On-line Appendix For:

A Categorization Theory of Spatial 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 perceive political stances through coarse classifications. Because voters think in terms of categories defined by the ideological center, their behavior deviates from standard models of utility-maximization along ideological continua. Their preferences are characterized by discontinuities, rewarding parties on their side of the issue space more than existing spatial models would predict. While our analysis concurs with prior studies suggesting that voters tend to use a proximity rule, we argue that this mainly serves to distinguish among parties of the same side. Overall, our findings suggest that voters' party evaluations are characterized by a nontrivial identity component, generating in-group biases not captured by the existing spatial models of voting.

A.1 Sampling Procedures and Question Wording

European Election Study

The EES data were collected using phone interviews. 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*: $\frac{I}{(I+P)+(R+NC+O)+(UH+UO)}$.

The question wording for the variables used in the analyses is given below:

Ideological self-placement:
"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?"

Ideological party placement:
"And about where would you place the following parties on this scale? ... How about the (Party X)? Which number from 0 to 10, where 0 means "left" and 10 means "right" best describes (Party X)?" (The order of the parties was rotated across respondents.)

Propensity to vote:
"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.

Vote choice:
"Which party did you vote for at the [most recent election]?"

Spanish Survey on Issue Perceptions

This survey is used in section A.4 of the On-line Appendix, in order to disentangle the different conceptualizations of the neutral point. In particular, we rely on the #2799 Study of the *Centro de Investigaciones Sociológicas* (CIS), a public survey research center with a long history of promoting social research. The CIS 2799 survey, "Spatial models of political preferences", was conducted in April 2009. This was a face-to-face survey, with special samples for Catalonia and the Basque Country. N=3,255.

The question wording for the variables used in the analyses is given below:

Status-quo questions:
Immigration: "When it comes to the issue of immigration, think of a scale in which 0 represents free entrance 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?"

Decentralization: "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?"

Propensity to Vote:
"As you know, in every election various Spanish parties 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'."

A.2 Critical Tests: A Classificatory Table

Table A.1 summarizes the configurations of party A, party B and voter placement for each of the comparisons described in the main text. It also reports the predictions of the competing models for each scenario involved.

Table A.1: 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	-4	-2	-1	6	1	0	0
4_T	3	1	0	3	1	1	0
4_C	4	2	1	6	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.

A.3 Critical Tests: Examining the Role of Extremity

A potential challenge for the critical tests presented in the main text is that the treatment and control group comparisons do not differ only in terms of sides but also in terms of party extremity. More specifically, in the first two tests (Comparison 1 & 2), Party A is located in an extreme position in the control group but not in the treatment group. If parties are generally penalized for being too extreme, it might be that the tests are picking up on these differences. In other words, the directional model might have performed better than categorization if one of the control group parties were not located in the extremes of the ideological continuum.

Although we cannot implement these tests without using the extremes of the scale, we can at least test the extent to which extremeness is generally penalized. Imagine two scenarios: In the first one a voter is located at point -3 and parties A and B are placed at points 3 and 5 respectively. In the second scenario, the voter is still placed at point -3 and parties A and B are placed at points 1 and 3 respectively. In this case, all three models arrive to the same conclusion. For proximity, the distance between the parties is the same in both groups and thus voter i should prefer Party A equally in both scenarios. For categorization

the voter should be equally indifferent in both scenarios since these are all opposite-side parties. Third, for the directional model, the difference in voter utility is also the same in both scenarios ($V_{1i} \times P_{1A} - V_{1i} \times P_{1B} = V_{2i} \times P_{2A} - V_{2i} \times P_{2B} = 6$). However, in the first scenario, the comparison is between an extreme and a non-extreme party. Thus, if parties are generally penalized for being extreme (or rewarded for being moderate), voters should prefer Party A in the first scenario more than in the second.

We implement similar tests for each voter position along the scale, as shown in Table A.2. We use the same estimation method as in the previous tests: We create a binary indicator identifying the party favored by both proximity and directional theory, i.e. *Party A*. After pooling the observations for the two scenarios, we create another binary indicator identifying the scenario with the "extreme" party. We then interact the two binary indicators, expecting a positive coefficient if extremity is further penalized by voters. The analysis includes also individual-fixed effects and drops voters that do not have observations of parties at the relevant positions. The results are presented in Figure A.1. In no instance do we observe a significant difference in favor of the second scenario.[1]

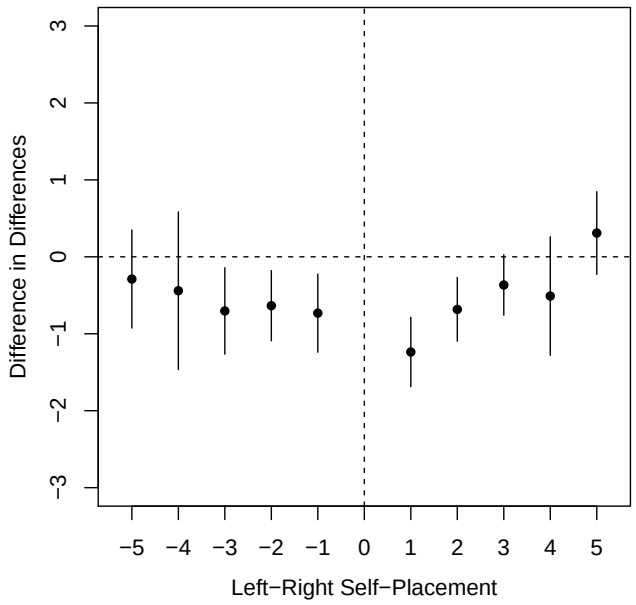
[1] A limitation of these tests is that they only consider extremity for parties on the opposite side of voters. Thus, if extremity effects are stronger for parties on the same side, our tests under-estimate the overall effect of extremity. We still present this test, however, because it is the only feasible test for extremity and because there are no theoretical reasons to expect such asymmetry in extremity effects, apart from those provided by our categorization theory.

Table A.2: Tests for the Role of Party Extremity

				Difference in Model Terms: $f(V, P_A) - f(V, P_B)$			
Scenario	V	P_A	P_B	Direction	Proximity	Categorization	Extremity
1_T	-5	3	5	10	-2	0	1
1_C	-5	1	3	10	-2	0	0
2_T	-4	3	5	8	-2	0	1
2_C	-4	1	3	8	-2	0	0
3_T	-3	3	5	6	-2	0	1
3_C	-3	1	3	6	-2	0	0
4_T	-2	3	5	4	-2	0	1
4_C	-2	1	3	4	-2	0	0
5_T	-1	3	5	2	-2	0	1
5_C	-1	1	3	2	-2	0	0
6_T	1	-3	-5	2	-2	0	1
6_C	1	-1	-3	2	-2	0	0
7_T	2	-3	-5	4	-2	0	1
7_C	2	-1	-3	4	-2	0	0
8_T	3	-3	-5	6	-2	0	1
8_C	3	-1	-3	6	-2	0	0
9_T	4	-3	-5	8	-2	0	1
9_C	4	-1	-3	8	-2	0	0
10_T	5	-3	-5	10	-2	0	1
10_C	5	-1	-3	10	-2	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. Within each comparison, all columns but for the last one predict no difference between the two scenarios.

Figure A.1: Tests for Extreme Party Positioning



Note: The black dots present the average difference-in-differences in the PTV score given to Party A compared to Party B between scenario 1 and scenario 2. Evidence in favor of the extremity hypothesis would imply a positive coefficient, denoting that the preference for Party A over Party B is greater in the first than the second scenario. The vertical spikes tap the 95% confidence intervals.

A.4 Full Results for the Projection Bias Models

Table A.3 presents the full results corresponding to the left panel in Figure 7 in the main text, while table A.4 presents the results for the right panel. Tables A.5 and A.6 replicate Tables A.3 and A.4 respectively, using Chapel-Hill data instead of sample means for the measurement of party positions.

Table A.3: Models Predicting Mis-Categorization to Detect Projection Bias

	Model 1	Model 2	Model 2b	Model 3	Model 4	Model 4b
Same Side		0.110^{***}		0.107^{***}	0.108^{***}	
		(0.007)		(0.006)	(0.006)	
Opposite Side		-0.120^{***}	-0.207^{***}	-0.147^{***}	-0.152^{***}	-0.203^{***}
		(0.005)	(0.006)	(0.006)	(0.007)	(0.009)
Preference		-0.001	-0.001	0.001	0.003^{**}	0.015^{***}
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Same Side		-0.028^{***}	-0.024^{***}	-0.028^{***}	-0.028^{***}	-0.059^{***}
× Preference		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Opposite Side		0.042^{***}	0.038^{***}	0.045^{***}	0.046^{***}	0.025^{***}
× Preference		(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Proximity				0.010^{***}	0.012^{***}	-0.042^{***}
				(0.001)	(0.001)	(0.001)
Proximity					-0.001^{**}	0.000
× Preference					(0.000)	(0.000)
Constant	0.202^{***}	0.189^{***}	0.259^{***}	0.161^{***}	0.155^{***}	0.562^{***}
	(0.001)	(0.004)	(0.003)	(0.005)	(0.005)	(0.005)
$s(Y\|S^M = 1)$	$p = 0.000^{***}$					
$s(Y\|O^M = 1)$	$p = 0.000^{***}$					
$s(Y\|S^M = O^M = 0)$	$p = 0.000^{***}$					
Individual F.E.	No	No	Yes	No	No	Yes
R_2	0.072	0.067	0.055	0.070	0.070	0.111
Observations	94833	94833	94833	94833	94833	94833
Individuals	13278	13278	13278	13278	13278	13278

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The cell entries are OLS regression estimates, with standard errors in parentheses. Model 1 is a generalized additive model (GAM), employing penalized smoothing splines for the effect of party preferences (Y) conditional on whether voters are on the same or opposite side of the sample mean party placement ($S_{ij}^M = 1$ and $O_{ij}^M = 1$), or neither ($S_{ij}^M = O_{ij}^M = 0$); the p-values of the splines are reported under model 1. Models 2-4b employ robust standard errors, clustered at the individual-level. Models 2b and 4b include individual-level fixed effects.

Table A.4: Models Predicting Subjective Proximity to Detect Projection Bias

	Model 1	Model 2	Model 2b	Model 3	Model 3b	Model 3c
Dependent Variable	Diff. Prox.	Prox.	Prox.	Diff. Prox.	Diff. Prox.	Diff. Prox.
Same Side		0.313^{***}		0.404^{***}		
		(0.038)		(0.036)		
Opposite Side		2.826^{***}	2.289^{***}	-0.073^{*}	-0.553^{***}	0.301^{***}
		(0.036)	(0.029)	(0.031)	(0.027)	(0.031)
Preference		-0.183^{***}	-0.188^{***}	-0.114^{***}	-0.107^{***}	-0.131^{***}
		(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Same Side		-0.046^{***}	-0.074^{***}	-0.083^{***}	-0.108^{***}	-0.098^{***}
× Preference		(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Opposite Side		-0.278^{***}	-0.244^{***}	-0.153^{***}	-0.170^{***}	-0.192^{***}
× Preference		(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Proximity	-0.261^{***}					-0.301^{***}
	(0.003)					(0.007)
Constant	1.215^{***}	2.941^{***}	3.289^{***}	1.103^{***}	1.459^{***}	2.009^{***}
	(0.010)	(0.023)	(0.016)	(0.024)	(0.016)	(0.023)
$s(Y\|S^M = 1)$	$p = 0.000^{***}$					
$s(Y\|O^M = 1)$	$p = 0.000^{***}$					
$s(Y\|S^M = O^M = 0)$	$p = 0.000^{***}$					
Individual F.E.	No	No	Yes	No	Yes	Yes
Adjusted R^2	0.160	0.350	0.302	0.116	−0.004	0.028
Observations	94833	94833	94833	94833	94833	94833
Individuals	13278	13278	13278	13278	13278	13278

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The cell entries are OLS regression estimates, with standard errors in parentheses. Model 1 is a generalized additive model (GAM), employing penalized smoothing splines for the effect of party preferences (Y) conditional on whether voters are on the same or opposite side of the sample mean party placement ($S_{ij}^M = 1$ and $O_{ij}^M = 1$), or neither ($S_{ij}^M = O_{ij}^M = 0$); the p-values of the splines are reported under model 1. The proximity term included in the models is based on mean party placements. Models 2-4b employ robust standard errors, clustered at the individual-level. Models 2b and 4b include individual-level fixed effects.

Table A.5: Models Predicting Mis-Categorization using Chapel Hill Placements

	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b
Same Side	0.112***	0.295***	0.114***	0.278***	0.113***	0.280***
	(0.007)	(0.008)	(0.007)	(0.009)	(0.007)	(0.009)
Opposite Side	−0.125***	0.086***	−0.131***	0.114***	−0.126***	0.100***
	(0.006)	(0.007)	(0.006)	(0.008)	(0.007)	(0.008)
Preference	−0.005***	−0.003***	−0.005***	−0.004***	−0.006***	−0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Same Side	−0.026***	−0.024***	−0.026***	−0.023***	−0.025***	−0.024***
× Preference	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Opposite Side	0.043***	0.036***	0.043***	0.035***	0.042***	0.040***
× Preference	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Proximity Term			0.002*	−0.013***	0.001	−0.008***
			(0.001)	(0.001)	(0.001)	(0.002)
Proximity Term					0.001*	−0.002***
×Preference					(0.000)	(0.000)
Constant	0.199***	0.050***	0.193***	0.087***	0.197***	0.078***
	(0.005)	(0.005)	(0.006)	(0.007)	(0.006)	(0.007)
Individual F.E.	No	Yes	No	Yes	No	Yes
Adjusted R^2	0.064	0.057	0.064	0.059	0.064	0.059
Observations	80707	80707	80707	80707	80707	80707
Individuals	12403	12403	12403	12403	12403	12403

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The table replicates Table A.3 using Chapel Hill estimates as a proxy for "true" party positions. The cell entries are OLS regression estimates, with standard errors in parentheses. Models 1a and 1b employ the specification shown in *Equation (3)* of the main text. Models 2a and 2b include proximity between voter and Chapel-Hill based party placement as a control variable; and models 3a and 3b interact perceived proximity with party preferences. Each set of models is estimated both with robust standard errors, clustered at the individual level (Models 1a, 2a, 3a) and with individual-level fixed effects (Models 1b, 2b, 3b). Using vote choice as a preference indicator produces substantively identical results.

Table A.6: Models Predicting Subjective Proximity using Chapel Hill

	Model 1a	Model 1b	Model 2a	Model 2b	Model 2c
Dependent Variable	Prox.	Prox.	Diff. Prox.	Diff. Prox.	Diff. Prox.
Same Side	0.445***	−0.059	1.236***	0.968***	0.595***
	(0.040)	(0.056)	(0.040)	(0.040)	(0.055)
Opposite Side	2.797***	2.110***	0.018	0.958***	1.059***
	(0.037)	(0.054)	(0.033)	(0.034)	(0.056)
Preference	−0.171***	−0.180***	−0.091***	−0.118***	−0.132***
	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)
Same Side	−0.067***	−0.086***	−0.107***	−0.094***	−0.109***
× Preference	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Opposite Side	−0.268***	−0.230***	−0.174***	−0.206***	−0.203***
× Preference	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)
Proximity Term				−0.338***	−0.508***
				(0.007)	(0.007)
Constant	2.880***	3.345***	0.385***	1.229***	1.898***
	(0.024)	(0.039)	(0.026)	(0.030)	(0.044)
Individual F.E.	No	Yes	No	No	Yes
Adjusted R^2	0.339	0.396	0.128	0.179	0.230
Observations	80707	80707	80707	80707	80707
Individuals	12403	12403	12403	12403	12403

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The table replicates Table A.4 using Chapel Hill estimates as a proxy for "true" party positions. The cell entries are OLS regression estimates, with standard errors in parentheses. Models 1a and 1b use the perceived proximity between voter and party as the dependent variable. Models 2a-2c use the difference between perceived and "real" distance between voter and party. Objective party placements are obtained from the Chapel Hill expert survey. Models 1a, 2a and 2b employ robust standard errors, clustered at the individual-level. Models 1b and 2c include individual-level fixed effects. Using vote choice as a preference indicator produces substantively identical results.

A.5 Policy Directions versus Ideological Sides

Another important implication of categorization theory relates to the conceptualization of the "neutral point," i.e. the middle category of issue dimensions. While both categorization theory and directional theory involve 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 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.

To compare the two conceptualizations, we need data that allow us to measure the neutral point as the policy status quo, defining directions of policy change, as opposed to letting the geometric middle define 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). 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. For each issue, more than 70% of the respondents placed the status quo off the center of the scale, providing ample unique variance for testing alternative specifications.

From the perspective of categorization theory, analyzing separate issues is not ideal,

as its identity-based component might be more pronounced with a dominant ideological dimension such as left-right than with more specific issues.[2] Conversely, directional theory should, according to its proponents, be highly appropriate for separate issues (Lacy and Paolino 2010). If voters ever focus on the status quo and directions of policy change, they should do so for separate policy issues, such as those investigated here. In addition, the respondents were asked to identify the policy status quo before party positions and their own positions and preferences, which means we may also see priming effects favoring a focus on the status quo. In other words, this analysis may be seen as a least-likely case for our theory, and a most-likely case for directional theory.

The issue scales all go from 0 to 10, making 5 the middle category.[3] We measure utilities in the same way as in the previous analyses, using "propensity to vote"-questions, with scales from from 0 to 10. As before, we transform our dataset to one consisting of party $\times$ 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. In a similar manner, we generate indicators for same and opposite side using these two alternative neutral points. If the policy status quo truly defines the neutral point, and voters think in terms of directions of change from this point, as directional theory holds, 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 first test the alternative directional terms. The left panel of figure A.2 reports the relevant estimates, while the full results are shown in table A.7. For all three issues, the results clearly favor the center-based measures over those based on the status quo. The directional model does not at all work better using the status quo as the neutral point.[4] The right panel of figure A.2 reports tests of the categorization model (as presented in equation 1 of the main text) using the alternative neutral points. Again, the center-based measures consistently outperform those based on the status quo. Of the status quo measures, the opposite side indicators have significant coefficients,[5] but they are all smaller than the center-based

[2] That said, the theoretical mechanism driving our argument should also apply to specific issues, so long as individuals perceive them through coarsened mental schemas.

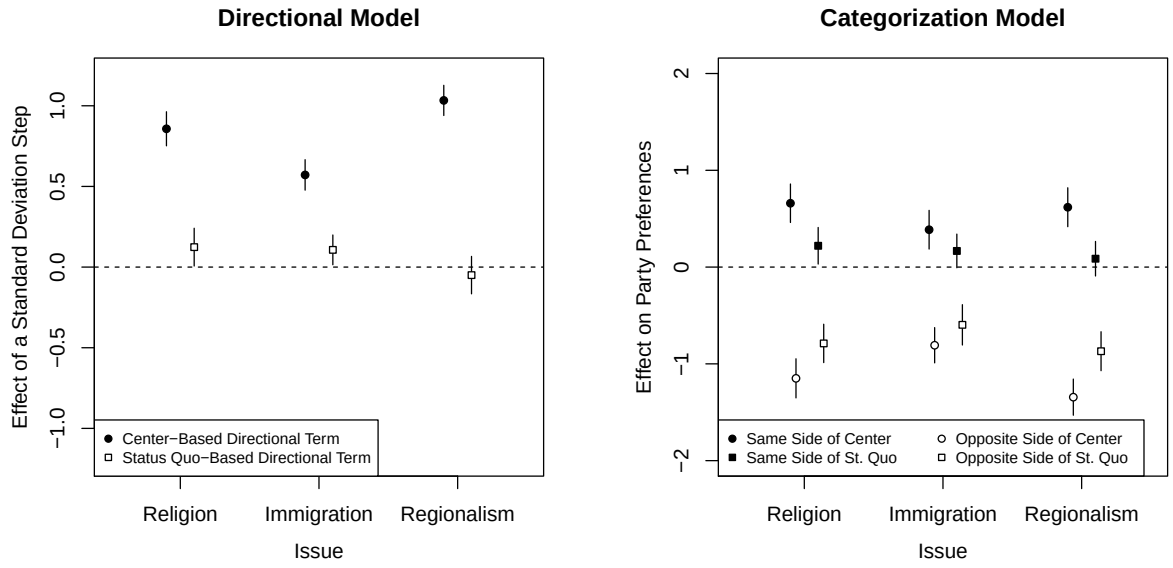
[3] All question wordings are reported in the first section of the On-line Appendix.

[4] It should also be noted, in line with our results in the main text, that if we control for both categorization and proximity effects, the directional estimates are substantially reduced.

[5] As mentioned above, a plausible explanation is the presence of priming effects. 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 the ordering of survey questions, may prime individuals' responses to such questions (Iyengar and Kinder 1987; McFarland 1981). In this case, the initial question invites respondents

ones. Overall, these results undermine the notion that voters think in terms of directions of policy change, while supporting the idea that voters perform coarse ideological categorizations.

Figure A.2: Competing Operationalizations of the Neutral Point



to interpret the scale with the status quo in mind. In contrast, the middle category is not mentioned, and must be identified by the respondents themselves, who thereby demonstrate that they find this point meaningful.

Table A.7: Models with Competing Operationalizations of the Neutral Point

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Issue	Religion	Immigr.	Regions	Religion	Immigr.	Regions
Directional Term	0.857***	0.571***	1.033***			
Center	(0.054)	(0.048)	(0.048)			
Directional Term	0.124*	0.107*	−0.050			
Status Quo	(0.060)	(0.047)	(0.059)			
Same Side				0.660***	0.386***	0.618***
Center				(0.101)	(0.102)	(0.103)
Same Side				0.220*	0.167	0.087
Status Quo				(0.096)	(0.089)	(0.091)
Opposite Side				−1.150***	−0.808***	−1.344***
Center				(0.103)	(0.093)	(0.095)
Opposite Side				−0.789***	−0.597***	−0.869***
Status Quo				(0.101)	(0.106)	(0.103)
Constant	3.215***	3.396***	3.458***	3.518***	3.575***	3.733***
	(0.037)	(0.043)	(0.040)	(0.076)	(0.075)	(0.069)
R^2	0.086	0.038	0.099	0.101	0.039	0.104
Observations	7030	7129	6640	7106	7189	6736
Individuals	2485	2608	2386	2516	2634	2427

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

A.6 Sides Effects Net of 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 fully accounting for directional effects. This is achieved by employing the Spanish survey and exploiting the fact that more than 70% of the voters perceive the status quo to be off the geometric middle of the scale. One option is to use a regression model controlling for a directional term based on the status quo. Another is to keep this directional term fixed at a specific value, while estimating categorization effects. The results of these approaches are reported in table A.8. The first three columns of the Table present the results from the first approach for each of the three issues for which data are avaiable. The last three columns keep the directional term at its modal value, i.e. zero. As shown in the table, both approaches yield categorization effects of remarkable magnitude.

Table A.8: 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: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The cell entries are OLS regression estimates, with robust standard errors, clustered at the individual-level, in parentheses.

A.7 Further Robustness Checks

Table A.9: Replication of Table 1 with Vote Choice as Dependent Variable

	Model 1	Model 2	Model 3	Model 4
Directional Term	-0.001^{***}			
	(0.000)			
Proximity Term	-0.029^{***}	-0.025^{***}		-0.027^{***}
	(0.001)	(0.001)		(0.001)
Same Side	0.130^{***}	0.125^{***}	0.099^{***}	0.183^{***}
	(0.005)	(0.005)	(0.006)	(0.007)
Opposite Side	0.008	0.010^{*}	-0.024^{***}	-0.103^{***}
	(0.005)	(0.005)	(0.006)	(0.007)
Proximity				-0.044^{***}
× Same Side				(0.003)
Proximity				0.021^{***}
× Opposite Side				(0.002)
Constant	0.102^{***}	0.089^{***}	0.065^{***}	0.094^{***}
	(0.005)	(0.004)	(0.007)	(0.005)
Individual-Fixed Effects	Yes	Yes	Yes	Yes
Party-Fixed Effects	Yes	Yes	Yes	Yes
Proximity-Fixed Effects	No	No	Yes	No
Adjusted R^2	0.236	0.236	0.205	0.246
Observations	75282	75282	41735	75282
Individuals	10306	10306	9615	10306

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

Table A.10: Replication of Table 1 Controlling for Party Identification

	Model 1	Model 2	Model 3	Model 4
Directional Term	-0.032^{***}			
	(0.003)			
Proximity Term	-0.488^{***}	-0.402^{***}		-0.439^{***}
	(0.010)	(0.008)		(0.012)
Same Side	0.602^{***}	0.486^{***}	0.462^{***}	0.464^{***}
	(0.037)	(0.037)	(0.043)	(0.050)
Opposite Side	-0.438^{***}	-0.386^{***}	-0.229^{***}	-0.739^{***}
	(0.039)	(0.038)	(0.047)	(0.062)
Proximity				-0.016
$\times$ Same Side				(0.019)
Proximity				0.082^{***}
$\times$ Opposite Side				(0.013)
Constant	3.929^{***}	3.603^{***}	2.916^{***}	3.764^{***}
	(0.038)	(0.036)	(0.051)	(0.041)
Individual-Fixed Effects	Yes	Yes	Yes	Yes
Party-Fixed Effects	Yes	Yes	Yes	Yes
Proximity-Fixed Effects	No	No	Yes	No
Party ID-Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.516	0.514	0.407	0.514
Observations	94804	94804	52966	94804
Individuals	13278	13278	12301	13278

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The cell entries are OLS regression estimates, with robust standard errors, clustered at the individual-level, in parentheses. All models include a 0-3 scale of party identification, where 0 equals no partisanship with the party in question; 1: sympathizer; 2: farly strong partisan; 3: very strong partisan. To account for the ordinal measurement of this variable, it is included in a fully factored fashion. Results remain intact when using vote choice as the dependent variable.

Table A.11: Replication of Table 1 using the ANES: 1972-2012

	Model 1a	Model 2a	Model 3a	Model 4a	Model 1b	Model 2b	Model 3b	Model 4b
	Without Party ID				With Party ID			
Directional Term	0.002				-0.006**			
	(0.003)				(0.002)			
Proximity Term	-0.058***	-0.060***		-0.059***	-0.025***	-0.020***		-0.021***
	(0.004)	(0.003)		(0.006)	(0.004)	(0.003)		(0.005)
Same Side	0.281***	0.284***	0.234***	0.308***	0.104***	0.091***	0.058***	0.102***
	(0.010)	(0.009)	(0.012)	(0.014)	(0.010)	(0.009)	(0.011)	(0.014)
Opposite Side	-0.076***	-0.079***	-0.050***	-0.122***	-0.048***	-0.036***	-0.022*	-0.065***
	(0.011)	(0.011)	(0.012)	(0.021)	(0.010)	(0.009)	(0.011)	(0.019)
Same Side				-0.033**				-0.016
× Same Side				(0.012)				(0.010)
Opposite Side				0.011				0.008
× Opposite Side				(0.007)				(0.006)
Constant	0.545***	0.547***	0.557***	0.545***	0.286***	0.281***	0.281***	0.280***
	(0.014)	(0.014)	(0.017)	(0.016)	(0.014)	(0.014)	(0.017)	(0.015)
Year-Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Proximity-Fixed Effects	No	No	Yes	No	No	No	Yes	No
Party ID-Fixed Effects	No	No	No	No	Yes	Yes	Yes	Yes
Adjusted R^2	0.234	0.234	0.155	0.235	0.412	0.412	0.360	0.412
Observations	17160	17160	10990	17160	17097	17097	10948	17097

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. The cell entries are OLS regression estimates, with robust standard errors, clustered at the individual-level, in parentheses. The first four columns replicate Table 1 of the main text, using the ANES data. Instead of Left-Right, we use the Liberal-Conservative 1-7 point scale available in these surveys. The last four columns include also party identification (0-6 from strong Democrat to strong Republican) in a fully factored fashion. In all models the dependent variable is binary variable denoting Republican vote in the presidential elections. We exclude third-party voters but include non-voters. Proximity, direction and side-specific variables are constructed with respect to the Republicans. Results are very similar when using the Democrats instead of the Republicans as the party indicated by the binary dependent variable.

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