

ELECTORAL SYSTEMS AND THEIR EFFECT ON
THE SURVIVAL OF MINORITY AND COALITION GOVERNMENTS
IN PARLIAMENTARY DEMOCRACIES

by

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ABSTRACT

Recent electoral reforms in New Zealand and two devolved sub-national parliaments in the U.K., coupled with the widespread fragmentation of party systems in Western democracies and shifts toward greater electoral volatility, give rise to the need to understand the effects of electoral systems on the incentives leading parties to cooperate (or not) with one another, and the results for government survival, especially under the circumstance of “hung parliaments,” where no party holds a legislative majority. This study is especially germane in the Canadian context, where an extended period of minority governance has renewed the debate about whether to reform the country’s electoral system to make it more proportional.

The two main approaches in the extant literature on cabinet termination – the empirical “events history” strand and the rational-choice theoretical models – remain to be fully unified, hampering the proper evaluation of hypothesized causal mechanisms linking public opinion shocks – and the systematic effects electoral systems have on them – to government survival outcomes.

This paper looks at the recent evolution of the literature on government duration, focusing specifically on determining whether electoral systems alter the incentives leading to government termination in hung parliaments sufficiently to reduce the length of government survival. The literature to date remains insufficiently specified to draw strong conclusions about the effect of electoral systems on the stability of individual minority or coalition governments. Thus, I propose reworking some assumptions in theoretical models of government termination dealing with public opinion shocks. I also recommend that a large-*N* statistical analysis of termination hazard rates of the type used by Lanny Martin be carried out using electoral system as the explanatory variable but limiting the sample to minority and coalition governments.

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1. Introduction

In recent years, some Westminster parliamentary systems have undergone changes that have shed light on old debates regarding the effect of institutional design on governance. These changes include a reform of the electoral system in New Zealand and the devolution of certain federal powers to the jurisdiction of the regional governments of Scotland and Wales in the U.K., which coincided with the adoption of new electoral systems in those territories. The new electoral systems that were adopted for these three legislatures were designed to increase the proportionality of the parties' seat counts to their share of the vote in order to improve the representativeness of the party caucuses, and by extension of government. Undoubtedly, the new electoral systems changed the incentive structures faced by parties at election time by reducing the importance of gaining a plurality of votes in geographical constituencies. More interestingly from a policy perspective, by reducing the likelihood that single-party majority governments would be elected in these three legislatures, the reforms introduced the potential for new dynamics of party cooperation or competition, since the resulting minority or coalition governments could be brought down before the end of their constitutionally mandated terms on votes of no confidence if governing parties didn't achieve enough support from other parties in the legislature.

At the same time, the party systems of Western democracies in general¹ and of Canada and the U.K. in particular have undergone shifts toward greater volatility and fragmentation, as traditional levels of voter support of the largest parties have declined to the benefit of smaller parties, and electoral volatility in general has increased. Currently, the U.K. is under a coalition government, the first in several

¹ Drummond, A. J. "Electoral Volatility and Party Decline in Western Democracies: 1970–1995." *Political Studies* 54.3 (2006): pp. 633–5. See also Norris, Pippa. *Electoral Engineering: Voting Rules and Political Behavior*. Cambridge University Press, New York (2004): p. 19.

decades, and Canada is under a majority government that followed a seven-year period spanning three minority administrations, with strong regional variations in vote preferences. Some commentators suggest that these trends may lead to more frequent minority governments in the future.

The combination of these factors gives rise to the need to understand the effects of electoral systems on the incentives leading parties to cooperate (or not) with one another, and the results for government survival, which in most parliamentary systems requires the government to maintain the confidence of the elected lower house. Many authors have posited that “majoritarian” electoral systems increase accountability and government stability in promoting the creation of single-party majorities, while proportional electoral systems sacrifice some stability and accountability in order to achieve greater representativeness.² But how accurate is it to say that proportional representation (PR) reduces government stability?

Michael Laver’s 2003 review of the literature on cabinet termination³ outlines three principal approaches to the analysis of government survival: “structural attributes,” “critical events,” and “a priori” modelling. For Laver, the “events” and “attributes” approaches have been successfully merged by King et. al, and subsequent research has consisted of variations on their “events history” model designed to include additional variables or study specific types of government termination. However, there remains a gap between this unified empirical study of the durations of cabinets and the theoretical rational choice models designed to assess potential government “durability” beforehand.

This paper supplements Laver’s synthesis with a look at the recent evolution of the literature on government duration, focusing specifically on determining whether electoral systems alter the incentives leading to government termination in “hung parliaments” – where no party holds a majority

² Norris, Pippa. *Electoral Engineering: Voting Rules and Political Behavior*. Cambridge University Press, New York (2004): p. 4.

³ Laver, Michael. "Government Termination." *Annual Review of Political Science* 6.1 (2003): pp. 23–40.

of the seats – sufficiently to reduce the length of government survival. The central proposition is that electoral systems, which determine the way in which vote shares are converted to seat shares through elections, should affect the calculus of parties hoping to achieve electoral gains through early elections, and should therefore also affect the likelihood of early government termination. Specifically, I propose that when compared to “first-past-the-post” (FPTP), proportional electoral systems increase the confidence of political actors in the correlation between polling numbers and seat totals while virtually eliminating single-party majority governments, thereby reducing the prospective value of a post-election government relative to the opportunity costs of bringing down the current government. The result, I hypothesize, is that the likelihood of failure of minority and coalition governments elected under proportional electoral systems will be lower than that under FPTP.

Portions of the extant literature on government stability model decision-making by parties experiencing public opinion shocks. Also among the body of work are studies of the potential effects of institutions such as electoral systems on government termination. However, the literature to date remains insufficiently specified to draw strong conclusions on the effect of electoral systems on the stability of individual minority or coalition governments. While recent debates in the government stability (or “cabinet durability”) literature suggest that electoral systems have the potential to substantially affect party coalition strategy, causes of stability in the group of multi-party legislatures elected through FPTP – such as India’s and Canada’s federal elected lower houses – are not well understood, leading to ambiguities with respect to the likely effects of electoral reform.

I propose not only the reworking of some assumptions in the theoretical models of government termination dealing with public opinion shocks, for example by adding a “seat bonus” variable based on the electoral system to the Lupia-Strom model of government termination, to further specify the differing effect of a given percentage increase in public support for a pivotal party under different

electoral systems. I further propose that it is worth trying to establish such a relationship using a large-*N* statistical analysis of termination hazard rates of the type used by Lanny Martin, also using electoral system as the explanatory variable but limiting the sample to minority and coalition governments.

2. Two Schools: Empirical vs. Theoretical: Government Duration vs. Government Durability

The field of government stability has been framed in several ways, with authors generally using individual cabinets as the unit of analysis. This has led to different strategies for defining when a government has “terminated,” with important substantive implications for measures of stability.⁴ The scholarly body up to 2003 is well encapsulated by Michael Laver’s state-of-the-art literature review covering scholarship in the field since the early 1970s. Studies on government termination have largely followed one of two distinct research programs. The largest body of literature consists of large-scale empirical studies of “government duration,” and attempts to find correlations between how long governments last and a combination of their attributes and the nature of critical events they face during their tenures.

Empirical study in the field of government duration has focused on measuring the observed durations of governments after the fact and correlating those durations statistically with various independent variables. Since government duration is directly observable within agreed definitions of a

⁴ For example, some authors consider a cabinet to have terminated if the prime minister resigns or dies in office, even if the same party remains in power with only minor changes in the cabinet to accommodate the prime minister’s replacement. In this study, I will use the term “government” in the broader sense to denote a continuity in the executive arm of the legislature, considering a government to have survived when the majority of its party composition stays the same, including the identity of the party of the prime minister, even if the prime minister himself changes or a major cabinet shuffle occurs.

I will consider a government to have been terminated if the party composition changes in its majority (i.e., if the government is replaced by an alternative coalition with mostly new members or a new prime ministerial party) or if it resigns or is dismissed and an election ensues, even if the same government is re-established following the election. By contrast, I will use the term “cabinet” where appropriate – as have most early empirical studies of government stability up to but not including King et. al – to designate a particular grouping of ministers that would be considered qualitatively changed (i.e., terminated) by anything more than a minor shuffle.

A more in-depth discussion of the substantive implications of differing definitions of government or cabinet “survival” (or its corollary “termination”) appears in a later section of this paper.

government's establishment and termination, the data sets that have been developed lend themselves to empirical study and the establishment of functional relationships. Laver notes, however, that this approach has been criticized on the basis that the independent variables proposed by scholars of government duration are based on intuition, justified on an *ad hoc* basis, and lacking in coherence from the standpoint of constituting a unified theoretical model.

In an effort to address this issue, a second, more recent group of studies attempt to create such a unified model describing "government durability," an estimate of the robustness of government equilibriums in the face of various perturbations. As noted by Laver, government durability is much more difficult to measure than duration, given that what might appear to be a "strong and durable" government may unexpectedly succumb to unanticipated shocks.⁵ Therefore, the study of government durability has largely involved the use of non-cooperative game theory to model the responses of key actors to various shocks, including new polling information that might change expectations about the results of a prospective election if the current government were to fall. At the time of Laver's study, these "a priori" models were observed to have been subject to relatively little empirical testing, largely because the variables used to describe the "robustness" of a government in "equilibrium" had proven difficult to operationalize in such a way that they could be compared with variables thought to represent "critical events" that could upset such an equilibrium and bring down a government.

Despite some efforts⁶ to bring the two tracks together, Laver observes that the theoretical modelling of government durability remains to be fully integrated with the empirical study of government duration, though prospects remain for unification in the future.

⁵ Laver, Michael. *Op. cit.*, p. 24.

⁶ For example, Diermeier, Daniel, and Randolph T. Stevenson. "Cabinet Terminations and Critical Events." *The American Political Science Review* 94.3 (2000): pp. 627–40. See also Diermeier, Daniel, and Randy T. Stevenson. "Cabinet Survival and Competing Risks." *American Journal of Political Science* 43.4 (1999): pp. 1051–68.

3. Theoretical Studies of Government Stability

d. Government Durability

Barring a few seminal works such as that of Dodd, the literature on government termination heavily tilted toward the empirical for a couple of decades until the 1990s, when the strongest theoretical contributions were made. Lacking a strong theoretical backing, the earlier studies focused on the correlation between various government or systemic attributes and government duration, generally justifying the “explanatory variables” on only an *ad hoc* basis. Summing up the empirical approaches to government termination, Taagepera and Qvortrup make the observation that empirical studies of government stability have suffered from a heavy reliance on data fits by regression, suggesting some scholars may be “under the delusion that a correlation establishes a fact or even a causal relationship.”⁷ This has helped lead to efforts to model the behaviour of governing parties more specifically.

Michael Laver’s 2003 review covers the small but growing body of research that attempts to use game theory to model the decision-making by pivotal parties that can lead to government termination. Generally deterministic, these models assume that “all anticipatable events unfolding during the life of the government are ... impounded, appropriately discounted, at the time of government formation in the calculations of the actors, and hence in the government equilibrium.”⁸ Thus, these are static models rather than dynamic ones, and assume governments should survive – and have planned for – anything but an unanticipated shock.

These models are thus able to establish, on the basis of the assumption a given government is rational, that it is in some sense in equilibrium at its time of formation, and will only dissolve if either the abilities or the incentives of one or more governing parties change to the point that they cannot or will

⁷ Taagepera, Rein, and Matt Qvortrup. “Who Gets what, when, how – through which Electoral System?” *European Political Science* 11.2 (2012): p. 250.

⁸ Laver, Michael. *Op. cit.*, p. 33.

not maintain the equilibrium any longer.⁹ Thus the comparison that can be made at any time is between the legislature currently presiding over government and the one that would replace it should it fall.¹⁰

These models predict the government will lose equilibrium if a party critical to the government's legislative majority sees that the benefits of maintaining the current configuration come to be outweighed by those that could result from turning public opinion gains into seat gains and a better position in the legislature. As Lupia and Strom point out, this net expected gain must also be discounted in terms of the transaction costs of contesting a new election and negotiating a new coalition.¹¹

While Dodd's seminal work led to the establishment of a field of rational-choice theorizing on coalition behaviour, the work largely focused on the relationship of coalition bargaining to legislative outcomes until the 1990s, when more attention began to be paid to electoral incentives. A rudimentary study by Bernard Grofman and Peter Van Roozendaal applies the rational choice approach to government termination by proposing that political actors faced with "critical events" (i.e., new information) can make rational choices to either support the status quo or attempt to bring about the end of the existing government.¹² Like King et al., these authors believe government dissolution may have a patterned, as well as a stochastic component. Exogenous shocks can lead to choices that bring down a coalition, but the key variable is the *motivations* of the actors who can make those choices.¹³

Notably, Grofman and Van Roozendaal sought to test the hypothesis that parties terminate

⁹ It should be noted that most models of government termination consider only governing coalitions of two or more parties. The case of minority governments that negotiate majority support (or sufficient abstentions from opposition parties) for confidence motions to pass has slightly different implications, as the replacement of a coalition partner, according to some definitions, constitutes a government (or cabinet) termination, while a minority cabinet may persist using various "legislative coalitions" over time.

¹⁰ Laver, Michael. *Op. cit.*, p. 34.

¹¹ *Ibid.*, p. 35.

¹² Grofman, Bernard, and Peter Van Roozendaal, "Toward a theoretical explanation of premature cabinet termination: With application to post-war cabinets in the Netherlands," *European Journal of Political Research* 26 (1994): p. 156.

¹³ *Ibid.*, p. 157.

governments when they expect electoral gains. In an attempt to test this theory, they employed the assumption that the expectation of gains is correlated with actual gains, which if true would mean the hypothesis could be confirmed if parties having precipitated elections by causing the breakup of governments were observed to experience electoral gains as a result.¹⁴ When tested against the set of post-war governments in the Netherlands, however, the hypothesis garnered mixed results, and the authors determined the evidence was not adequately supported by that sample.¹⁵

Lupia and Strom build on the work of Grofman and Van Roozendaal, developing the first explicit model of government termination for three-party legislatures. The model is based on the constitutional asymmetry existing in most parliamentary democracies whereby the government has the power to dissolve parliament but the opposition does not.¹⁶ In this model, decisions to terminate governments are taken as the rational response of coalition members to the receipt of new information about polling numbers, called “public opinion shocks” – usually referring to a given party’s increase in public support. Such an increase, it is reasoned, would affect the ratio of expected gains from an election to the sum of opportunity costs of abandoning the current coalition and/or the negotiation costs for forming a new coalition. The model predicts that in response to a public opinion shock, a set of three collectively exhaustive types of outcomes are possible:

- 1- a coalition termination followed by a “nonelectoral reallocation of power”;
- 2- a coalition termination followed by parliamentary dissolution and new elections; or
- 3- no coalition termination (i.e., a cabinet reshuffle, a renegotiation of the coalition “contract,” or the status quo).¹⁷

¹⁴ *Ibid.*, p. 158. A mitigating factor noted by the authors was the possibility that a party may sometimes leave a coalition if it thinks staying in would decrease its electoral prospects.

¹⁵ *Ibid.*, p. 165.

¹⁶ Laver, Michael. *Op. cit.*, p. 35.

¹⁷ Lupia, Arthur and Kaare Strom. “Coalition Termination and the Strategic Timing of Parliamentary Elections,” *American Political Science Review* 89.3 (1995): p. 648.

In short, coalition members have to weigh the value of policy and office benefits in remaining in the current coalition until the end of the constitutional interelection period (CIEP) against the value of either negotiating a new coalition with the “out party” or seeking a dissolution and early elections, both of which would entail negotiation costs and the latter of which entails campaigning costs and a lower certainty of gains. If campaigning, negotiation, or opportunity costs are too high, parties may still be able to use the prospect of electoral gains as a bargaining chip to negotiate a reallocation of power within the coalition.¹⁸ In all cases, parties are likely to adopt the option associated with the greatest cost-benefit ratio. This model thus makes the important advancement in the theory that a public opinion shock does not always lead to dissolution, and that, depending on campaigning and negotiation costs, several different outcomes are possible. This builds on the structural attributes school,¹⁹ in that it accounts for the role of institutions – such as the German constructive vote of no confidence, which means that in order for opposition parties to replace a governing coalition they must first establish confidence in a new government in the Bundestag – in shaping the options. It takes from the critical events tradition the understanding that not all aspects of a coalition's political life can be anticipated at its outset, since shocks can occur that change political actors' outlooks. It also follows from the strategic interaction school with the notion of “deliberate and complex bargaining between party leaders.”²⁰

Essentially, the model derives each party's utility as a function $F_i(s_i, c_i, X g_i^j)$ of the number of seats it holds s_i and the share of power it holds in the governing coalition (if any) c_i , multiplied by the value it places on coalition with the given partner g_i^j .²¹ The game is triggered by an event, which generally means a poll that credibly signals public opinion in a way that all parties come to share the same (new) set of expectations about likely electoral results. The parties then make a calculation about

¹⁸ *Ibid.*, p. 656.

¹⁹ The structural attributes and critical events approaches are explained in the next section of this paper.

²⁰ Lupia, Arthur and Kaare Strom. *Op. cit.*, p. 652.

²¹ *Ibid.*, p. 653.

the costs and benefits of bringing about an election, which can provide benefits b_i , but impose opportunity costs $s_i + (c_i X g_i^j)$ (for example, forfeiture of policy-making opportunities and office benefits) and transaction costs E_i (for example campaigning, electioneering, and inter-party negotiation).²² Any negotiation, according to this model, also involves a transaction cost, K_i , which is a result of the effort required to get party members and constituents to agree to a deal.²³

The advantage of looking at outcomes in terms of costs and benefits is that the model should allow for the attribution of values to the various transaction costs and expected election benefits based on both party-specific and institutional factors. In party-specific terms, there may be greater costs to getting caucus on board with some prospective coalition partners than others, or some parties might have less money and therefore incur higher election-related costs. In institutional terms, elections cost more in some countries than others. Moreover, the expected benefits of an election will vary based on the electoral system in use. According to the Lupia-Strom model, a structural measure resulting in a greater b_i for any given increase in polling numbers should result in a greater proportion of public opinion shocks becoming “critical events,” since the expected benefits of replacing the current government will more often exceed the expected costs. While it is not alluded to by these authors, I submit that an electoral system bestowing a “seat bonus” to leading parties should indeed cause just such a structural effect. An equally destabilizing effect should also be expected in the opposite direction if one or more parties fearing a magnified seat share decrease are thereby made more prone to cutting their losses early on an unpopular coalition. Unfortunately, the Lupia-Strom model has the disadvantage of being limited in applicability to coalitions in three-party systems.

²² *Ibid.*, p. 654.

²³ *Ibid.*, p. 655.

Laver and Shepsle's competing "portfolio allocation" approach to government survival models governments subjected to one of a number of different types of exogenous shocks including policy shocks, agenda shocks, public opinion shocks, and decision rule shocks.²⁴ This comprehensive model abandons the Lupia-Strom assumption that parties value legislative seats intrinsically, arguing that seat shares are instead entirely instrumental to the benefits they bring to a party. Thus, the focus is placed entirely on the decisive structures available in the legislature, where public opinion shocks have a discontinuous effect that only becomes critical when it allows for a new decisive structure, for example when a party gains enough support to move from a minority to a majority position, or two parties in a three-party coalition gain enough seats to govern without the third partner.²⁵

For these authors, the size of the shock required to lead to government termination varies depending on how close the current seat totals of pivotal parties are to a new decisive structure.²⁶ In order to avoid analytical complexities, the authors use simulated shock streams to assess the robustness of two particular governments to different types of shocks. As concerns public opinion shocks, the simulation issues random shocks within a standard deviation to assess the likelihood that shocks of a given magnitude will make the governing party "very strong."²⁷ The authors also assume parties that don't control the prime minister's office, even if in government, cannot force a dissolution, and thus only public opinion shocks affecting prime ministers' parties should be capable of terminating the government.²⁸

On the one hand, this model should help indicate why some authors claim minority governments in FPTP-elected legislatures are so unstable, since they are viewed by pivotal parties as

²⁴ Laver, Michael, and Kenneth A. Shepsle. "Events, Equilibria, and Government Survival." *American Journal of Political Science* 42.1 (1998): pp. 36–41.

²⁵ *Ibid.*, p. 39.

²⁶ *Ibid.*, p. 39.

²⁷ *Ibid.*, p. 51.

²⁸ *Ibid.*, p. 51.

“almost” majorities waiting to be converted via an election into a real legislative majority.²⁹ In other words, a smaller shock should more often be adequate to bring down a government. On the other hand, the assumption that only the prime minister’s party can bring about the end of a government is problematic within the context of minority governments, where at almost any given time opposition parties constituting a majority of seats may collectively decide to bring the government down on a vote of no confidence. In Westminster-style legislatures, opposition parties have a certain number of Opposition Days, during which they can raise such motions in Parliament should they see benefit in bringing down the government. A countervailing measure which would have to be considered, however, is the likelihood that the head of state would grant a prorogation should one be requested by a prime minister expecting to be defeated on confidence.

Another consideration is that this model would suggest increasing instability as the number of effective parties – and therefore the number of potential decisive structures – increases.³⁰ Since proportional electoral systems tend to increase the number of effective parties, as evidenced by the reform in New Zealand, this factor could lead to a decrease in stability where PR is instituted, countering my hypothesis of increased stability, though the question remains if the number of effective parties would increase to the point where there was a meaningful surge in the number of decisive structures.

The smaller, more recent body of work on endogenous election timing – where the government strategically chooses the timing of elections based on the desire to maximize remaining time in office – deals better with the approach to single-party government, and allows for a simpler way to explain the government’s dissolution when it occurs as a result of voluntary actions by the government itself, a not insignificant cause of early dissolution, especially in majoritarian parliaments.

²⁹ For example, Diermeier, Daniel, and Randolph T. Stevenson (2000). *Op. cit.*, p. 638.

³⁰ Laver, Michael, and Kenneth A. Shepsle. *Op. cit.*, p. 39.

The specific study of strategic election timing began in earnest with a seminal 1990 work by Nathan Balke, who proposed that “Governments desire to stay in power and will voluntarily call an election only if the benefits of doing so exceed the costs.”³¹ Balke theorized that the timing of elections depends on time left in the government’s term, the degree of electoral uncertainty, the volatility of government popularity, the government’s time rate of discount, and institutional constraints such as the likelihood of losing a vote of no confidence.³² Of these, the most relevant to the present study are the degree of electoral uncertainty, the volatility of government popularity, and the likelihood of losing a vote of no confidence. Polls could be imperfect measures of true popularity, or the “mapping between election outcomes and popularity may be stochastic.” A popular government might be tempted to call an early election given uncertainty that it will be able to maintain its popularity and therefore win a later election.³³ An example of this is described by Clemens and Saalfeld in their assessment of the 2005 German federal election which followed an engineered defeat of the Social Democratic-Green coalition government of Chancellor Gerhard Schröder on a confidence motion he initiated because of his concern that an emergent new political grouping on the left of the political spectrum would siphon critical votes from his party if he waited the remaining year until the end of his constitutional term.³⁴

I propose that electoral systems can affect this electoral uncertainty in two ways: PR leads to more predictable outcomes than FPTP, increasing the confidence that polling numbers will translate into seat totals, and it also virtually eliminates single-party majority governments, reducing the prospective value of a post-election government. In short, when opportunity costs are high, the reduction in the volatility of results under PR should cause governing parties to discount future popularity less and therefore experience less of an incentive to dissolve earlier.

³¹ Balke, Nathan S. "The Rational Timing of Parliamentary Elections." *Public Choice* 65.3 (1990): pp. 201–2.

³² *Ibid.*, p. 201.

³³ *Ibid.*, p. 203.

³⁴ Clemens, Clayton, and Thomas Saalfeld. "Introduction." *German Politics* 15.4 (2006): pp. 33–56.

Another effect noted by Balke is that parliaments in which ruling coalitions are unstable or minority governments are more common confer the possibility that the government may have to face an early election involuntarily. This reduces the government's ability to call elections at opportune times, but also lowers the opportunity cost of losing the election, since holding office is less valuable if there is a chance of being forced from power prematurely.³⁵ The question here is whether a different electoral system affects the likely stability of a coalition government or the likelihood of a minority government. If we assume that a country like Canada is headed for a multiparty system with most governments failing to obtain a majority of seats, then we can ask ourselves what the results would be like on coalition formation. As the case of New Zealand has demonstrated, the rapid establishment of a culture of coalition government after six decades of (alternating) single-party rule is quite possible.

Following Balke, most studies of endogenous election timing have followed variations on the political business cycles approach,³⁶ whereby governments opportunistically call elections when economic conditions are favourable and therefore conducive to increased voter satisfaction and a boost to the incumbent government's likely returns. In the literature, this is often referred to as "political surfing." While economic conditions can point to likely levels of voter satisfaction with the incumbent party or parties, as a proxy they are rather indirect, and most authors do not deal specifically with popularity, which would likely more effectively be measured using public opinion polls. One of the exceptions to this generalization about the "political surfing" literature is Alastair Smith's informational theory of endogenous election timing, which is based on the assumption that leaders have more accurate estimates of their future performance in economic terms than do citizens.³⁷ According to this approach, "competent governments wait longer before calling elections," while incompetent leaders

³⁵ Balke, Nathan S. *Op. cit.*, p. 203.

³⁶ For a recent example on Canadian election timing, see Voia, Marcel-Cristian, and J. Stephen Ferris. "Do business cycle peaks predict election calls in Canada?" *European Journal of Political Economy* 29 (2011): pp. 102–118.

³⁷ Alastair Smith. "Election Timing in Majoritarian Parliaments." *British Journal of Political Science* 33 (2003): p. 397.

fear they will preside over an economic decline and lose public support, so they are more likely to try to capitalize on their popularity with early elections.³⁸ As with the other models, Smith assumes that leaders enjoy holding office, and that they will call elections when they expect to win.³⁹ According to this view, when holding office is too much trouble, as with a minority government or a bare majority that requires all government MPs to attend each vote, this reduces the value of holding office and may lead to early elections where a “working majority” is sought.⁴⁰ While the model doesn’t discuss coalitions specifically, it suggests a reason why a majority coalition would be more stable than a minority government, given that in a formal arrangement, there is more certainty about the distribution of office benefits and there is a guaranteed working majority as long as the coalition holds together. In other words, minority governments have less to lose and more to gain by going to the polls than do coalitions.

Using post-war British governments as the sample, Smith obtains robust results indicating that popular governments are more likely to call early elections than are unpopular ones;⁴¹ governments without firm majorities are more likely to go to the nation early; and an expected decline in the future growth rate or increase in either the future unemployment or inflation rate also makes early elections more likely.⁴² The effect of popularity is given a numerical value in Smith’s book-length study: “the effect of a 1% rise in the number of people expressing intent to vote for the government relative to the opposition increases the probability of an election by about 13%.”⁴³ Since the model assumes a party’s benefits from holding office depend partially on its majority status, however, one has to wonder whether this relationship would hold if this parliament were elected through PR, *ceteris paribus*.

³⁸ *Ibid.*, p. 400.

³⁹ *Ibid.*, p. 402.

⁴⁰ *Ibid.*, p. 402.

⁴¹ *Ibid.*, p. 409.

⁴² *Ibid.*, p. 412.

⁴³ Smith, Alastair. *Election Timing*. Cambridge University Press, Cambridge (2004): p. 106.

e. Causal Mechanisms

In a discussion of the three ideal-type models of party behaviour – vote-seeking, policy-seeking, and office-seeking – Strom argues that “[v]otes have no intrinsic value to party leaders. They are simply a means, and in democratic societies an important one, toward office or policy benefits.”⁴⁴ This instrumentality is recognized in studies dating back to Downs’s original formulation of the vote-seeking party. Vote seeking, or vote-maximizing, is the pursuit of the control of government through the intermediate step of maximizing pluralities in a majority of single districts, a process corresponding with single-member plurality or FPTP electoral systems.⁴⁵ That parties compete for the whole prize – rather than compromising around policy initiatives as is done in the consensus systems of most PR countries – highlights the instrumentality of vote-seeking behaviour that incentivizes parties in a governing or legislative coalition to bring down a government. There is thus reason to hypothesize that the introduction of PR in a parliament like Canada’s might limit that instrumentality, all other things equal.

f. Operationalization

Often, the failure of studies in political science to strongly validate hypotheses stems less from the identification of causal mechanisms than from the failure to effectively operationalize independent variables. The inconclusive results of Grofman and Van Roozendaal are likely an example of this. It is possible that the problem lies with their assumption that the independent variable – expected electoral gains – is correlated with the observed quantity – actual electoral gains – when in reality, it is not clear how the two are causally related. Given the time lapse between a decision to withdraw support from the government and the holding of elections, a party’s level of public support could change as a result of the decision or thereafter during the campaign. In any case, the assumption is probably not realistic, and

⁴⁴ Strom, Kaare. "A Behavioral Theory of Competitive Political Parties." *American Journal of Political Science* 34.2 (1990): p. 573.

⁴⁵ *Ibid.*, p. 567.

may be incorrect.⁴⁶ The authors are able to generate testable hypotheses, but conclude they will need to find better proxies for their variables and replicate the analysis with data from many more countries.⁴⁷

In *Election Timing*, Smith operationalizes the expected gains of parties in terms of expected future losses if an election is not held right away. While Smith focuses on potential declines in economic performance that would supposedly invite decreases in popular support for the incumbents, there is scope to explore whether proportional representation might not also mitigate this concern, given that in most cases, a given decline in votes would not entail a disproportionately large decline in legislative representation, and the possibility for coalition participation post-election would likely be greater.

Ultimately, it appears that public polling information from the run-up to government terminations will have to be included in the datasets studied if causal inferences are to be made about electoral incentives and their possible relation to electoral systems.

4. **Empirical Studies of Government Stability**

f. **Government duration**

Laver's review of empirical scholarship on government duration charts the discipline from its beginnings in the early 1970s, when a group of authors, notably Kaare Strom, created a linear regression model of government duration based on a number of independent variables representing "attributes" of the cabinets under study.⁴⁸ Taking the form $\text{Cabinet Duration} = f(\text{Relevant Attributes})$,⁴⁹ the model included properties of the political system in general, such as the level of influence of opposition parties; properties of the party system, such as the level of party-system fragmentation; and properties of a

⁴⁶ See Warwick, Paul V. "Dissolvers, Disputers, and Defectors: The Terminators of Parliamentary Governments." *European Political Science Review* 4.2 (2012): p. 279. The author concludes that "Simply put, dissolvers, disputers, and defectors do not appear to profit from their actions."

⁴⁷ Grofman, Bernard, and Peter Van Roozendaal. *Op. cit.*, p. 167.

⁴⁸ Laver, Michael. *Op. cit.*, pp. 27–8.

⁴⁹ Browne, Eric, John Frensdreis, and Dennis Gleiber. "An 'Events' Approach to the Problem of Cabinet Stability." *Comparative Political Studies* 17.2 (1984): p. 183.

particular cabinet, such as its majority status.⁵⁰ Early on, a potential connection to the study of electoral systems was visible in studied attributes such as fractionalization of the party-system and the government's majority status, both closely related to the electoral systems under which a government is elected. Indeed, authors at the time unanimously concluded that majority governments lasted longer on average than minority governments.⁵¹ It is important to note, though, that majority status can apply to both single-party and multi-party governments, so the results imply that coalitions constituting legislative majorities may last longer than even single-party minority governments, though the distinction is rarely made explicit in the literature⁵² and merits further study.

While proponents of the linear regression model based on government attributes claimed it explained up to 30% of the variation in cabinet duration, the model was flawed, being capable of generating negative expected government durations – that is, certain cabinets were expected to collapse several months before even forming. Therefore, a competing approach focusing on “critical events” was developed by Browne, Frensdreis, and Gleiber⁵³ based on the proposition that government duration represented the amount of time before a government termination, an event often precipitated by unpredictable events like scandals, international conflicts, financial and monetary crises, and deaths or illnesses of key personalities.

These authors showed that the pattern of observed frequencies of government terminations resembled the Poisson distribution that would arise if governments were terminated by random events.⁵⁴ They thus discarded the deterministic attributes approach in favour of a stochastic model that

⁵⁰ King, Gary, et al. "A Unified Model of Cabinet Dissolution in Parliamentary Democracies." *American Journal of Political Science* 34.3 (1990): p. 847.

⁵¹ Laver, Michael. *Op. cit.*, p. 29.

⁵² Exceptions include Laver, Michael and Norman Schofield, *Multiparty Government: The Politics of Coalition in Europe*, Oxford University Press, New York (1990): 308 pp.

⁵³ Browne, Eric, John Frensdreis, and Dennis Gleiber. *Op. cit.*, p. 183.

⁵⁴ Laver, Michael. *Op. cit.*, p. 28.

attributes a “hazard rate” to governments based on the probability of the occurrence of critical events with sufficient magnitude to bring down a sitting government. The model was successful at demonstrating the inappropriateness of linear-Normal regression for the modelling of government duration but it drew only weak conclusions in that results for eight out of twelve countries had to be excluded.⁵⁵

In 1990, King et al. resolved the events-attributes debate with the largely stochastic “event-history” approach that combined critical events and system attributes. King et al. used an exponential function to describe the government’s “durability” at any given point in time (based on a number of attribute variables) and a second function including the durability variable (which changed with each observation) to determine the stochastic effect of critical events.⁵⁶ The authors were thereby able to chart the baseline hazard rate across the entire sample as it evolved over time. The observation was of an initially high but steadily decreasing hazard rate for governments that only increased again within around 12 months of the end of the CIEP.⁵⁷

This exponential time-dependent events-history model, later expanded and refined in a 1994 book by Warwick, has subsequently been adopted as the standard approach in empirical studies on government duration. The study confirmed the relationship between observed government durations and majority status of the government, party system fractionalization, the existence of an investiture requirement, the polarization of the opposition, and the number of “formation attempts” made when the government was put together, an indicator of the difficulty of the bargaining situation faced by prospective governing parties.⁵⁸ This approach holds promise for the study of the effect of electoral

⁵⁵ King, Gary, et al. *Op. cit.*, p. 847.

⁵⁶ Laver, Michael. *Op. cit.*, p. 29.

⁵⁷ King, Gary, et al *Op. cit.*, pp. 853–4.

⁵⁸ Laver, Michael. *Op. cit.*, pp. 29–30.

systems on government stability since it allows for large, cross-national statistical analysis and controlling for other covariates.

While a number of theoretical models and empirical studies in the political business cycles tradition list strong polling numbers among the reasons why first ministers in parliamentary democracies might opportunistically call early elections,⁵⁹ the only study I found that conducts empirical tests to determine the role of public opinion shocks on government termination is Lanny Martin's 2000 working paper, "Public Opinion Shocks and Government Termination."⁶⁰ For Martin, in order to be "critical" (i.e., to have the capacity to bring down the government), an event must "reshape the existing bargaining environment to such a degree that a party whose support had been essential to the government's ability to maintain the confidence of a legislative majority instead finds it in its interest, in the wake of the event, to withdraw its legislative support."⁶¹ Events correspond to public opinion polls, which parties can use to forecast their post-election payoffs in terms of seats, policy, and ministerial portfolios.⁶² Critically important to the current study, Martin notes that it is seat share, rather than vote share, that motivates parties, so we can *account for inter-country differences in proportionality* by estimating the regression coefficients for party vote share as it relates to party seat share over the elections studied.⁶³ This allows for a way to account empirically for the fact that any institutional factor that systematically increases the value of a public opinion shock (as expressed by a poll) in providing post-election payoffs in seats should (artificially) increase the perceived magnitude of the shock, making

⁵⁹ Several examples are cited in Roy, J., and C. Alcantara. "The Election Timing Advantage: Empirical Fact or Fiction?" *Electoral studies* 31.4 (2012): p. 775.

⁶⁰ Martin, Lanny W., "Public Opinion Shocks and Government Termination," Working paper, Department of Political Science, Florida State University (2000): 48 pp.

⁶¹ *Ibid.*, p. 1.

⁶² *Ibid.*, p. 6.

⁶³ *Ibid.*, p. 13.

potentially critical events out of a greater proportion of shocks of otherwise random magnitude. An electoral system such as FPTP is, of course, just such an institutional factor.

Martin highlights the difficulty of operationalizing the party-specific transaction costs identified by Lupia and Strom, concluding that their model is not yet fully testable. However, he notes that regardless of the transaction costs, if the model is correct, we should find that a party that is in a position to bring down the government and believes it will gain from the move will indeed do so.⁶⁴ Since it is the transaction costs that determine in the Lupia-Strom model whether the government ends in dissolution or replacement, Martin does not distinguish between these two modes of termination in this study.

Martin also moves past the Lupia-Strom model's assumption that the government controls a legislative majority, and therefore ignores single-party or multiparty minority governments.⁶⁵ Thus, instead of testing Lupia and Strom's model directly, Martin tries in this paper to test "some of the more intuitive insights" from their approach and that of Grofman and van Roozendaal, suggesting that "expected changes in the distribution of legislative seats should affect the likelihood of government termination in a systematic way, and that these effects are dynamic in nature."

Assuming that decisions to bring down a government can either come from the prime minister himself, a pivotal coalition party, or in the case of a minority government, the collective efforts of the opposition parties, Martin creates three sets of hypotheses about how sufficiently favourable poll numbers can lead each group to choose to bring down the government. His first group of three hypotheses follows:

⁶⁴ *Ibid.*, pp. 7–8.

⁶⁵ *Ibid.*, pp. 8–9.

- 1- the greater the expected increase in seat share in an immediate election for the PM's party, the greater the likelihood of a government termination⁶⁶;
- 2- the greater the potential seat share gain of the government party with the most to gain in an immediate election, the greater the likelihood of government termination⁶⁷; and
- 3- in the case of a minority government, the greater the expected increase in seat share for the opposition in the event of an immediate election, the greater the likelihood of government termination.

Like Lupia and Strom, Martin hypothesizes that any observed tendency to bring down the government as a result of favourable public opinion numbers should become more pronounced as the CIEP nears its end, when the opportunity costs of giving up any current seats and/or office and/or policy benefits are low. Thus, each hypothesis is accompanied by a corollary hypothesizing a time effect. Finally, in order to take account of the true benefits parties are seeking through seat share, there are two additional groups of three hypotheses analogous to the first but using portfolio shares and policy benefits, respectively, as independent variables.

For policy and portfolio payoffs, Martin uses Martin and Stevenson's 1999 models of government formation to determine the likelihoods of all other possible coalitions, then multiplying those probabilities by the probable policy and portfolio shares, respectively, summing the products to derive the expected payoffs for each party.⁶⁸ In the case of the opposition, variables for expected payoffs are defined collectively given the prohibitively large amount of data generation that would be necessary to calculate all the opposition parties' individual shares.⁶⁹ Using the "discrete-time" approach, where stability is determined on the basis of cross-sections of one month in which governments are said

⁶⁶ *Ibid.*, pp. 9–11.

⁶⁷ *Ibid.*, p. 10.

⁶⁸ The portfolio shares are proportional to the seat shares of contracting parties in any given coalition, with zero assessed to any party not in the coalition, while policy shares can also be distributed through legislative alliances with parties not formally in the coalition. *Ibid.*, pp. 14–5.

⁶⁹ *Ibid.*, p. 16.

to have either terminated or not,⁷⁰ Martin finds that government seats and majority opposition seats variables are predictive of government termination with statistical significance, but only if time remaining in the CIEP is taken into account, which he takes as empirical support for Lupia and Strom's hypothesis regarding an increasing hazard rate.⁷¹ For portfolios, only pivotal government parties seem to increase their likelihood of bringing down a government when the prospect for gain appears, while the PM portfolios and majority opposition portfolios variables are not statistically significant.⁷² Martin also finds that when portfolios are taken into account, the seat variables lose statistical significance, suggesting that seats only matter to government and opposition parties insofar as they are an instrumental factor to gaining portfolios. He finds no statistically significant results for the policy variables.⁷³

While this model comes the closest to being able to test the role of public opinion shocks in terminating governments in parliaments where no party holds a majority of the seats – and thereby could form the basis of an expanded study that also takes into account the role of electoral systems in qualifying those shocks – there are some possible methodological issues with the approach. Leaving aside the question of whether we can be sure that the calculations of the likelihood of formation of individual alternative coalitions are correct, we can certainly suspect that treating the opposition collectively may critically degrade the data for an important portion of the governments under study. Typically, in minority government situations, most opposition parties will oppose or abstain from votes against the government on confidence issues, and the government will seek the support of one opposition party or more (if required) to secure a minimal winning legislative coalition. Moreover, while most opposition parties may not expect changes in support under a potential election scenario, the

⁷⁰ *Ibid.*, pp. 20–1.

⁷¹ *Ibid.*, p. 25.

⁷² *Ibid.*, p. 26.

⁷³ *Ibid.*, p. 27.

important parties to study are the pivotal parties who could be convinced to support the government. This is further complicated by the fact that different opposition parties are likely to experience different public opinion fortunes at the same time, making it difficult to see how Martin's opposition variable measures the likelihood that they would all simultaneously agree to bring down the government.

An additional problem is that Martin's operationalization of the expected seat gain of the decision-making parties in question is opaque to me, since he only vaguely refers to "high expected increase in seats" versus "low expected increase in seats"⁷⁴ when comparing probabilities. Thus, it is hard to know which substantive choices may have affected his results in this regard since he appears to have converted a scalable variable into a binary. Furthermore, the study only covers governments in Belgium, Denmark, Germany, Ireland, Italy, Luxembourg, the Netherlands, and Sweden from early 1953 to 1981,⁷⁵ limiting the sample to countries with PR electoral systems with proportionality vote share-seat share ratios close to 1.0, meaning the results cannot be applied to countries with FPTP. Still, the value of the study cannot be understated given its uniqueness, originality, and potential for serving as the basis for future extended studies.

Finally, Paul Warwick's 2012 paper takes a different approach by measuring whether governing parties that break up coalitions through disputes or defection – or in the case of the prime minister's party, use of the power to dissolve parliament – are able to capitalize on expected gains from favourable new polling information. According to Warwick, the most telling indicator of strategic dissolution should be whether the disputers', defectors', or dissolvers' benefits through a new arrangement tend to increase the earlier the election is held, as would be suggested by an opportunity-costs logic.⁷⁶ The reasoning is that if parties were to realize such increased payoffs after an election, it would suggest that

⁷⁴ *Ibid.*, p. 30.

⁷⁵ *Ibid.*, p. 12.

⁷⁶ Warwick, Paul V. *Op. cit.*, p. 264.

the election was called for that purpose, though it might also have been called so a party could limit its losses.⁷⁷ There is a fundamental flaw in Warwick's use of electoral results as a proxy for expected electoral gains, since, as Alastair Smith's study above demonstrates, parties can be punished for the very fact of causing an early election. Warwick's otherwise meticulous study of outcomes for disputers, defectors, and dissolvers in the post-war parliaments of 14 Western European countries in terms of seat share, salience-weighted portfolio share (where specific portfolios considered more important by a party are weighted more heavily when calculating its share), and left-right range (denoting the degree of a government's stability) of subsequent governments indeed finds that "voluntary dissolutions display a general tendency to produce a decline in the seat shares of government parties," and earlier dissolutions tend to result in "significantly worse results in terms of legislative seat shares, rather than better ones, for government parties as a whole."⁷⁸ I believe the conclusion that he draws, that defectors, disputers, and dissolvers do not appear to follow an opportunity-costs logic in bringing down governments,⁷⁹ is unwarranted given the faulty assumption about realizing expected gains.

g. Causal Mechanisms

Part of the problem with the large-*N* studies is that while they are effective at demonstrating the existence of certain phenomena through correlation, they cannot be explicit about the causal mechanisms at play.⁸⁰ As noted above, the effect variables which seem *prima facie* to be related to duration of governments are often explained away in an unsatisfactory manner.

⁷⁷ *Ibid.*, p. 264.

⁷⁸ *Ibid.*, p. 271.

⁷⁹ *Ibid.*, p. 280.

⁸⁰ This observation was made about the democratic peace theory literature in Jarrod Hayes. "The Democratic Peace and the New Evolution of an Old Idea." *European Journal of International Relations* 18.4 (2012): p. 768.

One of the few authors to study the relationship between government duration and electoral systems, Nishikawa⁸¹ considers party systems to be the vehicles by which electoral systems act on stability. In this view, majoritarian electoral systems tend to correspond with two-party systems and more frequent majority governments, which tend to last close to their full term, while PR tends to correspond with multi-party systems and coalition or minority governments, which often fail well before their terms are up. While many authors have found that majority status is nearly uniformly associated with longer government duration, the explanation is clearly insufficient in the case of countries like Canada and India, where FPTP electoral systems have resulted in multi-party systems, rare examples of countries that fail to follow Duverger's Law.⁸²

h. Changing Hazard Rates

In the early 1990s, Warwick and Easton, and later Warwick successfully tested the events-history approach for a widely intuited increasing hazard rate, which they found to be supported by observed data.⁸³ Alt and King had found a constant pooled hazard rate, but since they had excluded most government terminations in the last year of the CIEP, they had essentially analyzed only the replacement hazard rate – dissolution hazard rates increase dramatically over that time period.⁸⁴

Diermeier and Stevenson⁸⁵ successfully created an empirical study to assess Lupia and Strom's implication that dissolution and pooled hazard rates should increase as the government approaches the end of the CIEP, but replacement hazard rates need not increase. This implies that the hazard rates evolve separately, though an electoral system like FPTP may affect both types of hazard rates – and therefore doubly affect on pooled hazard rates – because they increase expected changes in b_i , which

⁸¹ Nishikawa, M. "Electoral and Party System Effects on Ruling Party Durability." *Party Politics* 18.5 (2012): p. 637.

⁸² Duverger's Law will be discussed in a later section of this paper. Due to space limitations, however, I will not deal extensively with exceptional cases such as India and Australia.

⁸³ Laver, Michael. *Op. cit.*, p. 32.

⁸⁴ Diermeier, Daniel, and Randy T. Stevenson. *Op. cit.*, p. 1067.

⁸⁵ *Ibid.*, p. 1066.

affects calculations whether parties are attempting to actualize gains through an election or a nonelectoral redistribution of power.

As noted above, Nishikawa argues that electoral system effects on stability act through the party system, and thus tests two hypotheses:

-Hypothesis 1: the “hazard rates” for ruling parties are lower for the first four to five years under FPTP than under PR, but this tendency will reverse itself over time for governments that have survived⁸⁶; and

-Hypothesis 2: the “hazard rates” for ruling parties are lower for the first four to five years under two-party systems than under multiparty systems, but this tendency will reverse itself over time for governments that have survived.⁸⁷

Support is found for both hypotheses, indicating that FPTP does not necessarily lead to more stability than PR, but rather that changes in risks over time need to be taken into account.⁸⁸ The author suggests this is evidence that governing parties face greater hazards at the polls (and increasing after each election) under FPTP, whereas governments under PR are likely to be replaced within the first CIEP, but less so at the polls. This is consistent both with my proposition that parties facing elections under PR do not see their potential seat losses magnified, and that their incentives favour replacement over dissolution.

i. Operationalization

In an effort to derive testable implications from Lupia and Strom, Diermeier and Stevenson’s 2000 study embeds the model in the stochastic environment of the events theorists to take account of

⁸⁶ Nishikawa, M. *Op. cit.*, p. 637.

⁸⁷ *Ibid.*, p. 638.

⁸⁸ *Ibid.*, p. 637.

the fact that government termination is probabilistic rather than deterministic.⁸⁹ Their model maintains the three-party approach, but models electoral prospects according to a Poisson process with arrival rate δ .⁹⁰ This brings up an interesting point, as it implies that countries with a high level of electoral volatility should experience more potentially critical events. In the case of Canada, which is said to have relatively high electoral volatility,⁹¹ any observed systematic effect increasing b , should be compounded, thereby making it an even better candidate for electoral reform.

The authors note the problem of dealing with single-party majority and minority governments, as Lupia and Strom assume each government to consist of two parties. Thus these cases make some of the assumptions questionable.⁹² I would argue that further study is required for the modelling of minority governments in order to see if a version of “ c ” (the power division variable) can be successfully modelled on a basis of issue-by-issue negotiations between a minority government and a pivotal opposition party. Diermeier and Stevenson find the Lupia-Strom model clearly confirmed when tested for minority governments, though the sample is limited.⁹³ Most notably, these authors find that an observed spike in dissolution hazard rates around 48 months before the end of the CIEP (i.e., around a year after the previous elections) is entirely due to minority governments.⁹⁴ They attribute this to “almost majority” cases from countries like Canada that almost always produce single-party majorities and therefore increase the incentives for minority governments to strategically “fail” in order to try for a better electoral outcome. While the results are not robust, they are clear, and present empirical support

⁸⁹ Diermeier, Daniel, and Randolph T. Stevenson. *Op. cit.*, p. 627.

⁹⁰ *Ibid.*, p. 629.

⁹¹ See, for example, Stephenson, Laura B., Thomas J. Scotto, and Allan Kornberg. "Slip, Sliding Away Or Le Plus Ca Change...: Canadian and American Partisanship in Comparative Perspective." *The American Review of Canadian Studies* 34.2 (2004): pp. 283–312.

⁹² Diermeier, Daniel, and Randolph T. Stevenson (2000). *Op. cit.*, p. 634.

⁹³ The problem also remains as to whether the model even applies to these governments.

⁹⁴ Diermeier, Daniel, and Randolph T. Stevenson (2000). *Op. cit.*, p. 638.

for the central proposition of this paper, that governments other than single-party majorities should last longer when elected under PR.

Taagepera and Sikk use an exponential model to predict cabinet duration based on district magnitude, which is itself the main determinant of the level of proportionality of the electoral system. While it remains to be seen if this model holds up for governments in general,⁹⁵ these authors find that doubling district magnitude reduces mean cabinet duration by 21%.⁹⁶ They attempt thereby to solve Laver's request for a "well-grounded and coherent theoretical model generating observable implications that can be tested."⁹⁷ While their success in this regard can be debated, the authors do find empirical support for an inverse square law: $C = k/N^2$, where C is duration, N the effective number of legislative parties, and k is a constant that comes in units of time.⁹⁸ They find an equal probability that duration, C, is above or below k/N^2 , so the relationship is "deterministic" in a limited sense. They use this model to explain how electoral reform affected New Zealand, generating an expected drop from 6.3 year average cabinet duration to 2.3 when the number of effective parties increased, though the observed drop was even more drastic, reaching an average of 1.4 years.⁹⁹

There are at least two methodological issues with this study that should be noted, however. The first is the use of "cabinet" duration rather than "government" duration – a distinction which allowed these authors to attribute two separate cabinets to the 45th New Zealand Parliament. Instead, I would consider there to have been one single coalition government in this parliament, which lost its majority by a few seats partway through the term due to the defection of eight MPs from the junior coalition

⁹⁵ See Footnote 1 for distinction between government and cabinet.

⁹⁶ Taagepera, Rein, and Allan Sikk. "Parsimonious Model for Predicting Mean Cabinet Duration on the Basis of Electoral System." *Party Politics* 16.2 (2010): p. 261.

⁹⁷ *Ibid.*, p. 264.

⁹⁸ *Ibid.*, p. 264.

⁹⁹ *Ibid.*, p. 276. The result is confirmed in Taagepera, Rein, and Matt Qvortrup. *Op. cit.*, p. 250. In the latter study, however, the authors point out the problem of inferring causality too easily based on the observation of statistical correlation.

partner, but continued to govern as a minority government with the same prime minister and almost 90% of the original MPs. The second issue is the fact that cabinets are not considered to have ended upon parliament's dissolution if the same party is returned to power. For the purpose of the current study, which is to examine the stability of governments arising from hung parliaments as determined by the proportion of the CIEP they are able to last, it is inappropriate to consider government continuity after dissolution. Nevertheless, if a data set were created to reflect "government" duration as defined in Footnote 1 of this paper and the relationship still held (perhaps with a different constant, k), then a study of this nature, controlling for single-party majority status in the legislature, might be able to tell us something about the likely effect on government survival of an electoral change in a given legislature with appropriate assumptions about that reform's likely influence on effective number of parties.

Taagepera and Shugart (and later Taagepera and Enschede) develop a formula to describe the institutional determinants of the largest seat share, finding that if nothing else is known about a given political system except district magnitude (M) and assembly size (S), the likeliest largest fractional seat share (s_1) is the inverse of the eighth root of the product MS : $s_1 = (MS)^{-1/8}$.¹⁰⁰ The authors are able to confirm the model with robust empirical results given a large sample of democracies.¹⁰¹ The empirical analysis also shows that the key institutional factors of district magnitude and assembly size – which are directly determined by the electoral system – appear to systematically outweigh country-specific and socio-cultural factors.¹⁰² While there are some individual outlier countries in the sample, it does hold the prospect of clarifying at least one aspect of how electoral expectations of parties in a given legislature might change if the electoral system were to be altered. As Taagepera and Enschede note, in all three cases of a change in electoral rules, the largest party's seat share did decrease, but $s_1(MS)^{1/8}$ also increased by

¹⁰⁰ Taagepera, Rein, and John Enschede, "Institutional determinants of the largest seat share," *Electoral Studies* 25 (2006): p. 762.

¹⁰¹ *Ibid.*, p. 766.

¹⁰² *Ibid.*, p. 767.

an average of 0.19, such that more cases would be needed to draw any conclusions.¹⁰³ A possible avenue for further research in this regard would be to see if polling data can be used to further specify the model. However, it should be noted that the authors did concede that their model is limited in that it presumes an ideally simple electoral system where all seats are allocated in districts of equal magnitude, with no legal thresholds, multiple rounds, or upper tier or nationwide allocation.¹⁰⁴ Mixed electoral systems could therefore not be assessed with this system.

j. Cabinet Stability versus Ruling Party Stability

In studies of cabinet stability, authors have defined cabinet duration in terms of the length of time between given cabinets' establishment and the occurrence of one of a number of events considered to constitute their "termination." The definition of these cabinet terminations, while complicated by the large variance in constitutional definitions of the establishment and termination of cabinets, has generally been agreed in the empirical literature to include the times when there was an election, the prime minister changed, the partisan composition of the cabinet changed, or the government voluntarily or involuntarily resigned and the head of state accepted that resignation.¹⁰⁵

As will be discussed below, other authors such as Mershon and Misa Nishikawa have more recently expressed concern about the resultant lack of accounting for "ruling party stability," which they theorized to have different causes than "government" or "cabinet" stability.¹⁰⁶ Hence, it must be understood that the unit of analysis in the "government termination" and "cabinet duration" literature is the individual government or cabinet¹⁰⁷ which, either under the more restrictive definition of a cabinet or in the broader sense of a government, might for the purposes of study be considered to have

¹⁰³ *Ibid.*, p. 773.

¹⁰⁴ *Ibid.*, p. 766.

¹⁰⁵ Laver, Michael. *Op. cit.*, p. 26.

¹⁰⁶ Nishikawa, M. *Op. cit.*, p. 634.

¹⁰⁷ See Footnote 1 for distinction.

“ended” in certain situations even if the same ruling party were to remain in power. Accordingly, as noted by Laver, the precise definition of the end of one government and the beginning of another depends on “substantive choices” by the researcher which “may well have a significant effect on results” and “will inevitably be conditioned by the theoretical concerns of the analyst.”¹⁰⁸

A 2006 study by Ko Maeda and Misa Nishikawa highlights the point by Laver regarding one of the initial limitations of the data set that had been used in most studies of government durability until the early 2000s: the built-in definition of termination. As mentioned above, the original dataset coded a case (cabinet) as “terminated” any time when the chief executive changed (even if within the party or within the ruling coalition); there was an election; or the partisan composition of the cabinet changed. Maeda and Nishikawa argue this distorts the view of government stability – and resulting continuity of policy – by positing government changes even when the ruling party and policy platform remain essentially the same. The authors take the example of the British government between 1979 and 2006, a period which saw eight elections and three prime ministers, but realistically only two governments since the Conservatives were in power with a similar platform over the period 1979–1997, and Labour during the period 1997–2006.¹⁰⁹

Thus these authors argue that government stability and policy continuity are better reflected through the measurement of “ruling party durability” (i.e., continuity in a given party or coalition’s control of the executive) than “cabinet durability.” While I agree with Maeda and Nishikawa’s characterization, I would submit that for the purposes of the present study the definition of a government’s longevity be restricted to a single parliamentary session, for the reasons stated above.

¹⁰⁸ Laver, Michael. *Op. cit.*, p. 26.

¹⁰⁹ Maeda, K., and M. Nishikawa. “Duration of Party Control in Parliamentary and Presidential Governments: A Study of 65 Democracies, 1950 to 1998.” *Comparative Political Studies* 39.3 (2006): pp. 353–5.

The operationalization of ruling party termination, however, merits consideration as it could potentially bring a slight nuance to the definition of government duration proposed at the beginning of this paper.

Ruling party termination is operationalized in one of two ways. The first is when the prime minister¹¹⁰ is replaced by one from another party, a measure which has the disadvantage of ignoring changes in government coalition composition where the parties swap places. For this reason, these authors also use the Government Change Index (GCI), which measures fractions of seats departing and entering the coalition as some (or in the extreme case, all) partner parties are replaced. The GCI value varies between 0% and 100%, and is measured by dividing the sum of the fraction of MPs leaving the coalition and the fraction of new MPs joining it by two. Thus if 40 out of 100 of the coalition's MPs depart the coalition, and a new party joins with 20, the GCI value will be $[(40/100) + (20/80)]/2$ or 32.5%. When does this fraction constitute a termination of the ruling party? Maeda and Nishikawa test their results using both GCI50 (50% change) and GCI75 (75% change) in order to avoid being subjective.¹¹¹ In a consideration of long-term rule of given parties over several elections, GC75 may be an appropriate measure for the demise of a certain configuration of ruling parties, but in a study like the current one, I would submit that GCI50 is probably a more appropriate measure of termination.¹¹²

In a later study, Nishikawa tests the effects of differing electoral systems on hazard rates in 32 parliamentary democracies finding that both with the chief executives variable and the GCI 75, hazard rates faced by FPTP governments begin at a low level or zero and increase steadily, while PR governments' hazard rates jump quickly after formation and then peak after a couple of years, declining

¹¹⁰ Maeda and Nishikawa use the term "chief executive" to denote both prime ministers and presidents, since their study also applies to presidential systems.

¹¹¹ Nishikawa, M. *Op. cit.*, pp. 640–1.

¹¹² That is, if we were to want a more permissive definition than the one I used at the beginning of this paper, in order to account for the continuity of coalitions in which members of more than one party take turns occupying the prime minister's post but still provide a measure of continuity of policy and also reduce the need for early elections or the negotiation of entirely new coalitions.

steadily thereafter.¹¹³ While the central finding does not necessarily advance our understanding of hung parliaments *per se*, since the author does not control for single-party majority status, she does make an interesting observation about the difference in the results between models using her two measures for government continuity. According to Nishikawa, a very “recognizable feature” of models 2 and 4, where GCI75 is used as the dependent variable, is that “the initial gap in the hazard rates between FPTP and PR is smaller compared to that in Models 1 and 3.” The author notes that this is because when GCI75 is used, the measured hazard rates are lower, as some coalition governments can stay in power “while maintaining the same party compositions but alternating the chief executives’ parties,”¹¹⁴ a practice unknown in Canada but not unheard of in the proportional national legislatures of continental Europe. A relevant question for Canadians considering reform would be whether the heretofore adversarial political culture of Canada’s legislatures could accommodate such practices given new incentives under PR, and how long it would take for voters in this country to come to accept them.

Yet a different angle from which to view governmental longevity comes from Church’s study of a period of multiparty rule in New Zealand under FPTP in the early 20th century. What Church terms “rate of survival” is calculated as the *proportion* of a country’s CIEP that a given government lasts.¹¹⁵ This measurement is particularly germane in the case of elected lower houses such as New Zealand’s and Australia’s that have a relatively short CIEP of three years. To speak of government stability in terms of how many days a country’s average government lasts would be to falsely accuse New Zealand’s governments of chronic instability, when in fact they almost always last until within a few months of

¹¹³ Nishikawa, M. *Op. cit.*, p. 646.

¹¹⁴ *Ibid.*, p. 644.

¹¹⁵ Church, S. "Assessing Stability in New Zealand's First Era of Multiparty Politics, 1911–1935." *Political Science* 52.1 (2000): p. 31.

their maximum allowable term.¹¹⁶ By contrast, the efforts by some empirical scholars of government duration to mitigate the range in parliamentary term limits by counting backwards – in order to measure “time remaining” in the CIEP when the average government falls – are only a small improvement on overall length of tenure. This approach likely over-represents the stability of countries like New Zealand or Australia – notably by underestimating hazard rates early in their terms – since they of course never fall with more than three years remaining before the end of the CIEP. Therefore, I would recommend that future studies of government stability include a proportional measure of their duration like Church’s “rate of survival,” possibly also using a categorical variable or a series of dummy variables to see if there are any trends in stability for parliaments of different term lengths.

5. Electoral Reform: The Case of New Zealand

Are governments in New Zealand more stable now than before MMP was implemented in 1996? There are two ways to look at the question in terms of government survival (within the CIEP). Since MMP was implemented, elections are still held every three years (i.e., parliaments reach the end of their CIEP). One might say that the first National-NZF coalition of 1996 was not very stable, given that it collapsed in 1998, but National remained in power until the end of the CIEP nonetheless. Neither GCI75 nor even GCI50 was reached, because when NZF left the coalition, it disintegrated, and eight members remained in coalition.

As noted in a previous section, Taagepera and Sikk have found a drastic decline in average cabinet survival following MMP from 6.3 to 1.4 years. However, these authors’ use of a definition of duration that does not consider a termination to have occurred in the event of elections if they return the same government presents a distorted view of government stability. Essentially, the figures

¹¹⁶ Indeed, as Peter H. Russell observes, “elections every three years are [seen to be] frequent enough.” Russell, Peter H., *Two cheers for minority government: The evolution of Canadian parliamentary democracy*, Emond Montgomery Publications Limited, Toronto (2008): p. 136.

produced by these authors are inappropriate in a study of the effects of electoral reform on New Zealand's government durability, since they do not reflect the reality that elections still occur roughly every three years, and no government replacements have taken place mid-parliament since the institution of the MMP electoral system. The only explanation for the finding of an average 1.4-year cabinet duration after the reform is that a "termination" was determined to have occurred when some members of New Zealand First (NZF) left the National-NZF coalition, but the cabinet's membership remained largely intact and the coalition continued to govern as a minority. Moreover, for the purposes of the present study, since the possible destabilizing effects of electoral turnover already existed under the old system, it makes more sense to abstract from this by viewing the CIEP of three years as the maximum government duration.

More interesting from a theoretical point of view is the observation that in New Zealand, we can see that the average length of time before dissolution did not decrease under MMP, even though the country moved from a two-party system of single-party majority rule directly to a multiparty system of coalition rule. Accordingly, Church wonders if MMP has indirectly changed the parameters of behavior for politicians and their parties in the following way. Under MMP, no party is likely to see its majority status change given a new election, reducing the potential value of an immediate election for pivotal parties.¹¹⁷ Furthermore, with a greater number of smaller parties in the legislature, the prospect of achieving a change in the policy direction of the government through the negotiation of a new coalition is made relatively easier, thus skewing incentives in favour of the negotiation of a new coalition rather than forcing early elections. Church notes that this may, however, enable the collapse of the old coalition, since when it's not working well, there are "other options" apart from going to the polls.¹¹⁸

¹¹⁷ Boston, Jonathan, Stephen Church, and Hilary Pearse. "Explaining the Demise of the National-New Zealand First Coalition." *Australian Journal of Political Science*, Vol. 39, No. 3. (2004): p. 597.

¹¹⁸ *Ibid.*, p. 597.

Thus if we were to model the structural changes to the strategic choices faced by a coalition party in New Zealand using a model like Lupia and Strom's, we might have not only to reduce the expected value of expected electoral gains b_i , but also reduce negotiation costs k_i . While we haven't yet seen a replacement coalition take over mid-term in New Zealand, the practice is more common in countries with established proportional electoral systems, for example in the countries of Western Europe and Scandinavia, and we must allow the possibility that such a replacement may occur in the future, as it had in New Zealand's first period of multi-party rule.

Church discusses the previous period of multiparty rule in New Zealand, finding that the elections results shown in Table 1 (p. 25) counter Duverger's Law since Labour's steadily improving representation during the period did not immediately result in a reduction of Liberal representation.¹¹⁹ While this observation may be contested,¹²⁰ Church finds that the widely varying disproportionality over the period, from 3.43 to 19.59, likely altered the mechanical effect, leading to a delay in the effectiveness of Duverger's mechanical and psychological effects.¹²¹ There is reason to question whether Canada is now in a transitional phase like New Zealand was from 1911 to 1935 – on its way to a settling into a new two-party system through the processes observed by Duverger – or whether Canada is in fact an exceptional case as suggested by Rae and Benoit. Certainly the ability of third, and sometimes fourth or fifth, parties to elect substantial numbers of MPs since at least 1915, such that nearly half of the governments over the past century have held fewer than half the legislative seats, gives support to the "exceptional case" hypothesis.

¹¹⁹ Church, *S. Op. cit.*, p. 26.

¹²⁰ As soon as Labour broke the 10% mark (with 23.8 % in the third election surveyed), the Liberals did see a major decline in representation.

¹²¹ *Ibid.*, p. 26.

6. The Canadian Debate

As noted by Pippa Norris,¹²² there are two primary competing theoretical approaches used by scholars of electoral reform to explain the effects of electoral systems on the propensity of parties to engage in consensual versus adversarial politics in parliamentary legislatures. The first approach, rational-choice institutionalism, holds that political actors will respond to institutional incentives rationally, such that changing these incentives through institutional reform can directly result in changed behaviour. Cultural modernisation, by contrast, suggests that political behaviours such as party cooperation are much more deeply ingrained and culturally determined, such that institutional reforms are unlikely to succeed in changing attitudes and behaviours, but rather arise as a response to such changes. Norris's review of the electoral reform literature finds that the balance of the work supports the rational-choice institutionalist thesis in finding institutional design can affect the style of politics engaged in by parties, though the author does call for a dynamic model accounting for the interaction of institutions and culture.

In view of these results, there is reason to believe electoral reform might contribute to a transition toward consensual politics in Canada like in New Zealand, as parties reduce their expectations of prospective electoral gains relative to opportunity costs and are forced to adopt more conciliatory relations with one another.

In the context of the Canadian debate on electoral reform, the concern that adopting a proportional electoral system might lead to instability hinges on the proposition that single-party majority governments would give way to multiparty coalition governments or minority governments, both of which face a greater likelihood of being defeated in a motion of no confidence. Historically, most votes of no confidence at the federal level have been followed by a request for dissolution by the prime

¹²² Norris, Pippa. *Op. cit.*, p. 5

minister, which in virtually all cases was granted by the governor-general. Thus, the expectation will likely be that a decreasing proportion of majority governments will lead to reduction in length of time governments are expected to survive, resulting in more frequent elections.

This gives rise to a number of theoretical considerations. First, in an era of increasing voter volatility and decreasing party allegiances, Canada and the U.K. are already facing the prospect of more frequent minority governments in the future. The question is whether this trend is likely to continue, and consequently, what would be the extent of the effect of electoral reform in increasing the likelihood of the election of parliaments in which no party commands a legislative majority? Clearly, as recent federal election results in Canada have shown, legislative majorities are possible when a party holds as little as 37% of the vote, so the strong probability is that the reduction in number of majority mandates under PR is likely to be a non-zero value. However, if it can be demonstrated that the average minority or coalition government will last longer under a PR electoral system than under FPTP, then the question of whether elections are likely to be more frequent over all becomes a function of both the increase in duration of minority/coalition governments and the decrease in duration of “majority governments that could have been,” a calculation that will have to be based on the study of relevant empirical evidence.

To that end, the second question directly follows: does the likely scenario that a new electoral system will reduce the incentives provided by public opinion shocks hold the prospect for changing the opportunity cost for parties considering triggering a government’s downfall? Michael Laver discusses at length the interplay between incentives provided by public opinion shocks and the potential costs of bringing down the government. Following Lupia and Strom, Laver notes that a priori models of government equilibrium take into account the opportunity, negotiating, and transaction costs inherent

in forgoing the remainder of an elected mandate for governing and negotiating parties.¹²³ Accordingly, Laver notes the Lupia-Strom model of government termination shows that “it is often more rational for the beneficiaries of opinion poll shocks to renegotiate the existing coalition deal – perhaps getting more cabinet portfolios or a better deal on government policy – than it is to attempt to realize opinion poll gains by forcing an election.”¹²⁴ Intuitively, this should be even more often the case in parliaments elected through PR than it is in FPTP systems, given that small swings in popular support – for example from 34% to 38% of vote intentions – are likely to bring only incremental increases to seat totals under the former system, while under the latter such a shift could mean the difference between a plurality – or less – and a majority of seats.

A further question is whether, in addition to increasing the relative benefit of intra-coalition bargaining over dissolution and new elections, the introduction of a PR electoral system might not also change the culture around government replacements as an alternative to dissolution. If a sufficiently favourable bargaining situation prevails, and the benefits of an early election are low enough to convince a majority of political actors to renegotiate a new multi-party majority rather than face the costs of a new election, we can expect to see an increase in the frequency of this practice under PR, thereby the number of early elections. Whether this is seen as acceptable by the population, however, remains to be seen, as the abortive Liberal-NDP-Bloc Québécois coalition agreement in 2008 attests. However, there was a 2004 coalition attempt as well by the Conservatives, Bloc, and NDP, so maybe views on conventions are to a certain extent malleable. It also remains to be seen whether the replacement of a government without dissolution is considered a sign of instability itself, or if the main concern as regards stability is of frequent elections.

¹²³ Laver, Michael. *Op. cit.*, pp. 35–6.

¹²⁴ *Ibid.*, p. 27.

We should also consider that while Canada's FPTP system may be heading for a higher prevalence of hung parliaments, electoral reform could facilitate further fragmentation of the party system. As noted by Taagepera and Qvortrup, in PR systems with no threshold, politicians are less constrained from leaving large parties or forming/joining small ones, since they are more likely to have an effect on policy if they can get into a governing coalition.¹²⁵ This tends to promote the proliferation of smaller parties, as has been observed to some extent in New Zealand, though the two largest parties nevertheless continue to account together for upwards of two thirds of the vote. A more complicated bargaining scenario with a larger number of potential decisive structures has been identified by Diermeier and Stevenson as leading to shorter government duration.

On the other hand, Laver and Schofield indicate that Germany and Austria each maintain a bipolar party system, with a "simple, clear-cut, and unchanging" bargaining situation where shifts in the opinion polls are unlikely to change the basic bargaining logic holding that "any two-party coalition is viable."¹²⁶ While the system in Germany has since evolved through the rise of the Green Party and the Left Party, etc., it still remains centred around the two largest parties, one of which is virtually certain to lead any coalition at the federal level (and has done so in all governments up to and including the current one). If the party system in Canada under PR were to remain essentially bipolar, as has Germany's over more than six decades of PR voting, we should expect the bargaining situation to remain stable, with a possible reduction in the effect of electoral incentives on party strategy. In any case, it would be incumbent to anyone considering electoral reform in Canada to consider the extent to which the party system would likely fracture further as a result, and what that would mean for the number of decisive structures. Already, Canada, like India, is as Benoit notes an example of a "non-Duvergerian equilibrium," where several parties are competitive even though a FPTP electoral system prevails which

¹²⁵ Taagepera, Rein, and Matt Qvortrup. *Op. cit.*, p. 251.

¹²⁶ Laver, Michael and Norman Schofield. *Op. cit.*, p. 156.

should discipline parties and voters into coalescing around two major parties.¹²⁷ Because of persistent special cases like these two countries, Rae suggested qualifying Duverger's law with an "except where strong local minority parties exist" statement.¹²⁸ The question that arises is whether Canada under PR would be likely to follow the example of New Zealand in multiplying the effective number of parties.

a. Coalitions vs. Minorities

A related concern is whether the introduction of PR in a country like Canada can change the incentives facing prospective governing parties and make them more likely, when facing a hung parliament, to consider forming a coalition with another party rather than "going it alone" as a minority government. If so, we can expect governments to last longer in hung parliaments under PR, since empirical evidence suggests, as previously noted, that minority governments are more likely to be brought down by outside forces at any given time than are majority coalitions. Strom and Swindle provide a reason for why coalitions might be more likely under PR: "if party leaders perceive a substantial probability of winning an outright majority, they may be unlikely to accept the transaction costs of coalition bargaining and the hassles of actually implementing such a deal. This is particularly likely to happen in majoritarian systems such as the ones analyzed by Smith."¹²⁹ In other words, parties under PR discount potential office benefits more than do those under FPTP, making the opportunity cost of allowing the current parliament to collapse relatively more salient. This proposition is corroborated by Peter H. Russell's study of Canadian governments, which suggests that a possible reason that Canada has almost never seen coalitions at the federal level is that "third parties" here, such as Social Credit, the CCF, and the NDP, have aspired to become governing parties in their own right, and have therefore wanted to develop their own distinct identity. In contrast, European democracies have a lot more

¹²⁷ Benoit, Kenneth. "Duverger's Law and the Study of Electoral Systems," *French Politics* 4.1 (2006): p. 75.

¹²⁸ *Ibid.*, p. 76.

¹²⁹ Strøm, Kaare, and Stephen M. Swindle. "Strategic Parliamentary Dissolution." *American political science review* 96.3 (2002): p. 578.

“single-issue” parties, which can find it in their interests to gain immediate influence by joining governments in coalition.¹³⁰

7. Avenues for further study

This study set out to determine whether there was adequate support in the literature to suggest that the governments arising from hung parliaments – where no party holds a legislative majority of seats – would be more stable if elected through PR than if elected through FPTP. Defining stability in terms of the length of time that a government stays in office before it is deliberately brought down by parliamentary parties and either it is replaced or parliament is dissolved and new elections are held, studies to date have garnered insufficient evidence to support or disprove this hypothesis. A number of insights and other clues have emerged, however, forming potential new paths for study that can more specifically address the effect of electoral systems on governments formed in hung parliaments.

The studies cited above have dealt with some potential effects of public opinion shocks on parties represented in parliaments as well as the effect of electoral systems on government duration. An important starting point is the extensive empirical evidence that majority status is one of the most important factors in determining government survival. This leads to two important theoretical implications for the effect of electoral systems on government stability. The first and most unambiguous implication is that insofar as FPTP has a propensity to accord a majority of legislative seats to a single party, thereby enabling single-party majority governments even when no party is close to achieving a majority of votes cast, this electoral system should lead to longer-lasting governments on average than more proportional electoral systems. However, this widely-cited propensity for single-party majority governments is under question in the current juncture in a multi-party system such as Canada, where it may be giving way to more frequent hung parliaments, which alone constitute the subject of this study.

¹³⁰ Russell, Peter H. *Op. cit.*, p. 80.

The second implication of the significance of majority status leads to a more indirect route by which electoral systems could affect government stability. While the point is not made explicit in any of the articles reviewed for this paper, the possibility that multiparty majority coalitions last longer than single-party minority governments *on average* is strongly suggested, and could likely be confirmed with only a minor modification to the standard events-history model used in most empirical studies of government termination. If true, it would be possible to infer that legislatures that are more likely to produce majority coalitions would have longer lasting governments in the average hung parliament than those that are more likely to result in single-party minority governments. Anecdotal evidence would suggest that hung parliaments in FPTP systems are more likely to produce minority governments than legislatures elected under PR, where coalitions are more common, a point which, if confirmed, would lend credence to the main hypothesis of this paper, that hung parliaments elected under PR produce more stable governments than those elected under FPTP. Again, anecdotal evidence from New Zealand and the devolved parliaments of Wales and Scotland would seem to indicate that these PR legislatures are the ones with the greatest propensity to produce coalition governments in case of a hung parliament within the easily comparable realm of federal and regional Westminster-style legislatures of Canada, Australia, the U.K., and New Zealand, all of which have classically operated under FPTP electoral systems.¹³¹ In short, the literature, combined with anecdotal evidence, provides support for the higher incidence in PR legislatures than those elected by FPTP of at least one process of institutionalizing stability-promoting party cooperation – the establishment of a governing coalition.

With few exceptions, however,¹³² empirical studies have failed to deal more directly with the calculations of electoral gains versus opportunity costs that formed the basis of Lupia and Strom's model

¹³¹ Australia's federal lower chamber is the exception, as it has been elected for several decades under the Alternative Vote. However this is a majoritarian system which, like FPTP, tends to lead to high levels of distortion of the vote-to-seat ratio that favour large parties.

¹³² A notable exception being Martin, Lanny W., *Op. cit.*

of government termination. Moreover, I have not been able to find a single study that has approached the problem of determining the effect of the electoral system on those cost-benefit calculations. This information is critical to understanding whether governments arising out of hung parliaments under PR are likely to be more stable than their counterparts in FPTP-elected legislatures. The logic in Lupia-Strom is compelling in that it shows that a simple quantification of the tangible and measurable benefits held by parties under the status quo situation as compared to the benefits they might have should the government fall can indicate the precise conditions under which a government should fall as a result of a public opinion shock. As pointed out by Martin, Diermeier and Stevenson,¹³³ and Taagepera and Sikk,¹³⁴ however, no way has yet been found to operationalize the party-specific transaction costs that determine whether or not a replacement or dissolution/elections happen when the release of a credible poll would otherwise indicate gains through an election outweighing opportunity costs for parties representing a majority of seats in the legislature. Unfortunately, while an understanding of these transaction costs would go a long way toward building a credible explanation of the causal link between electoral incentives – and by extension the electoral systems that may or may not distort them – and government termination, such clarity is unlikely to be generated without massive data collection on individual parties' preferences in all the countries that form part of the study sample.

In any case, the endogenous election timing literature, notably Martin, provides a workaround by looking more generally at government terminations as they relate to bargaining parameters informed by electoral prospects without distinguishing replacements from dissolutions. Martin's statistically significant finding that expected seat gains by government parties as well as expected seat gains by majority oppositions (in the case of minority governments) are predictive of increased likelihood of government termination, but only if time remaining in the CIEP is taken into account, lends some

¹³³ Diermeier, Daniel, and Randolph T. Stevenson (2000). *Op. cit.*, p. 628.

¹³⁴ Diermeier, Daniel, and Randy T. Stevenson (1999). *Op. cit.*, p. 1052.

empirical support to the cost-benefit model proposed by Lupia and Strom.¹³⁵ Similarly, Martin finds that pivotal government parties seem to increase their likelihood of bringing down a government when the prospect for ministerial portfolio gains arises as a corollary of expected seat gain, though the portfolio variable does not reach statistical significance for majority opposition portfolios.¹³⁶

While Martin's work suffers from some possible methodological limitations, such as limiting its sample to countries with PR, possible oversimplifications in the calculation of expected portfolio payoffs for government and opposition parties, and a lack of clarity about whether his expected seat and portfolio gains variables are expressed in binary or scalable form, he does advance the empirical modeling of the effect of public opinion shocks on government termination while creating a direct opening for the inclusion of electoral system as an independent variable. He does this by using a calculation of actual vote share to seat share ratios for each country over the observed period to convert expected vote shares to expected seat shares for each party for use in their consideration of seat- and portfolio-related opportunity costs and expected benefits when deciding whether to bring down the government. While all of the countries used in his study use PR, there seems no reason why the sample of governments under study couldn't be expanded to hung parliaments¹³⁷ in FPTP countries where the seat share-to-vote share regression coefficient is much higher than one most of the time, and its high value for all "majority" government results probably drives expectations even during those periods when it comes out lower. Without completing such an extension to Martin's study, it would be difficult to determine whether we would see a stronger effect – or any effect – if we included FPTP countries in the sample. Furthermore, Martin's sample is rather small and perhaps not adequately representative, though small sample size would likely remain a limitation of any study trying to include a representative

¹³⁵ Martin, Lanny W., *Op. cit.*, p. 25.

¹³⁶ *Ibid.*, p. 26.

¹³⁷ Martin already excluded some periods of single-party majority government rule from his sample to focus on hung parliaments.

sample of hung parliaments in majoritarian systems such as those elected through FPTP. A potential way of growing the sample size for such a study would be to include provincial- and state-level hung parliaments in countries such as Australia and Canada, though such a move engenders its own methodological issues.

In short, there exists the prospect that to study the hypothesis that hung parliaments engender more stable governments under PR than FPTP, a study could build on Martin, using all hung parliaments as a sample, and adding electoral system as a second explanatory variable affecting expected seat and portfolio gains. This could be explored through the method proposed by Martin, in which a regressor describing proportionality of results over the period of study is developed for each country, or more generally based on a formula such as that of Taagepera and Enschedé's calculation for average largest seat share.¹³⁸ The expected outcome would be that governments formed in hung parliaments in PR systems last longer than those formed in FPTP. A cautionary point would be that the electoral system "distortion" variable would likely have to take a logarithmic form, since it varies within each country based on the level of support for a given party, albeit within roughly predictable ranges running from zero to well over one.

b. Considerations

i. Methodological

One consideration that appears to have been poorly treated in the previous literature on government termination is the effect of the CIEP on government survival. Following observations from New Zealand, where the CIEP is three years, it would likely be worthwhile to explore operationalizing government duration in terms of months (or days, or years) that a government lasts as a *proportion of*

¹³⁸ This parsimonious measure is based only on the size of the assembly S and the number of MPs elected per district M in the relation $s_1 = (MS)^{-1/8}$, where s_1 is the seat share of the largest party. It has proven quite successful at describing average ratios in the world's parliamentary democracies but has the prospect for being modified based on particular specifications. Taagepera, Rein, and John Enschedé. *Op. cit.*, p. 762.

its CIEP in order to control for this. By contrast, efforts by authors such as Diermeier and Stevenson to chart termination hazard rates in terms of months remaining in the CIEP seem insufficient, given that a government that terminates with more than three years left in its mandate could not have even been formed yet in a country such as New Zealand. Moreover, anecdotal evidence from New Zealand has shown that all of its parliaments since the electoral reform in 1993 have lasted very near to their three-year CIEP, a possible indication that a shorter CIEP reduces the incentives to bring down a government early, since there exists the possibility that voters will punish a party that does this, making its expected gain impossible to realize.

An additional place to look for inspiration as concerns cases like Canada would be the government formation literature, which might provide clues as to the likely effect of electoral system on the relative likelihood of the establishment of coalition-majority versus single-party minority governments.

ii. **Sociological**

Finally, it is important to keep in mind that certain causal mechanisms will always be much harder to discern in the case of political actors responding to electoral incentives. There are a number of observations that have been made regarding the relative incentives faced by parties under different electoral systems, which can add layers to any approach that attempts to understand their behaviour in rational terms.

Political parties are thought to seek three kinds of goals: maximizing votes, holding office, and influencing policy.¹³⁹ Kaare Strom discusses at length the incentives that different electoral systems provide for political actors, concluding that disproportional electoral systems are more likely to lead to

¹³⁹ Maeda, K., and M. Nishikawa. *Op. cit.*, p. 356.

vote-seeking behaviour while proportional electoral systems allow parties to focus on policy.¹⁴⁰ As noted above, if the benefit of staying in a governing coalition or continuing to prop up a minority government offers sufficient benefits to a pivotal party in the form of a negotiated distribution of policy or office benefits, these benefits can outweigh the perceived benefits of securing a better bargaining position through a new election, once the transaction costs of an electoral campaign, the risk of being left out of a subsequent coalition or minority agreement, and the costs of the negotiations themselves are properly discounted. As such, the stability of any given coalition or legislative agreement will depend on what the (potentially) contracting parties want and can offer, respectively.

A lot of “minor” institutional or cultural factors might influence this incentive structure. Institutionally, it will be important to consider electoral thresholds, which themselves determine the how far the proportionality of the electoral system can be fractionally divided (i.e., how proportional it is). Culturally, we can talk about issue dimensions, which can create niches and drive party competition and cooperation strategies that will be key to determining the bargaining environment, whatever electoral system prevails.

The empirical evidence demonstrating that “oversized” coalitions producing overlapping gains for ideologically close political parties often appear when rational choice game theoretic models would instead predict zero-sum, “minimum winning” coalitions between ideologically diverse parties¹⁴¹ demonstrates that consensual government is a value. The democratic stability literature confirms that in different periods of time, countries like Spain and the U.S. experienced both majoritarian and consensus political behaviour by the dominant political actors, despite having majoritarian electoral systems.¹⁴²

¹⁴⁰ Strom, Kaare. *Op. cit.* See also Nishikawa, M. *Op. cit.*, p. 636.

¹⁴¹ Browne, Eric, John Frensdreis, and Dennis Gleiber. *Op. cit.*, p. 172.

¹⁴² Gunther, Richard. “The Relative Merits (and Weaknesses) of Presidential, Parliamentary and Semi-Presidential Systems: The Background to Constitutional Reform.” *Journal of Social Sciences and Philosophy* 88.3 (1999): p. 69.

It comes down to two questions, the first being how rational are political actors? In our model, we'll have to assume that for a significant portion of the time, they are rational, and will pursue greater gains over lesser gains if possible. Irrationality is probably a trait that applies more to some actors than to others, and in order to effectively establish causality with our variable of interest, we need to exogenize, or at least temporarily bracket irrational behaviour.

This leads us to the second question: how do political actors measure gains? This question is closely related to the assumptions held by political actors, and to a great degree their political culture. Undoubtedly, the tendency in Canada has been for parties holding a plurality of seats to prefer minority government to coalition, and wedge politics are not unknown here. The whole coalition-prorogation controversy in 2009 is testament to the fact that coalition government is controversial, and brinksmanship is not uncommon in political showdowns between parties that could probably achieve greater mutual gains through cooperation. By the same token, however, the very fact that the coalition was proposed indicates some willingness on the part of Canadian political actors to work together in pursuit of common objectives. Strategic voting efforts and ongoing civil society discussions about electoral cooperation and electoral reform do appear to indicate that inter-party cooperation is valued by a meaningful segment of Canada's population and some of its political elite.

8. Conclusion

In this review, I have sought to appraise the rich body of literature on government termination more broadly, and the potential effect of public opinion shocks on the stability of governments more specifically, with an eye to understanding the role of electoral systems in determining the stability of governments arising from hung parliaments. This study was motivated by a desire to inform the current Canadian debate on the potential need for electoral reform and provide food for thought when considering recent volatility in the party systems of several Westminster legislatures as well as recent

reforms in others. The central finding was that, while literature abounds on the matter of government termination, many of the results dealing with electoral incentives remain ambiguous or preliminary in nature, and deserve follow-up research in order to expand on their results or at least to disprove them. Furthermore, papers that directly study the role of electoral systems in government stability rely heavily on their Duvergerian correlation with party systems, and have not to date controlled for majority status to gain a more nuanced view of incentive structures. This is unfortunate, as this nuance is likely to take on increased salience if legislatures such as those of the U.K. and Canada remain fractured and more regularly produce hung parliaments in the future. For this reason, in aiming to confirm or disconfirm the hypothesis that hung parliaments under PR are more able than FPTP ones to cooperate without resorting to bringing down the government, this paper has proposed some minor adjustments to existing models, that may be able to shed new light on a hypothesized phenomenon the evidence of which at this time remains circumstantial or anecdotal.

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