

Legislative Voting in the Canadian Parliament

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ABSTRACT

We analyze legislative votes in the 35th (1994-97) and 38th (2004-05) Canadian Parliaments over a multidimensional policy space. The results demonstrate that policy debates are two-dimensional in Canada. The first dimension represents the division between governing and opposition parties that has been found in similar parliamentary systems. The second dimension captures the opposition between Quebec and western provinces. There is a clear regional division between the Reform Party (and later the Conservative Party) and the Bloc Québécois in both Parliaments; whereas the Liberals and the NDP occupy the center on this legislative dimension. We also note that the newly formed Conservative Party has moved closer to the center in the 38th Parliament.

In this article, we propose to analyze legislative voting in Canada by applying a Bayesian simulation procedure to estimate a two-dimensional item-response model on recorded divisions for the 35th and 38th Parliaments. This technique is based on the spatial theory of voting (Downs, 1957; Davis, Hinich and Ordeshook, 1970) where legislators are arranged geometrically in a low-dimensional policy space that reflects fundamental policy and ideological preferences (Hinich and Munger, 1997). The distribution of these preferences form a spatial map that demonstrates how divisions in the legislature represent partisan affiliation, regionalism, or voting polarization over time (Poole and Rosenthal, 2007, 1997, 1991; Poole, 2005; Clinton, Jackman and Rivers, 2004; Heckman and Snyder, 1997). Since party discipline is usually very strong in a Westminster style parliamentary system, we may find that there is little variation in the actual location of members from the same party over the course of a legislative session. However, the location of the party groups in relation to one another should provide us with a mapping of cross party voting coalitions. In the Canadian context, we believe that this is very important since the party system has experienced some major transformations in recent years.

For instance, the introduction of two new parties in the 35th Parliament has been associated with the emergence of a salient dimension of conflict in which Quebec nationalists (represented by the Bloc Quebecois) have been opposed to western regionalists (represented by the Reform Party, which was renamed the Canadian Alliance in 2000) (Flanagan, 1998). We believe that this opposition goes beyond the traditional division found in the principal di-

mension of legislative voting that usually sets the governing party(ies) against opposition party(ies) in parliamentary systems (Hix and Noury, 2007). This is because the Bloc Quebecois has vowed to prioritize the interests of Quebec in all votes, regardless of whether a bill originates from the government or not. The opposite pattern of legislative behavior may also be found within the Reform Party since this formation originates from a pro-western, social-conservative and anti-Quebec movement (Laycock, 2002). Consequently, the primary task in this study of parliamentary voting will be to determine whether the difference between these two parties actually reflects regional conflicts in Canada.

A second major recent transformation in the Canadian party system is related to the merger of the Canadian Alliance with the Progressive Conservative Party in December 2003. One of the principal objective of this party fusion was to broaden the electoral appeal of the right by creating a more moderate coalition of former Reformist and Conservative MPs (Members of Parliament) – especially on issues that opposed Quebec to western Canada (Belanger and Godbout, 2008). In this study, we aim to test the validity of this claim by comparing the spatial location of Reformers and Conservatives in a pre and a post-merger environment to determine whether this merger has created a more moderate right wing party in the House of Commons.

We will test these two claims by analyzing all recorded divisions in the 35th (January 1994 to April 1997) and 38th (October 2004 to November 2005) Parliaments. The selection of these legislative terms makes intuitive sense since the Reform and the Bloc first elected representatives in the 35th Parlia-

ment; whereas the merger between the Canadian Alliance and the Progressive Conservative Party occurred just before the start of the 38th Parliament.

The paper is organized as follow. In the first section, we provide a brief overview of some of the most important spatial analysis of legislative voting. In the subsequent section, we explain in more details the recent changes in the Canadian party system. In this section, we also introduce the two research hypotheses (the regional conflict dimension and the moderation hypotheses) that will guide the remaining empirical study of legislative voting. In the third and fourth sections, we present the data and methodology employed in our analysis of votes and review some of the key findings. In the final section, we conclude.

LEGISLATIVE VOTING IN THE U.S. AND OTHER DEMOCRACIES

The geometric analysis of legislative votes in a multidimensional space is a common practice in the United States Congress (e.g Poole and Rosenthal, 2007, 1997, 1991; Poole, 2005; Clinton, Jackman and Rivers, 2004; Heckman and Snyder, 1997), Latin America (e.g Morgenstern, 2004; Morgenstern and Nacif, 2002), and the European Union (e.g. Hix, Noury and Roland, 2007; Mattila and Lane, 2001). The logic behind this type of study is that legislators have underlying ideal points (or preferences) across a set of policy alternatives (Hinich and Munger, 1997). In the geometric model of voting, the distribution of ideal points forms a spatial map that summarizes the composition of the legislature. These ideal points are calculated by aggre-

gating the outcome of individual roll call votes (or recorded divisions as in the Canadian case) to create vote-based scores for each legislator in distinct choice spaces. In this context, the choice spaces are much like a road map and provide a visualization of the political world (Poole, 2008). Lawmakers who are close together on the map tend to have similar voting records, and the spatial distribution of all legislators corresponds to the dimensions of conflict within the legislature.

One of the principal characteristics of the spatial analysis of legislative voting is that the distribution of preferences (or ideal points) between legislators generally reflects different partisan coalitions (Clinton, Jackman and Rivers, 2004). In the United States Congress for example, Democrats are inclined to cluster together at one extreme and Republicans at the other, while moderates like Senator Joe Lieberman situate between these two groups. This is because party members are more likely to have similar voting records over the course of a legislative session. The most important finding of the geometric analysis of legislative voting is that much of the behavior in Congress can be explained by a stable, low-dimensional issue space, which is generally limited to no more than two dimensions. And this is true in a variety of national assemblies. For example, Hix and Noury (2007) found that to be true in Belgium, Canada, Chile, the Czech Republic, Israel, Italy, Mexico, New Zealand, Peru, Poland, South Korea, Switzerland, and the United Kingdom.

This low dimensionality implies that voting on certain unrelated issues will be a fairly good predictor of future legislative votes. In the United States, conservative lawmakers today generally favor lower taxes and oppose abor-

tion, whereas liberal lawmakers favor a higher level of income redistribution and gun control. Poole and Rosenthal (1997; 2007) explain that in the U.S. Congress, the first dimension represents the traditional ideological conflict along the left-right ideological spectrum which generally relates to the role of government in the economy. The second dimension represents different policy issues that are specific to certain periods in United States history, such as slavery, civil rights, but also bimetallism and the free coinage of silver (Poole, 2008). In recent years, the primary dimension has accounted for more than 90% of the variation in all roll call choices by members of Congress (Poole, 2005). Any remaining votes that cannot be explained along party line (the first dimension) falls theoretically onto a second dimension which in the U.S. represents a different type of conflict located outside of the traditional left/right party opposition (such as the conflict between southern Democrats and northern Democrats/Republicans over civil rights in the 1960s).

Of course the geometric analysis of legislative voting is not well suited for every type of legislature. In the most perfect scenario, the absence of parties, log-rolls, or other factors affecting legislative preferences could theoretically give us the precise location of a lawmaker's preference on a given policy dimension (or a specific policy issue). However, most legislatures have some institutional characteristics that constrain the behavior of its members (such as committee gate keeping powers, party whips, or amendment rules). Generally, the absence of political parties allows for the greatest amount of liberty; like in the Confederate Congress (Jenkins, 1999), the Irish Free State Senate (Sircar and Hoyland, Forthcoming), or the United Nations (Voeten,

2000). In this context, legislative actors have the most opportunity to vote according to their own preferences. But even under these conditions, log-rolls, strategic behavior or position-taking can theoretically lead representatives to vote against their underlying interests.

Nevertheless, in countries like the United States where party discipline is weaker than in most parliamentary systems, we find that given a sufficiently large number of votes, the interpretation of the first dimension of conflict can be conceptualized as the left-right ideological continuum. However, in parliamentary systems where party discipline is usually much stronger, studies of legislative voting have reached a different conclusion about the meaning of the primary spatial dimension of voting. In their study of legislative behavior in fourteen parliaments, Hix and Noury (2007) concluded that the dominant feature of voting in most parliamentary systems corresponds to a division between government and opposition members; not the classical left-right conflict which is generally assumed to be the present in the congressional legislative literature (McCarty, Poole and Rosenthal, 2006). Hix and Noury explain that opposition parties usually vote against the government, regardless of whether they prefer a government legislation to the existing status quo. In other words, opposition members vote against the government to signal their opposition rather than their discontent with a particular proposal. This pattern occurs because the government needs to sustain the confidence of a majority of members of the elected assembly in a parliamentary system, and the opposition parties can attempt to weaken the executive by voting against most legislations and government motions (Docherty, 1997). One extreme

example of such a legislature is the Australian Parliament (Jackman, 2001), where party discipline induces little or no variance in the voting profiles of legislators from the same party. On the other hand, we find much more variance in the Brazilian case (Hix and Noury, 2007; Desposato, 2006), where an important proportion of MPs switch their allegiance between parties when casting votes in the *Congresso Nacional*.

Hix and Noury (2007) also find that the traditional ideological opposition between the left and the right actually falls on a second dimension of conflict in most of the parliaments they study. The authors explain that this second dimension can account for a significant amount of voting variance and captures divisions which occur *within* the government or opposition parties (as opposed to the first dimension where we find conflict *across* the government and the opposition). We believe that this type of spatial mapping will be more common in parliaments where there is both a strong regional and socio-economic opposition in the legislature. Canada fits nicely into this category since it has the federal system which guarantees regional representation in the Senate but also in the House of Commons.

THE CANADIAN PARLIAMENT

It has generally been assumed that studying voting in the Canadian Parliament would reveal very little in the way of individual legislative behavior since party discipline is so strong. This assumption has largely remained unchallenged because “the collection of Canadian voting data is hampered

both by a substantive technical problem also found in other legislatures – members are identified in records by name but not party, making data collection an exceedingly tedious and resource-intensive task.” (Malloy, 2003, p.169).¹ Fortunately, the most recent voting records of the Canadian Parliament are now available online in machine readable format. Furthermore, recent software developments in scaling methodologies and data management have greatly facilitated the systematic analysis of political choices in legislative settings (Jackman, 2006; Poole, 2007, 2008). The following section will focus on the recent transformations of the Canadian party system and explain how a geometric analysis of legislative voting can help us understand these developments.

The most important of these transformations is related to the emergence of two new parties prior to the 1993 election (a nationalist party from Quebec, the Bloc Quebecois, and a western Regional party, the Reform Party) which severely weakened one of the oldest political party in Canada (the Progressive Conservative Party). The advent of these new political formations has not only changed the distribution of seats in Parliament, it has also introduced a new salient dimension of political conflicts at the federal level pitting Quebec nationalists (represented by the Bloc Quebecois) against Western regionalists (represented by the Reform Party which was later renamed the Canadian Alliance (Flanagan, 1998)).

Up until the 1990s, the Progressive Conservative (PC) and the Liberal parties were the two historically dominant governing political formations in the House of Commons. This dominance soon ended after the 1993 election

– an election in which the Tories lost 167 of their 169 incumbent seats. This defeat was the result of a constitutional crisis. After the 1980 referendum on secession in Quebec, the Liberal government of Pierre Trudeau proposed a series of amendments to the Canadian constitution in order to resolve some of the issues raised by Quebec nationalists. Although this new constitution was adopted in 1982, it was never ratified by Quebec. And the failure of the federal government to meet Quebec’s demands antagonized a majority of the province’s French speaking population. The Conservatives who received most of their electoral support in western Canada, saw this as an excellent opportunity to gain an important number of seats in the House of Commons. During the 1984 election campaign, Brian Mulroney (the leader of the Conservative Party), proposed to amend the new constitution in order to bring Quebec back in the federation. This strategy proved successful. The Conservatives won the following two elections (1984 and 1988). The Mulroney government organized a series of constitutional conferences (in 1987 and 1992) that produced a set of amendments to change the 1982 constitution. However, these proposals ultimately failed to be ratified by a majority of the Provincial legislatures and the Canadian population.

The failure to amend the constitution can partially be explained by the heterogeneity of the coalition of interest constructed under Mulroney. The strong contingent of Conservative Quebec MPs was at odds with the traditional western Canadian right wing ideology. The rest of the Conservative caucus had some reservations against granting additional constitutional power to Quebec. Consequently, dissension grew among the ranks of the

Tories, and many western Canadians voters opted to support a new political formation in the 1988 election, the Reform Party. As a result, the Tories gradually lost ground in the Canadian west (Woolstencroft, 1994) because the Reformists addressed issues of alienation and disenchantment (Bernard, 1996). Following the rejection of the second round of constitutional negotiations in 1992, six members of the Conservative caucus from Quebec resigned and formed a new political party, the Bloc Quebecois; which was to be devoted to the defense of the French speaking population of Quebec in the federal Parliament.

By focusing the 1984 campaign on the issue of constitutional reform, Brian Mulroney emphasized the importance of the rights of the French speaking province of Quebec in the minds of the Canadian electorate (Johnston et al., 1992; Nevitte et al., 1995). Consequently, both new parties were able to capitalize on this new political conflict in the 1993 election. In this election, the Bloc won 54 of the 75 Quebec seats and became the official opposition, while the Reform Party won 52 of the 86 western seats.² The electoral defeat of the Old Tories in 1993 can be explained by the fact that the Bloc Quebecois outflanked the Conservative party on the constitutional issue and captured its share of the votes in Quebec. Likewise, the Reform party captured the traditional support of the Conservative in the West by focusing its campaign on similar regional appeals (western alienation, cultural conservatism) that disadvantaged the Tories.

The subsequent 1997 and 2000 elections have somewhat consolidated the regional support for both of these regional parties. In an attempt to broaden

the Reformers' electoral appeal and to replace the Conservatives as the new ideologically conservative party of Canada, the Reform Party was renamed the Canadian Alliance before the 2000 election; it also adopted a softer policy platform and changed leader. However, these efforts proved insufficient. In the 2000 election, the Canadian Alliance only made modest electoral gains outside of the west; the party was still perceived as too extreme (especially on issues related to Quebec) by a majority of the population (Blais et al., 2002). It finally took a merger with the remaining members of the Progressive Conservative Party in December 2003 for the Canadian Alliance to shake off its reputation of being a regional based populist party from western Canada.

Renamed the Conservative Party of Canada, the merger between the Progressive Conservative Party and the Canadian Alliance was a success because it provided the former Reformers with a more moderate platform and a more moderate pool of candidates (Belanger and Godbout, 2008). This new entrant in the party system forced the Liberals into a minority government following the 2004 election, the first such government since 1979. The situation did not improve in the subsequent 2006 and 2008 elections. However, this time it was the Conservative Party that formed two minority governments.

The preceding narrative of the recent changes in Canadian politics has highlighted an important characteristics of its legislative organization. Because of its Westminster style parliamentary system, a study of legislative voting in the House of Commons should identify a clear difference between the governing MPs and the members of the opposition. However, it is likely

that there is also a second dimension of conflict. This dimension should be territorial, pitting the Reform Party against the Bloc Quebecois. The Reformist made their first significant gains by politicizing the cleavage between Quebec and the rest of Canada in the 1993 campaign, and they followed suit in the 1997 elections by capitalizing on the antipathy that many voters still felt toward this province (Nevitte et al., 2000). It was only after the merger with the Progressive Conservative Party that the former Reformists lost their extremist reputation in the minds of the Canadian electorate (Stevenson, 2008). The question remains to see if this moderation has also materialized in the legislative voting records of the new party members.

By comparing the divisions of party group members in a pre and a post-merger Parliament, it will be possible to determine whether 1) there is a strong regional conflict in the Canadian Parliament, and 2) whether the new Conservative Party remains polarized on this issue after the merger between the Progressive Conservatives and the Canadian Alliance (the former Reform Party). This regional conflict may still be salient in the post-merger party system since the constitution remains unratified by Quebec, and the Bloc Quebecois is still the third largest party group in parliament. However, like Belanger and Godbout (2008), we believe that the merger will have moved an important proportion of Conservatives MPs closer to the Liberals (and the New Democratic Party) when we look at their voting records on issues related to Quebec, language, or provincial rights. However, before proceeding with the actual empirical analysis, we discuss in the next section our voting model, data and estimation methodology.

VOTING MODEL, DATA, AND ESTIMATION

The hypotheses are developed within the framework of the spatial theory of voting, where both actors and policy alternatives are located in a low-dimensional policy space. In order to obtain the ideal policy location (or the ideal point) for each Member of Parliament, it is necessary to calculate their individual location using a binary discrete choice model. It is important to note that we do not observe the ideal point of the decision-maker in the data – i.e. we can only observe their voting decisions. Therefore, we use a standard Bayesian item-response model set-up to estimate these ideal points. Other methods such as Optimal Classification Scaling (Poole, 2008) and NOMINATE (Poole, 2007) could also have been used. The main advantage of the Bayesian approach is that the stochastic error component within the voting decision is not associated with the legislator’s spatial location. Rather, it is attached to the location of a specific bill in the policy space (Clinton, Jackman and Rivers, 2004). This nuance makes intuitive sense if we consider the fact that uncertainty is more likely to be related with the location of a bill, rather than with an individual’s legislator own policy preference (Clinton, 2007; Martin and Quinn, 2006). The Bayesian approach to the analysis of recorded legislative votes is implemented and well documented in the `pscl` R-package of Jackman (2006). The reader can consult Bafumi et al. (2005) and Clinton, Jackman and Rivers (2004) for a technical discussion of practical issues related to the binary discrete choice model.³

We analyze all recorded divisions (roll-call votes) from the 35th and the

38th Canadian Parliaments. Divisions in parliament can be over specific bills and motions arising from government or private members.⁴ Table 1 shows the composition of the two parliaments.

[Table 1 about here.]

The data of the 35th Parliament was taken from Kam (2001) while the data for the 38th Parliament was taken directly from the Canadian Hansard records which can be found online.⁵ Overall, the 35th Parliament contains 735 divisions while the shorter 38th Parliament includes 190 divisions.

Legislators who participated in fewer than 50 division votes were dropped from the analysis since their estimates were associated with a large degree of uncertainty. Overall, the model computes the positions of 296 legislators on 726 divisions in the 35th Parliament and the positions of 307 legislators on 182 divisions in the 38th Parliament. In this study, we are principally interested in estimating a legislator's ideal point; however, as the next section will show, we are also interested in some of the other parameters found in the model. These parameters allow us to evaluate the dimensionality of the Canadian legislature, and whether a single or two-dimensional Euclidian space is sufficient to account for most of the variation in legislative voting.⁶

RESULTS

Since Canada has a parliamentary system where strong party discipline is the norm (Dyck, 1993; Longley, 1998; Garner and Letki, 1995; Massicotte,

1989), it has generally been assumed that any study of recorded legislative votes would only yield a limited amount of information. In his historical description of parties, Carty (1988) explains that party discipline was much weaker in earlier federal parliaments. However, strict party discipline has been enforced in modern parliaments. It is very unlikely today that we will find many independent Liberal or Conservative “loose fish” who do not support their own party (Kornberg and Mishler, 1976). In one of the few existing studies that focuses on party discipline in the Canadian context, Kam (2001) found that the governing Liberal Party experienced dissent in 16 per cent of the division votes in the 35th Parliament. According to Kam (2001) this corresponds to an average of fewer than five or six Liberal MPs voting against their own party in every recorded vote. A similar trend is found if we look at other legislative terms; the total amount of dissenting vote for all parties was 6 per cent in the 32nd (1980-1984) Parliament, 8 per cent in the 33rd (1984-1988), and 17 per cent in 34th Parliament (1988-1993).⁷ According to these calculations, the overall level of dissenting votes was 22 per cent for all parties in the 35th Parliament.⁸

In tables 2 and 3, we report a slightly different measure of voting dis-sentiment which calculates the overall level of voting unity for each party for the 35th and 38th Parliaments. This unity score, which is similar to the one computed by Poole (2008) for the U.S. Congress, is obtained by averaging the percentage of times members voted against a majority of their own party. We also present in both tables the level of cross party voting among the different parties. To obtain this score, we divided the total number of times

individual MPs voted with the majority of a given party by the total number of votes that each casted in a legislative term. The number reported in each row of the tables is the average of this ratio for all members of the same party. Hence, the higher the value, the higher the level of legislative support for this party.

[Table 2 about here.]

Not surprisingly, the results show that the level of intra-party unity is extremely high in these two parliaments (in each table, intra-party voting is represented by the diagonal values). Members tend to vote with their own party virtually all the time. Docherty (1997) even stipulates that the level of party discipline in 35th Parliament was one of the highest in the modern parliamentary era. And this trend seems to be confirmed again in the 38th Parliament.⁹ This high level of party discipline implies that voting against one's own party is a rare occurrence. This also implies that any individual estimation of ideal point cannot be assumed to represent a member's ideology like in the U.S. Congress. As was indicated earlier, opposition members in the Canadian Parliament tend to vote against the governing party to signal their disagreement, regardless of whether they support a particular bill or not. And as the numbers in table 2 indicate, party loyalty seems to supersede any other preference in almost all recorded votes.

Of course, this characteristic of the Westminster parliamentary system will affect the scaling of individual ideal point estimates. Since party discipline is so strong in Canada, we may find little variation in the actual spatial

location of members from the same party over the course of a legislative term. If we assume for example that there is perfect party discipline (and there is no abstention or missed votes), the scaling of legislative votes will reveal that each individual ideal point estimate will be equal for all members of the same party group. Nevertheless, even if there is no intra-party voting variance, we may still find a lot of cross party voting variance, especially if certain opposition parties collaborate more with the government than others. In return, this could imply that certain parties are closer together in the spatial mapping of the legislature. As long as we find some variation in voting across different parties, the geometric analysis of recorded votes will identify the location of all MPs –and by extension their party– in a multidimensional policy space. Hence, this explains why we report the level of cross party voting in both tables.

[Table 3 about here.]

In table 2, the unity scores of the first row imply that a majority of the members of the Bloc Quebecois voted 44 per cent of the times with a majority of the Progressive Conservative party, 56 per cent with the Reform, 25 per cent with the Liberal, and 72 per cent with the New Democratic Party (NDP) in the 35th Parliament. The most interesting finding in this table relates to the fact that the Reform voted more often with the Bloc than with any other party in this Parliament. This result is somewhat surprising if we consider that these political formations clearly claimed to represent different and opposing interests in the legislature. The table also indicates that the PC

and the Reform, who later merged into the new Conservative Party, actually have the lowest level of cross-party voting (if you exclude the votes with the governing Liberals).

Not surprisingly, table 3 also confirms the low level of cross-party voting between the Liberals and the newly formed Conservative Party in the 38th Parliament (32 per cent and 34 per cent respectively). It is a lot more interesting to see that the level of cross-party voting between the Conservatives and the Bloc Quebecois actually declined to 43 per cent in the post-merger party system. As was indicated earlier, one of key objective of the fusion between the two right wing political formations was to appear more moderate on issues related to Quebec. The lower unity score between these parties seems to indicate *less*, not more, cooperation between these two parties.

However, before we can conclude that there is more opposition between the new Conservative party and the Bloc Quebecois, it is necessary to put these findings in perspective. The unity score does not discriminate between government and private bills for example. We may still find that the Reform and the Bloc collaborate to signal their opposition to the government, but remain in clear conflict when it comes down to specific regional issue votes related to Quebec or western Canada. Similarly, the lower level of cross-party voting between the new Conservative Party and the Bloc Quebecois in the 38th Parliament does not necessarily imply greater polarization. The fact that the Liberals formed a minority government probably explain why we find a greater level of cross-party voting for this party, since the Liberals needed to collaborate with other parties to enact legislations.

The only way to clearly disentangle between what Hix and Noury (2007) label the government/opposition dimension of conflict in the legislature, and any other division that may exist between the parties is through a spatial analysis of legislative voting. Even in the Canadian Parliament, it is possible that lawmakers may simply be voting along a single issue dimension. However, as (Poole and Rosenthal, 2007) explain, even in the United States Congress, we can find certain issues over which party loyalty is much weaker. The civil rights controversies of the 1960s is a good example of this. It is during that time that Southern Democrats were most likely to vote against their own party on issues related to race and segregation.

In a two-party system like in the United States, some level of intra-party division is necessary to have a second dimension of voting in the legislature. But in Canada, this is not a necessary condition since there is a clear multi-party system. Party loyalty is indeed much stronger, but we also find as much as five different parties with elected members in the Commons. And since some of these parties claim to represent distinct regional interests, it is quite possible that we will find a strong second dimension of conflict in the legislature even if there is a very small amount of intra-party division.

[Table 4 about here.]

We begin our spatial analysis by comparing the overall performance of the model in different dimensional settings in table 4 which reports the percentage of correctly predicted voting decisions.¹⁰ The one-dimensional model correctly predicts the individual voting decisions of 92 per cent and 91 per

cent of all legislators in the 35th and 38th Parliaments. If we consider the individual predictions for each party groups, we find that the one-dimensional model works particularly well for the Liberal party. More than 99 per cent of the Liberal voting decisions are correctly predicted in the 35th Parliament (96 per cent in the 38th Parliament). Not surprisingly, this same dimension predicts fewer votes for the Bloc Quebecois; the one-dimensional model accounts for only 88 per cent of the voting decisions in the 35th Parliament and 72 per cent in the 38th Parliament.

A more interesting trend is found when we consider the Reform and later the new Conservative Party. In the 35th Parliament, the one-dimensional model correctly predicts 73 per cent of their divisions. However, in the 38th Parliament –which immediately followed the merger between the PC and the Reform (renamed the Canadian Alliance in 2000)– the first dimension of voting accounts for more than 98 per cent of the Conservative votes.

Our predictions significantly improve when we add a second dimension to the model. A two-dimensional model increases the percentage of correctly classified votes by 6 per cent in the 35th Parliament (from 92 per cent to 98 per cent) and by 4 per cent in the 38th Parliament (from 91 per cent to 95 per cent). A useful comparison here would be to look at the correct classification percentage of a similar model of voting in the U.S. Congress. If we consider the 85th House (1957-58) – which basically represents a three party system according to Poole and Rosenthal (2007) – we find that the addition of a second dimension increases the number of correctly classified legislations by about 6 percentage points (from 79 per cent to 85 per cent, p.64).

When focusing specifically on the 35th Parliament, adding a second dimension in the model increases the number of correctly predicted votes by 16 per cent for the Reform Party, from 73 to 99 per cent, and by 11 per cent for the Bloc Quebecois, from 88 to 99 per cent. On the other hand, the contribution of the second dimension is much smaller for the new Conservative Party in the 38th Parliament. Adding a new dimension hardly makes a difference in this case. It only increases the percentage of correctly predicted votes from 98 to 98.4 per cent. For the Bloc, this second dimension remains very salient in the 38th Parliament. The two-dimensional model increases the percentage of correctly predicted votes by 15 points, from 72 to 97 per cent.

We also find that adding a second dimension to the model does not improve the prediction success rate for the remaining parties in both parliaments. Estimating the model with a second dimension actually *reduces* the number of correctly predicted votes for the NDP (from 71 per cent to 65 per cent in the 35th Parliament and from 80 per cent to 77 per cent in the 38th Parliament). This is explained by the fact that the NDP is situated around the middle of the two-dimensional policy space. As for the Liberals, the addition of a second dimension of voting has virtually no effect on the accuracy of the model (from 98.50 per cent to 98.61 per cent in the 35th and from 96 per cent to 94 per cent in the 38th).

This brief overview of the voting prediction results indicate that a two-dimensional models fits the data extremely well in both parliaments. We find this to be especially true in the case of the Bloc Quebecois – but less so for members of the NDP and the Liberal Party. In addition, the added

explanatory power obtained from estimating a secondary dimension is substantively lower for the 38th than for the 35th Parliament. It also appears that the merger between the PC and the Canadian Alliance (formerly the Reform Party) has somewhat reduced the importance of voting on this second dimension. We next turn our attention on estimating and interpreting the positions of legislators in the two parliaments under study as shown in figure 1.

[Figure 1 about here.]

In both plots, the first dimension reveals itself as being the pro-government/opposition conflict while the location of the parties in the second dimension represents the regional division between western provinces and Quebec. Figure 1 also shows that the policy-space is two-dimensional. In both Parliaments, we identify a distinct separation between the voting records of the governing Liberals and the remaining opposition parties (the NDP, the Bloc Quebecois, the Reform, and the Conservative). This division is somewhat less clear in the 38th Parliament when the Liberals formed a minority government. In this period, it was necessary for the government to collaborate with one of the three opposition parties to pass any legislation. We believe that this sudden surge in inter-party cooperation partially explains why the Liberal party is much closer to the opposition in the first dimension issue space in the 38th Parliament. The fact that the party loyalty score is lower for the Liberals in this parliament also explains why we see an important number of their MPs being closer to the Conservative on the spatial map. It

is surprising to find that an important proportion of Liberal MPs sometime chose to vote against the leadership of their party, even under a minority government. Motion number M-165 in the 38th Parliament from the Bloc Quebecois, which proposed that the government lower gasoline prices, is a good example of a division where Conservative and Liberal MPs voted against the Bloc, the NDP, and some rogue Liberals. In this case, more than 25 per cent of the MPs who voted in favor of this motion were Liberals who chose not to support their own party.

Figure 1 also indicates that the NDP occupies the center on the primary dimension of conflict in both parliaments. It also appears that the Conservatives have moved closer to the governing Liberals in the 38th Parliament. This represents a clear departure vis-à-vis the Reform Party. Unlike in the earlier legislative term, we can clearly distinguish a smaller gap between the position of the Liberals and the locations of both the Bloc and the Conservative parties. One thing is clear, the closest party to the governing Liberals in both the 35th and 38th Parliament is the NDP. This party appears to be voting with the Liberals most of the time, and it also seems to have adopted a similar position on the regional conflict opposing Quebec to western Canada.

An example of a division which fits clearly on the first dimension relates to Bill C-37 of the second session of the 35th Parliament. This bill, which was supported by all the Liberals, and opposed by all of the minority parties, approved the budgetary policy of the government for the 1997 fiscal year. In the 38th Parliament, certain bills were also supported by the Liberal minority only (and thus failed to be enacted). The Liberal government lost its first

vote just one month after taking office. The bill which was opposed by the Conservatives, the NDP, and the Bloc was defeated by a vote of 150 to 125. The legislation aimed to separate the departments of Foreign Affairs and International Trade (Bill C-31). A serious attempt to dissolve the Parliament also occurred in this session when the opposition parties in the Commons passed a motion of no-confidence in May 2005. The vote had the support of the majority: the Conservatives and the Bloc (153 votes) voted against the Liberals and the NDP (150 votes). However, the Liberal government refused to dissolve parliament, and a constitutional crisis was avoided when a second definitive motion of no-confidence failed to pass with a 153-152 vote a few days later. This outcome would not have been possible without the defection of Belinda Stronach (a Conservative MP) to the Liberal Party.

Looking now at the second relevant dimension of Figure 1 which captures the division between Quebec and the western provinces, we find that the spatial location of the party groups demonstrates that there is a definite split between the Reformists (and later the Conservatives) and the Bloc Quebecois; whereas the Liberals and the NDP occupy the middle ground on this issue. Clearly, the opposition between Quebec and the west is strongest in the 35th Parliament. This should come as no surprise if we consider the fact that both the Bloc and the Reform focused their 1993 election campaigns on the failure of the previous constitutional conventions, and because Quebec held a second referendum on secession in the middle of the 35th Parliament.

An example of a vote that clearly fits on the second dimension in the 35th Parliament relates to Bill C-41, which aimed to authorize the construction

of a high-speed train linking the cities of Windsor and Quebec. This vote was supported by all the MPs from the Bloc but opposed by almost everyone else in the Commons. In the 38th Parliament, we find another example in private Bill C-260 proposed by a member of the Bloc which aimed to require the Government of Canada to consult the provincial governments before negotiating treaties with other foreign nations. It should come as no surprise that this bill was supported by the Bloc, and opposed by all other parties in the Commons.

As we saw earlier, one of the primary goal of the recent fusion between the Progressive Conservative Party and the Canadian Alliance (the former Reform Party) was to create a more moderate permanent right wing coalition. Figure 1 allows us to investigate whether the different positions of MPs in the pre and post merger party systems have significantly changed. To begin, when we look at the first dimension, we see that the new Conservatives MPs are somewhat closer to the Liberals, if we compare their locations to the Reformists in the 35th Parliament. It is important to note that it is impossible to disentangle between the moderating effects that the merger and the minority government may have had on the voting records on the government/opposition dimension. However, the same problem should theoretically be absent from the second dimension, since the divisions found on this issue space cannot be explained by the traditional government/opposition voting dynamic.

Figure 1 does indeed confirm movement on the second dimension in the 38th Parliament. It appears that the legislative behavior of the newly formed

Conservative party is closer to the Liberal in the spatial mapping. We believe that this sudden shift can both be explained by the moderating influence of the merger on the former Reform/Alliance Party as well as the influx of newly elected Conservative MPs in the 38th Parliament. When we focus on the provincial origin of the new Conservative MPs in the 38th Parliament, we find that the most moderate representatives on the second dimension originate from Ontario, which is where the new Conservative party made the most gain in the 2004 election.¹¹

What remains harder to explain is the stability of the Bloc Québécois vis-à-vis the other three parties on the second dimension in the 38th Parliament. The extreme location occupied by Quebec nationalists is probably a consequence of their permanent opposition status in parliament. However, without a clear mandate for secession from the provincial government of Quebec, the second dimension seems to have lost some of its salience among the remaining parties. One thing is clear, if the new Conservative party wishes to become a champion of Quebec's regional interests in the near future, it needs to move even closer to the center on this second dimension of legislative voting.

CONCLUSION

This study presented the first attempt to systematically organize and analyze legislative voting in more than one Canadian Parliament. The data was taken from Kam (2001) and the *Canadian Hansards* directly. Using a

Bayesian implementation of a spatial voting model, we estimated the location of elected members of the 35th and the 38th Parliaments. These estimates were calculated with all individual recorded divisions. The model provided us with a spatial representation of parliamentary voting to analyze the legislative consequences of two recent major transformations in the Canadian party system.

Our intention was to validate the idea that the emergence of regional parties (the Bloc Quebecois and the Reform Party) in the 35th Parliament introduced a salient dimension of conflict in the House of Commons – which pitted Quebec nationalists against western regionalists. We began by demonstrating that there is a clear division between the government party and the opposition in the legislature, which can account for most of the voting decisions in the House of Commons. This primary dimension of legislative voting is also present in other parliamentary systems (Hix and Noury, 2007). We believe that the existence of this legislative conflict is explained by the strong level of party discipline in the Canadian Parliament and by the tendency of the opposition parties to vote against most government bills.

We also identified a different type of legislative conflict which failed to be explained by the traditional government/opposition voting dimension. Our spatial representation of voting in the 35th Parliament clearly demonstrate that the Reform party (and to a lesser extent the new Conservative Party in the 38th Parliament) was located at the opposite extreme of the Bloc Quebecois on a second dimension. After reviewing the content of some the divisions that failed to be explained by this simple opposition/government voting dy-

namic, we concluded that the second dimension of voting corresponds to the regional conflict in Canada opposing Quebec nationalists to western regionalists. This finding is contrary to what Hix and Noury (2007) found in other parliamentary systems where the second dimension is assumed to represent a left/right ideological opposition in the legislature. Because the Liberals and the NDP occupy the center on this dimension, it is highly unlikely that this issue space corresponds to an ideological conflict over redistribution since the NDP favors much more government interventions in the economy.

One of the main objectives of the recent party merger between the Canadian Alliance (the former Reform Party) and the Progressive Conservative Party was to create a more moderate right wing coalition – especially on issues related to Quebec. A common explanation for the failure of the Canadian Alliance in the 2000 election was that it was perceived as too extreme by a majority of Canadians (Blais et al., 2002). And as we have shown, this objective has clearly been achieved on the new Conservative side. By comparing the location of the Reform to the New Conservative party on the second regional dimension of voting, we have identified a significant movement away from the extreme in the most recent parliament.

It is important to note that the regional voting dimension remains salient even after the merger. However, it appears that most of the explanatory power associated with this second dimension of voting in the 38th Parliament applies to the Bloc Quebecois. Indeed, when using a two dimensional voting model, we predicted virtually all of the Reform and Bloc recorded votes (99 per cent for the Bloc and Reform in the 35th and 97 per cent for the Bloc

in the 38th). However, unlike for the Reform Party in the 35th Parliament, when we added a second dimension to the model, we increased the number of correctly predicted votes by less than 1 percentage point for the new Conservative Party in the 38th Parliament (from 98 per cent to 98.4 per cent). We believe that this result implies that the merger between the Progressive Conservative Party and the Canadian Alliance has “depolarized” this new political formation away from a pro-western and anti-Quebec position in the legislature.

Of course, the fact that the Bloc Quebecois remains polarized from the other parties in parliament suggests that the regional conflict will remain salient until the constitutional crisis is solved, or the Bloc Quebecois disappears (by merging with another party, or after an electoral defeat). A merger between the new Conservative Party and the Bloc appears highly unlikely in the short term since Quebec nationalists have vowed to secede from Canada. In addition, the fact that the Bloc Quebecois has consistently elected about 50 representatives (or more than 15 per cent of the House of Commons) in the last six elections suggests that the electoral support for this party is fairly stable.

It is interesting to note that much like in the Solid south of the 1960s, we find that 24 per cent of the current seats in parliament are apportioned to the province of Quebec. After the 1960 census –at the height of the polarization between southern and northern Democrats over civil right issues– the solid South was represented by 24 per cent of the House seats and 22 per cent of the Senate seats. It was only after the gradual southern realignment toward

the Republican Party that the U.S. Congress returned to a more stable unidimensional legislature. We believe that a gradual party realignment will be harder to achieve in Canada since regional demands remain strong.

The roots of this regional polarization can be linked to federalism and geographic-based representation (for a similar argument in the United States see Poole (2008)). Much like in the American Congress, there is a guaranteed level of statewide representation in the Canadian legislature. Each province has a fixed (but not equal) number of Senators in the Upper House and the apportionment method in the Commons is largely affected by federalism. For instance, Quebec gets a minimum of 75 House seats regardless of its population size while Ontario gets a minimum of 95 seats. Adjustments are then made by provincial population size.¹²

Even though both countries elect representatives with a plurality voting method which should theoretically favor a two-party system (Cox, 1997), Canada is clearly a multi-party system. We believe that this difference is related to the nature of responsible government. Since the U.S. Constitution separates executive and legislative powers, the incentives for a strong level of party discipline is much weaker in Congress. This characteristic implies that representatives can break-away from their own caucus to support their constituent's regional interests. This is not so much the case in the Canadian context since opportunities for cross-party voting are much more limited. In big tent national parties –like the Liberal Party or the former Progressive Conservative Party– regional interests are often superseded by broader national appeals. This characteristic doesn't leave much room for

local or provincial representation, except when parties are explicitly created for that purpose, like the western Reform Party or the Bloc Quebecois.

In short, we believe that the Westminster style parliamentary system, combined with federalism, geographic-based representation and a plurality voting method explains why there is such a strong two dimensional legislative policy space in the Canadian legislature. Recent elections have shown that the primary consequence of this legislative mapping has been the fragmentation of the party system and the formation of minority governments (as in the 38th, 39th, and most recent 40th Parliaments). This last point leads us to conclude by saying that much more work needs to be done in studying the Canadian Parliament –especially on the issues related to the dynamic of legislative voting under minority governments. It will be very interesting to see how party behavior and voting coalitions have changed under the first Conservative’s minority government in the 39th (2006-2008) Parliament. We plan to conduct such an analysis in the near future.

Notes

¹To date, Kam (2001) provides the only comprehensive data set of recorded divisions in the 35th Canadian Parliament.

²The 295 seats in the 35th Parliament were divided as follow: Liberals 177, Progressive Convervatives 2, Bloc 54, Reform 52, New Democratic Party 9.

³The model can be described as follows: The data has n legislators. They vote on m proposals. On each vote $j=1,\dots,m$, legislator $i=1,\dots,n$ chooses between a “Yea” position ζ_j and a “Nay” position ψ_j located in the Euclidian space, \mathbb{R}^d where d is the number of dimensions. Then, $y_{ij} = 1$ if legislator i votes Yea on division j and $y_{ij} = 0$ if she votes Nay. The revealed position of legislator i is $\theta_i \in \mathbb{R}^d$, while η_{ij} and ν_{ij} are stochastic elements whose distribution is jointly normal. Assuming quadratic loss functions, the utility for legislator i of voting Yea on proposal j is $U_i(\zeta_j) = -\|\theta_i - \zeta_j\|^2 + \eta_{ij}$. Similarly, the utility of voting no is $U_i(\psi_j) = -\|\theta_i - \psi_j\|^2 + \nu_{ij}$. The variance of the stochastic elements is $(\eta_{ij} - \nu_{ij}) = \sigma_j^2$. The Euclidean norm is $\|\cdot\|$. Utility maximizing implies that legislator i votes “Yea” on vote j if $U_i(\zeta_j) = -\|\theta_i - \zeta_j\|^2 + \eta_{ij} > U_i(\psi_j) = -\|\theta_i - \psi_j\|^2 + \nu_{ij}$ and “Nay” otherwise. The model can be re-parameterized as a hierarchical probit model $P(y_{ij} = 1) = \Phi(\beta_j' \theta_i - \alpha_j)$, where $\beta_j = \frac{2(\zeta_j - \psi_j)}{\sigma_j}$ and $\alpha_j = \frac{(\zeta_j' \zeta_j - \psi_j' \psi_j)}{\sigma_j}$. $\Phi(\cdot)$ is the standard normal function. θ_i is legislator i 's revealed position. Decision to support of oppose a bill are reached by comparing the utility that characterized both alternatives. Legislators vote for the alternative that minimizes their loss in utility.

⁴A recorded division vote in the Canadian Parliament occurs after a request is made by five or more MPs.

⁵The Hansard can be found at <http://www.parl.gc.ca/>

⁶We estimated the model independently in both a one and a two-dimensional issue space. In each case, the sampler ran for 200,000 iterations. Only every 1,000th iteration was stored. The first 100,000 iterations were discarded to ensure that the results were not influenced by the starting values. The parameters reached their stationary state before 100,000 iterations. The in-

ferences used in this analysis are from 100 relatively independent samples of the posterior distribution. To ensure global identification and to make the estimated Euclidian space comparable across two distinct parliaments, the results were post-processed. More precisely, the location of three legislators, serving in both terms were fixed. All other parameters were adjusted relative to these locations iteration by iteration. Monte Solberg, from the Reform/Conservative party was given the position -1,-1 (first dimension, second dimension). Joseph Volpe, form the Liberal party was given the location 1,0. And Stephane Bergeron from the Bloc Quebecois was given the position -1,1 in both sessions. These constraints permit us to compare the location of all legislators across terms since the estimated positions are relative to these three legislators in both the 35th and 38th Parliaments (for a discussion about identification, see Rivers, 2003).

⁷Numbers cited in Malloy (2003).

⁸In other words, 160 of 735 divisions saw zero cross party voting

⁹The only exception is found with the Progressive Conservative Party in the 35th Parliament (where this level is at 90 per cent) and with the Liberals in the 35th Parliament (where this level is at 96 per cent). There was only two Conservative MPs in the 35th Parliament, and one of them, Jean Charest, voted only on five occasions. The lower unity score for the Liberals in the 38th Parliament is explained by the fact that this party formed a minority government, and that certain MPs were less willing than the leadership to compromise with other parties. We will return to this finding later in the paper.

¹⁰Predicted probabilities are computed from the `pscl` package using the mean of the posterior density of the ideal points, or latent ability and the bill. The percentage of correctly predicted votes are determined by counting the number of votes which have a predicted probabilities of a “Yea” greater than or equal to the ‘cutoff’ threshold. This threshold is .5.

¹¹This figure is available in the Appendix.

¹²After the last 2001 census, this translated in 1 representative per 96,500 people in Quebec (75 House Members), and 1 per 107,642 in Ontario (105 House Members).

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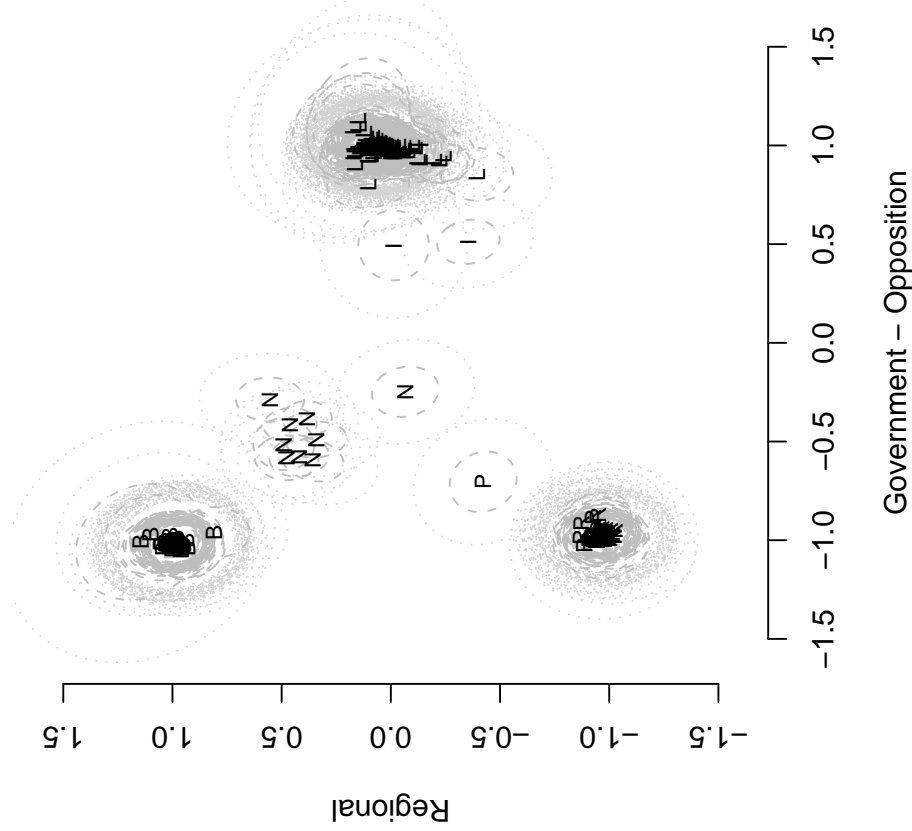
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35th Canadian Parliament



38th Canadian Parliament

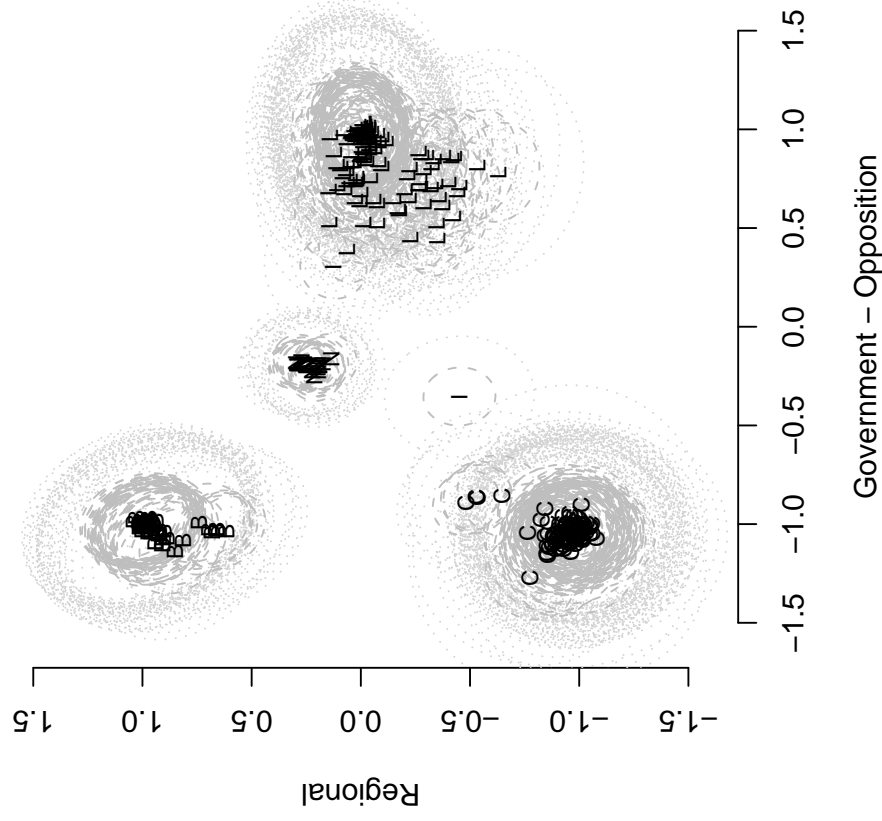
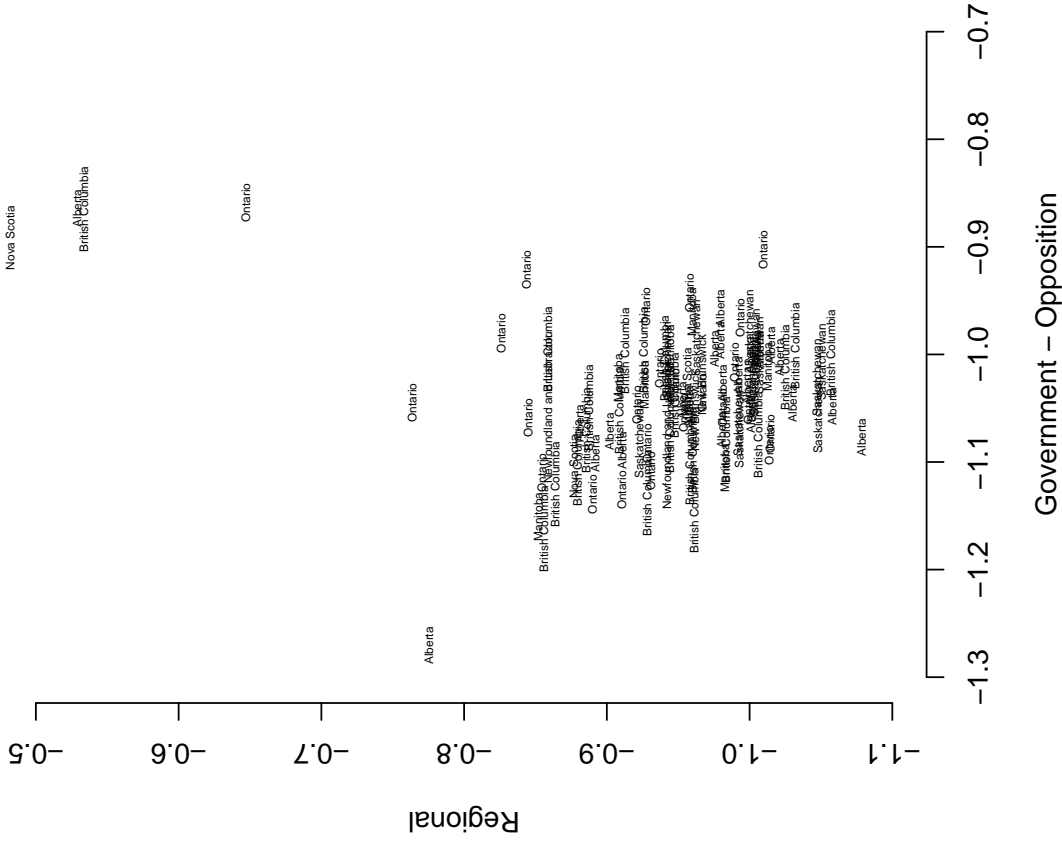


Figure 1: The left side of the figure shows the revealed ideal points of the legislators in the 35th Canadian Parliament. The right side of the figure shows the revealed ideal points of the legislators in the 38th Canadian Parliament. The black letter represents the median location of each member, while the grey ellipses show the 95 per cent Bayesian credibility ellipse surrounding these points.

38th Canadian Parliament, Conservative



38th Canadian Parliament, Liberals

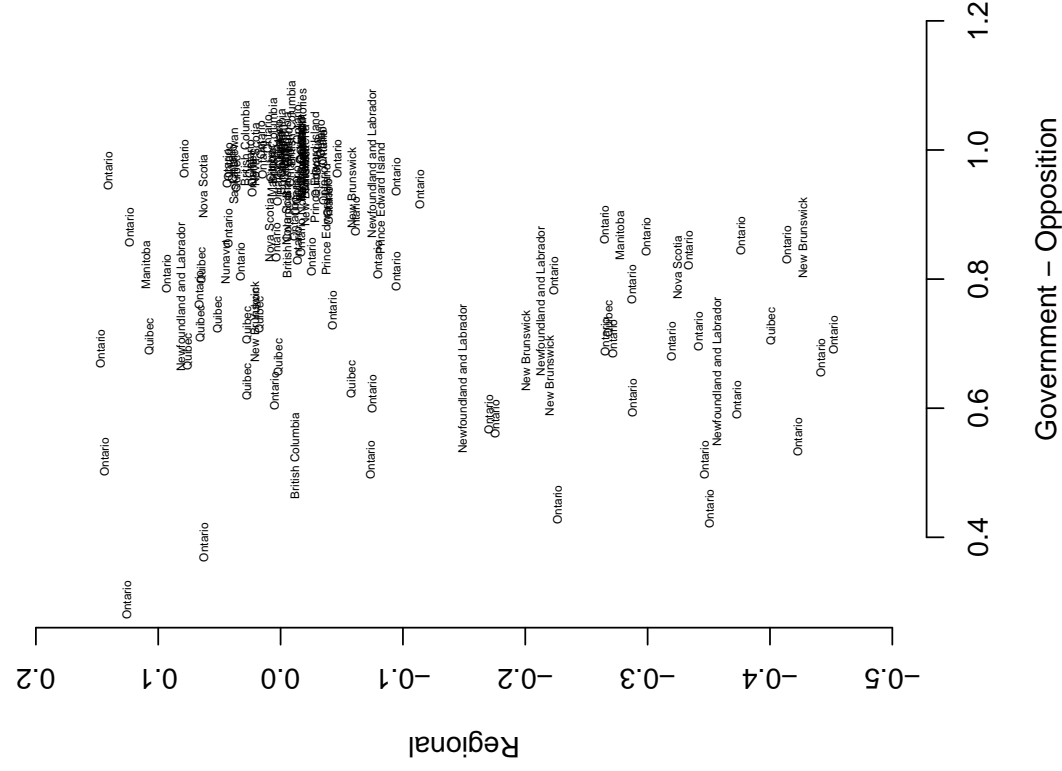


Figure 2: The figures show the revealed ideal points (in this case province) of the legislators in the 38th Canadian Parliament. Each figure is a “zoomed” section of the new Conservative and the Liberal party positions.

Party	35 th	38 th
Liberal Party	177	135
Bloc Quebecois	54	54
Reform	52	–
Conservative	–	99
NDP	9	19
PC	2	–
Independent	1	

Table 1: The table shows composition of the 35th and 38th Parliaments.

Party Unity Score 35th Parliament					
Party	Bloc	PC	Reform	Liberal	NDP
Bloc	1	.44	.56	.25	.72
PC	.53	.90	.37	.36	.55
Reform	.53	.48	.99	.27	.54
Liberal	.27	.49	.27	.98	.42
NDP	.70	.48	.53	.45	.99

Table 2: The table shows party loyalty scores for the 35th Parliament. Each row represents the average party unity score, or the proportion of times a majority of the party voted with another party. Averages are rounded to two decimal points.

Party Unity Score 38th Parliament				
Party	Bloc	Conservative	Liberal	NDP
Bloc	.99	.43	.43	.63
Conservative	.43	.99	.32	.44
Liberal	.43	.34	.96	.63
NDP	.63	.44	.63	.99

Table 3: The table shows party loyalty scores for the 38th Parliament. Each row represents the average party unity score, or the proportion of times a majority of the party voted with another party. Averages are rounded to two decimal points.

Percentage correctly predicted votes				
Party	35 th		38 th	
	1 dim	2 dims	1 dim	2 dims
Bloc	88	99	72	97
Reform - Conservative	73	99	98	98.4
Liberal	98.5	98.6	96	94
NDP	71	65	80	77

Table 4: The table shows the percentage correctly predicted voting decisions.