Note: The comparisons are numbered 1 to 4, and consist of a "Treatment" and "Control" Scenario, subscripted T and C, respectively. The voter position is denoted V, while the positions of parties A and B are denoted P_A and P_B.

Comparisons 3 and 4 are slightly different, as can be seen from figure 6. Here, we test the role of categorization, while letting the proximity of the two parties vary. In each of the scenarios involved, the proximity model predicts voter V to prefer party B over A, while directional theory predicts A over B. However, the relative distances are kept constant from one scenario to the other, so proximity theory still predicts no difference between the two scenarios. The directional model yields the same prediction as before, there should be a negative difference-in-differences. According to the categorization model, there should be a positive difference-in-differences. These tests are more challenging for the categorization argument because the distinction is not between same versus opposite side but rather between

same-side versus neutral status.

For each scenario, we take all individuals who place themselves at point V, but keep only those among them who have located at least one party at P_A and at least one party at P_B. We further create a dummy variable, selecting the alternative favored by the directional model (always party A). We then pool the observations for the two scenarios to be compared, creating a dummy variable identifying the scenarios, and interacting this with the one identifying party A. The resulting coefficient denotes the difference in the average difference between the preference scores for party A and party B, going from scenario C to T. To account for the clustering of preferences within individuals, we include individual fixed-effects, and use robust standard errors, clustered at the individual level. A negative coefficient would imply that the party A is preferred to party B to a greater extent in scenario C than T, as predicted by directional theory. A coefficient of zero would imply there is no difference between the two scenarios in the extent to which one party is preferred to the other, as predicted by proximity theory. Lastly, a positive coefficient would imply that party A is preferred to party B to a greater extent in scenario T than C, as predicted by categorization theory.

Figure 7 shows the results, plotting the coefficients of interest along with 95% confidence intervals. As can be seen, all the point estimates are positive; two are clearly significant, while one is barely significant, and one is barely insignificant. As explained above, the positive estimates are in line with the predictions of our categorization theory. Moreover, it is clear that proximity alone does not capture the whole story, as these tests fully control for proximity effects. The directional model receives little support here; categorization in terms of sides appears to matter considerably more than the intensity of position taking.

Parametric Analysis

Although illustrative, the previous analyses have been applied only to specific configurations of individual and party ideological placements. To obtain more general estimates of the effects we now turn to a more standard regression framework, implementing the categorization model along with other spatial functions.[14]

Table 1 reports a set of regression models. Model 1 includes the Proximity Term, the

[14] All our models include individual-fixed effects, to focus the analyses on within-individual variance, as advocated by Westholm (1997), removing the risk of having individual-level confounders biasing the estimates. We further employ robust standard errors, clustered at the individual level. In addition, we include party-fixed effects, to account for party-specific characteristics (and, by implication, country-specific characteristics).

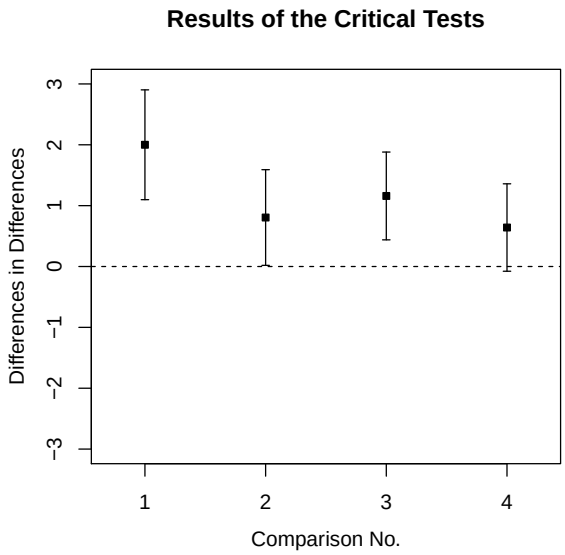

Figure 7: Estimated Differences in Differences for Comparisons 1 to 4.
Note: The errors bars give 95% confidence intervals. The estimations include individual fixed effects and the standard errors are clustered at the individual level.

Directional Term, and indicators of Same Side and Opposite Side status. The estimated effect of Same Side is close to 1-point on the 11-point preference scale, while that of Opposite Side is about -.3, and both estimates are highly significant. Also the effect of the proximity term is highly significant and has the expected sign. The estimate for the Directional Term appears to be statistically significant, but it has the wrong sign, suggesting this model is misspecified. Furthermore, the plots above show no trace of a directional effect, which is unsurprising, given the recent experiments concluding in favor of proximity theory and against directional theory. The Directional Term is therefore dropped in Model 2, without a notable loss in explanatory power, or change in the other estimates. The categorization effects are still significant and having a considerable magnitude.

There is one reason for concern with the reported results, however. Using the whole set of observations and a linear implementation of the Proximity Term, the analyses involve some extrapolation. All three side-statuses can only be observed for proximity values of 2, 3 and 4. (It takes 2 steps to move from same to opposite side, while with a distance of 5 or larger, it is not possible to be on the same side. With a proximity value of 1, it is only possible to compare either same or opposite side status to the neutral status.) In other words, there is only common support for the mentioned proximity values. Model 3 in Table 1 reports an analysis only including observations where the Proximity Term is 1, 2, 3, or 4. It further includes proximity-fixed effects, ensuring that proximity effects are fully controlled for. The

resulting categorization estimates are only slightly weaker than before, with a Same Side estimate of about .8 and Opposite Side estimate of about -.3.[15]

As discussed above, voters need more criteria than side categorizations to distinguish between several parties on a given side. We expect these criteria to play a larger role for parties on the same side as voters, as the voters need to pick a winner of their vote. So far, our analyses show that when categorization in terms of sides does not suffice, voters apply a proximity logic to make finer distinctions. In Model 4, we therefore include an interaction between the Proximity Term and the categorization indicators. The results are in line with our expectations: The effect of the Proximity Term is almost twice as strong for parties on the same side as voters, compared to parties on the opposite side (-.73 versus -.40). Thus, categorization does not only create discontinuities in what proximity theory suggests is a continuous space, it also qualifies the impact of proximity considerations.

Policy Directions versus Ideological Sides

At this point, we try to examine two important theoretical implications of the theory. The first analysis relates to a key concept both in categorization and in directional theory, i.e. the "neutral point." As explained above, whereas for directional theory the neutral point denotes a policy status quo, in categorization theory, it simply indicates the midpoint that distinguishes the ideological continuum into different coarsened categories.

To compare the two conceptualizations, we need to find data that would allow us to measure the neutral point as the policy status quo, defining directions of policy change, versus the neutral point as the geometric middle, defining the ideological center, and its respective sides. To conduct this test, we exploit a unique dataset on issue voting in Spain, produced by the Centro de Investigaciones Sociológicas (2009). This face-to-face survey was conducted in April 2009 and had a realized sample size of 3,255. For three issues, respondents were not only asked to locate political parties and themselves, but also the status quo of public policy. The three issues are immigration, the process of secularization and the process of regional devolution, and we will analyze all three. The scales all go from 0 to 10, and thus have 11 points.[16] They all have an answer category at their geometric middle: Position 5

[15] Given the empirical salience of the proximity model, we focus on this model. However, the issue of common support is even more challenging with regard to directional theory. The online appendix offers several possible solutions to this challenge.

[16] The questions regarding the status quo were phrased this way: *Immigration*: "When it comes to the issue of immigration, think of a scale in which 0 represents free entrance

Table 1: Models of Spatial Voting with Categorization Effects.

	Model 1	Model 2	Model 3	Model 4
Directional Term	-0.027^{***}			
	(0.003)			
Proximity Term	-0.572^{***}	-0.500^{***}		-0.519^{***}
	(0.011)	(0.009)		(0.013)
Same Side	1.030^{***}	0.933^{***}	0.777^{***}	1.196^{***}
	(0.041)	(0.040)	(0.048)	(0.056)
Opposite Side	-0.320^{***}	-0.278^{***}	-0.271^{***}	-0.885^{***}
	(0.043)	(0.042)	(0.052)	(0.068)
Proximity Term				-0.210^{***}
× Same Side				(0.021)
Proximity Term				0.117^{***}
× Opposite Side				(0.014)
Constant	4.197^{***}	3.910^{***}	3.230^{***}	4.017^{***}
	(0.042)	(0.039)	(0.055)	(0.045)
Individual-Fixed Effects	Yes	Yes	Yes	Yes
Party-Fixed Effects	Yes	Yes	Yes	Yes
Proximity-Fixed Effects	No	No	Yes	No
Adjusted R^2	0.398	0.396	0.286	0.399
Observations	94833	94833	52979	94833
Individuals	13278	13278	12302	13278

Note: The cell entries are OLS regression estimates, with robust standard errors, clustered at the individual-level, in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

has 5 other positions on each side.

We measure utilities in the same way as in the previous analyses, i.e. using the Propensity to Vote questions, ranging from 0 to 10.[17] As before, we transform our dataset to one

of immigrants and 10 represents complete restriction of entrance to immigrants, at which point would you say Spain is currently located?" *Secularization*: "It is often debated what the role of religion in politics should be. Thinking about the presence of Catholicism in Spanish politics, if 0 is a completely secular state and 10 means a completely religious state, at which point would you say the Spanish state is currently located?" *Regions*: "A state can organize its regional structure in various ways. If 0 represents a completely centralized state and 10 represents a completely decentralized state, including the possibility of secession for those regions that wish to become independent, at which point would you say the Spanish state is currently located?"

[17] The question was phrased this way: "As you know, in every election various Spanish parties

consisting of party × individual observations. For each issue, we generate one directional term based on the perceived status quo and another based on the geometric center. That is, we calculate $v_i \times p_{ij}$, centering v_i and p_{ij} on the perceived status quo and the geometric center, respectively. If the policy status quo truly defines the neutral point, and voters think in terms of directions of change from this point, we would expect the terms based on the status quo to perform better. If voters rather perform basic ideological categorizations independent of the status quo, we would expect the center-based measures to perform better.

We estimate a regression model encompassing the six resulting directional terms (the three issues each having two alternative specifications). The results are reported in figure 8. As can be seen, the directional terms based using the center of the scale as the neutral point, consistently outperform those based on the status quo. This is despite the survey questions in this particular case encourages the respondents to consider the status quo as a relevant feature of the political context. [18] These results thus provide quite clear support for the notion that voter apply categories defined by the center of the scale rather than the status quo. The challenge this poses to directional theory is aggravated by the fact that the tests involve specific issues, for which the directional model, according to its proponents, should be highly appropriate (Lacy and Paolino 2010).[19] It should also be noted that, while the center-based directional term appears to perform well in this test, the results are not

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compete for our votes. I would like you to tell me the probability that you will ever vote for each of the parties that I mention, using a scale from 0 to 10, where 0 means 'I am completely sure I would never vote for this party' and 10 means 'I am completely sure I will vote for this party'."

[18] For all three issues, respondents were first asked to locate the status quo, then their own position, and lastly the party positions. It is well established that priming of respondents, for example through the ordering of survey questions, may influence how the respondents interpret and answer such questions (Iyengar and Kinder 1987; McFarland 1981).

[19] Operationalizing directional theory using the status quo as the neutral point, creates variation between sides and the sign of the directional term, hence allowing us to test the categorization model while conditioning on directional effects. Because of the fact that status-quo does not always coincide with the geometric middle, we can condition on status-quo based directional values while estimating categorization effects. We do this in the online appendix, Table 3. One option is to use a regression model controlling for the resulting directional term. Another is to keep the directional term fixed (for example at zero, which provides the most observations), while estimating categorization effects. Both approaches yield categorization effects of remarkable magnitude.

supportive of directional theory. If we include controls for proximity and categorization, none of the center-based estimates would be statistically significant.

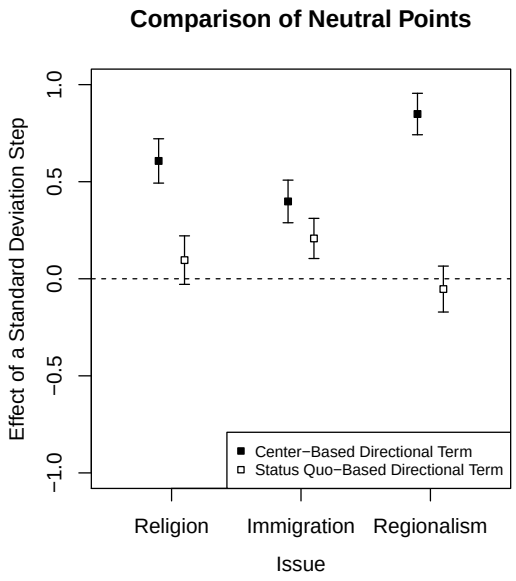

Figure 8: Directional Terms with Alternative Neutral Point Specifications.
Note: The errors bars give 95% confidence intervals, using standard errors clustered at the individual level.

Categorization Effects in Projection Bias

Categorization theory builds on a social-identity logic, which allows voters to form their ideological perceptions from their more encompassing social identities and prototypes. For example, left-wing voters are allowed to side-converge with their preferred party, not only because they perceive the party's stances to be on the left, but also because doing so permits them to gain consistency between their party preferences and their ideological perceptions (Festinger 1957). This is a classic problem for the proximity model, as it is built on the assumption that perceptions precede utilities. The key point for us is that if our theory is correct, projection should not be linear either. A classic idealized model of projection considers the interaction between individuals' self-placement and their affective evaluations of the party in question. The more right-wing a voter is and the more she likes a given party, the more likely she is to bring the party closer to her ideal point – in this case to the right. Importantly, since this process has been suggested as an alternative explanation of proximity patterns in voter preferences, it has invariably been assumed to operate in a linear fashion throughout the ideology scale. In contrast to this widespread assumption, the

theory presented here implies categorization effects: The incentive to misplace a party's true position so as to bring it closer to one's own ideal point is significantly augmented when this also means bringing it to the one's own side. Thus, among two individuals with the same distance to their preferred party, projection should be more evident for the individual who would otherwise find the party at the opposite side of the center.

To test this hypothesis in a comparative setting, we turn to the 2009 European Election Study. We draw on but also significantly modify existing models of projection bias (e.g. Converse and Markus 1979; Johnston, Fournier and Richard 2000). We do so by using as a measure of parties' "true" positions, their sample mean placement.[20] Our dependent variable, W_{ij}, is constructed as a dummy denoting "side misplacement," i.e. those party-individual combinations where the respondent placed the party at the opposite side of the sample average. Our measure of party utility, the PTV scale, is now employed as an independent variable, denoted Y_{ij} (for individual i and party j). This variable is interacted with two binary indicators of same and opposite sides, S_{ij}^M and O_{ij}^M, where mean party placements are used to locate the parties. The first indicator thus identifies observations where respondents are on the opposite side of the mean party placement whereas the second identifies those where respondents are on the same side as the mean party placement. The interaction between party evaluations and these two dummies reveals the impact of categorization-based projection: The more a voter likes a party, the more likely she is to misplace the party so as to find it on her own side. We thus estimate the following model:

$$W_{ij} = \beta_0 + \beta_1 O_{ij}^M + \beta_2 S_{ij}^M + \beta_3 Y_{ij} + \beta_4 O_{ij}^M Y_{ij} + \beta_5 S_{ij}^M Y_{ij} + \epsilon_{ij} \quad (4)$$

In this equation, categorization effects in projection are captured by β_4 and β_5. If our prediction is correct, we should observe a weaker tendency to misplace the party if it is already located on the same side as a voter, and a greater tendency to do so if it is located on the opposite side ($\beta_4 > \beta_5$). The estimation includes individual fixed effects and clusters the errors at the individual level. Full results are presented in the online appendix. Here, we only report the key findings. The first panel of Figure 9 presents the marginal effect of party preference on side misplacement, conditional on whether i and j are on the same side or not. Consistent with our hypothesis, we find that this effect is negative in the first case and positive in the second.

A possible caveat in this analysis is that β_4 might be capturing proximity effect to a greater extent than β_5. The distance between i and j is bound to be greater in the first

[20] Although we recognize that our measure of "true" party positions is far from ideal, sample mean placements have been shown to correlate very highly with other, more objective, measures of party positioning, such as those stemming from the coding of manifestos and expert surveys (e.g., Dinas and Gemenis 2010).

than in the second case. In effect, both S and O perfectly predict W when proximity is 0, 5 or greater. Although conditioning on post-projection bias proximity effects is likely to generate post-treatment bias in the estimates, there is no other way to address this concern but to implement the same analysis separately for each level of proximity. This is done in the second panel of figure 9. Although there is some variation accross the proximity values, the main pattern remains intact. Contrary to the established wisdom that projection operates uniformly across the issue scale, we see that this tendency for party misplacement is higher when it involves bringing the party to the same side as the voter.

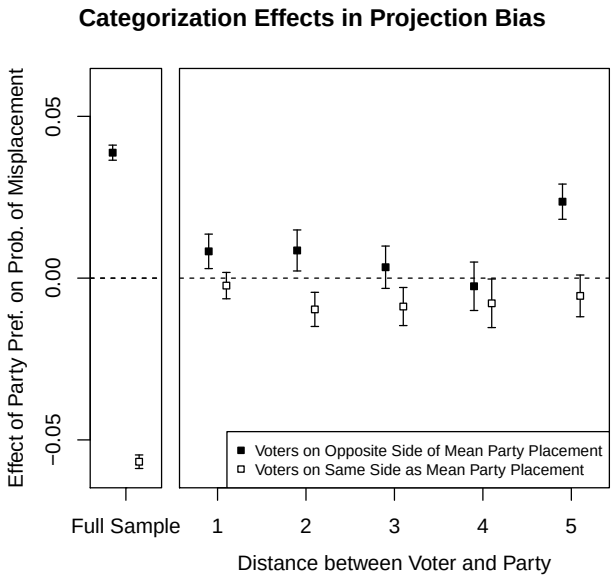

Figure 9: Categorization Effects in Projection Bias.
Note: The plot reports marginal effects of preference strength on the probability of placing a party on the "wrong side" compared to its sample mean placement. The errors bars give 95% confidence intervals. The estimations include individual fixed effects and the standard errors are clustered at the individual level.

Conclusion

Our results confirm that politics is understood in terms of sides, resulting in a discontinuous political space. Even when voters are presented with seemingly continuous ideological scales, they still impose broad categories along the scale, representing the sides of the center. Voters are conscious of their own side and categorize parties accordingly, giving significantly higher ratings to the parties they consider to be on the same side as themselves. On average, we find party preferences to be about 1 point higher on an 11-point scale, when parties are on

the same side as voters, and about .3 lower when they are on the opposite side. This finding has important implications that merit further elaboration.

First, spatial voting appears to be influenced by an identity component, interfering with the purely rational optimization of policy outcomes that is commonly assumed to guide party choice. While we find considerable support for the proximity model, we believe that voters first perform a basic categorization in terms of sides. This coarsened logic is not compatible with a utility loss minimization principle—the driving force of proximity theory—unless utilities are themselves defined in more coarsened terms than through ideal points. When categorization does not suffice to pick a single party, voters attempt to make finer distinctions between the parties on their side by applying a proximity logic.[21] Accordingly, we find proximity effects to be almost twice as strong for parties on the same side as voters. Our theory thus qualifies the proximity model in three ways: First, the coarse categories of sides lie beneath and cut across the political space, and second, the impact of the more finely grained distinctions afforded by proximity considerations is conditional on these basic categories. Third, projection bias, which imples a link from party affinity to party issue perceptions, can be better understood in terms of categorization theory than in terms of proxity theory. Party misplacement on affective grounds is more likely to take place when parties and voters are on different sides of the ideological spectrum. This idea speaks in favour of a group-identiy logic, which drives our categorization effects. Categorization, in short, helps identify the lenses through which voters understand politics.

Research on directional theory is also affected by our argument. Our results are consistent with the expectation that voters apply categories defined by the center of the scale, rather than the policy status quo. This is important, as the directional model is commonly operationalized using the geometric center of survey scales as the neutral point, which increases the correlation between the directional measure and the categorization measures. While the directional model still fails to clearly capture the effects we find, prior estimates of directional effects may have benefited from the presence of categorization effects, in the absence of appropriate controls.

Finally, the findings shed more light on the dynamics of party competition. A common observation among students of party politics is the absence of leapfrogging: When parties change their position, they tend to do so within a limited range, maintaining the overall ranking of parties along the policy dimension in question. Categorization theory adds a

[21] In these cases, being on the same side may be a necessary, but insufficient condition for a party to be selected, while the combination of being the closest party on the same side is both necessary and sufficient. Simply being the closest party may neither be necessary nor sufficient, as being on the wrong side may be a significant disadvantage.

prediction to this pattern: That parties will stay on a given side of the center, as they need to convince their supporters they remain on their side. This may in part account for the absence of leapfrogging, as it adds a boundary to party movement, and the parties around the center might otherwise have been the most likely to leapfrog each other. Even the most centrist parties tend to have a distribution of supporters that is skewed towards one side of the left-right continuum, and in light of the categorization model, this is likely to give these parties incentives to stay on the side of their traditional voters.

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Supporting Information for Online Archiving

Table 2: Summary of Critical Tests and Model Implications.

				Difference in Model Terms: $f(V, P_A) - f(V, P_B)$			
						Categorization	
Scenario	P_A	V	P_B	Direction	Proximity	Same Side	Opposite Side
1_T	-3	-1	1	4	0	1	-1
1_C	-5	-3	-1	12	0	0	0
2_T	3	1	-1	4	0	1	-1
2_C	5	3	1	12	0	0	0
3_T	-3	-1	0	3	1	1	0
3_C	-5	-3	-2	9	1	0	0
4_T	3	1	0	3	1	1	0
4_C	5	3	2	9	1	0	0

Note: P_A and P_B refer to party A and B of a given scenario. Direction refers to the difference in the directional term calculated for P_A and P_B; the columns labeled Proximity, Same Side and Opposite Side report similar differences for the proximity model and the categorization model.

Side-effects, controlling for Directional effects

If we operationalize directional theory using the status quo as the neutral point, there is also additional scope for testing the categorization model while controlling for directional effects. This is achieved by employing the Spanish survey and making use of the variation generated by the fact that not all respondents have indicated the middle point of the issue scales as the current state of affairs in this country. One option is to use a regression model controlling for the resulting status-quo based directional term. Another is to keep the directional term fixed at a fixed value, while estimating categorization effects. The results of these approaches are reported in table 3. The first three columns of the Table present the results from the first approach for each of the three issues for which a status-quo question was asked. The last three columns set the status-quo based directional term at its modal value, i.e. zero. As shown in the Table, both approaches yield categorization effects of remarkable magnitude.

Table 3: Categorization Effects Controlled for the SQ-Based Directional Term.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Issue	Religion	Immigr.	Regions	Religion	Immigr.	Regions
Directional Term				$= 0$	$= 0$	$= 0$
Same Side	0.675^{***}	0.346^{***}	0.643^{***}	0.885^{***}	0.606^{***}	0.698^{***}
	(0.102)	(0.104)	(0.104)	(0.152)	(0.168)	(0.161)
Opposite Side	-1.419^{***}	-0.923^{***}	-1.651^{***}	-1.314^{***}	-1.000^{***}	-1.672^{***}
	(0.097)	(0.089)	(0.088)	(0.147)	(0.133)	(0.137)
Directional Term	0.017^{***}	0.012^{***}	0.010^{*}			
	(0.004)	(0.003)	(0.004)			
Constant	3.427^{***}	3.524^{***}	3.625^{***}	3.486^{***}	3.607^{***}	3.803^{***}
	(0.068)	(0.064)	(0.061)	(0.091)	(0.091)	(0.082)
Adjusted R^2	0.096	0.037	0.096	0.062	0.038	0.073
Observations	7030	7129	6640	2733	2877	2714
Individuals	2485	2608	2386	1349	1595	1444

Note: The cell entries are OLS regression estimates, with robust standard errors, clustered at the individual-level, in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.