Legislative Coalitions and Minority Governments in Canada

Jean-François Godbout¹, and Bjørn Høyland²

Department of Political Science, Simon Fraser University Department of Political Science, University of Oslo

Paper presented at the Canadian Political Science Association Meeting Ottawa, ON. May 29, 2009

Abstract

In this paper, we analyze legislative voting in the 38^{th} and 39^{th} Canadian minority Parliaments. Our goal is to study coalition formation using Poole $(2005\,a)$'s Optimal Classification methodology in order to estimate the location of legislators and parties in a two dimensional spatial model. The main contention of this project is that voting coalitions are more likely to form along ideological lines—the Axelrod (1970)'s thesis. However, the analysis also shows that voting coalitions form along a second dimension in the Canadian Parliament; mainly on issues related to federalism and the province of Quebec. This study ultimately validates different theories of coalition voting under minority governments.

Introduction

Understanding the dynamic of parliamentary voting coalitions is important. Effective representative democracies require not only that the problem of delegation be overcome, but also that agents who are empowered to act on citizen's behalf find a way to build coalitions in order to effectively govern (Lupia and Strøm, 2008). In the context of minority governments where no party controls a majority of the seats in parliament, the question of coalition building becomes central to the notion of democratic rule.

Minority governments usually rely on the support of at least one other party to sustain the confidence of the legislature. They are also required to build winning coalitions with other elected members to enact legislations. Thus, we may find that certain parties support the cabinet most of the time, while others systematically oppose the government's agenda. What motivates a party's legislative strategy in this context remains difficult to explain, mainly because we find very few theories or empirical research on coalition voting in minority parliaments—a notable exception here is Strøm (1990). This is because most of the existing studies on minority governments primarily focus on the causes and the consequences associated with the emergence of this type of cabinet, rather than on on their internal working.¹

In the following paper, we propose to address this gap in the literature by studying interparty voting coalitions in two recent Canadian minority cabinets: the 38th (2004-2005) and the 39th (2006-2008) federal Parliaments. What makes the Canadian case interesting is that both of these parliaments have successively been governed by the Liberal and the Conservative Parties. In addition, both cabinets have refused to enter a formal alliance with the remaining legislative parties in the House of Commons (the New Democratic Party and the Bloc Quebecois). Rather, the Liberals and the Conservatives have opted to govern with shifting majorities; relying on the support of one or more parties depending on the motion raised in the legislature. This type of ad hoc coalition building is not unique to Canada. It is popular in other parliamentary systems, like in Denmark and Norway, because it usually leaves the government with a high degree of flexibility in policy making while rendering it maximally susceptible to parliamentary defeat (Strøm, 1990).

It is also important to note that aside from the work of Kornberg (1967) on the 27^{th} Liberal minority government and of Stewart (1980) on the 29^{th} Conservative minority government, this paper will represent the first attempt to focus explicitly on coalition voting in more than one

¹For a review see Mueller (2003)

Canadian Parliament. The primary goal of this analysis is thus to understand how voting majorities operate in the absence of a formal legislative alliance between two or more parties. Put differently, the paper aims to identify the reasons why certain parti(e)s have been maintaining the Liberals and the Conservatives in power over the course of the 38^{th} and 39^{th} Parliaments.

In order to help us understand the logic behind the formation of voting coalitions in the Canadian context, we borrow from three existing theories of legislative organization. The first of these theories predict that coalitions are more likely to form if they produce a minimal winning combination of parties that will contain the smallest number of elected Members of Parliament (Riker, 1962). The second theory predicts that coalitions occur only among parties who share a common ideology (Axelrod, 1970). And finally, the third theory predicts that coalitions can also form because two or more parties strongly favor a particular position which fall outside of the traditional left-right ideological conflict (Budge and Laver, 1986).

The paper is organized as follow. In the first section, we present an overview of the Canadian national party system since the 1920s. We also focus on the origins of minority governments in the House of Commons and include a description of the 38^{th} and 39^{th} Parliaments. In the second section, we review the literature on cabinet formation and minority governments in parliamentary systems and present different theories of legislative organization. In the third section, we test these theories in the Canadian context by analyzing legislative voting in the 38^{th} and 39^{th} Parliaments. In the final section, we conclude.

Minority Government in Canada

Aside for some work related to legislative effectiveness and productivity McKelvy (2009); Franks (1987); Jackson and Atkinson (1980), we know very little about the behavior of Canadian parties and legislators in minority governments. We know even less about the different legislative coalitions that minority governments induce. This is somewhat surprising if we consider the fact that there has been twelve minority governments since the confederation in Canada.²

In one of the few existing studies which focuses explicitly on the formation of federal alliances (or coalitions) in Canadian minority governments, Stewart (1980) identifies a series of norms that dictates parliamentary behavior under such conditions. For instance, Stewart claims that Canadian parliamentary traditions imply that the role of formateur in the House will always go to the party

²In the House Commons, minority cabinets basically govern without effectively controlling a majority of seats.

who has won the most seats in the election. The author also points out that minority parties in Canada have always survived the initial parliamentary test of confidence, and this remains true today.

Probably the most important feature of Canadian minority cabinets is the fact that parties have never created a formal coalition to resolve legislative stalemates. Unlike in other parliamentary systems, the House of Commons has yet to be officially governed by a cabinet where positions are divided among different parties.³ The country did experience a number of partnership between distinct parties at the national level, like between the Progressives and the Liberals in the first two minority government of the 1920s; but even under these circumstances, there was never any exchange of ministerial portfolios between more than one party. In short, minority governments in Canada have always had to rely on the support of some opposition Members of Parliament (MPs) to maintain the confidence of the House.

Although not directly related to the study of coalition voting in the legislature, much of the remaining work on Canadian minority governments has focused on explaining its electoral roots. This literature can help us understand the logic behind the formation of a multiparty system in Canada, which is a necessary condition for the existence of minority governments (Johnston, 2008; Carty, Cross and Young, 2000; Carty, 1988; Strøm, 1990).

Not surprisingly, the advent of minority governments in Canada can be attributed to the emergence of regional parties in the 1920s. This period corresponds to an era of party brokerage in politics, or what Carty (1988) refers to as the second party system. Carty, Cross and Young (2000) explain that the group of regionally focused Liberal cabinet ministers of this period paved the way for the creation of western protest parties like the Progressive, the Cooperative Commonwealth Federation and the Social Credit Parties. These regionally based political formations were the product of a combination of factors, such as the first past the post electoral system, federalism, parliamentary party discipline, and overlapping cultural and linguistic groups (Gaines, 1999; Blais, 1991; Epstein, 1964). Thus, it is not surprising that the second party system experienced the first four minority governments in Canadian history (two Liberals in the 14th and 15th Parliaments and one Conservative for three days at the end of the 15th Parliament).

The next series of transformations of the Canadian party system began after the election of two consecutive Progressive-Conservative minority governments led by John Diefenbaker in the

³We must exclude the Union government of World War I which was a coalition of Conservatives and Liberals under Laurier's majority government.

late 1950s and early 1960s. This new era in politics was characterized by a pan-Canadian party orientation dominated once again by the Liberal Party. The roots of this third party system can be traced back to the electoral realignment of western Canadians away from the regionally based parties and toward the Conservatives Johnston et al. (1992). Another major characteristic of this party system is related to the introduction of a third national political formation, the New Democratic Party (which was an alliance between the former Cooperative Commonwealth Federation with the Canadian Labour Congress). The presence of this new left party helped produce four additional minority governments since Liberal majorities tended to coincide with a drop in New Democratic Party (NDP) support (as in 1974), while minority governments followed an increase in the NDP vote share (as in 1972 and 1979) (Bickerton and Gagnon, 2004)(p.248).

The 1984 election put an end to the Liberal dominance and to the pan-Canadian party era. Following the failed referendum on Quebec sauvereignty, the Liberal cabinet of Pierre Trudeau succeeded in modifying the Canadian Constitution without the agreement of Quebec's provincial government. This set the stage for the Conservative Party to win two consecutive elections in 1984 and 1988, principally because of the electoral support of French speaking nationalists and western regionalists Johnston et al. (1992). However, this grand coalition was short lived. The failure to ratify two Conservative sponsored Constitutional Accords in the late 1980s and early 1990s paved the way for the return of regional parties in the House of Commons. The Tories gradually lost ground in the Canadian west (Woolstencroft, 1994) because a new political formation, the Reform Party, addressed issues of alienation and disenchantment (Bernard, 1996). And following the rejection of the second round of constitutional negotiations, 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. Both new parties competed together for the first time in the 1993 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. The Progressive-Conservatives lost 167 of their 169 incumbent seats.

There were now five parties in the House following the 1993 election, and this multiparty system was to remain in place for two subsequent elections (1997 and 2000). Both of these elections consolidated the regional support for the Reform Party and the Bloc Quebecois. The Reform Party was even renamed the Canadian Alliance before the 2000 election in an attempt to broaden it's electoral appeal and to replace the Conservatives as the new conservative party of Canada.

However, as Bélanger and Godbout (2009) explain, these efforts proved insufficient to significantly alter the electoral landscape outside of western provinces.

It was the merger between the Canadian Alliance and the remaining members of the Progressive Conservative Party in December 2003 that precipitated a return to minority government rule in the House. By consolidating the vote on the right, the new Conservative Party was capable of forcing the Liberals into a minority cabinet after the 2004 election, the first such government since 1979. This 38th Parliament was short lived and two Conservative minority governments followed suite after the 2006 and 2008 elections. The next section will describe in greater details the events that marked these recent legislative sessions.

The cases of the 38^{th} and 39^{th} Minority Governments

In this study, we will focus exclusively on the Liberal minority cabinet of the 38^{th} Parliament (2004-2005) and on the Conservative minority cabinet of the 39^{th} Parliament (2006-2008). Table 1 presents an overview of the party standings in the House following the 2004 and 2006 elections.

[Table 1 about here.]

In the 38th Parliament, the NDP failed short to hold the balance of power by one seat. Thus, a majority coalition between the governing Liberals and the NDP proved impossible in the first few months of this legislative session. However, the defection of Belinda Stronach (a Conservative MP) to the Liberal Party created a bare majority coalition in May 2005, allowing the government to pass the budget in a 153-152 vote.⁴

In terms of voting coalitions in the 38th Parliament, Harper's Conservative Party became the official opposition and the natural opponent of Martin's Liberals.⁵ Without the support of the Tories, the Liberals needed to form a coalition with both the NDP and the Bloc Quebecois h(that is until the defection of Stronach). In order to effectively govern, it was expected that the Liberals would 'loosen' the federal purse strings to please the NDP, and to 'loosen' the strings of federalism to please the Bloc Quebecois.⁶ Thus, even if the Conservative Party announced that it would support the minority government after the throne speech, many believed in Ottawa that the Conservatives

⁶Ibid.

⁴This is the division number 91. One of two new independent MPs voted to support the budget, as well as Chuck Cadman the only elected independent candidate.

⁵Harper's Conservatives real 'enemy' to Martin Liberals: Liberals working on talks with Bloc, NDP. Persichilli, Angelo. The Hill Times, Oct 4, 2004. Iss. 757; pg. 1.

were the lease likely to collaborate with the Liberals. Not surprisingly, this government proved short lived. Following the publication of a report related to a sponsorship scandal under the former Liberal government of Jean Chrétien, the Conservative, the NDP and the Bloc Quebecois united over a motion of no confidence to defeat Martin's cabinet almost a year after the beginning of the legislative session.

An election followed and a Conservative minority government was elected in January 2006. It is important to note that the Conservative party made major gains in Quebec and Ontario, thus ending 12 years of Liberal dominance in these provinces. Unlike in the previous cabinet, the new Conservative party could count on a majority by simply forming a coalition with either the Bloc or the Liberals; the NDP remained two seats short of holding the balance of power. Nevertheless, Prime Minister Stephen Harper opted not to engage in any formal discussion of external alliances with the opposition parties; preferring instead to form specific coalitions to enact government legislations.

Harper's minority government managed to last two parliamentary sessions (from April 2006 to September 2008). To this date, this represents the longest uninterrupted minority government in Canada's history. This cabinet was relatively more successful than the previous one since it was able to enact three federal budgets, an Accountability Act (in response to the sponsorship scandal), an omnibus crime bill and a bill to fix future election dates.⁸ The government also met with failure when the opposition parties adopted a motion to force the government to implement its climate change obligations under the Kyoto Protocol. The opposition parties also refused to reopen a debate over the same-sex marriage act which was adopted by Martin's government. The parliament finally dissolved after Harper triggered an election in September 2008. His government returned to power in the 40th Parliament with some additional seats, but not enough to secure a majority.

In terms of coalition voting in the 39th Parliament, many in Ottawa expected that the Bloc Quebecois and the Liberal Party (the official opposition) would be more likely to support the Conservative minority government. For instance, the Bloc Quebecois, with 51 MPs, had the potential to give a conformable majority to the minority cabinet. Indeed, this party supported the first Conservative budget, while both the Liberals and the NDP announced their intention to oppose it. Unlike for the previous government, the NDP leadership expected to have very little room to

⁷However, the Liberal defections of David Emerson and Wajid Khan before the beginning of the 39th Parliament was enough to give a hypothetical NDP-Conservative coalition the balance of power. However, this potential majority coalition ended when the independent Garth Turner joined the Liberal.

⁸From CBC news: http://www.cbc.ca/news/background/parliament39/. Accessed 5-11-09.

negotiate with the Conservative cabinet since this party could count on the support of the Bloc.⁹ In addition, it is also possible that we will find a certain number of coalition votes between the Conservatives and the Liberals in 39th Parliament. Indeed, the Liberals have closer ideological ties with the Tories, and on issues where the government could not rely on the Bloc Quebecois or the NDP, their only remaining option would have been to vote with the official opposition.

Based on this brief overview of potential voting coalitions in the Canadian legislature, we expect to find a certain number of ad hoc or fluctuating legislative alliances in both the 38^{th} and 39^{th} Parliaments. With four parties in the House of Commons—the Liberal, Conservative, NDP, and Bloc—we have identified seven possible coalitions: $\{L + B + C + N \text{ or the unanimous coalition}\}$; $\{L + C + N\}$ vs. $\{B\}$; $\{L + B + C\}$ vs. $\{N\}$; $\{L + B + N\}$ vs. $\{C\}$; $\{B + N + C\}$ vs. $\{L\}$; $\{L+B\}$ vs. $\{C+N\}$; $\{L+C\}$ vs. $\{N+B\}$; $\{L+N\}$ vs. $\{C+B\}$. Of course to be effective, these legislative coalitions require that parties enforce a high level of voting discipline.

Even if this section has highlighted some of the working of minority parliaments in Canada, it remains unclear what exactly motivates opposition parties to form alliances with the government. Should we expect, for example, that the NDP will be the logical backer of the Liberal minority cabinet, or that the Bloc will maintain the Conservatives in power? Our goal in the next section is to identify theories of coalition formation to help us increase our understanding of legislative voting in the minority parliament.

Theories of Legislative Coalitions and Minority Governments

There are only a handful of studies which focus explicitly on minority governments in parliamentary systems despite the fact that "undersized (minority) cabinets are a surprisingly common occurrence across a number of parliamentary democracies (Strøm, 1990) (p.8)." In fact, Mitchell and Nyblade (2008) calculate that minority cabinets account for about 35% of all postwar government in Western Europe.

It is generally believed that minority governments emerge in conflicting, and fractionalized party systems. It is also commonly assumed that such cabinets are highly ineffective and unstable. However, Strøm (1990) claims that these explanations are erroneous. The author shows in his analysis of Western parliamentary democracies since 1945 that minority governments form as the results

⁹Commons to vote on Finance Minister Flaherty's \$223.6-billion budget this week. Bea Vongdouangchanh. The Hill Times. May 8, 2006. Iss. 836; pg. 19.

of rational choices made by party leaders under certain structural constrains, most notably the anticipation of future elections. Strøm also identifies different strategies that minority cabinets can chose from to build legislative coalitions. These legislative strategies depend principally on institutional conditions, bargaining power, and party objectives. If a minority government is composed of a single-party (as in all of the Canadian cases), the pursuit of office (or cabinet seats) by other parties is not an option. Thus, a cabinet is most likely to use policy concessions as a bargaining chip to build coalitions around specific legislations. ¹⁰ Unfortunately, we know very little about how minority governments operate in the legislature in order to form these winning coalitions.

To govern, minority governments need to secure the support of parties outside of their cabinet. This is usually done by providing some form of policy concessions to opposition parties, pork barrel projects, or other types of office spoils (like committee chairmanship) (Budge and Laver, 1986). One could think, for example, of an external agreement between the government and one or more parties. A Canadian example of this type of alliance occurred in the 29th Parliament. In this legislature, the Liberals and the New Democratic Party formed a coalition to negotiate the content of bills and policy proposals before they were introduced on the floor of the House (but no cabinet positions were shared). As a consequence, the combination of the two parties guaranteed a majority of votes for the governing Liberals until the NDP opted to break the coalition and voted against the budget in 1974.

This type of relationship between an opposition party and the government is exceptional in the Canadian case; it is more common in other countries like Israel or Italy. Hence, to remain in power, virtually all Canadian minority governments had to rely on different bundling strategies to secure majorities in the House. For instance, Joe Clark's Conservative minority government in 1979-1980 chose to govern "like a majority" even if his party could have controlled more than half of the seats by forming a coalition with the Social Credit party.

To help us understand these differences, Strøm (1990) has identified a continuum of majority-building strategies which are available to minority governments. At one end, he situates coalitions which are formal and external, basically consisting of the same parties across all types of votes and which are stable over time. At the other extreme, he positions shifting or ad hoc majority coalitions, in which minority cabinets are required to build majorities in the legislature on a case by case basis. These legislative deals will depend on the type of issues raised, on logrolling, or on

 $^{^{10}}$ We can also think about legislative pork or sub-cabinet office but we are not considering these possibilities in this paper.

some other variable present in the legislature. Both the 38^{th} and 39^{th} Parliaments fall under this last category.

When dealing with a formal and external coalition between two or more parties (e.g. where one party or a coalition of parties control the cabinet, and one or more parties enter a formal coalition agreement with the cabinet to give the government a majority in the legislature), understanding the voting dynamic within parliament is fairly straightforward. The government will maintain the confidence of the legislature until the formal alliance ends. Legislative voting in this context is also fairly predictable. Assuming a high level of party discipline, the coalition will support all bills and motions from the cabinet. Thus, understanding parliamentary voting inside this type of government is simply a matter of examining the bargaining dynamic which occurred at the beginning of the legislature before any combination of parties could form the government (Müller and Strøm, 2000).

If the minority government chooses to rely on a shifting majority strategy instead, the process of bargaining over policy issues can potentially occur before each round of voting in the legislature. Of course, it is highly unlikely that parties engage in extensive negotiations whenever the House divides. However, one can think that the introduction of government or supply motions require some sort of agreement between the cabinet and one or more of the other parties present in the legislature. This is most likely to be true if the passage of bills originating from the government has the potential to turn into an issue of confidence. Since these ongoing negotiations take the form of bargaining sessions between the cabinet and the opposition parties, we can turn to the literature on government formation to understand the dynamic behind the building of legislative voting coalitions.

Even though the literature on parliamentary organization has tended to ignore the legislative consequences of minority governments, preferring instead to focus on bargaining and the formation and survival of coalition governments, some of the main conclusions of these theories can also be applied to shifting majority strategies. ¹¹ Indeed, most of this work has developed bargaining theories to predict the membership of majority cabinets. For example, in his seminal piece, Riker (1962) predicted that a coalition will form in order to produce a minimal winning combination of parties, which will contain the smallest number of elected MPs from all the potential majority coalitions in the legislature. The logic behind this coalition building strategy is that fewer concessions and cabinet seats will have to be offered when the majority size is near its absolute value.

 $^{^{11}}$ For a review, see Mueller (2003)

Axelrod (1970) proposed an alternative and more realistic theory of coalition formation by stipulating that the parties who will form a winning alliance must necessarily be adjacent to one another along an ideological continuum (e.g. left-right); thus highlighting the importance of ideology in predicting coalition formation. The main prediction of this body of literature is that coalitions should form between parties who share an ideological common ground (Axelrod, 1970; Laver and Shepsle, 1996). In other words, parties who enter a formal coalition should be adjacent to one another on a single policy dimension (Mueller, 2003). de Swaan (1972) extended this line of reasoning by combining Riker and Axelrod's theories and by predicting that coalitions are more likely to occur among ideologically connected parties of minimum winning size.

Of course these theories presuppose that there will be a distribution of cabinet seats among the different parties who will form the government. However, since by definition minority governments in the Canadian context exclude the division of office spoils among more than one party, we cannot rely completely on these bargaining models to increase our understanding of minority governments. Nevertheless, it is still possible that parties who enter shifting coalitions are on average, more likely to be adjacent to one another ideologically.

So for instance in the Canadian case, we should expect to find that the left leaning New Democratic Party will support the more moderate Liberal Party on economic issues in the 38^{th} minority Parliament. However, the same cannot be said about the Conservative minority government of the 39^{th} Parliament. In this case, we should find that the more moderate parties on economic issues—the Liberals and the Bloc Quebecois—will be more likely to enter a voting coalition with the Conservatives.¹² The ideological proximity theory also predicts that "unholy" alliances between the NDP and the Conservative Party in the 39^{th} Parliament are less likely to occur than alliances between the Bloc and the Liberal or the Conservative parties. Similarly, in the 38^{th} Parliament, we should find a greater number of coalitions between the Liberal Party and the NDP, especially after this coalition secured a majority of the seats in the House.

It is important to note that coalitions could also form over other issue dimensions (Budge and Laver, 1986). In a recent study using a spatial model of legislative voting, Godbout and Høyland (2009) have demonstrated that the Canadian Parliament divides in a two dimensional issue space. The first dimension represents a measure of the frequency of support for the cabinet, where the closer

¹²See Pétry and Collette (2009) for a positioning of the Canadian parties using their party platforms. The authors show that the Bloc Quebecois and the Liberal Party policy positions on issues of economic redistribution are quite similar.

a party is to the government, the more likely the same party is to support government legislations (see also Hix and Noury (2007) for a similar argument). The authors also found that parties align along a second dimension of voting which is related to a regional conflict existing in the Canadian federation (Flanagan, 1998). Although this dimension was strongest in the 35th Parliament with the presence of both the Reform party and the Bloc Quebecois, it remains salient today even after the party merger between the Canadian Alliance and the Progressive-Conservative Party. This is explained by the fact that the Bloc Quebecois has consistently supported legislations in favor of the province of Quebec's interests, regardless of whether a motion originates from the government or any other opposition parties. Thus, as Godbout and Høyland (2009) explain, ordering parties (and their votes) along a traditional cabinet/opposition dimension cannot account for the Bloc Quebecois' legislative record; in order to be valid, the spatial model of legislative voting in Canada requires the inclusion of a second dimension.

To sum up, in order to study coalition formation in the Canadian Parliament, we should first consider the possibility that legislative alliances between opposition parties and the government occur in a two dimensional spatial model. If the ideological proximity thesis is correct, we should find that the NDP is situated away from a Conservative government in the 39th Parliament. However, it is also possible that the existence of a coalition between the Conservative and the Bloc Quebecois will be confirmed in the same Parliament, especially over motions related to provincial rights.¹³

In this paper, we propose to spatially map legislative voting in the Canadian House of Commons to analyze coalition formation. Our main contention is that voting coalitions are more likely to form along ideological lines (the Axelrod (1970)'s thesis) rather than because of size (the minimal winning coalition size principal of Riker (1962)). We also predicts that coalitions will form because one party strongly favors a particular position which fall outside of the traditional left-right ideological conflict (Budge and Laver, 1986). In the case of the Canadian Parliament, this dimension should relate to federalism and Quebec's provincial rights.

Data and Methodology

For this study, we have collected all of the division votes from the 38^{th} and 39^{th} Parliaments directly from the Canadian Hansard records. Table 2 presents a summary of these votes. We have grouped

¹³This will be true even if the is log-rolling on specific issues, the cabinet will support a specific issue in return for the support of a party on another issue.

all divisions into four categories: government motions (which is related to regular motions, general and ways and means motions, and government bills); private member motions (related to general motions and bills); opposition motions (such as responses to the speech of the throne, or general opposition motions like amendments to government bills), and other types (like motions related to committee reports and votes on adjournment of debates.)

[Table 2 about here.]

We have processed the voting data to exclude lop-sided votes (in which all but five MPs vote similarly on a motion).¹⁴ 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.

In this study, we test the ideological proximity hypothesis 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 a legislator's location in this spatial mapping, we calculate individual coordinates using a binary discrete choice model. It is important to note that we do not observe the location of the decision-maker in the data –i.e. we can only observe the voting decisions. Therefore, we use a standard Optimal Classification model to estimate the fixed locations of the legislators which will maximize the proportion of correctly classified votes in a given Parliament.¹⁵

We are also interested in measuring cross-party voting and party discipline in this paper. The cross-party voting or unity score is obtained by averaging the percentage of times members voted against a majority of all the parties in the Commons. Overall, the model computes the loyalty scores and spatial locations of 308 legislators on 180 divisions in the 38^{th} Parliament and 322 legislators on 350 divisions in the 39^{th} Parliament. Parliament.

¹⁴There are 9 and 30 lopsided votes in the 38^{th} and 39^{th} Parliaments respectively.

¹⁵The interested reader should consult Poole (2005a) for a detailed account of the Optimal Classification (OC) methodology. OC is design to optimally locate legislators in a low-dimensional space such that the number of correctly classified voting decisions is maximized. The model is non-parametric, no explicit utility form is specified. Other methods such as Bayesian item response models or W-NOMINATE have been used (Poole and Rosenthal, 2007; Clinton, 2007; Martin and Quinn, 2006; Jackman, 2006). They yield similar substantive results. As Spirling and McLean (2007) rightly assert OC cannot be readily applied to every type of legislatures, in particular not if the aim is to uncover the "ideal point" of individual legislators in a policy space. Our aim is not to identify the position of each individual legislators in some underlying policy-space, let alone compare ideal points of individual legislators within the same party. We simply use OC as a summarizing tool to describe and illustrate the formation of voting coalition in a two-dimensional issue space.

¹⁶It is similar to the one computed by Poole (2008) for the U.S. Congress

¹⁷There are more than 308 legislators because of party switchers whose voting records needed to be re-estimated; with switchers (counted twice) we have a total of 313 MPs in the 38th Parliament and 323 MPs in the 39th Parliament.

Analysis

One of the assumption in the ideological proximity theory of coalition formation is that parties have a high degree of voting discipline. Hence, we begin by reporting the party loyalty scores in tables 3 and 4. These unity scores are obtained by averaging the percentage of times all members of a given party voted with a majority of their own party. We also include in both tables the level of cross party voting among all the parties present in the legislature. To obtain these scores, we report the average percentage of times all members of a given party voted with a majority of any one of the remaining parties. Hence, the higher the value, the higher the level of legislative support for a given party.

Both tables also group legislative motions into three categories: all motions, government motions, and private member motions. The logic here is that party discipline may be weaker when the House divides on private member motions; especially if we consider the three line whipping system introduced by Liberal Prime Minister Paul Martin. In short, party unity should be higher when dealing with government business and lower when dealing with private member motions.

The unity scores of the first row of table 3 imply that a majority of the members of the Bloc Quebecois voted 43% of the times with a majority of the Progressive Conservative party, 43% with the Liberal, and 63% with the NDP in the 38th Parliament. Party discipline (which is represented by the diagonals in both tables) is quite high for the Bloc as well. And this is true for the remaining parties –except for the Liberals.

For example, the 95% loyalty score implies that for each vote, at least 1 out of 20 Liberal MP voted against the government. And this number slightly improves by 1% when we consider government motions. However, it falls to 89% when we consider private member motions. In other words, more than 1 out of 10 Liberal MP voted against the majority of their own party when the House divided on private member's business in the 38th Parliament.

[Table 3 about here.]

When we look at the 39^{th} Parliament, we can see that party discipline is much stronger for the governing Conservatives. The Liberals still have the lowest unity scores in the government (98%) and private member motions (94%) categories. When considering all of the divisions, we see hat the Conservative Party, the Bloc, and the NDP have perfect party discipline.

These numbers are interesting, but the most important information in both of these tables relates to the support each party gives to the government. To consider this, we must look at the government motion category for the Liberal column in the 38^{th} Parliament and the Conservative column in the 39^{th} Parliament. Both of these columns indicate how much each party supported the cabinet. In other words, the entries in these specific columns correspond to the proportion of votes in which a majority of MPs from a party supported the minority government.

As we can see in table 3, the NDP supported the Liberals 79% of the time on government motions, followed by the Bloc (45%), and finally the Conservatives (32%). In the 39^{th} Parliament, both the Liberals and the Bloc Quebecois voted with the Conservatives on government related business 59% of the time. As for the NDP, their party supported the Conservative government in only 24% of all their votes. At first glance, it would appear that the ideological proximity thesis has some validity in explaining coalition voting in Canadian minority governments. We see that the NDP is the most likely to support the Liberal government in the 38^{th} Parliament, followed by the Bloc and the Conservatives. On the other hand, the Conservative minority government of the subsequent parliament could equally rely on the support of the Bloc and the Liberal parties who have closer ideological ties with the Tories than the NDP Johnston (2008).

[Table 4 about here.]

Of course before we can conclude in the validity of these claims, we need to establish a more precise measure of voting coalitions in the Canadian Parliament. The party unity scores do not report which *other* party may have voted in a specific coalition. So for instance, it is possible that the unity score between the NDP and the Conservative Parties in the 38th Parliament contains only votes that were also supported by the Liberals. Similarly, we may find that the NDP only voted with a majority of the Liberals when a motion by the Bloc Quebecois was supported by the Conservatives.

[Table 5 about here.]

To control for this possibility, we include a measure of coalition voting in tables 5 and 6. We report a specific statistic of coalition voting which counts the proportion of votes cast by a single party in all the possible combination of coalitions in the House. These coalitions occur when a majority of one party votes with the majority of either one, two, or three of the other parties.

For example, {L+C+N+B} represents the proportion of all the votes in which the majority of all parties voted together; {L+C+N} represents the proportion of votes that were supported by a coalition of Liberal, Conservative, and NDP only; {L+N} represents the proportion of votes that were supported by a coalition of Liberal and NDP (this coalition is thus different and is not counted in the previous two coalitions); and finally {L} represents the proportion of votes that were only supported by a majority of the Liberals.

We can in each tables that 6% and 9% of all the votes were unanimous in both parliaments. Since we are dealing with two minority cabinets, we find that more than 6% ($\{L\}$) of the government motions in the 38^{th}) and 10% ($\{C\}$ of the government motions in the 39^{th}) were defeated. In the 38^{th} Parliament, the important coalitions of voting seem to be between the Liberals and the NDP (15%) and between the Liberals, Bloc, and the NDP (29%). It is also very interesting to notice that there is no Liberal-Bloc versus Conservative-NDP coalition over government motions (the second column) in this same Parliament. It appears that most of the government motions were enacted in a tri-partisan coalition made up of NDP, Bloc and Liberal MPs. This is not surprising if we consider the fact that for over a third of the 38^{th} Parliament, the NDP did not have a sufficient number of seats to form a majority coalition with the governing Liberals. We also note that the Liberals formed a three party coalition against the Bloc with an NDP-Conservative alliance over more than 19% of the government motions.

In short, we find in the 38th Parliament that the main opposition party to the governing Liberals was the Conservative party. We also note that the NDP is almost always included in coalition votes with the governing Liberals, even if this party does not provide enough seats to form a majority coalition with the cabinet (at least until the defection of the Conservative MP Stronach). In fact, only 20% of all divisions on government related business excluded the NDP.¹⁹ In contrast, more than 65% of government motions excluded the Conservative Party.²⁰

[Table 6 about here.]

Turning now to the Conservative minority government, we find in table 6 that the government motion coalitions were made up by the Conservatives and the Liberals (18%) and the Conservatives and the Bloc (17%). It is also very interesting to note that a plurality of government motions (second

¹⁸Stronach defected to the Liberals before the 90th division. However, the Liberals still required the support of at least two independents to obtain a majority.

¹⁹In the second column of table 5: $\{L\}+\{L+C\}+\{L+B\}+\{L+B+C\}=20\%$

²⁰In the second column of table 5: $\{L\}+\{L+N\}+\{L+B\}+\{L+B+N\}=65\%$

column) occured under a tri-partisan coalition of Liberal-Conservative-Bloc MPs (31%). This result is surprising if we consider the fact that these two opposition parties could have independently provided enough seats to form a majority coalition with the cabinet. Thus, this preceding finding clearly contradicts the notion of *minimal* winning coalition.

We mention in passing that the number of private member motions that were not supported by the government (and thus needed the support of all opposition parties in order to pass) represented over 57% of all the motions passed in the 39th Parliament. In contrast, only 18% of the private member motions of the 38th Parliament passed without the Liberal's consent. Still, it appears that the strongest supporter of the Conservative government was the Liberal Party. It is closely followed by the Bloc Quebecois. Finally, we must also highlight the fact that we found 8% of "unholy" alliances between the NDP and the Conservative Party on government related motions. In other words, 2 out of 25 divisions pitted a coalition of Tories and New Democrats against Quebec nationalists and the Liberals.

To summarize, we clearly see in table 5 that the main opposition party to the governing Conservatives was the NDP in the 39^{th} Parliament. We also note that the NDP was excluded in over 75% of all coalition votes with the governing Conservatives.²¹ Hence, it appears that supporting the cabinet is primarily a function of ideological proximity. The Conservatives were the least likely to obtain NDP votes when they were in power. Similarly, the NDP was the most likely to collaborate with the ruling Liberals in the 38^{th} Parliament. On government motions, the NDP almost always voted with the Liberals –more than 80% of coalition votes with the Liberal government in the 38^{th} Parliament contained the NDP.

With these results in hand, we can partially validate our principal research hypothesis which stated that coalition voting under minority governments is more likely to form along ideological lines. We found no confirmation of the *minimal* winning coalition hypothesis –or even the *connected* minimal winning coalition hypothesis. Many of the divisions related to government business garnished well over 50% of support in the House. For instance, more than 19% and 31% of all government motions were made by a three party coalitions, like the Liberal-Conservative-NDP alliance in the 38^{th} or the Conservative-Liberal-Bloc alliance in the 39^{th} Parliament.

Of course, as we indicated earlier, it is also important to consider the possibility that legislative alliances between opposition parties and the government occur in more than one dimension (Budge

 $^{^{21}}$ In the second column of table 6: $\{C\}+\{C+L\}+\{C+B\}+\{C+L+B\}=75\%$

and Laver, 1986). The coalitions we have just described can also be represented within a spatial model of legislative voting. These spatial models generally classify voting along a single line where divisions between MPs and their parties are determined by the extent to which they support or oppose the government (Hix and Noury, 2007). However, we can also find other issues over which parties divide. Thus, voting cannot always be necessarily explained in terms of support or opposition toward the cabinet. Godbout and Høyland (2009) have indeed shown that classifying legislative voting in the Canadian Parliament works best in a two-dimensional model.

Normally, we explain the outcomes of most of the legislative votes along a principal dimension which measures the support of an individual MP toward the cabinet. In the context of the 39th Parliament for example, we could think that NDP MPs are farther away from Conservative MPs, and in the center we may find Bloc and Liberal MPs. However, it is also possible that on certain issues related to regional or provincial power, the Bloc Quebecois would be closer to the position of the Conservatives Party, followed by the NDP, and finally by the Liberals (who are in favor of a stronger national government). In this context, the NDP-Bloc-Liberal-Conservative ordering will fail to correctly classify the outcome of this vote. This explain why it is necessary to introduce a second dimension to the spatial mapping of legislative voting if we intend to classify both government/opposition and regional votes into a single model of legislative voting. This is precisely what Godbout and Høyland (2009) did in their analysis of voting in the 35th and 38th Parliaments.²²

Because there is a distinct possibility that legislative alliances will vary depending on the type of issue raised in the House, we present in Figures 1 and 2 a series of two-dimensional spatial maps for the 38^{th} and 39^{th} Parliaments. In these Figures, the dots represent the two dimensional coordinates of legislators obtained with the Optimal Classification algorithm of Poole (2005b). These estimates represent the locations of all MPs which will maximizes the proportion of correctly classified votes over a given parliament.²³ The Figures also plot the cutting line of eight specified divisions. These lines are also known as Coombs mesh (Poole, 2005a) and they basically separate MPs who support and oppose particular motions. A circle is included in each Figure to emphasize the constraints on the Optimal Classification coordinates.²⁴

²²Their two-dimensional spatial model of legislative voting correctly predict more than 92% and 91% in both Parliaments respectively.

²³Correctly classified means in this context that the model can predict correctly the vote outcome of different MPs with a two dimensional spatial model.

²⁴Only the cutlines that are constrained to have midpoints lying in a unit circle are included. We use the oc package in R to calculate the coordinates and compute the Figures.

[Figure 1 about here.]

As we can see in Figure 1, the spatial mapping of the 38th Parliament is clearly two dimensional, with the Liberal Party at one end of the first dimension (arbitrarily chosen to be the right end side), the Bloc and NDP in the middle, and the Conservative Party at the opposite extreme. We also see that the Bloc Quebecois occupies the top end of the second dimension, closely followed by the NDP, and finally a cluster of both Liberal and Conservative MPs. The top left OC-plot reports the outcome of the first vote lost by the Liberal minority government in the 38th Parliament. The proposed legislation aimed to separate the departments of Foreign Affairs and International Trade. Not surprisingly, the Liberals are on the right end side of the dividing line (meaning that they all voted in favor of the motion), while the Conservative-Bloc-NDP are located on the other side (meaning that they voted against the motion).

The next division (number 91) plots the voting outcome of an amendment to the Liberal budget made by the NDP which would have increased spending by \$4.6 billion. This motion passed because of the defection of Stronach and a tie-breaking vote made by the Speaker of the House. Division (no.156) demonstrates that the two dimensional model performs relatively well when we consider the outcome of a vote related to a bill aiming at recognizing same sex marriages. This motion was a free votes in each party, and we can clearly see in the spatial mapping the breaking of Liberal party along an ideological line.²⁵

Finally, division 158 clearly demonstrate the existence of a regional opposition between the Bloc Quebecois and the rest of the parties in the legislature. The vote is related to a motion made by the Bloc Quebecois which would have required the government to get provincial approval before negotiating national treaties. Not surprisingly, it failed to be adopted by the House.

[Figure 2 about here.]

Turning now to the Conservative minority government in Figure 2, we find that the right end side of the spatial mapping is now occupied by the Conservative cabinet, while the opposite extreme is occupied by the NDP. The Bloc and the Liberal Party occupy the middle ground in the first dimension (with the Bloc slightly to the left of the Liberal Party). We also see that the Bloc Quebecois remains polarized on the second dimension, but less so than in the previous Parliament.²⁶

²⁵The model also show the sole dissension within the NDP (Mrs. Bev Desjarlais) but fails to record the inter-party split within Bloc and the Conservative MPs (3g Conservatives were in favor, and 5 Bloc MPs were opposed).

²⁶However, we should be careful about making such conclusions since Optimal Classification is not a dynamic

The first vote reported in Figure 2 corresponds to a Conservative motion which aimed to extend the deployment of Canadian troops in Afghanistan for an additional two years.²⁷ The motion passed, but once again, discipline broke down within the Liberal Party. The vote line clearly separates the party into two factions. Division 72 is also very interesting. It relates to a motion made by the government to recognize that the Québécois form a nation within a united Canada. Every MP from the Bloc Quebecois, the NDP, and the Conservative Party voted in favor of this motion; and do did a majority of the Liberal caucus –except 16 Liberal MPs who are clearly located at the extreme end of the second dimension in this OC-plot. Division number 94 relates to a motion introduced by the Conservatives which aimed to re-open the same sex marriage debate; however it failed to obtain the support of a majority of the House. Finally, division 98 is an opposition motion which required the government to reconfirms Canada's commitment to honor the Kyoto Protocol. There was no cross-party voting on this vote. Each members of the NDP, the Liberal, and the Bloc supported the motion, while everyone in the Conservative party voted against it.

These eight previous OC-plots of legislative behavior in the Canadian Parliament clearly confirm that coalition voting is best explained in a two-dimensional policy space. The models demonstrate that parties in the House primarily divide to support or oppose the cabinet. Of course, this simple classification model cannot perfectly predict the outcome of each individual vote in the legislature. As we have seen, the remaining votes that cannot be divided between party lines (the first dimension) can theoretically be classified along a second dimension. In Canada, this dimension appears to be related to a regional conflict, opposing Bloc Quebecois members to the rest of Parliament. It is also important to note that intra-party dissension sometimes fails to explain why certain Conservative or Bloc MPs side with Liberals or NDP MPs, like in the case of the two same-sex marriage motions. Similarly, although rare, Conservative-NDP coalitions against Bloc-Liberal coalitions are not correctly classified in any of the OC-plots. We could think of introducing a third dimension to our spatial model which would then correctly classify the outcome of these votes, but this is beyond the scope of the current analysis.

scaling methodology which permits comparisons across legislative sessions; we can only directly compare the location of parties within a given Parliament.

 $^{^{27}}$ All of the divisions in this figure are from the first session. However the location of all MPs are calculated from the legislative votes of both parliamentary sessions of the 39^{th} legislature.

Discussion

This study analyzed parliamentary voting coalitions in two recent Canadian minority governments. Because very little is known about the working of legislative voting coalitions under minority governments, the paper relied on bargaining theories of cabinet formation to account for the dynamics of legislative behavior in the 38^{th} and 39^{th} Parliaments. The analysis demonstrated that the formation of voting coalitions is best explained by the ideological orientation of parties (the Axelrod (1970)'s thesis) rather than by their size (the minimal winning coalition size principal of Riker (1962)).

The study also represented legislative voting in different spatial models using Poole (2005 a) Optimum Classification methodology. This analysis confirmed that MPs clearly aligned in a two dimensional issue space. Probably the most interesting finding of the spatial mapping of legislators relates to the Conservative-Liberal-Bloc-NDP ordering on the the x axis in the 39^{th} Parliament. This classification matches with the traditional left-right classification of party platforms that we find in the Canadian party system. However, unlike in the U.S. Congress, we cannot conclude that the first dimension of legislative voting is a representation of ideology. Rather, this dimension represents the extent to which an individual MP supports the cabinet. When the cabinet is controlled by the Liberals, we saw that this ordering changed to a Liberal-NDP-Bloc-Conservative continuum.

We also confirmed the existence of a series of coalition votes which were best classified on a second dimension. Although we didn't review the content of all the divisions, the OC plots clearly demonstrated that MPs from the Bloc Quebecois occupy a polarizing position in the legislature which fails to be classified in terms of support or opposition toward the cabinet. In both parliaments, the Bloc Quebecois occupied more or less the center on this first dimension. However, on certain other votes, it appears that the members of this party shift to an extreme position. This is explained by the fact that the Bloc Quebecois prioritizes the interests of Quebec in Parliament, regardless of whether a bill originates from the government or not.

We have also showed that the OC scaling methodology is capable of accounting for some of the votes were party discipline breaks down in the Canadian Parliament (e.g. both on the nation of Quebec vote and on the same sex issue). The spatial model fails to correctly classify vote outcomes in only a very limited number of divisions. We believe that with the addition of a third spatial dimension, the model would basically explain all of the Liberal-Bloc and NDP-Conservator voting coalitions. Of course, we must also explain what is the content of this third dimension. It could

represent log-rolls or other strategic alliances. The only way to find out would be to look at the incorrectly classified votes, and take an approach along the lines of Jackman (2001). We intend to analyze these votes in another version of this paper.

In this paper, we have explained coalition formation by focusing on legislative voting and party ideology. But it is also possible that other factors like committee assignments or other office spoils could help explain why certain parties chose to collaborate more with the cabinet. We are also well aware that electoral considerations could potentially explain why certain parties choose to support the cabinet when it is clearly not in their *policy* interests to do so.

The electoral calculus of parties probably explains why the Liberals also opted to collaborate more with the Bloc and the NDP in the 38^{th} Parliament, when in fact they could have very well chosen to form a series of legislative alliances with the Conservatives instead. Since the Liberal Party occupies the center of the Canadian political landscape, it can theoretically choose to form a legislative alliance with any of the remaining parties in the House (Johnston, 2008). Yet, in most votes of the 38^{th} Parliament, the Liberals generally opted to form coalitions with the NDP, or with the NDP and the Bloc (more than 59% of the government motions in the 38^{th} Parliament were made with these two coalitions). This result is not surprising. According to Stewart (1980), we should find that third parties (like the NDP or the Bloc) are more willing to enter alliances with major parties (like the Liberal or Conservative) in minority governments, since this represent their only opportunity to have a significant impact on public policy.

Indeed, minority governments usually make more concessions over policy and legislation to gain "third party" support (Franks, 1987). And for electoral reasons, we believe that it was in the Conservative Party's interest to clearly establish itself as an opposition to the government and collaborate less with the Liberals in the 38^{th} Parliament. For the NDP and especially the Bloc Quebecois, the price of collaborating with the government was not as high as for the Conservatives, since minority governments provide these parties with an opportunity to extract policy concessions and to enact more private member motions and bills. Ironically, the Liberals had fewer options in the 39^{th} Parliament. It is possible that their continuing support of the Conservative cabinet explain why they lost some seats in the 40^{th} Parliament and why the NDP elected seven more MPs.

References

- Axelrod, Robert. 1970. The Conflict of Interest. Chicago: Markham.
- Bélanger, Éric and Godbout, Jean-Francois. 2009. Why Do Parties Merge? The Case of the Conservative Party of Canada. In *Unpublished Manuscript*.
- Bernard, André. 1996. Liberals and Conservatives in the 1990s. In *Canadian Parties in Transition*, ed. Brian Tanguay and Alain-G. Gagnon. 2nd ed. Scarborough: Nelson Canada.
- Bickerton, James and Alain-G. Gagnon. 2004. Political Parties and Electoral Politics. In *Canadian Politics*, ed. James Bickerton and Alain-G. Gagnon.
- Blais, André, and Carty Kenneth R. 1991. "The psychological impact of electoral laws: Measuring Duverger's elusive factor." *British Journal of Political Science* 21(1):79–92.
- Budge, Ian and Michael Laver. 1986. "Office Seeking and Policy Pursuit in Coalition theory." Legislative Studies Quarterly 11(4):485–506.
- Carty, R. Kenneth, William Cross and Lisa Young. 2000. Rebuilding Canadian Party Politics.

 Vancouver: UBC Press.
- Carty, R.K. 1988. Three Canadian Party Systems: An Interpretation of the Development of National Politics. In *Party Democracy in Canada: The Politics of National Party Convention*, ed. George Perlin. Prentice Hall Canada Inc. pp. 15–30.
- Clinton, Joshua. 2007. "Lawmaking and Roll Calls." Journal of Politics 69(2):455-67.
- de Swaan, Abram. 1972. Coalition Theories and Cabinet Formations. Amsterdam: Elsevier.
- Epstein, Leon D. 1964. "A Comparative Study of Canadian Parties." American Political Science Review 58(1):46–59.
- Flanagan, Thomas. 1998. Game Theory and Canadian Politics. Toronto: University of Toronto Press.
- Franks, C.E.S. 1987. The parliament of canada. Toronto: University of Toronto Press.
- Gaines, Brian J. 1999. "Duverger's Law and the Meaning of Canadian Exceptionalism." Comparative Political Studies 32(7):835–861.

- Godbout, Jean-Francois and Bjørn Høyland. 2009. Legislative Voting in the Canadian Parliament. In Paper Presented at the Midwest Political Science Association Meeting. Chicago, IL: .
- Hix, Simon and Abdul Noury. 2007. "Government-Opposition of Left-Right? The Institutional Determinants of Voting in Eight Parliaments." Presented at APSA 2007.
- Jackman, Simon. 2006. pscl: classes and methods for R developed in the Political Science Computational Laboratory, Stanford University. Technical report Standford, California: .
- Jackson, Robert L. and Michael M. Atkinson. 1980. *The Canadian Legislative System*. 2nd ed. Toronto: MacMillan of Canada.
- Johnston, Richard. 2008. "Polarized Pluralism in the Canadian Party System: Presidential Address to the Canadian Political Science Association, June 5, 2008." Canadian Journal of Political Science 41(4):815–834.
- Johnston, Richard, André Blais, Henry E. Brady and Jean Crête. 1992. Letting the People Decide:

 Dynamics of a Canadian Election. Montreal: McGill-Queen's University Press.
- Kornberg, Allan. 1967. Canadian Legislative Behavior: a Study of the 25th Parliament. New York: Holt, Rinehart, and Wilson.
- Laver, Michael and Kenneth A. Shepsle. 1996. Making and Breaking Governments: Cabinets and Legislatures in Parliamentary Democracies. Cambridge: Cambridge University Press.
- Lupia, Arthur and Kaare Strøm. 2008. Bargaining, Transaction Costs, and Coalition Governance. In Cabinets and Coalition Bargaining, ed. Kaare Strøm, Wolfgang C. Müeller and Torbjörn Bergman. Oxford University Press.
- Martin, Andrew D and Kevin M Quinn. 2006. Markov chain Monte Carlo (MCMC) Package, R. Technical report Washington University in St.Louis.
- McKelvy, Andrew J. 2009. Minority Government in Canada: Impediment to, or Impotent Against, the Prime Minister's Legislative Agenda? In *Paper Presented at the Midwest Political Science Association Meeting*. Chicago: .

- Mitchell, Paul and Benjamin Nyblade. 2008. Government Formation and Cabinet Type. In *Cabinets and Coalition Bargainng*, ed. Kaare Strom, Wolfgang C. Mueller and Torbjorn Bergman. Oxford University Press.
- Müller, Wofgang C. and Kaare Strøm. 2000. Coalition Governments in Western Europe. Oxford: Oxford University Press.
- Mueller, Dennis C. 2003. Public Choice III. Cambridge: Cambridge University Press.
- Poole, Keith. 2008. "The Roots of the Polarization of Modern U. S. Politics.".
- Poole, Keith T. 2005 a. Spatial models of parliamentary voting. Analytical methods for social research Cambridge; New York: Cambridge University Press.
- Poole, Keith T. 2005b. Spatial models of parliamentary voting. Analytical methods for social research Cambridge; New York: Cambridge University Press.
- Poole, Keith T. and Howard Rosenthal. 1997. Congress: a political-economic history of roll call voting. New York: Oxford University Press.
- Poole, Keith T. and Howard Rosenthal. 2007. *Ideology and Congress*. 2 revised edition ed. New Brunswick: Transaction Publishers.
- Riker, William H. 1962. The Theory of Political Coalitions. New Hawen & London: Yale University Press.
- Spirling, Arthur and Iain McLean. 2007. "UK OC OK? Interpreting Optimal Classification Scores for the U.K. House of Commons." *Political Analysis* 15(1):85–96.
- Stewart, Ian. 1980. "Of Customs and Coalitions: The Formation of Canadian Federal Parliamentary Alliances." Canadian Journal of Political Science 13(3):451–479.
- Strøm, Kaare. 1990. Minority Government and Majority Rule. Cambridge: Cambridge University Press.
- Woolstencroft, Peter R. 1994. The Canadian General Election of 1993. In *Doing Politics Differently:*The Conservative Party and the Campaign of 1993, ed. Pammet J., A. Frizzell and T. Westell.

 Carleton University Press pp. 9–26.

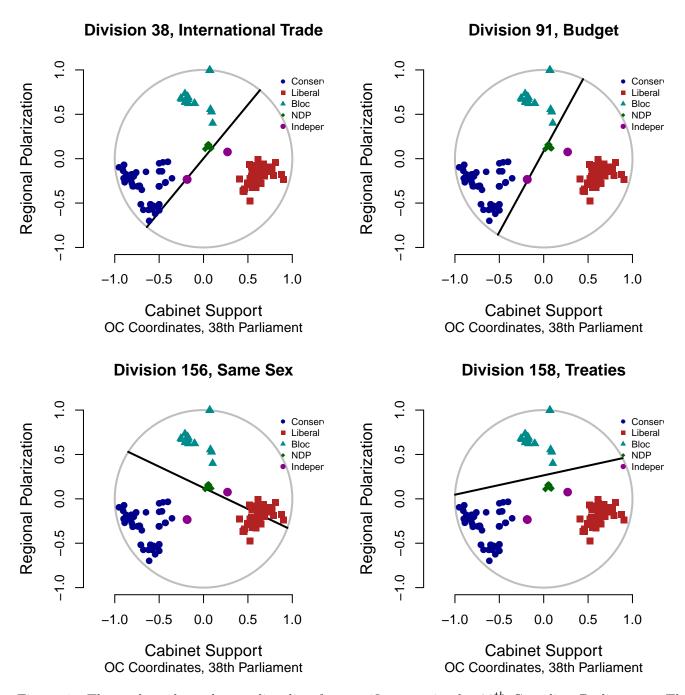


Figure 1: These plots show the cuttling line for specific votes in the 38^{th} Canadian Parliament. The dimension on the x-axis is Cabinet support. The y-axis corresponds to the regional dimension. The plots are based on optimal classification. The location of the legislators indicate their optimal location given their voting behavior on all votes in the 38^{th} Parliament.

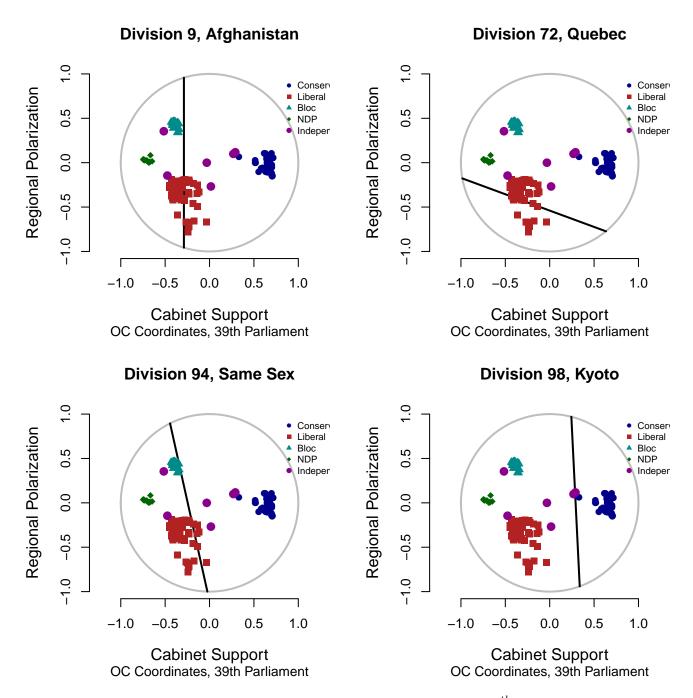


Figure 2: These plots show the cuttling line for specific votes in the 39^{th} Canadian Parliament. The dimension on the x-axis is Cabinet support. The y-axis corresponds to the regional dimension. The plots are based on optimal classification. The location of the legislators indicate their optimal location given their voting behavior on all votes in the 39^{th} Parliament.

Party	$38^{th}(2004 - 2005)$	$39^{th} (2006-2008)$
Conservative	99	124
Liberal Party	135	103
NDP	19	29
Bloc Quebecois	54	51
Independent	1	1

Table 1: The table shows composition of the 38^{th} and 39^{th} Parliaments.

Votes	38^{th}	39^{th}
Government motions Private member motions Opposition motions Other	93 39 27 30	170 111 52 47
Total	189	380

Table 2: The table shows the number of divisions in the 38^{th} and 39^{th} Parliaments by types of motions. Government motions include general and ways and means motions, as well as government bills. Private member motions include general motions and bills introduced by private members. Opposition motions include motions made in response to the speech of the throne, and general opposition motions (such as amendments to government bills). The last category includes motions related to committee reports and votes on adjournment of debates.

Party Unity Score 38th Parliament

Party Bloc Conservative Liberal NDP

Type	Party	Bloc	Conservative	Liberal	NDP
All divisions:					
	Bloc	.99	.43	.43	.63
	Conservative	.43	.99	.32	.43
	Liberal	.43	.33	.95	.63
	NDP	.62	.43	.63	.99
Government divisions:					
	Bloc	.98	.30	.45	.59
	Conservative	.30	1	.34	.28
	Liberal	.43	.36	.96	.76
	NDP	.57	.28	.79	.99
Private divisions:					
	Bloc	.98	.37	.49	.61
	Conservative	.37	.95	.42	.61
	Liberal	.46	.45	.89	.46
	NDP	.63	.59	.41	.95

Table 3: The table shows party loyalty scores for the 38^{th} Parliament by types of votes. 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 39^{th} Parliament

Type	Party	Bloc	Conservative	Liberal	NDP
All divisions:					
	Bloc	1	.40	.65	.61
	Conservative	.40	1	.45	.26
	Liberal	.66	.43	.97	.64
	NDP	.61	.25	.62	1
Government divisions:					
	Bloc	1	.59	.51	.36
	Conservative	.58	1	.58	.24
	Liberal	.52	.59	.98	.38
	NDP	.37	.24	.38	1
Private divisions:					
	Bloc	1	.23	.71	.82
	Conservative	.23	.99	.35	.25
	Liberal	.75	.32	.94	.84
	NDP	.81	.24	.38	.99

Table 4: The table shows party loyalty scores for the 39^{th} Parliament by types of votes. 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.

Coalition Voting 38th Parliament

	All divisions	Government divisions	Private divisions
$\{L\}$	0.17	0.06	0.18
$\{C\}$	0.29	0.41	0.15
$\{N\}$	0.03	0.03	0.05
{B}	0.13	0.19	0.13
$\{L+C\}$	0.11	0.11	0.18
$\{L+N\}$	0.15	0.18	0.03
{L+B}	0.06	0.00	0.18
$\{C+N\}$	0.06	0.00	0.18
$\{C+B\}$	0.15	0.18	0.03
$\{B+N\}$	0.11	0.11	0.18
$\{L+C+N\}$	0.13	0.19	0.13
$\{L+C+B\}$	0.03	0.03	0.05
$\{L+B+N\}$	0.29	0.41	0.15
$\{C+N+B\}$	0.17	0.06	0.18
$\{L+C+N+B\}$	0.06	0.01	0.10

Table 5: The table shows voting coalitions in the 38^{th} Parliament by types of votes. Each entry represents the proportion of votes that were made by a specific coalition. A coalition occurs when a majority of a party votes with the majority of one or more of the other parties. Thus, $\{L+C+N+B\}$ represents the proportion of all the votes where the majority from all parties voted together; $\{L+C+N\}$ represents the proportion of votes that were supported by a coalition of Liberal, Conservative, and NDP only; $\{L+N\}$ the proportion of votes that were supported by a coalition of Liberal and NDP only (not to be counted in previous categories); and finally $\{L\}$ the proportion of votes that were supported by the Liberals alone. Averages are rounded to two decimal points.

Coalition Voting 39th Parliament

	All divisions	Government divisions	Private divisions
{L}	0.04	0.06	0.02
{C}	0.35	0.10	0.57
$\{N\}$	0.16	0.31	0.04
{B}	0.07	0.06	0.08
$\{L+C\}$	0.12	0.18	0.10
$\{L+N\}$	0.10	0.17	0.04
$\{L+B\}$	0.05	0.08	0.03
$\{C+N\}$	0.05	0.08	0.03
$\{C+B\}$	0.10	0.17	0.04
$\{B+N\}$	0.12	0.18	0.10
$\{L+C+N\}$	0.07	0.06	0.08
$\{L+C+B\}$	0.16	0.31	0.04
$\{L+B+N\}$	0.35	0.10	0.57
$\{C+N+B\}$	0.04	0.06	0.02
$\{L+C+N+B\}$	0.09	0.04	0.12

Table 6: The table shows voting coalitions in the 39^{th} Parliament by types of votes. Each entry represents the proportion of votes that were made by a specific coalition. A coalition occurs when a majority of a party votes with the majority of one or more of the other parties. Thus, $\{L+C+N+B\}$ represents the proportion of all the votes that were unanimous in Parliament; $\{L+C+N\}$ represents the proportion of votes that were supported by a coalition of Liberal, Conservative, and NDP only; $\{L+N\}$ the proportion of votes that were supported by a coalition of Liberal and NDP only (not to be counted in previous categories); and finally $\{L\}$ the proportion of votes that were supported by the Liberals alone. Averages are rounded to two decimal points.