



The formation of party preferences: Testing the proximity and directional models

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Abstract. We review the methodological debate between defenders of the proximity and directional models. We propose what we believe to be a rigorous and fair test of the two models, using the 1997 Canadian Election Study. The analysis is based on responses to questions in which the various issue positions are explicitly spelled out. We rely on individual perceptions of party positions because it is individual perceptions that matter in the formation of party preferences but we control for projection effects through a multivariate model that incorporates, in addition to indicators of distance and direction, socio-demographic characteristics, party identification, and leader ratings. We also take into account whether a party is perceived to be extreme. The empirical evidence vindicates the proximity model.

In the classical Downsian proximity model, voters form preferences among parties on the basis of the distance between their own positions on various issues and the parties' perceived stands on the same issues. The policy domain is portrayed in terms of a continuum of policy options that can be ordered from the extreme left to the extreme right. On that continuum, voters vote for the party that is closest to their own positions.

The proximity theory has been challenged by Macdonald, Rabinowitz, and Listhaug (thereafter MRL; see Listhaug, Macdonald & Rabinowitz 1990; Macdonald, Listhaug & Rabinowitz 1991; Macdonald, Rabinowitz & Listhaug 1995, 1998; Rabinowitz & Macdonald 1989; Rabinowitz, Macdonald & Listhaug 1991) who propose an alternative theory of electoral choice, the directional theory. The directional theory postulates that there are two sides or directions in a policy domain and that voters systematically prefer the parties that are on their side of the issue over those that are on the other side. Moreover, among the parties on their side, voters prefer the party that is perceived to take the strongest stand in favour of that side. The theory adds a proviso. Voters prefer parties that fall within the region of acceptability, that are deemed to be 'responsible', not 'extremist'. Parties that are beyond the region of acceptability are penalized for their extremism.

Rabinowitz, Macdonald and Listhaug have presented considerable evidence to demonstrate the superiority of directional theory. That claim has been vigorously challenged, most especially by Gilljam (1997), Granberg & Gilljam (1997), Kramer & Rattinger (1997), Pierce (1997) and Westholm (1997). A third school, best represented by Merrill & Grofman (1997, 1999) and Iversen (1994), argues that both theories have some validity and should be combined in a unified model.

Much of the debate between defenders of the two models is of a methodological nature. We review that methodological debate. In the process we propose what we believe to be a rigorous and fair test of the two models. We raise questions about the quality of indicators to measure voters' positions and perceptions of party positions and we argue in favour of a question format in which each policy position is explicitly mentioned. We provide new evidence which supports the proximity model.

The methodological issues

What is the dependent variable?

The standard dependent variable is evaluations of the parties rather than the vote itself. The justification is that 'both theories predict the entire preference order of each voter, not just the most preferred alternative . . . Evaluation scores also provide information about the size of the utility preferences' (Westholm 1997: 870). The argument is a valid one. We would add that the vote may reflect not only preferences but also strategic considerations (Cox 1997; Blais & Nadeau 1996) and that these theories are about the formation of preferences independent of strategic considerations.

There is still the question of how to measure party evaluations. In Westholm's analysis, the dependent variable is each voter's *relative* evaluation of a party, that is, the score given by the individual to a party minus that individual's mean evaluation of all parties. The rationale is that both theories are theories of individual choice and thus 'predict the utility any one person will associate with each alternative *relative to other alternatives*' (Westholm 1997: 868). MRL (1998) argue for a two-stage sequential decision process whereby people first evaluate the various parties separately and then choose.

Westholm's position seems more plausible. We believe that voters evaluate parties on a comparative basis. This position is supported by the finding of Rahn, Aldrich, Borgida & Sullivan (1990: 156) that 'a model based on comparative judgments outperforms models based on separate judgments'. What we want to explain is why a given voter prefers party A over party B. But that is *not* what Westholm is doing. We agree with his argument that

relative preferences should be used, but we believe it makes more sense to examine relative evaluations between pairs of parties rather than evaluations of a given party, relative to the individual's mean evaluation of all parties.

What are the independent variables?

The key variable in the proximity model is distance, referring to the difference between a voter's own position and the party's perceived position on the issue scale. Since we are explaining the respondent's preference between party A and party B, the appropriate distance measure is the distance between the individual's position and party A's position minus the distance between her position and party B's position. Distance has been measured as either the absolute difference between the voter and a party or the squared root of the squared difference (Euclidian distance). Like Westholm, we believe that the absolute difference best corresponds to how distance is conceptualized in the proximity model. As Ordeshook (1986: 22–23) put it, the absolute difference 'nicely summarizes the intuition that, when comparing candidates, voters look separately at how different each is from their most preferred position on each election issue'.¹

The key variable in the directional model is directional intensity, which corresponds to the product of voter and party positions. The appropriate directional measure is the product of the voter and party A's position minus the product of her position and party B's position.

This begs the question of how to measure voter and perceived party positions. All previous studies rely on a standard question that asks respondents to place themselves on a seven-, ten-, or eleven-point scale and specifies the meaning of the endpoints of the scale. Consider this example from the 1989 Norwegian election study:

Some say that Norwegian agriculture should manage without government support and tariff protection against foreign competition. Let us assume that these people are placed at 1 on this scale. Others hold the opinion that the present system of government support for agriculture should be kept. Let us assume that those who hold this opinion are given the value of 10 on the scale. Of course there are some who are located between these extremes.

Such questions are flawed. The whole point of proximity and directional theories is to explain how and why party *positions* affect party preferences. Yet, only two positions, at the two ends of the continuum, are explicitly spelled out in the question wording. It is up to each individual to interpret what a '3' or '7' may actually mean. Furthermore, in order to test the directional model one must assume that respondents reason that there are two

sides, those in favour of government support and those opposed and that the two sides correspond to 6 to 10 and to 1 to 5 respectively. We propose below a question format in which each policy position is explicitly indicated.

Another crucial issue with respect to perceptions of party positions is the reference point. The two theories are theories of individual choice. Yet, MRL have chosen to use, not the specific score an individual imputes to a party, but the average score given by survey respondents. This is an odd decision since 'although voters may at times be mistaken . . . it is their personal beliefs, whether right or wrong, that will guide preference formation' (Westholm 1997: 870).

Three main arguments are offered to support the use of aggregate perceptions. First, MRL contend that the two theories 'require parties to have a single fixed location' since they 'are geared to linking the behavior of parties to how they are assessed by voters' and that, consequently, 'there must be a discernible behavior on the part of the elite to which the mass reacts' (Macdonald, Rabinowitz Listhaug 1998: 670). Westholm (1997: 870) rebuts this argument. He makes the case that 'neither theory demands that all voters have identical and perfectly accurate information' and that 'it is sufficient to assume that the issue stands actually taken by the parties have some impact on the images of those stands held by voters'.

The second argument is more convoluted. The 'directional team' refers to the on-line model of candidate evaluation which suggests that 'information retrieved from memory, such as individual perceptions of party issue positions, is of little consequence in the evaluation process' (Macdonald, Rabinowitz & Listhaug 1998: 671) and notes that an experimental study by Lodge, Steenbergen & Brau (1995) showed that evaluations of candidates were affected by actual rather than by perceived party positions. This line of reasoning is not very persuasive. It is not hard to imagine that people could not remember the issue positions taken by two hypothetical candidates in an experimental setting two weeks earlier, the average lapse of time between the two questionnaires in the Lodge, Steenbergen & Brau (1995) study. This is much less likely to occur in a real election campaign. The argument amounts to assuming that many people sort of know the objective positions of the parties but have forgotten about them, and that this forgotten piece of information affects their evaluations of the parties. This seems implausible.

The third argument is that there is a 'projection' or 'rationalization' effect. Rationalization occurs when party evaluation causes perception of party position: the person comes to believe that the party she likes is close to her viewpoints on the issues. In this case, 'it is wrong to claim that issue proximity causes positive evaluation. In fact the reverse is true: Proximity follows from prior affect' (Macdonald, Rabinowitz & Listhaug 1998: 672). Projection

occurs when a prior disposition (such as party identification) causes both party evaluation and perception of party position: the person who traditionally identifies with a party is prone to assume that 'her' party is close to her viewpoints.

Westholm acknowledges that rationalization constitutes a problem but contends that this should not affect the performance of the two theories relative to each other since proximity voters will tend to project on the basis of proximity and directional voters on the basis of directional intensity. As a consequence, 'the unwarranted increase in statistical association due to projection should affect the results in direct proportion to their true explanatory power' (Westholm 1997: 871).

The latter contention is dubious. The simplest – and most widespread – type of projection/rationalization is for a respondent to attribute to her preferred party her own position on an issue: if the respondent is at +1, she assumes her party is at +1. Whenever this happens, the proximity model appears to perform better than the directional model which predicts that the respondent will prefer the party that is at +3. For that reason, rationalization and projection bias the results in favour of proximity.

On the issue of whether the empirical analysis should rely on individual or aggregate perceptions, therefore, it seems to us that both sides are partly right. At the theoretical level, it is individual perceptions that matter and it makes sense to use individual perceptions when testing these two theories. At the same time, it should be acknowledged that because of projection and rationalization effects, tests based on individual perceptions are likely to be biased against the directional model. The ideal solution would be to incorporate these projection and rationalization effects. This is only partly possible. It is possible to neutralize projection effects that come out of traditional partisan loyalties, and we will control for party identification in our analyses. We are thus able to neutralize the propensity of those who identify with a party to perceive that party to be closer to their own positions on the issues. In the absence of panel data, it is unfortunately impossible to take into account rationalization, whereby preferences as such determine perceived party locations. The propensity to rationalize is likely to be greater after someone has voted than before, which has led us to tap perceptions of party positions in the campaign rather than in the post-election interview. All previous studies have used post-election questionnaires, in which the risk of rationalization is greater.

We are left with two options. The first is to use aggregate scores similar to those of MRL. This does not make theoretical sense because there is no reason to believe that voters react to an aggregate score of which they are unaware. The second, and more satisfactory, approach is to rely on the theor-

etically more meaningful measure, individual perceptions, while controlling for projection effects. We acknowledge that this slightly favours the proximity model but that bias is reduced by incorporating voters' predispositions such as party identification and feelings towards party leaders. We also take comfort in Merrill & Grofman's (1999: 86) assessment that 'projection adjustment may be omitted without substantial bias in model estimation'.²

According to the directional model, we also need to take into account whether a given party is inside or outside the region of acceptability. We operationalize the concept as the perception that a party is not too extreme. MRL indicate themselves that a party that is beyond the region of acceptability will be labelled 'extremist' or 'irresponsible' (Rabinowitz, Macdonald & Listhaug 1991: 151). They argue that 'whether a party is inside or outside the region of acceptability is the characteristic of the party' though they concede that 'voters who are themselves intense and sympathetic to the party might apply no penalty or a very small one, while other voters might apply a larger penalty' (Rabinowitz, Macdonald & Listhaug 1991: 152). It would seem odd to assume that all voters, including 'extremist' ones, will penalize an 'extremist' party. We thus use individual perceptions of whether a given party is too extreme.

The study

We use the campaign wave of the 1997 Canadian Election Study. The telephone survey was conducted by the Institute for Social Research at York University among a representative sample of 3,949 Canadians over the course of the campaign.³ There were five main parties running in the election: the Liberals (38 percent of the vote), the Reform Party (19 percent), the Progressive Conservative Party (19 percent), the New Democratic Party (11 percent) and the Bloc québécois (11 percent). Because the party system is different in Quebec – the Reform Party had only a few candidates in Quebec and the Bloc québécois did not run candidates outside Quebec – we perform separate analyses of party preferences inside and outside Quebec.

Preferences among the parties are measured by hundred-point feeling thermometers. As already indicated, we want to account for relative preferences between the parties. We use the incumbent Liberal Party as the reference point. We thus look at relative evaluations of Reform, the Conservatives, and the NDP, compared to the Liberals, outside Quebec, and to relative evaluations of the Bloc, the Conservatives and the NDP, compared to the Liberals again, in Quebec. We determine, for each individual and each pair of parties, which party is preferred and by how much.

We thus examine comparative evaluations of three pairs of parties inside and outside Quebec: Liberal/Conservative, Liberal/NDP, and Liberal/Reform (Bloc in Quebec). We do not examine the three other pairs (Conservative/NDP, Conservative/Reform or Bloc, NDP/Reform or Bloc) because the latter three can be computed as a linear combination of the first three and are therefore not statistically independent. Voters who give 70 to the Liberals, 60 to the Conservatives and 40 to the NDP will have a difference score of +10 for the Liberal/Conservative comparison and of +30 for the Liberal/NDP comparison. It can be inferred that their Conservative/NDP difference will be +20. It should be noted that using all six pairs would lead to the very same conclusions. Our setup is thus a pooled (respondents inside and outside Quebec) and stacked (with three sets of comparative evaluations for each respondent) matrix.

The questionnaire focused on the two major issues of the campaign, whether taxes should be cut and whether more should be done to accommodate Quebec. We used a branching format in which respondents were first asked whether taxes should be cut, increased, or kept as they are (or whether more, less, or about the same as now should be done for Quebec) and then whether taxes should be cut/increased a lot, somewhat, or a little (or whether much, somewhat or a little more/less should be done for Quebec). The branching format has been shown to increase reliability (Krosnick & Berent 1993). Combining these two questions gives us an ordered set of seven positions, each being clearly identified, and a scale ranging from -3 to +3.

The two main independent variables for each of the two issues are DISTANCE and DIRECTION. For a given party, DISTANCE is the absolute difference between the respondent's position and the party's perceived position minus the absolute difference between the respondent's position and the Liberals' perceived position. Similarly, DIRECTION equals the product of the respondent's position and the party's perceived position minus the product of the respondent's position and the Liberals' perceived position.⁴

To take account of the region of acceptability, we have created a variable that equals 1 for a party that is deemed to be too extreme by a given individual (the question was: 'Is there any federal political party that is just too extreme?'). We have also included a whole set of socio-economic characteristics (all socio-demographic variables that have been shown to be related to vote choice (Nevitte, Blais, Gidengil & Nadeau 2000): region, urban/rural, ethnicity, language, religion, education, employment sector, unionization, income, age, and marital status), party identification and leader evaluations, to control for projection effects as well as for other factors that may affect voters' preferences between the parties. All variables have been standardized from 0 to 1 to facilitate the interpretation of the results.

Table 1. Party preferences, distance and direction

	Distance Only	Direction Only	Distance and Direction
Distance Quebec	-0.09 ^a (0.01)	-	-0.12 ^a (0.02)
Distance tax	-0.11 ^a (0.011)	-	-0.11 ^a (0.02)
Direction Quebec	-	+0.08 ^a (0.02)	-0.05 (0.03)
Direction tax	-	+0.11 ^a (0.02)	-0.02 (0.03)
Region of acceptability	-0.07 ^a (0.01)	-0.09 ^a (0.01)	-0.07 ^a (0.01)
Party identification	+0.11 ^a (0.01)	+0.11 ^a (0.01)	+0.11 ^a (0.01)
Leader evaluation	+0.62 ^a (0.01)	+0.64 ^a (0.01)	+0.62 ^a (0.01)
Adjusted R ²	0.68	0.68	0.68
N	2,749	2,749	2,749

^aSignificant at 0.01 level (two-tailed test).

Note: Entries for independent variables are unstandardized regression coefficients with standard errors in parentheses. Intercepts and demographic effects are omitted from the table in order to save space. The regressions also include five dummy variables for each pair of parties except Liberal/Conservative, outside Quebec (the reference category).

The findings are presented in Table 1. The table pools and stacks comparative evaluations of the Liberals (the reference party) and of the Conservatives, the NDP and Reform outside Quebec and of the Conservatives, the NDP and the Bloc in Quebec. We have three observations for each individual respondent (for each of our three comparative pairs of evaluations). The N (2,749) in Table 1 refers to the number of individual respondents. The number of observations is 8,247. The regressions incorporate five party pair dummy variables (the Liberal/Conservative pair outside Quebec is the reference category) to capture the impact of other unmeasured factors that may affect party preferences. Like most studies (see, for instance, Westholm 1997; Macdonald, Rabinowitz & Listhaug 1998; Merrill & Grofman 1999), we test the two models first independently and then jointly.

Table 1 shows that even after controlling for socio-demographic characteristics, party identification and leader evaluations, and region of acceptability, the distance and the direction variables come out significant when they are entered separately. It is also clear, however, that when the two distance and the two direction variables are included in the same equation, only the two distance variables remain significant. The direction variables do not even have the expected (positive) signs.

Our results indicate that voters form preferences on the basis of proximity, and not of direction. There is no support either for a mixed model in which both distance and direction matter (see Iversen 1994; Merrill & Grofman 1997, 1999).

Conclusion

We have reviewed the methodological debate about the merits of the proximity and directional models. We have proposed what we believe to be a rigorous and fair test, with data coming out of the 1997 Canadian Election Study. The analysis is based on survey questions in which the various issue positions are explicitly spelled out rather than on questions in which only the extreme positions are indicated. We rely on individual perceptions of party positions because it is individual perceptions that matter in theories of individual choice but we control for projection effects through a multivariate model that incorporates, in addition to indicators of distance and direction, socio-demographic characteristics, party identification, and leader ratings. We also take into account whether a party is perceived to be too extreme.

Our findings support the proximity model. It would be imprudent to conclude that our study definitively settles the debate between the proximity and the directional models. Other analyses, with other data sets, are needed to determine whether the pattern uncovered here can be generalized. We would claim, however, that voters' own issue positions and their perceptions of party positions should be tapped through questions that explicitly spell out issue positions and the evidence presented here supports the classical Downsian model.

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Notes

1. Merrill & Grofman (1999) and Lewis & King (2000) use Euclidian distance in order to develop an encompassing model that equals the directional or the proximity model under certain conditions. This does not allow, however, for a direct measure of the impact of distance and direction.
2. We also note that our approach is the standard practice in the economic voting literature. It is accepted that what matters is how voters *perceive* the economy, even though there may be substantial gap between the 'facts' and voters' perceptions. As a consequence, researchers routinely regress the vote on economic perceptions, controlling for other factors such as party identification (see, for instance, Lewis-Beck 1988; Anderson 2000).
3. The survey was a rolling cross-section, a miniature sample of around 110 Canadians being interviewed every day of the campaign, which lasted 36 days. The fieldwork was conducted by the Institute for Social Research at York University. The response

- rate was 59 percent. See Northrup (1998) for more detailed information on the survey. Copies of the questionnaires, data sets, and technical documentation can be obtained at: www.fas.umontreal.ca/POL/CES-EEC. The study also includes a post-election survey.
4. It could be argued that the analysis should also take into account the relative importance that each respondent gives to each of the two issues. We have performed analyses in which both DISTANCE and DIRECTION were multiplied by the subjective importance of the issues. Such analyses lead to the very same conclusions.

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