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When voters decide: Causes, correlates and effects of the time-of-voting-decision

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ABSTRACT

Why do individuals make their vote decisions at the point in time at which they do, and what impact does the time-of-voting-decision (TOVD) have upon other important political variables? Through a series of integrated articles, this dissertation explores the causes, correlates and effects of TOVD in Canada. The first two articles explore the relationships between TOVD and political attitudes, employing TOVD as both an independent and dependent variable. The first examines the impact that consistency, intensity and direction of summary political attitudes have on TOVD, and introduces a new measure of attitudinal ambivalence. The second article employs cognitive dissonance theory to argue that TOVD can influence attitudes towards parties, after an election occurs. The third and fourth articles respectively consider the relationships between TOVD and vote sincerity, and an individual's ability to vote for the party that best reflects his or her own policy preferences. Insincere voters are found to have a relatively late TOVD, which the third article attributes to the fact that these individuals are able to use the campaign period to update their expectations about the competitive prospects of candidates and parties. The fourth and final article uses TOVD as a moderating variable to evaluate the impact of the campaign period on correct voting rates. It finds that late deciders, who are able to use the campaign period to collect information to inform their vote decisions, are actually less likely to vote correctly than are early deciders. The dissertation also includes a research note which outlines a new method of identifying invalid TOVD responses, and illustrates the importance of removing such cases. As a whole, this dissertation adds significantly to our knowledge of TOVD, a variable which, until now, has received relatively little scholarly attention.

KEYWORDS

Time-of-voting-decision, political attitudes, voter sincerity, campaign effects, cognitive dissonance, correct voting, validation of survey responses

To my patient, wonderful wife.

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1 – INTRODUCTION

Since Lazarsfeld et al.'s 1944 work, *The People's Choice,* there has been significant interest in the study of voting behaviour (see Meisel, 1957, Clarke *et al*., 1979; Johnston *et al*., 1992; Gidengil, 1992, Blais *et al*., 2002, and Kanji and Archer, 2002 for some Canadian examples). Yet the bulk of work in this field deals with the subject of vote choice. That is, scholars have attempted to identify patterns to explain why people vote for the parties or candidates they do. Initial work on this topic considered factors such as sociodemographic characteristics (Lazarsfeld, 1948 and the Columbia, or sociological vote choice model) and partisanship (Campbell *et al*., 1960 and the Michigan, or psycho-sociological vote choice model). In a theoretical contribution to the field, Downs introduced the notion of the 'rational voter' – one who gathers information on party positions on important issues and then votes for the party which will provide that individual with the greatest "benefits" (Downs, 1957). Finally, in a more comprehensive approach to the study of vote choice, scholars have developed a multi-stage explanatory recursive model (see Miller and Shanks, 1996; Blais *et al*. 2002) which considers sociodemographic characteristics, partisanship, and Downs' notion of rationality, but introduces a greater level of detail with respect to the consideration of the underlying values and beliefs of voters, economic perceptions, evaluations of government performance, leader evaluations and strategic considerations. While there is still much that is unknown about the causes and correlates of vote choice, our knowledge of this topic has advanced significantly in the last 65 years.

Receiving much less attention from scholars is the question of why people make their vote choices *when* they do. We know from the small amount of research on the topic of the time-of-voting-decision (TOVD) that many voters know long before an election which party or candidate they will support, while others take much longer to arrive at their decision (Berelson *et al*., 1954; Campbell *et al*., 1960; Fournier *et al*., 2004). There remains, however, a significant lacuna in the literature with respect to this topic, especially in Canada. Most of the literature on the subject is based upon American data, though even within that country there is a relative scarcity of work explicitly related to the topic of TOVD. In Canada the subject has attracted only a modicum of scholarly interest (the two pieces by Fournier *et al*. from 2001 and 2004 are exceptions).

As a result, we know relatively little in this country about factors which have an impact upon whether voters make their voting decisions prior to, or during, a campaign (and the point at which these decisions are made during a campaign). We know even less, however, about the impact of TOVD as an independent variable. Existing work on the topic of TOVD generally employs this concept as a dependent variable, rather than studying the impact that TOVD may have upon other factors. This dissertation aims to address these gaps in the literature by increasing our understanding of factors that influence TOVD, as well as exploring TOVD as an explanatory variable.

In the academic realm, this type of information is of relevance not only to the field of political behaviour, but also to political psychology and marketing. In addition to increasing our knowledge of the subject for strictly academic purposes, however, a study on TOVD potentially has important practical implications. Political actors

(including politicians, political parties, interest groups, or any others who may be interested in influencing the outcome of an election) have a keen interest in knowing which types of individuals are likely to make decisions at specific times and for what reasons. Joslyn (1984) terms late deciders "the battleground of electoral politics" (p. 59) and Dalton (2006) argues that "[i]ncreasingly, the campaign practitioner's job is to find out who [is most likely to be persuaded during the campaign period] with the hopes of learning how to most compellingly communicate with them" (p. 15). Late deciders are the primary audience of campaign communication, and knowing who these individuals are helps political actors to tailor messages so that they resonate with such voters. They are targeted by campaigns because of their propensity to change allegiances (Wattenberg, 1991). Targeting this group has the potential to pay dividends, whereas aiming advertisements at those faithful to an opponent's party is a waste of campaign resources (Kirkpatrick, 1972). Dalton *et al*. (2000) suggest that the segment of the electorate composed of campaign period deciders has increased in most industrialized countries over the last few decades. Thus, the study of these voters is also becoming increasingly important.

Through a series of integrated articles and a research note, this dissertation investigates the causes and correlates of TOVD in Canada. The first two articles explore the relationships between TOVD and political attitudes, employing TOVD as a dependent and then an independent variable. The third and fourth articles consider the relationships between TOVD and vote sincerity and an individual's ability to identify and vote for the party that best reflects his or her own policy preferences. The research note deals with concerns over TOVD recall validity. It illustrates the importance of

removing cases with invalid TOVD responses, and outlines a method to identify such cases. Before moving on to consider these matters, however, it is important to describe the state of the existing literature on the topic of TOVD.

1.1 - WHO ARE LATE DECIDERS?

Scholarly work on the topic of TOVD emerged at the same time as the first major works on voting behavior (Lazarsfeld *et al*., 1948; Berelson *et al*., 1954; Cambpell *et al*., 1960), and American National Election Studies have included a postelection question on TOVD since 1952.[1] Both the Columbia and Michigan schools provide explanations for why individuals decide when they do. For Lazarsfeld *et al*. (1948), individuals who make their minds up late do so because they are experiencing sociodemographic cross-pressures. If vote choice is largely determined by sociodemographic features, as the Columbia school suggests, inconsistencies among these variables can make one's vote choice difficult, or unclear. "Conflicts and inconsistencies among the factors which influence vote decisions" (p. 53) can lead to a delay in TOVD as these voters seek out other factors which aid them in making their choice. To proponents of the Columbia School, late deciders have good reasons for voting for multiple candidates, and decisions are delayed until an event comes along that allows for the resolution of this conflict.

Yet as the influence of the Columbia school waned, so too did the persuasiveness of Lazarsfeld *et al.*'s explanation. The Michigan school (see Campbell *et al*. 1960), with its focus on the role of partisanship in voting behaviour, contended

[1] Every iteration of the Canadian Election Study, which was first conducted in 1965, has included a question on TOVD.

that TOVD was determined largely by patterns of partisan attachment. Individuals with the strongest partisan sentiments made their decisions earliest, while those with the weakest partisan attachments decided who they would vote for relatively late. Voters were seen as fitting into one of two general groups: (1) the highly partisan, pre-decided majority which pays close attention to a campaign, but is unaffected by it, and (2) late-deciding voters who are uninterested, unknowledgeable, unpredictable and less enthusiastic. The partisans are assumed to be relatively knowledgeable, firmly anchored to their party, less centrist and more resilient to messages that oppose their predispositions than are non-partisans (Zaller, 1996).

While partisanship is still seen as a strong determinant of TOVD, its importance in the literature has declined over time. Implicit in the partisanship-focused dichotomous model is the assumption that campaigns have relatively little impact upon election outcomes. If sociodemographic characteristics (the focus of the Columbia school) and partisanship (the focus of the Michigan school) remain constant over time, there is little reason to expect many voters to be influenced during the campaign period. If most voters are partisans, while the rest of the population is composed of uninterested and unpredictable individuals, one might expect the campaign itself to have only "minimal consequences" (Buchanan, 1977). Nevertheless, over time the proportion of the American electorate made up of individuals who are interested in and attentive to elections, but who are not highly partisan, has risen, and party identification has declined as a correlate of the vote (Chaffee and Rimal, 1996). These findings present a clear challenge to the dichotomous model, since they do not leave room for interested and attentive non-partisans.

In response to these trends, American scholars have largely abandoned the dichotomous model. In their analysis of the 1976 Presidential election, Chaffee and Choe (1980) divide campaign deciders into early- and late-deciding groups (meaning that they considered three TOVD groups, including pre-campaign deciders). Late-campaign deciders (those who decide in the last week of the election) were found to be relatively inattentive and have the lowest levels of partisanship, while pre-campaign deciders were highly partisan and moderately attentive. While these two findings are compatible with the dichotomous model, the authors also found that early campaign deciders had the lowest levels of partisanship of all three groups, and were highly attentive (Chaffee and Choe 1980). This finding challenges the traditional assumption of a monotonic relationship between TOVD and partisanship and attentiveness. Early campaign deciders are said to lack the partisan ties that might lead them to an early decision, but rely upon information gathered during a campaign to make their decision. Further complicating the debate, Whitney and Goldman (1985) have found that, in situations where there is a strong third party candidate present, late deciders are the most interested and attentive, while it is early deciders who are relatively uninterested and uninformed. Finally, Dalton has challenged the widely held assumption that late deciders are unknowledgeable and inattentive. He contends that 'swing voters,' who are "uncommitted to a candidate until the final days of a campaign," are as politically knowledgeable and attentive as earlier deciding voters are (Dalton, 2006, 18). Clearly then, there is a lack of agreement in the literature with respect to how many TOVD periods should be considered in a study, and the relationship between TOVD and factors like partisanship, attentiveness and knowledge.

In Canada, Fournier *et al*. (2004) consider only two TOVD groups: pre-campaign deciders and campaign deciders. The authors find no statistically significant differences among campaign-deciding sub-groups with respect to partisanship, attentiveness and knowledge in their examination of the 1997 election, and hypothesize that the relative brevity of Canadian campaigns may explain why the distinction between early- and late-campaign deciders is not as important in Canada as it appears to be in the US. They nevertheless confirm that partisanship, interest, attentiveness and political knowledge have a relationship with TOVD in this country. The authors also discover relationships between several sociodemographic factors and TOVD. In particular, women, the young and those without a university education are relatively late deciders (although the authors argue that the only "important difference" between TOVD groups is partisanship (p. 668)). Using American data, Riedel and Dunne (1969-1970) and Kenski (2007) find that women are less likely to not know who they will vote for when interviewed during a campaign than are men. Lucas and Adams (1978) identify two more characteristics of late deciders, concluding that these individuals discuss politics less frequently and watch less television news than do early deciders.

Lachat (2007) offers additional insight into the study of TOVD, as he points out that voters are a heterogeneous group, and that factors that influence the political decisions of some individuals do little to influence others. He argues that political predispositions, such as political interest, attentiveness, knowledge and partisanship, can influence voters differently depending upon the presence or absence of other factors. For instance, individuals who are interested, attentive and knowledgeable might be expected to have an early TOVD, as they have a great deal of expertise to

draw upon when making their decisions. Even if such individuals are partisans, this factor may have little to do with their TOVD. Indeed, this person's partisanship may have been influenced by these other factors. On the other hand, for individuals who are uninterested, inattentive and unknowledgeable, a partisan attachment may play a significant role in determining TOVD. If such individuals are partisans, they may resort to "low-information rationality" (Popkin, 1991) and use their partisanship as a cue, leading them to an early TOVD. Thus it must be recognized that some of the variables known to influence TOVD affect various segments of the population in different ways.

It has also been argued that TOVD is a function not only of the characteristics of individual voters, but also of specific campaign circumstances. Much of the existing literature on TOVD explores the impact of permanent or long lasting individual characteristics such as those described above. However research also exists which examines the effects of specific campaigns (Converse, 1962; Bowen, 1994; Chaffee and Choe, 1980), and unique electoral circumstances (such as the impact of an especially charismatic leader, or unique election issues) have been found to have an impact upon TOVD patterns (Chaffee and Rimal, 1996). Kirkpatrick (1972) has argued that competitive circumstances can influence TOVD patterns, noting that some voters delay their decisions when they prefer one candidate but expect another to win.

The findings of O'Keefe, Mendelsohn and Lui (1976) also suggest that TOVD may not necessarily be a stable personality trait. Through a panel study conducted in Ohio, the authors find that of the early deciders in the 1972 presidential election, nearly

half were classified as "late" deciders in the 1974 gubernatorial or senatorial races.[2] They conclude that TOVD should be considered a function of the circumstances of a particular campaign, rather than of individual voters (O'Keefe, *et al*., 1976). Whitney and Goldman (1985) echo this argument, as after their analysis of the 1976 and 1980 American Presidential elections they find that TOVD findings from one campaign, at one time and place, should not necessarily be generalized to all times and places. In other words, the fact that a voter is an early decider in one election does not necessarily mean that he or she will be an early decider in another election.

We know therefore that both stable variables and election-specific factors have the potential to affect TOVD. While the American literature on this topic is informative, the numerous and significant differences between Canada and the US mean that it is of uncertain utility in this country. Factors such as campaign length, party system, and even political culture may conceivably have a significant impact upon TOVD patterns. Fournier *et al*. (2001, 2004) offer some noteworthy examples of work on this topic in Canada. Their first study is focused upon validating TOVD recall responses, while the second is focused primarily upon using TOVD as an indicator of campaign effects. Indeed, TOVD is commonly employed to argue that particular campaign events are having an impact upon the electorate (Chaffee and Choe, 1980; Bowen, 1994; Chaffee and Rimal, 1996; Fournier *et al*., 2004; Matthes, 2011). With this exception, TOVD is rarely considered as anything other than a dependent variable.

Accordingly, there is ample room for a study of the causes and correlates of TOVD in Canada. Before outlining each of this dissertation's theoretically-driven

[2] The authors divide voters into only two groups: early and late deciders. Early deciders are described as "those who had decided for their candidate upon that candidate's nomination," and late deciders are all voters who decide later than that point.

articles, however, it is worthwhile to briefly explore some basic TOVD data from recent Canadian federal elections. While the results below do not test the theories discussed above, they provide insight into some basic features of TOVD in Canada.

1.2 - SOME PRELIMINARY DATA

TOVD is defined here with reference to election day; individuals are categorized on the basis of the point in time, relative to election day, when they make their decision. Voters are classified either as election-day deciders, campaign period deciders (excluding election day) or pre-campaign deciders. This information is determined through a single post-election Canadian Election Study (CES) question. While there has been considerable concern about the validity of TOVD recall in American surveys (see Campbell *et al*., 1954; Plumb, 1986; Chaffee and Rimal, 1996), Fournier et al. (2001) argue that TOVD data are "highly reliable" in Canada (96). The authors also develop a method of identifying invalid responses (meaning that cases can be removed from a dataset). A research note included in this dissertation builds upon this work, and introduces a new method of validating TOVD responses. TOVD data in the articles that follow are validated according to this new method.[3]

While each article in this dissertation focuses on different combinations of elections (depending upon the appropriateness of the data available for each election), it

[3] TOVD recall validity is not considered in this introductory chapter, as sorting cases on the basis of TOVD leads to the removal of large number of pre-campaign and election-day deciders. This serves to overestimate the share of the electorate made up of campaign period deciders, which is a problem if, as is the case here, one's goal is to estimate population wide TOVD patterns.

is worth briefly exploring TOVD patterns from recent years. Table 1-1 shows reported TOVD patterns for the 2004, 2006 and 2008 elections, based upon CES data.[4]

Table 1-1: Reported TOVD (%)

	2004	2006	2008
Pre-Campaign Period	48.13	56.45	52.26
Campaign Period	38.37	29.10	32.90
Election day	13.50	14.45	14.84
N	2360	2630	2808

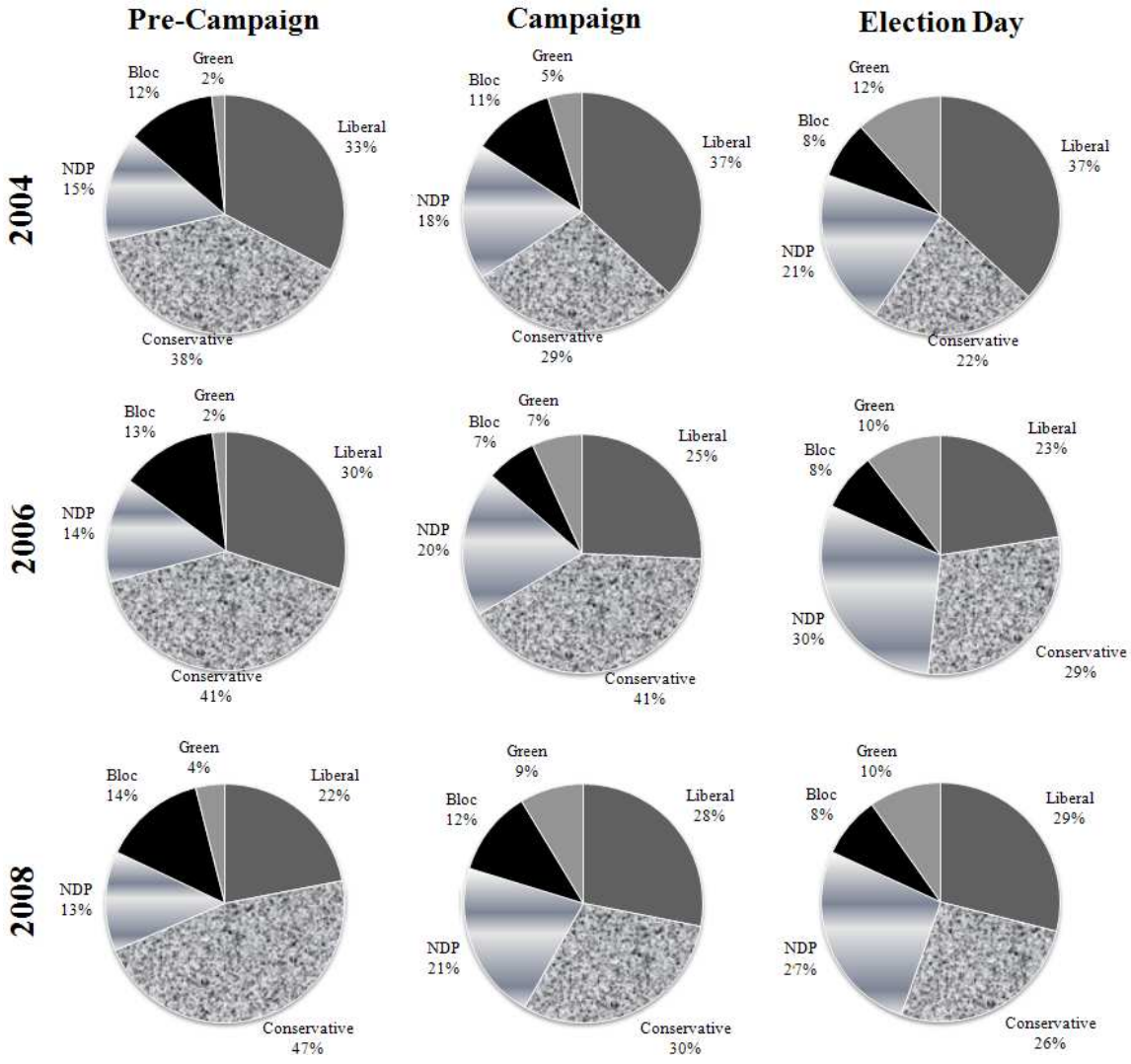
While results vary slightly from election to election, roughly half of the voters in each of these years made their vote decisions before the campaign began, and about one voter in seven waited until election day to finalize his or her decision. Considering the fact that reported rates of partisanship (of any strength) were 66.4% in 2004, 72.1% in 2006 and 70.1% in 2008, these values suggest that, while partisanship may indeed be a relatively strong predictor of TOVD, as the Michigan School and Fournier *et al*. (2004) suggest, there are clearly other factors at work influencing TOVD. Even if all pre-campaign deciders were partisans (which is not the case), this would mean that a significant proportion of the individuals who decided after the campaign began, in each election, were also partisans. CES data reveal that the average partisanship rates for the three elections considered above are 84.5% for pre-campaign deciders, 72.3% for campaign deciders and 61.9% for election-day deciders. The results suggest that there is a great deal of potential for individuals, including partisans, to be influenced during the campaign period, and that depending upon how these late deciders vote, this segment of the population could have a significant impact upon election outcomes.

[4] All results in this introductory chapter are weighted using the national weight.

This leads to the question of how those individuals in each TOVD group cast their ballots. If a party can lock up the support of a large segment of the voting population before the campaign even begins, it stands to do quite well, given that such a large segment of the electorate decides during this period. On the other hand, a party that performs well during the campaign might be expected to get a large share of the votes from campaign period and election-day deciders, which could significantly boost its electoral fortunes. Figure 1-1 shows the breakdown of votes for five parties (the Conservatives, Liberals, NDP, Bloc Quebecois, and Greens) according to TOVD group for the 2004, 2006 and 2008 federal elections.[5]

[5] Votes for other parties or candidates are omitted here.

FIGURE 1-1: VOTE CHOICE BY TOVD GROUP



In all three elections the Conservative Party was the most successful at attracting pre-campaign deciders. The party performed especially well among this group in 2008, where it was supported by almost half of these voters. Considering that such a large segment of the population decides before the campaign begins, this goes a long way to explaining the relatively high level of support that this party received in these elections (the Conservatives were the official opposition in 2004 and won a plurality of votes in

both 2006 and 2008). The Bloc was also better at attracting early rather than late deciders.

For their part, the NDP and Greens were more successful at attracting voters with a campaign and election-day TOVD than they were at sewing up support before these campaigns began. This pattern is especially pronounced for the Green Party, which never won the votes of more than 4% of pre-campaign deciders, but consistently received double-digit support from election-day deciders.[6] Given the relatively low numbers of election-day deciders, however, this did little to boost the electoral fortunes of the party.

Finally, it is worth investigating the stability of TOVD patterns, at the individual level, across time. If it is true that only stable, long-term variables such as sociodemographic factors and partisanship influence TOVD, one would expect individuals to have the same TOVD from one election to the next. Conversely, if TOVD were influenced only by election-specific circumstances, TOVD stability should be quite low. The 2004 to 2008 versions of the CES contain panel data, which means that it is possible to trace TOVD patterns across time, at the individual level. Table 1-2

[6] These findings are largely compatible with the contention by Campbell *et al*. (1960) and Gopoain and Hadjiharalambous (1994) that the choices of late deciders are nearly random in character. If voters did act randomly, one would expect each party to receive 20% of the vote. Using the following equation, a measure of relative randomness can be calculated for each party for each TOVD period (this is the equivalent of measuring the average deviation from the value that would be expected if results were random):

$$(Relative\ randomness = \frac{\sum_i^5 |vote\ share_i - 20|}{5}),$$

where the parties are represented by various values of i.

Results suggest that the votes of late deciders tend to be more randomly distributed than those of early deciders. Values for relative randomness for 2004 are 12.4 for pre-campaign deciders, 10.4 for campaign deciders, and 8 for election-day deciders. The corresponding values are 12.4, 10.4 and 8.8 for 2006 and 11.6, 7.6 and 8.8 for 2008 (note that a high value indicates that votes are less evenly distributed among parties).

The votes of campaign and election-day deciders are more randomly distributed than those of pre-campaign deciders. In 2004 and 2006 election-day deciders are the most random. Only in 2008 are the votes of campaign period deciders more evenly distributed than those of election-day deciders.

shows rates of TOVD stability, comparing 2004 to 2006 data, and 2006 to 2008 data. Note that the columns sum to 100, representing the individuals who made up their mind during each respective TOVD period in the first election being considered in each instance.

TABLE 1-2: STABILITY OF TOVD (%)

	2004 to 2006 (N = 1107)			2006 to 2008 (N = 805)		
	Pre-Campaign	Campaign	Election-day	Pre-Campaign	Campaign	Election-day
Pre-Campaign	81.67	43.50	27.05	72.69	35.56	32.91
Campaign	14.59	44.68	38.52	21.77	53.56	36.71
Election-day	3.74	11.82	34.43	5.54	10.88	30.38

Note: Chi-squared results are significant at > 99% level

By far the largest values in Table 1-2 represent those individuals with a pre-campaign TOVD in consecutive elections—the vast majority of those with a pre-campaign TOVD in one election have a pre-campaign TOVD in the next election as well. It is uncommon for a pre-campaign decider to become a campaign decider in the next election, and very rare for one to switch to an election-day TOVD. Campaign deciders in one election are more likely to have a campaign-period TOVD in the next election than to decide at any other point in time, although the relationship here is much weaker than it is for pre-campaign deciders. Finally, those individuals who have an election-day TOVD are distributed rather evenly among TOVD periods in the next election. There is very little consistency among this group. It thus appears as though, at least for some voters, one's TOVD in the previous election is a relatively good predictor of TOVD at the next election.

Not only is there is consistency in TOVD among early deciders, but these individuals consistently vote for the same party over time. Not surprisingly, early deciders tend to vote for the same party in consecutive elections, while late deciders are

much less predictable. 88% of pre-campaign deciders in 2004 voted for the same party in 2006, while the corresponding rate for 2006 to 2008 is over 82%. In contrast, only 51% of election-day deciders in 2004 voted for the same party in 2006, while this value falls to 40% for the 2006 and 2008 elections. Perhaps not surprisingly then, TOVD and vote choice data appear to be fairly strong predictors of future TOVD and vote choice patterns. These results also lead to the conclusion that TOVD likely is determined by different factors for different people; voters are not a homogenous group. The data are compatible with the contention that long-term factors influence TOVD for some voters, but that other voters are influenced during the campaign period.

The articles that comprise this dissertation consider the influence of both long and short-term factors upon TOVD, but they also consider TOVD as an explanatory and moderating variable. While political scientists have made inroads in explaining TOVD, this variable is rarely used to explain other political phenomena. This dissertation turns next to a brief explanation of the articles to follow.

1.3 - The Causes, Correlates and Effects of TOVD

This dissertation includes a series of four integrated articles and a research note, each of which tackles a discrete question relevant to the topic of TOVD. As previously mentioned, the first two articles explore the relationship between political attitudes and TOVD. The third and fourth articles use TOVD to explore other political phenomena, specifically voter insincerity and rates of correct voting. Finally, the research note evaluates the validity of TOVD data and introduces a new method of identifying invalid cases for removal.

The first article explores the relationship between TOVD and several measures of attitudinal consistency, intensity, and direction, and contrasts the power of these measures to explain why individuals finalize their vote decisions when they do. Based upon 2008 Canadian Election Study data, the article finds that an early TOVD is likely when attitudes are consistent or of low intensity, or when individuals have stronger negative than positive attitudes towards the party they vote for (i.e. the direction of summary attitudes should lead one *away* from that party). Some of the attitudinal measures considered tap into more than one of these dimensions, and those variables which tap into multiple dimensions are found to better explain TOVD patterns than those based upon only one dimension. A new measure of attitudinal ambivalence is introduced in order to tap into all three dimensions, and this measure is found to have the greatest power to explain TOVD of any of the attitudinal variables considered.

The article also argues that existing measures of these three attitudinal dimensions are based upon too few of the factors known to influence vote decision. Lavine (2001) explores the relationship between ambivalence and TOVD, but only considers feelings towards presidential candidates. Berelson *et al*. (1954) evaluate the impact of cross-pressures upon TOVD, but focus upon sociodemographic characteristics alone. Fournier (2005) and Lewis-Beck *et al*. (2008) consider a broader array of factors when exploring the relationship between attitudinal conflict and TOVD, but only include the six strongest correlates of vote choice. Moreover, with the exception of Fournier (2005), these studies deal exclusively with American TOVD data, which, as noted above, have been found to be problematic. This study builds upon previous work by employing a multi-stage recursive model of vote choice as a

framework to broaden the array of variables included in the calculation of summary attitudinal measures. The model (see Miller and Shanks, 1996, Blais *et al.*, 2002; Gidengil *et al*., 2009) includes a considerable variety of factors known to influence vote decision and provides a relatively comprehensive account of the correlates of vote choice.[7] The article also posits that, since some factors have a stronger relationship with vote choice than do others, some factors should be weighted more heavily when evaluating conflict, intensity and direction. It introduces a method of weighting the correlates of vote choice when combining factors into summary attitudinal measures.

The dissertation's second article begins by arguing that, while most political scientists use attitudes to explain behaviour, behaviour can also have an impact upon attitudes. Informed by the lessons of cognitive dissonance theory, this article explores the impact of cognitive, affective and behavioural factors upon changes in attitudes towards parties between pre- and post-election election study questionnaires. The fundamental premise of dissonance theory is that individuals are motivated to seek consistency among their cognitions (defined here as thoughts, pieces of knowledge or beliefs) (Worchel *et al*., 2000). First proposed by Festinger (1957), the theory suggests that when pertinent cognitions are inconsistent (or dissonant) with one another, a sense of psychological discomfort can arise. One way of reducing this discomfort is to alter cognitions (only some of which are malleable) so that they become consistent (or consonant) with one another. This article explores the circumstances under which dissonance motivates individuals to change their attitudes towards parties.

[7] The stages of the model are: sociodemographic characteristics, underlying values and beliefs, partisanship, economic perceptions, issue opinions, evaluations of government performance and leader evaluations

With reference to TOVD, the article contends that the time at which an individual finalizes his or her vote decision can influence the extent to which attitudes towards parties shift after one has voted. At the time of the post-election interview, knowledge of one's TOVD becomes a cognition that feeds into the process whereby ratings of parties are determined. While several dissonance-related factors are found to influence post-election attitude change, all other things equal, individuals who decide early on who they will vote for will tend to justify their TOVD by assigning a higher rating to the party voted for relative to the parties not voted for. This article provides insight into the complex relationship between behaviour, knowledge and beliefs, as well as the dynamic nature of political attitudes.

The third article explores the relationship between vote sincerity and TOVD. A sincere voter is one who casts a ballot for a party or candidate that is one's genuine first preference. Among insincere voters, strategic (or tactical) voters receive the greatest amount of scholarly attention (see Black, 1978; Blais and Nadeau, 1996; Blais *et al*., 2001). Largely overlooked, however, is another type of insincere voter: the protest voter. This article introduces a new method of identifying protest voters using CES data, defining them as those individuals who wish to express their political dissatisfaction by supporting an uncompetitive non-traditional party that is not their genuine first preference. In contrast, a strategic vote is a vote for a party or candidate that is not one's favourite, cast in the hope of affecting the outcome of an election (Blais *et al*., 2001). In both cases, these insincere voters factor their expectations about how competitive each party is into their vote decisions. Protest voters intentionally vote for a party that they see as uncompetitive, while strategic voters abandon their most

preferred party because it is uncompetitive, in order to prevent some party that they dislike from winning. Insincere voters who are influenced by information collected during a campaign about competitive circumstances are likely to be campaign-period deciders. This article tests Kirkpatrick's (1972) contention that competitive circumstances can influence TOVD patterns.

The third article thus contributes to the literature on the relationship between campaign effects and TOVD. While some scholars have contended that campaigns have little impact upon election outcomes (Lazarsfeld *et al.,* 1948; Berelson *et al*., 1954), if competitive considerations are shown to have an impact upon TOVD, this provides compelling evidence that, for a particular subset of the population, the campaign can have a significant impact. As information on the competitive prospects of parties is widely available and frequently updated during the course of an election campaign (Andersen, 2000), it stands to reason that there is a high probability that individuals who base their vote decisions upon such factors will make their vote decisions during that period. In contrast, voters who do not factor competitive considerations into their vote decisions will not be influenced by polling results, or any other source of information they are exposed to during the campaign period about the competitive prospects of the parties. Accordingly, the expectation here is that insincere voters will tend to make their vote decisions later than will sincere voters.

This dissertation's fourth and final article explores the notion of a "correct" vote (as introduced by Lau and Redlawsk, 1997) using Canadian data. Following Lau and Redlawsk, a "correct vote" is the vote choice individuals would make under conditions of perfect information. In other words, a vote is "correct" if is cast for the party or

candidate which a voter *should* vote for, based upon a fully informed comparison of the issue positions of individuals to those of political candidates. To determine levels of correct voting, the article compares the positions of individuals (determined through Canadian Election Study, or CES, data) to those of parties (based upon data from the Comparative Manifestos Project, or CMP) in seven dimensions of political competition to create an overall measure of correct voting. The first goal of the article is thus to evaluate the extent to which Canadians are capable of identifying and voting for the party that best reflects their own self-reported preferences and interests.

TOVD comes into play in the second part of the article, where the aim is to evaluate whether the campaign period helps individuals to vote correctly. Individuals have the opportunity to learn about party policy positions during the campaign, but whether they use this opportunity to make a 'better' vote choice has yet to be determined. The amount of attention that respondents report having paid to the campaign is employed as a proxy for campaign knowledge (which includes knowledge of party policies), and TOVD is introduced as a moderating variable to explore in detail the relationship between attentiveness and correct voting. If correct voting is desirable, as the article argues, then the campaign can be said to have a positive impact if it improves the ability of the electorate to vote correctly.

The dissertation concludes with a brief research note on the validation of TOVD data. Since TOVD data are known to be of questionable quality, there is a need to ensure that only cases with valid TOVD responses are included in studies where TOVD serves as either a dependent or independent variable. Fournier *et al*.'s (2001) method of validating Canadian TOVD data is augmented to account for changes in CES TOVD

question format.[8] A new method of validating and sorting CES cases on the basis of TOVD validity is introduced (this method, termed the "partially restrictive" method, is applied to each of the dissertation's articles). The research note also illustrates the importance of removing invalid cases, by comparing valid and CES cases with valid and invalid TOVD responses on the basis of several variables known to have a relationship to TOVD.

The components of this dissertation make a significant contribution to our knowledge of the causes and correlates of TOVD in Canada. They consider previously overlooked variables in explaining TOVD patterns, and use TOVD in novel ways to evaluate this factor as an explanatory variable. While TOVD is an important concept in all four articles, these works also add to the literature on a variety of other topics, including ambivalence, cognitive dissonance theory (and political psychology more broadly), campaign effects, voter sincerity, and the increasingly prominent literature on correct voting. Together, these works represent a noteworthy step forward in understanding TOVD in Canada.

[8] Prior to 2006 CES respondents were given five TOVD options (before the campaign, and four campaign-period options). Since 2006, there have been only three options (before the campaign and two campaign-period options).

1.4 - BIBLIOGRAPHY

Andersen, R. (2000). Reporting public opinion polls: the media and the 1997 Canadian Election. *International Journal of Public Opinion Research*, *12*, 285-298.

Berelson, B., Lazarsfeld, P.F. & M^{c}Phee, W.N. (1954). *Voting*. Chicago: University of Chicago Press.

Black, J.H. (1978). The multicandidate calculus of voting: applications to Canadian Federal Elections. *American Journal of Political Science* 22, 609-638.

Blais, A., Gidengil, E., Nadeau, R. & Nevitte, N. (2002). *Anatomy of a Liberal Victory: making sense of the vote in the 2000 Canadian Election*. Peterborough: Broadview Press.

Blais, A., Nadeau, R., Gidengil, E. & Nevitte, N. (2001). Measuring strategic voting in multiparty plurality elections. *Electoral Studies*, *20*, 343-352.

Blais, A. & Nadeau, R. (1996) Measuring strategic voting: a two-step procedure. *Electoral Studies, 15*, 39-52.

Bowen,L. (1994). Time of voting decision and use of political advertising: the Slade Gorton-Brock Adams senatorial campaign. *Journalism Quarterly*, *71*, 665-675.

Buchanan, W. (1977). American institutions and political behaviour. In Freeman, D.M. (ed.) *Foundations of Political Science*. New York: Free Press.

Campbell, A, Converse, P., Miller, W. & Stokes, D. (1960). *The American voter*: Chicago, University of Chicago Press.

Canadian Election Study: Surveys. Online: <http://ces-eec.mcgill.ca/surveys.html> Accessed June, 2010.

Chaffee, S.H. & Rimal, R.N. (1996). Time of vote decision and openness to persuasion, in Mutz, D.C., Sniderman, R.A. and Brody, R.A. (eds.) *Political persuasion and attitude change,* Pgs 267-291. Ann Arbor: University of Michigan Press.

Chaffee, S. H., & Choe. S.Y. (1980). Time of decisions and media use in the Ford-Carter Campaign. *Public Opinion Quarterly. 44*, 53-69.

Clarke, H.D., Jenson, J., LeDuc, L., & Pammett, J. (1979). *Political choice in Canada*. Toronto: McGraw-Hill Ryerson.

Converse, P. E. (1962). Information flow and the stability of partisan attitudes. *Public Opinion Quarterly*. *26*, 578-599.

Dalton, P. D. (2006). *Swing voting: understanding late deciders in late modernity*. Cresskill: Hampton Press.

Dalton, R.J., McAllister, I. & Wattenberg, M.P. (2000). The consequences of partisan dealignment, in Dalton R.J. and Wattenberg, M.P. (eds.): *Parties without partisans: Political change in advanced industrial democracies*. Pgs. 37-63. Oxford: Oxford University Press.

Downs, A. (1957). *An economic theory of democracy*. New York: Harper and Row.

Festinger, L., (1957). *A theory of cognitive dissonance*. Evanstan: Row, Peterson.

Fournier, P., Nadeau, R., Blais, A., Gidengil, E. & Nevitte, N. (2001) Validation of time-of-voting-decision recall. *Public Opinion Quarterly*. *65*, 95-107.

Fournier, P., Nadeau, R., Blais, A., Gidengil, E. & Nevitte, N. (2004). Time-of-voting decision and susceptibility to campaigns, *Electoral Studies*, *23*, 661-681.

Fournier, P. (2005). Ambivalence and attitude change in vote choice: Do campaign switchers experience internal conflict? in *Ambivalence, politics, and public policy,* (Ed.) Stephen C. Craig & Michael D. Martinez. New York: Palgrave Macmillan

Gidengil, E. (1992). Canada votes: A quarter century of Canadian election studies. *Canadian Journal of Political Science*. *25*, 219-248..

Gidengil, E., Fournier, P., Everitt, J., Nevitte, N & Andre Blais. (2009). *Anatomy of a Liberal defeat*. Paper presented at the annual meeting of the Canadian Political Science Association, Ottawa.

Gopoian, J. D., & Hadjiharalambous, S. (1994). Late deciding voters in presidential elections. *Political Behavior*. *16*, 55-78.

Johnston, R., Blais, A., Brady, H.E. & Crete, J. (1992). *Letting the people decide: Dynamics of a Canadian Election*. Montreal: McGill-Queen's University Press.

Joslyn, R. (1984). *Mass media & elections*. Reading: Addison-Wesley.

Kanji, M. & Archer, K. (2002). Theories of voting and their applicability to Canada, in Everitt, J. and O'Neill, B. (Eds.) *Citizen politics: research and theory in Canadian political behaviour*, pgs. 160-183. Don Mills: Oxford University Press.

Kenski, K.M. (2007). Gender and time of voting decision: decision certainty during the 2000 presidential campaign. *Journal of Political Marketing, 6*, 1-22.

Kirkpatrick, S.A. (1972). Political attitudes and behavior: some consequences of attitudinal ordering. In D.D. Nimmo & C.M. Bonjean (Eds.). *Political attitudes and public opinion*, pgs. 386-404. New York: David M^{c}Kay.

Lachat, R. (2007). A heterogeneous electorate: political sophistication, preposition strength and voting decision process. Nomos: Baden-Baden.

Lavine, H. (2001). The electoral consequences of ambivalence towards presidential candidates. *American Journal of Political Science*, *4*, 915-929.

Lau, R.R., Andersen, D.J., & Redlawsk, D.P, (2008). An exploration of correct voting in recent U.S. presidential elections. *American Journal of Political Science 52*, 395-411.

Lazarsfeld, P.F., Berelson, B. & Gaudet. (1944). *The people's choice: how the voter makes up his mind in a presidential campaign.*. New York: Columbia University Press.

Lazarsfeld, P.F., Berelson, & B. Gaudet, H. (1948). *The people's choice: How the voter makes up his mind in a presidential campaign (second edition)*. New York: Columbia University Press.

Lucas, W. & Adams, W.C. (1978). Talking, television and voter indecision. *Journal of Communication*, *28*, 120-131.

Matthes, J. (2011). Exposure to counterattitudinal news coverage and the time of voting decisions. *Communication Research 18*, 1-23.

Meisel, J. (1957). *The Canadian general election of 1957*. Toronto: University of Toronto Press.

Miller, W.E., & J. M. Shanks. (1996). *The new American voter*. Cambridge: Harvard University Press.

O'Keefe, G.J., Mendelsohn, H. & Lui, J. (1976). Voter decision making, 1972 and 1974. *Public Opinion Quarterly, 41*, 320-330.

Popkin, S. L. (1991). *The reasoning voter: communication and persuasion in presidential campaigns*. Chicago: University of Chicago Press.

Plumb, E. (1986). Validation of voter recall: time of electoral decision making. *Political Behavior, 8,* 301–12.

Riedel, J.A., & Dunne, J.R. (1969-70). When the voter decides. *Public Opinion Quarterly, 33*, 619-621.

Wattenberg, M.P. (1991) *The rise of candidate-centered politics: presidential elections of the 1980s*. Cambridge: Harvard University Press.

Whitney, D. C., & Goldman, S.B. (1985). Media use and time of vote decisions: a study of the 1980 presidential election. *Communication Research, 12*, 511-529.

Worchel, S., Cooper, J., Goethals, G.R. & Olson, J.M., 2000. *Social Psychology*. Stamford: Wadsworth Thomson Learning.

Zaller, J. (1996). The myth of massive media impact revived: new support for a discredited idea, in Mutz, D., Brody, R. and Sniderman, P. (Eds.), *Political persuasion and attitude change*, Pgs. 17-79. Ann Arbor: University of Michigan Press.

2 – EXPLAINING THE TIME-OF-VOTING-DECISION USING MEASURES OF ATTITUDINAL CONFLICT, INTENSITY AND DIRECTION

What causes individuals to make their vote decisions at the point in time at which they do? We know from the small amount of existing research on the topic of the time-of-voting decision (TOVD) that many voters know long before an election which party or candidate they will support, while others take much longer to arrive at a crystallized decision (Berelson *et al.*, 1954; Campbell *et al.*, 1960; Fournier *et al.*, 2004). However, aside from a few socio-demographic factors, partisanship, and measures of political attentiveness and knowledge (Fournier *et al.*, 2001), we know little of the causes and correlates of TOVD.

The lack of attention to the study of TOVD patterns is surprising considering the potential practical implications of knowledge of this sort. Political actors no doubt have a keen interest in knowing what types of individuals are likely to make decisions at specific times and for what reasons, and how best to target such voters with political communication. In the academic realm, this type of information is of relevance not only to the field of political behaviour, but also to political psychology and marketing. The market for research on this topic is thus both practical and academic.

Three concepts that have received modest attention in the literature on TOVD are the consistency, intensity, and direction of political attitudes. *Consistency*, or the extent to which attitudes or considerations are in conflict with one another, is typically evaluated through measures of ambivalence, which is defined here as the simultaneous presence of both positive and negative attitudes towards a candidate or party. These

attitudes may be contradictory (i.e. they may lead one to support different parties), reinforcing (i.e. they may both lead to the same party), or irrelevant (i.e. they may not have an impact upon a vote choice) (Alvarez and Brehm, 2002). For a sense of inconsistency, or ambivalence, to exist, coexisting contradictory factors must be present. The second dimension of attitudes explored here, *intensity*, is defined as the strength or depth of feeling a person attaches to his or her opinions (Katz, 1944).[9] Voters who are relatively indifferent with respect to individual political attitudes towards candidates or parties can be said to have opinions of weak intensity. Finally, the *direction* of summary evaluations of candidates or parties can be determined by combining information from a series of relevant political attitudes. Individuals who have stronger positive than negative attitudes towards the party they vote for are said here to be voting in a positive direction. Perhaps surprisingly, many individuals vote for a party towards which they have more negative than positive attitudes.

The primary aim of this article is to explore in detail the relationship between the time at which an individual finalizes a vote decision, relative to election-day, and the consistency, intensity and direction of factors known to be related to vote choice. The explanatory power of existing measures of these attitudinal dimensions is contrasted to that of a new measure introduced here. Based upon the limited amount of existing research on these relationships, the fundamental expectations are that an early TOVD will be associated with low levels of inconsistency (Berelson *et al.*, 1954; Lavine, 2001), high levels of intensity (Fournier, 2005; Petty and Krosnick, 1995), and summary evaluations in the direction of the party voted for (Lewis-Beck *et al*., 2008).

[9] In some cases this concept is referred to as attitudinal "extremity," and refers to the distance between a person's attitude evaluation and the midpoint on a bipolar attitude scale (see Abelson 1995).

It is also expected that TOVD patterns will be better explained when summary attitudinal measures take several of these dimensions into account. Since American TOVD data have been found to have a significant validity problem (Plumb, 1986; Chaffee and Rimal, 1996), Canadian data (from the 2008 Canadian Election Study, or CES) are employed to test these expectations (Fournier *et al*., 2001, have shown that Canadian data are relatively reliable).

In addition to exploring the relationships between TOVD and these attitudinal dimensions, this article makes several noteworthy contributions to the literature. First, it introduces a new summary attitudinal measure which takes into account conflict, intensity and direction (existing measures are currently based upon only one or two of these factors), and the explanatory power of this new variable is contrasted to that of existing indicators through a series of bivariate regression models with TOVD as the dependent variable. Second, the article considers a wider range of factors known to influence vote choice than existing work on this topic. All attitudinal measures are calculated here on the basis of variables from the many stages of the multi-stage recursive model of vote choice. The model, which was first proposed by Miller and Shanks (1996), and has been subsequently adapted for Canada by authors associated with the CES (see Blais *et al.*, 2002 and Gidengil *et al*., 2009), outlines a variety of categories of factors known to have a relationship with vote choice (the stages of Blais *et al*.'s, 2002, model are: sociodemographic characteristics,[10] underlying values and

[10] Strictly speaking, sociodemographic characteristics are not attitudes. However, these factors have long been known to have a relationship with vote choice (Berelson *et al*., 1954). For instance, religious groups are often associated with support for various parties, although the reasons for such relationships are not always well understood (see Blais, 2005). While Blais *et al*. (2002) posit that sociodemographic factors can influence attitudes from other stages of the multi-stage recursive model, the fact is that the effects of sociodemographic variables are not fully washed away when included in multivariate vote choice models with variables from the other stages of the model. One possible reason for this may be that that these

beliefs, partisanship, economic perceptions, issue opinions, evaluations of government performance and leader evaluations) and provides a relatively comprehensive account of the correlates of vote choice.

Finally, this article is unique in that it recognizes that, if some attitudes are more consequential to vote choice than are others, some attitudes will be more influential to the relationship between TOVD and attitudinal consistency, intensity and direction. The strength of the relationships between vote choice and each stage of the multi-stage recursive model are evaluated, and this information is used to assign weights to each stage (and, where applicable, to each variable within each stage). The calculated weights are party specific to account for the possibility that factors may differ in importance depending upon which party one supports. This information is incorporated into the calculation of the new summary measures of conflict, intensity and direction. It is anticipated that the weighted variables will better account for TOVD patterns than will their unweighted counterparts.

2.1 - TOVD AND ATTITUDINAL CONFLICT, INTENSITY AND DIRECTION

Since Lazarsfeld *et al.*'s 1944 work, *The People's Choice*, there has been significant interest in the study of voting behavior (see Gidengil, 1992, Blais *et al*. 2002 and Gidengil *et al*. 2009 for some noteworthy Canadian examples), and the bulk of

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variables could be tapping into some latent attitudes not otherwise included in the model. Additionally, it has been illustrated that voters will tend to delay their TOVD if they see their social networks (which may be influenced by factors such as religion, race or income), as being politically at odds (or inconsistent) with their own preferences (Mutz, 2002). Accordingly, the sociodemographic stage of the model is retained in the analyses below. All references to attitudinal consistency, intensity and direction here should be interpreted to include sociodemographic factors.
As it turns out, when the attitudinal measures considered below are calculated by omitting sociodemographic variables, the results in Table 2-2 change very little and the article's substantive conclusions remain the same.

work in this field deals with the subject of vote choice. That is, scholars have attempted to identify patterns to explain why people vote for the parties or candidates they do. Receiving relatively little attention, however, is the question of why people make their vote choices *when* they do. The majority of research aiming to explain TOVD patterns originates from the United States, where researchers have explored the relationship between TOVD and sociodemographic cross pressures (Lazarsfeld *et al*. 1948, Berelson *et al*. 1954), partisanship (Campbell *et al*., 1960), gender (Riedel and Dunne, 1969-1970; Kenski 2007), political interest and attentiveness (Chaffee and Choe, 1980; Whitney and Goldman, 1985; Lucas and Adams, 1978), and the perceived competitiveness of one's preferred candidate (Kirkpatrick 1972).

Unfortunately, however, American National Election Study TOVD data have been found to be largely unreliable (Plumb 1986, Chaffee and Rimal 1996). Whether survey respondents are intentionally dishonest about their TOVD information (Bradburn *et al*., 1979; Clausen, 1968) or they are genuinely unable to ascertain when their decisions are finalized (Plumb, 1986), the fact that American TOVD data are so flawed means that the conclusions of research based upon these data must be treated with caution. In contrast, however, CES TOVD data have been described as "highly reliable" (Fournier *et al*., 2001).[11] Fournier *et al*. have shown that roughly 80% of CES respondents provide accurate TOVD responses, and introduced a method whereby invalid TOVD responses can be identified for removal. Canadian data thus are suitable for an analysis of the relationship between TOVD and measures of attitudinal consistency, intensity and direction.

[11] Possible reasons for this difference include different campaign lengths and election study question format.

The study of how attitudes relate to and influence one another, how they combine to form summary evaluations of an attitude object, and how attitudes influence behaviour has received a considerable amount of scholarly attention. Psychologists (e.g. Cacioppo *et al*., 1997; Tesser and Martin, 1996) and political scientists (e.g. Zaller and Feldman, 1992; Alvarez and Brehm, 1997; Meffert *et al.*, 2004) have recognized that summary evaluations of attitude objects are influenced by a number of discrete attitudes, and that these attitudes are not necessarily compatible with one another. These opinions may be inconsistent, they may be held with different degrees of intensity, and some types of attitudes may be more consequential to summary evaluations than others. Authors like Heider (1946), Lewin (1951), and Festinger (1957) recognized that conflicting attitudes can lead to psychological tension and, in some cases, attitude change. The intensity, or strength, of attitudes has also been extensively studied (Katz, 1944; Scott, 1968; Petty and Krosnick, 1995), and both attitudinal consistency and intensity are known to moderate the attitude-behaviour relationship (Raden, 1985).

In contrast, study of the relationships between political attitudes and TOVD has received a modest amount of scholarly attention. According to Lazarsfeld *et al*. (1948), late deciders are those who are experiencing sociodemographic cross-pressures. In other words, these voters exhibit some sociodemographic characteristics associated with a vote for a particular candidate, and others associated with a vote against that candidate (the assumption is that sociodemographic characteristics somehow shape political attitudes). Cross-pressure theory suggests that "conflicts and inconsistencies among the factors which influence vote decisions" (p. 53) can lead to a delay in TOVD, as

individuals will tend to avoid making a decision until it becomes necessary to do so. If vote choice is influenced heavily by sociodemographic factors, as the Columbia school suggests, inconsistencies among these variables can make one's vote choice difficult, or unclear. In related, more recent work, Nir (2005) has shown that voters tend to decide later if they perceive their social networks (which can be based upon sociodemographic factors such as religion, race or income) as being split in partisan terms. There is good reason to expect, therefore, that conflict with respect to some of the determinants of vote choice will lead to a relatively late TOVD.

By focusing only upon sociodemographic characteristics, which are relatively stable over time, the Columbia School downplays the importance of the campaign period. Regardless of what occurs during the course of a campaign, individuals who are strongly aligned with a particular party are expected to make their minds up early, and those who are cross-pressured are expected to make their minds up late. Heider's (1946) cognitive balance theory, which has also been used to explain why some voters with inconsistent (or unbalanced) attitudes have a delayed TOVD (Kirkpatrick, 1972), performs slightly better in this regard. Whereas cross-pressure theory focuses upon avoidance of decision making, cognitive balance theory is focused upon the resolution of inconsistencies (or a shift towards greater consistency). Heider's theory is compatible with dissonance theory (Festinger, 1957), which suggests that voters will seek consistency among attitudes by changing some of those attitudes. It also allows for campaign events to have an influence upon attitudes, as this theory recognizes the malleability of attitudes (sociodemographic factors, in contrast, are largely stable).

Accordingly, it is anticipated here that attitudinal conflict will be related to a relatively late TOVD. Aside from the logic of the cross-pressures and cognitive balance theories presented above, researchers have discovered that the attitudes of ambivalent individuals are relatively pliable in the face of persuasive information (Bassili, 1996; MacDonald and Zanna, 1998; Armitage and Conner, 2000) and that ambivalence is related to response instability (Conner and Sparks, 2002; Craig *et al*., 2005). In contrast, even if exposed to persuasive arguments, unambivalent individuals are unlikely to change their opinions. Existing attitudes may enable such individuals to reject arguments which are incompatible with existing beliefs, or new information may not be persuasive enough to cause attitude change (Zaller, 1992). In the context of a political campaign, this suggests that ambivalent individuals (those with inconsistent attitudes) are more likely to change their minds during the campaign period than are non-ambivalent voters, which makes them late deciders by definition.

The intensity of attitudes towards an attitude object is also expected to influence TOVD. Individuals who have intense attitudes are more likely to have an early TOVD than are those individuals with weaker attitudes (even if attitudes are of equal consistency). Weak attitudes are known to be relatively malleable (Petty and Krosnick, 1995; Alvarez and Brehm, 1997; Fournier, 2005), and individuals with strong attitudes are known to be resistant to persuasion (Zaller, 1992), meaning that the campaign period is likely to have relatively little effect upon individuals who hold intense attitudes. Accordingly, individuals who tend to hold intense attitudes towards their vote decision are expected to have an early TOVD.

Finally, the direction of summary evaluations is expected to have a relationship with TOVD. As noted above, Lewis-Beck *et al*. (2008) found that the predictability of vote choice (as measured through the direction of summary evaluations) has a strong relationship with American TOVD data. Additionally, it is known that strategic and protest voters tend to have a late TOVD (M^{c}Gregor, *working paper*). These groups of voters are, by definition, voting for a party that is not their most preferred, and thus it is likely that summary evaluations of that party will be in the negative direction. Voters with positive summary evaluations of the party they vote for thus are expected to be more likely to have an early TOVD than are those with negative summary evaluations.

If the consistency, intensity and direction of attitudes have a relationship with TOVD, it stands to reason that attitudinal measures which tap into more than one of these dimensions should better explain TOVD patterns than should measures based upon only one dimension. It is known that intense attitudes tend to be relatively central to decisions (i.e. they are factored heavily into summary evaluations) and shape other, less intense attitudes (Herzon, 1975). In other words, if an individual feels strongly with respect to one political opinion, it may influence other relevant opinions so that they become compatible with one another. Thus individuals with intense attitudes are likely to also hold relatively consistent attitudes, and summary evaluations of these attitudes are likely to be in the direction of the party voted for. Nevertheless, consistency, intensity and direction cannot simply be assumed to correspond with one another for all voters. The relationships between TOVD and several measures of attitudinal conflict, intensity and direction are considered below, and some of these measures take more than one attitudinal dimension into account. It is expected here that

measures which are based upon information from more than one of these dimensions will better explain TOVD than will measures based upon only one of these factors.

In addition to exploring the explanatory power of several measures of consistency, intensity and direction, this article improves upon existing measures of political ambivalence (a concept closely related to the three dimensions of attitudes under study here) in two ways. First, existing measures are based upon very few of the determinants of the vote choice. The Columbia school's focus upon sociodemographic characteristics has long been deemed inadequate, but more recent work on the intersection of TOVD and attitudinal conflict also leaves room for improvement. Lavine (2001) only considers attitudes towards presidential candidates in his measure of ambivalence, ignoring important information like partisan identification and evaluations of past government performance. Lewis-Beck *et al*. (2008) and Fournier (2005) also include only include six attitudes (the factors with the strongest relationship with vote choice) in their measures. While these measures represent a noteworthy improvement over the Columbia approach, they nevertheless ignore several important known correlates of vote choice (a fact which Lewis-Beck *et al*. themselves concede).

The multi-stage recursive model (see Blais *et al*., 2002) provides a comprehensive account of the factors known to have a relationship with vote choice, and is used here to determine which factors should be included in summary attitudinal measures. Despite the relatively poor quality of American TOVD data, one observation from the American literature that is accepted here is the assertion that TOVD can be influenced by both long and short-term factors. Permanent, or relatively stable, factors like partisanship and gender can have a relationship with TOVD (Campbell *et al*., 1960;

Chaffee and Choe, 1980; Kenski, 2007), as can more transient, short-term considerations such as candidate evaluations (Converse, 1962; Bowen, 1994; Chaffee and Rimal, 1996). When exploring the relationship between attitudes and TOVD, it therefore stands to reason that measures of attitudinal conflict, intensity and direction should take both long- and short-term factors into account. The version of the multi-stage recursive model employed by the CES authors includes both long-term (sociodemographic variables, underlying values and beliefs, party identification) and short-term (economic perceptions, issue opinions, evaluations of government performance, and leader evaluations) variables. The assumption here is that, since vote choice can be affected by this entire array of factors, each of these factors has the potential to have an impact upon TOVD.

The second way in which existing measures of conflict, intensity and direction are improved upon here is by recognizing that some attitudes will be more influential to summary evaluations than will others. Attitudes are generally assigned equal levels of importance in the calculation of attitudinal conflict (Fournier 2005; Lewis-Beck *et al*. 2005). However, we know that some factors are more important to vote decisions than are others (Blais *et al*., 2002; Gidengil *et al*., 2009). It stands to reason, therefore, that some factors will be more influential than others when it comes to summary measures of attitudinal conflict, intensity and direction. For example, if an individual has one factor predisposing him or her to vote for a particular party, and another which leads away from that same party, a person may or may not feel conflicted, depending upon how important each of the two factors are to his or her vote decision. If one factor is much more important to the person's decision than is the other, he or she can be

expected to feel relatively little attitudinal conflict, as compared to a situation where the two factors are of the same importance. When the two factors are equally important, TOVD is expected to be later than if one factor is much more important than the other.

The strength of the relationships between vote choice and the stages of the multi-stage recursive model (and the variables are included in each stage of the model), are evaluated here (this process is outlined in detail in Appendix 2-1). The attitudinal measures considered below are calculated by weighting the stages and variables included in the multi-stage recursive model, according to the strength of the relationship between these factors and vote choice. It is anticipated that measures based upon these weights will be better able to explain TOVD patterns than will unweighted measures.

To summarize, this article's expectations are as follows:

H1: An early TOVD will be associated with low levels of attitudinal conflict, high levels of attitudinal intensity, and summary evaluations in the direction of the party voted for.

H2: TOVD patterns will be better explained by attitudinal measures which tap into more than one of these dimensions than they will by measures based upon only one factor.

H3: The capacity of measures of attitudinal conflict, intensity and direction to account for TOVD patterns will be increased when weights are included in the calculation of these measures, to take into account the relative importance of each attitude to summary evaluations.

2.2 - DATA AND METHODOLOGY

This study's dependent variable, TOVD, is defined with reference to election-day; voters are categorized on the basis of the length of time prior to an election that they make their decision. The TOVD periods considered here are the period before the start of the campaign, the campaign period (excluding election-day) and election-day.

TOVD is measured through a single question in the post-election segment of the CES.[12] The validity of TOVD responses is evaluated using M^{c}Gregor's (*working paper*) partially restrictive method, and invalid cases have been removed.

In total, six measures of attitudinal conflict, intensity and direction are compared here to TOVD. With the exception of subjective ambivalence (discussed below), it is possible to factor information from all seven stages of the multi-stage recursive model into the calculation of each of these measures. These variables thus are based upon almost 50 survey questions,[13] and take into account an individual's sociodemographic characteristics,[14] underlying values and beliefs,[15] partisan attachments,[16] economic perceptions,[17] issue opinions,[18] leadership evaluations,[19] and opinions of the current

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[12] The CES TOVD question is as follows: When did you decide that you were going to vote [*for party X*]? Potential responses are: Before the campaign began, during the campaign, election day, don't know, and refusal. Interviewees who gave the last two responses have been removed from the dataset.

[13] Appendix 2-III lists all CES questions used here.

[14] The sociodemographic factors and underlying beliefs considered here are the same as those employed by Gidengil *et al*. (2009). The one exception is religious fundamentalism, which is not considered here. The CES question on fundamentalism is only asked to Christians, and excludes individuals who could be fundamentalists of other religions.

The sociodemographic factors considered are: race (visible minority or not), language (French or not), Catholic or not, public sector worker or not, union member or not, university educated or not, gender, rural or urban resident, religion (Catholic, Protestant or non-Christian), age (under35, 35-54, or over 54), income (lowest quartile, highest quartile, two middle quartiles), and region. Variables are coded as either 0 or 1, so nominal variables are made into a series of dummy variables.

[15] The values and beliefs considered are: free enterprise, social conservatism, feelings towards Quebec, regional alienation and political disaffection. In most cases several questions (listed in Appendix 2-III) are combined to determine a score for each factor for each individual.

[16] Individuals are categorized as either partisans of the party voted for, non-partisans, or partisans of a party other than that which they voted for.

[17] Economic perceptions are based upon blame or credit individuals assign to the federal government for sociotropic or egocentric economic factors.

[18] Four issues are considered: fighting crime, improving healthcare/social welfare programs, creating jobs/dealing with the economy and protecting the environment. Individuals are asked which party they think is the best to deal with each issue. Voting for the party that is best to deal with an issue is a positive factor, and voting for another party is a negative factor.

[19] Leadership evaluations are based upon 100-point feeling thermometer questions. The rating of two party leaders is considered for each case: that of the party that one votes for, and that of the highest-rated leader of the parties not voted for (the Bloc Quebecois leader is not considered outside of Quebec). Values for this stage of the model are based upon the difference between these two scores. If the rating of the leader of the party voted for is greater than that of the highest other party leader, the score is positive, and if the rating is lower the score is negative.

government's performance.[20] Omitting any of these stages would make it more likely that factors important to individual voters would be ignored.[21] Survey responses are translated into positive or negative attitudes, depending upon the party voted for. For example, if a person approves of the Government's performance, this would be considered a positive attitude if that person votes for the Conservatives (the incumbent party), but a negative attitude if that person votes for any other party. Similarly, if one votes Liberal, but is a partisan of another party, this factor would be counted as a negative pressure. If a Liberal partisan were to vote Liberal, however, partisanship would be a positive factor for him or her.[22] Values for each stage of the model are determined in this fashion for each respondent and are combined to determine conflict and intensity scores. Because these measures include so many factors, control variables are not included in the analyses below.

In order to evaluate *H1*, TOVD is regressed onto several types of indicators of consistency, intensity and direction. Attitudinal consistency or conflict generally is studied through measures of ambivalence, although some measures of ambivalence also take other dimensions into account. One of the most commonly studied forms of ambivalence, "subjective ambivalence," is measured by asking respondents to comment directly upon how conflicted they feel towards an attitude object (Tourangeau *et al*., 1989; Preister and Petty, 1996). After asking which party respondents voted for, the CES asks interviewees to reveal if their feelings towards that party are all positive,

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[20] This is based upon a single question about satisfaction with the government's performance.

[21] The flip side of this argument is that factors which are unimportant to an individual may be included in the calculation of ambivalence. However, using the multi-stage recursive model as a framework avoids the arbitrary inclusion or exclusion of variables.

[22] Only the supporters of the four major parties (the Conservatives, Liberals, NDP and Bloc Quebecois) are considered here, as information from some of the stages of the model are party specific (i.e. leader ratings), and such information is not available on minor parties.

mostly positive, or mixed.[23] This measure directly taps into attitudinal conflict and is used here to determine subjective ambivalence scores for each respondent. As this measure is based upon one CES question, rather than a series of factors included in the multi-stage recursive model, a weighted version of subjective ambivalence cannot be calculated.

Subjective ambivalence taps into attitudinal conflict, but provides no information on the intensity or direction of summary attitudes. It only provides insight into the presence or absence of attitudes which conflict with an individual's vote choice. This measure is also an unreliable indicator of the direction of summary evaluations. While individuals who say that their opinions of the party voted for are either all positive or mostly positive can be said to have summary evaluations in the direction of the party voted for, no such conclusion can be drawn about the group of voters who say that they have "mixed" feelings (this includes over 40% of respondents) - these voters could have summary attitudes in either the positive or negative direction.

All other summary attitudinal measures considered here are calculated on the basis of information from all seven stages of the multi-stage recursive model. The intensity variable is based upon the summation of positive and negative attitudes, and is scaled to a range of 0 to 1. In an approach similar to that taken by the Columbia school in their evaluations of cross-pressures, and by Lewis-Beck *et al*. (2008), direction is determined by subtracting the sum of negative attitudes (those which would lead respondents to vote against the party that they do) from the sum of positive attitudes.

[23] This question is asked in both the pre- and post-election questionnaires, but is only asked to decided voters in the pre-election survey. Post-election data thus are used here for this variable. In contrast, pre-election data are used for all other variables (in order to get a more accurate sense of the tension voters are feeling prior to casting their ballots).

Those individuals who have a positive value from this calculation are assigned a value of 1, and those with negative values are assigned a value of -1.[24] Both weighted and unweighted versions of each variable are calculated and compared to TOVD.

The other independent variables considered below tap into more than one attitudinal dimension. The first such variable is a measure of "objective ambivalence" (Preister and Petty, 1996). In contrast to subjective ambivalence, objective ambivalence values are based upon responses to multiple survey questions about feelings towards an attitude object. This information is then combined to determine how ambivalent an individual is towards an attitude object, without asking them directly about ambivalence. Griffin has developed a widely adopted formula (shown in Equation 2-1) for the calculation of objective ambivalence, based upon two conditions which are said to be necessary and sufficient for a sense of ambivalence to exist (Thompson *et al*., 1995).[25] First, conflicting attitudes must be of moderate intensity. If one does not hold strong opinions with respect to some political factor, it is unlikely that the factor will matter significantly to one's vote decision. This requirement is captured in the first term of the formula. Second, the conflicting attitudes must be of similar magnitude, or intensity. If one factor is of significantly greater intensity than the other, an individual is unlikely to experience a strong sense of ambivalence. Consistency is captured in the second term of the equation. Thus whereas subjective ambivalence taps into conflict

[24] The few cases where the positive and negative attitudes are equal to one another are assigned a value of 0.

[25] Other formulas have been suggested as measures of ambivalence (i.e. Kaplan, 1972, and Katz and Hass, 1988). See Thompson *et al*. (1995) for an overview of existing measures and an explanation as to why Equation 2-1 is the most commonly employed formula for objective ambivalence.

only, objective ambivalence is based upon both attitudinal conflict and intensity.[26] Griffin's formula is as follows:

$$Griffin's\ Ambivalence = \frac{\sum P + \sum N}{2} - |\sum P - \sum N| \qquad \textbf{Equation 2-1}$$

Where *P* and *N* represent the positive and negative attitudes relevant to a vote for a particular party (sigma notation is used to show that information from the seven stages of the multi-stage recursive model is included in the calculation of *P* and *N*). P and N are coded here to a scale from 0 to 1.

Equation 2-1 overlooks, however, the important difference between unambivalent individuals who vote for the party they might be expected to based upon the direction of summary attitudes, and those who vote against that party. While these two types of voters are clearly very different from one another, the direction of summary evaluations is not factored into this measure. Respondents who are strongly predisposed to voting *against* the party that they eventually do would be assigned the same objective ambivalence score as those who are strongly predisposed to voting *for* that party.

Another measure that taps into multiple attitudinal dimensions was introduced by Fournier (2005) in his study of individuals who change their vote preferences between pre- and post-election CES questionnaires. "Actual ambivalence" is based upon the difference between the proportions of consistent and inconsistent attitudes. While Fournier only includes the six strongest correlates of vote choice for each party in

[26] Perhaps not surprisingly, the correlation between subjective and objective measures of ambivalence is not usually very strong (Martinez *et al.*2005, Thompson *et al*. 1995).

his calculations, variables from all seven stages of the multi-stage recursive model are included here.[27] Although this measure taps into attitudinal conflict and direction, it provides no information on the intensity of attitudes (since actual ambivalence values are based upon differences in *proportions*, or shares of total relevant attitudes, rather than the absolute magnitude of attitudes). Equation 2-2 shows the formula for Fournier's actual ambivalence.

$$Actual\ Ambivalence = 1 - \frac{\sum P - \sum N}{\sum P + \sum N} \qquad \textbf{\textit{Equation 2-2}}$$

The first term of the equation serves as the baseline for actual ambivalence values. That is, individuals are assigned an actual ambivalence score of 1 if the strengths of positive and negative considerations are equal to one another. The second term taps into the direction and consistency of attitudes. Individuals with stronger positive than negative attitudes will have an actual ambivalence value of less than one, and those with more negative than positive attitudes will have a value of greater than one.[28] Individuals who have large differences between $\sum P$ and $\sum N$ (or those with relatively consistent attitudes) will have actual ambivalence values farther away from 1 (the baseline) than will those with relatively inconsistent attitudes. This term includes a denominator based upon the sum of positive and negative attitudes (since the formula

[27] A measure of actual ambivalence based upon only six factors does display a statistically significant relationship with TOVD (results not shown), but has less explanatory power than the model based upon more factors (based upon psuedo-R^2 values).

[28] In his work, Fournier truncates his scale so that individuals who have more negative than positive attitudes are assigned a maximum actual ambivalence value of 1. This applies to 17.1% of cases here (161 of 939). Simply assigning these individuals a value of 1, however, masks a great deal of information. Accordingly, the measure of actual ambivalence used here is not truncated in this manner. While the truncated measure does have a statistically significant relationship with TOVD, it produces a lower pseudo-R^2 value (results not shown) than the non-truncated version.

evaluates differences in the *proportions* of positive and negative attitudes). Equation 2-2 thus taps into attitudinal consistency and direction, but not the overall intensity of attitudes.

In order to take all three dimensions into account in a single variable, a new measure is introduced here by making a revision to Griffin's measure of ambivalence (this new variable is referred to hereafter as revised Griffin's ambivalence). The first term in Equation 2-1, which evaluates the intensity of attitudes, need not be changed. The second term, which evaluates dissimilarity between positive and negative attitudes, can be altered to take direction into account by removing the absolute value brackets. This change means that, in cases where N is greater than P, the value of this variable increases, which makes intuitive sense. When P is greater than N, this variable has the same value as it would accordingly to Griffin's original formula. All three dimensions are thus factored into this equation. *H2* receives support if this measure is better able to explain TOVD patterns than are the other variables discussed above.

Table 2-1 shows the formulas used to calculate each summary attitudinal measure, and indicates which attitudinal dimensions each measure taps into.

TABLE 2-1: ATTITUDINAL FORMULAS AND DIMENSIONS TAPPED INTO

Variable	Formula	Consistency	Intensity	Direction
Subjective Ambivalence	*N/A*	X		
Intensity	$\sum P + \sum N$		X	
Direction	$\begin{cases} 1 \; if \; \sum P > \sum N \\ -1 \; if \; \sum P < \sum N \\ 0 \; if \; \sum P = \sum N \end{cases}$			X
Griffin's Ambivalence	$\frac{\sum P + \sum N}{2} - \lvert \sum P - \sum N \rvert$	X	X	
Actual Ambivalence	$1 - \frac{\sum P - \sum N}{\sum P + \sum N}$	X		X
Revised Griffin's Ambivalence	$\frac{\sum P + \sum N}{2} - (\sum P - \sum N)$	X	X	X

With the exception of subjective ambivalence, each indicator is calculated in two ways: unweighted and weighted. Unweighted measures factor all stages of the multi-stage recursive model equally in the calculation of summary measures. That is, all stages are assumed to have the same level of impact upon summary attitudinal measures. Weighted measures are calculated using the same formulae as their unweighted counterparts, but factors from the multi-stage recursive model are assigned weight values based upon the strength of the relationship that these variables have with vote choice. Only those factors with a statistically significant relationship with vote choice are included in calculations. Weights vary from party to party and are calculated on the basis of the strength of the relationship between party support and each type of factor included in the multi-stage recursive model. The greater impact a variable has upon the likelihood of voting for a party, the greater impact that variable is assumed to have upon TOVD. Appendix 2-I contains a detailed description of how weights are assigned to the stages of the multi-stage recursive model, and, where applicable, to variables within each stage, and Appendix 2-II contains descriptive statistics for the weighted and unweighted versions of each explanatory variable. *H3* receives support if weighted measures are better able to account for TOVD than are their unweighted counterparts.

2.3 - RESULTS

To compare the explanatory power of the measures of attitudinal consistency, intensity and direction, TOVD is regressed onto each variable in a series of bivariate

multinomial logistic regressions,[29] the results of which are displayed in Table 2-2. If *H1* is accurate, the coefficients for the intensity and direction measures should be negative, and all others should be positive.

TABLE 2-2: BIVARIATE MULTINOMIAL REGRESSION RESULTS WITH TOVD AS DEPENDENT VARIABLE – 2008 DATA

Variable		Campaign vs. Pre-Campaign	Election-day vs. Pre-Campaign	Election-day vs. Campaign	Pseudo-R^2
Subjective Ambivalence	Constant	0.66(.12)[c]	1.78(.24)[c]	1.14(.25)[c]	**0.0472**
		-0.68(.08)[c]	-2.59(.21)[c]	-1.91(.21)[c]	
Intensity	Unweighted	-3.30(.59)[c]	-5.07(.87)[c]	-1.77(.86)[b]	**0.0283**
	Constant	1.47(.34[c]	-1.18(.47)[b]	-0.29(.46)	
	Weighted	-5.61(.59)[c]	-8.34(.93)[c]	-2.73(.90)[c]	**0.0921**
	Constant	1.82(.24)[c]	1.51(.33)[c]	-0.31(.31)	
Direction	Unweighted	-0.73(.09)[c]	-1.30(.13)[c]	-0.58(.12)[c]	**0.0686**
	Constant	0.09(.10)	-1.01(.13)[c]	-1.12(.12)[c]	
	Weighted	-0.71(.10)[c]	-1.45(.13)[c]	-0.73(.12)[c]	**0.0816**
	Constant	0.05(.10)	-1.04(.13)[c]	-1.09(.12)	
Griffin's Ambivalence	Unweighted	3.30(.39)[c]	4.70(.61)[c]	1.40(.61)[b]	**0.0607**
	Constant	-0.14(.08)[a]	-1.36(.11)[c]	-1.23(.11)[c]	
	Weighted	6.30(.64)[c]	9.32(.99)[c]	3.02(.95)[c]	**0.0961**
	Constant	0.30(.10)[c]	-0.76(.13)[c]	-1.06(.12)[c]	
Actual Ambivalence	Unweighted	1.54(.16)[c]	2.70(.23)[c]	1.16(.20)[c]	**0.1148**
	Constant	-1.15(.11)[c]	-3.39(.22)[c]	-2.24(.23)[c]	
	Weighted	1.58(.17)[c]	2.67(.22)[c]	1.09(.17)[c]	**0.1259**
	Constant	-1.02(.09)[c]	-3.12(.20)[c]	-2.09(.20)[c]	
Revised Griffin's Ambivalence	Unweighted	2.88(.28)[c]	4.77 (.40)[c]	1.89(.35)[c]	**0.1145**
	Constant	-0.35(.07)[c]	-1.94(.14)[c]	-1.58(.14)[c]	
	Weighted	4.69(.45)[c]	7.13 (.58)[c]	2.44(.46)[c]	**0.1325**
	Constant	-.07(.08)	-1.48(.13)[c]	-1.41(.13)[c]	

Entries report coefficients and standard errors (in parentheses).
a: Coefficient significant at 90% level, b: Coefficient significant at the 95% level, c: Coefficient significant at the 99% confidence level.
N = 965 for subjective ambivalence, and 939 for all other variables.

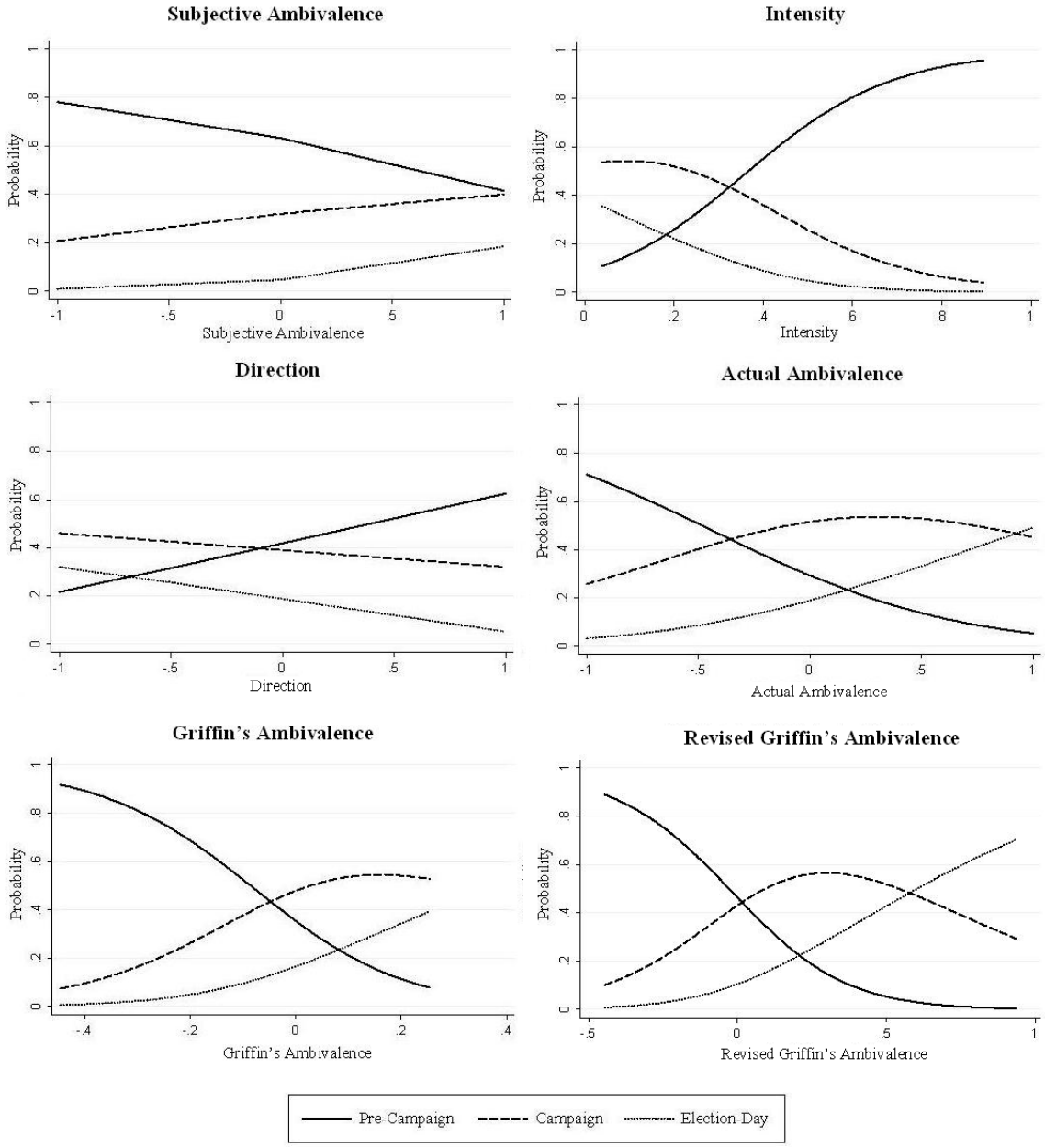
[29] Sampling weights have not been applied here, as there is no reason to expect the relationship between these variables and TOVD to be influenced by any of the variables factored into sampling weights. Results change very little when a sampling weight is applied, and all substantive conclusions remain unchanged.

The results in Table 2-2 suggest that we can be confident that there are relationships, in the expected direction, between TOVD and each explanatory variable.[30] *H1* receives strong support from these results. All coefficients, comparing all TOVD periods, are statistically significant at the 95% confidence level or greater. Pre-campaign deciders tend to have more consistent and intense attitudes than do later deciders, and they are more likely to have summary evaluations in the direction of the party voted for. Figure 2-1 illustrates these patterns graphically, showing the predicted probability distributions of TOVD for subjective ambivalence and each of the weighted measures contained in Table 2-2.[31]

[30] The Columbia school's contention that sociodemographic cross-pressures leads to a delay in TOVD is compatible with 2008 CES data. While measures of consistency, intensity and direction based upon sociodemographic factors alone do have statistically significant relationships to TOVD (results not shown), the pseudo-R^2 values produced by these bivariate regressions are much lower than those observed in Table 2-2. Nevertheless, the fact that these relationships are statistically significant helps provide support for the decision to include sociodemographic characteristics in the calculation of attitudinal variables in this study.

[31] The weighted and unweighted versions of these variables display similar probability distributions.

FIGURE 2-1: PREDICTED PROBABILITY DISTRIBUTIONS BY EXPLANATORY VARIABLE – WEIGHTED RESULTS



Not surprisingly, the probability of having a pre-campaign TOVD is greatest at the minimum values for the ambivalence measures, and at the maximum values for

intensity and direction.[32] The opposite is true of an election-day TOVD, which is most likely at the maximum value of the ambivalence measures and the minimum value for intensity and direction.[33] While the pre-campaign-period and election-day lines are all monotonic, this usually is not the case with the campaign-period lines. The probability of being a campaign-period decider peaks, and then recedes (in all graphs except for the subjective ambivalence and direction variables), as the probability of an election-day TOVD increases. This finding makes intuitive sense — there is a point at which a campaign-period TOVD becomes more likely than a pre-campaign TOVD, but an election-day TOVD eventually becomes more likely than a campaign-period TOVD. This shows that the relationship between these explanatory factors and TOVD holds when comparing campaign-period to election-day deciders and pre-campaign to campaign-period deciders. All of these attitudinal measures thus exhibit the expected relationship with TOVD.

The results above suggest not only that TOVD is related to these variables, but also that TOVD is profoundly affected by these measures of attitudinal consistency, intensity and direction. For example, individuals with the minimum value for revised Griffin's ambivalence have an estimated 90.0% chance of having a pre-campaign period TOVD, a 10.2% chance of having a campaign-period TOVD, and a mere 0.8% chance of having an election-day TOVD. At the maximum value of this variable, however, the probability of a pre-campaign period TOVD decreases to 0.4%, while the chances of a

[32] Due to the large number of factors included in the calculation of direction, there are no cases where positive and negative attitude scores equal one another (meaning that there are no direction scores of 0). This factor thus acts as a binary variable, with values of -1 and 1.

[33] Only in the actual ambivalence and revised Griffin's ambivalence graphs is the probability of an election-day TOVD greater than that of a campaign period TOVD. Very few voters, however, have a values for these variables within the ranges where this occurs (greater than roughly +0.9 for actual ambivalence, or above +0.6 for BoP).

campaign-period and election-day TOVD increase to 29.3% and 70.3% respectively. Not only does *H1* receive support from these results, therefore, but the impact of the attitudinal dimensions considered here upon TOVD have been shown to be substantial.

While all of the variables considered in Table 2-2 have the anticipated relationship with TOVD, some factors account for TOVD patterns much better than others. Since all models contain the same number of explanatory variables (1), M^{c}Fadden's pseudo-R^2 values (reported in Table 2-2) can be used to compare the explanatory power of these variables.[34] While this measure does not convey precisely the same information as R^2 values produced by OLS models,[35] it does provide insight into how well a model explains variability in the dependent variable, and when comparing two models using the same data, M^{c}Fadden's pseudo-R^2 is higher for the model with greater explanatory power (UCLA Academic Technology services, online).

In general, the measures which tap into only one attitudinal dimension have weaker explanatory power than those which tap into multiple dimensions. Subjective ambivalence, which measures consistency alone, has a relatively low R^2 value (0.0472). While this measure can be quickly obtained through a single election study question, it performs relatively poorly if the goal is to explain TOVD patterns.[36] While the

[34] When comparing models with different numbers of explanatory variables, measures such as the Akaike (1974) information criterion (AIC) must be used. This measure accounts for the number of variables in a model and is designed specifically to allow for comparison between models based upon the same dataset. However, all models here have one explanatory variable, thus M^{c}Fadden's pseudo-R^2, which is similarly based upon log likelihood values, is sufficient here.

[35] Rather than expressing the proportion of variation of the dependent variable explained by the independent variables, M^{c}Fadden's pseudo R^2 is a measure of the improvement in the prediction of the outcome variable by a model including the independent variables, as compared to a model without any explanatory variables. These values are useful when comparing models based upon the same dataset (as is the case here).

[36] The argument might be made that, since the subjective measure of ambivalence is reported directly by survey respondents, it allows individuals to consider only those factors important to their personal vote decision, and thus is the most valid measure of ambivalence. However, it is conceivable that cognitive dissonance triggered by the act of voting causes individuals to report a lower value for ambivalence that

unweighted measure of intensity has the lowest R^2 value (0.0283) in Table 2-2, weighting this variable significantly improves its explanatory power (R^2=0.0921). The last variable to tap into only one attitudinal dimension, the direction variable, produces R^2 values which are higher than subjective ambivalence, and while the weighted version of this variable (R^2 = 0.0816) does have a higher R^2 score than the unweighted version, this value remains lower than that produced by the weighted versions of the measures which tap into multiple dimensions. Among these variables, the weighted measure of Griffin's ambivalence (R^2=0.0961) performs slightly better than any of the unidimensional variables, and actual ambivalence reveals a relatively high R^2 value (0.1259) when weighted. The measure that taps into three attitudinal dimensions, however, is best able to explain TOVD patterns. The explanatory power of Griffin's ambivalence increases markedly when the formula is altered to take direction into account; R^2 = 0.1325 for the weighted version of revised Griffin's ambivalence. Table 2-2 thus provides fairly solid support for *H2*. The multidimensional variables have higher R^2 values than do the unidimensional variables, and the revised measure of Griffin's ambivalence produces the highest R^2 value in the Table. The more attitudinal dimensions the explanatory variables considered above are based upon, the better they are able to account for TOVD patterns.

The power of the independent variables considered here can be put into context by considering the explanatory power of other variables known to have a relationship with TOVD. This process reveals that the measures of consistency, intensity and direction considered here are relatively powerful predictors of TOVD. Bivariate

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they may have experienced before the vote decision was made. This variable thus might have less validity than more objective measures of ambivalence.

regressions of political attention, gender, interest in the election, interest in politics in general and political knowledge (all of which are expected to have a relationship with TOVD, Fournier *et al.*, 2001) and TOVD produce pseudo-R^2 values of 0.0068, 0.0180, 0.0100, 0.0097 and 0.0012 respectively.[37] Even when these variables are combined in a single, multivariate regression model with TOVD, the R^2 value improves to a mere 0.0173.[38] This value is lower than that produced by any *single* variable considered in Table 2-2, suggesting that the attitudinal measures considered here are relatively powerful. The one variable known to be related to TOVD with explanatory power able to rival these variables is the strength of partisanship, which produces a pseudo-R^2 of 0.0605. Still, this value is lower than the R^2 scores for 9 of the 11 variables considered in Table-2-2, and all of the weighted measures.[39] Thus, not only do the independent variables considered in Table 2-2 reveal statistically significant relationships in the anticipated direction, but these variables have been shown to have relatively great explanatory power.

In addition to showing that the measures considered in Table 2-2 exhibit statistically significant relationships with TOVD, and revealing which measures of conflict, intensity and direction are better able to account for TOVD patterns, Table 2-2 provides strong support for the practice of creating party specific weights for variables

[37] The CES questions used to calculate these measures are listed in Appendix 2-III.

[38] As noted in footnote #34, when comparing models with different numbers of explanatory variables, measures such as AIC (which takes the number of independent variables into account) are normally used. The concern with such comparisons is that the mere inclusion of additional independent variables will tend to automatically increase likelihood and pseudo-R^2 values. AIC need not be considered here, however, as the R^2 value for the model containing attention, gender, interest and knowledge is so much lower than the bivariate models in Table 2-2.

[39] The measures of consistency, intensity and direction considered here (with the exception of subjective ambivalence) take partisanship into account, and the fact that they tend to have greater explanatory power than a measure of partisanship alone provides some justification for the decision here to consider the entire array of factors included in the multi-stage recursive model.

and stages of the multi-stage recursive model, and thus *H3*. The R^2 value more than triples when the intensity variable is weighted, and sizable increases are observed for all other variables. This pattern illustrates the importance of recognizing that some factors have more of an impact upon summary evaluations than do others, and provides some validation of the method of weighting variables and stages of the multi-stage recursive model outlined in Appendix2-I.

2.4 - DISCUSSION AND CONCLUSION

This article has evaluated several separate, yet related, research questions. First, relationships between TOVD and a number of measures of attitudinal consistency, intensity and direction have been established. Second, the data suggest that attitudinal measures which tap into multiple attitudinal dimensions are better able to explain TOVD than are measures which are based upon only one dimension. Finally, it has been shown that recognizing that some factors are more important to vote decisions than are others, and weighting these factors accordingly when calculating summary attitudinal measures, improves the ability of such measures to account for TOVD patterns. This article's three expectations are consistent with results.

The article's primary expectation, that TOVD is related to measures of attitudinal consistency, intensity and direction, has received firm support. All of the attitudinal measures considered here, whether they tap into one or more of these dimensions, have been found to have statistically significant relationships with TOVD. Attitudes also have been shown to have a significant impact upon TOVD; individuals

with low values for these variables have very different TOVD patterns than do those with high values.

The introduction of a new measure of ambivalence, and the decision to focus upon the entire range of variables included in the multi-stage recursive model, represent significant improvements over existing studies of ambivalence. Griffin *et al*.'s objective ambivalence is unable to differentiate between individuals who have positive and negative summary evaluations towards the party voted for, and Fournier's actual ambivalence does not take into account the intensity of attitudes. In contrast, the revised version of Griffin's formula provides insight into the consistency, intensity *and* direction of attitudes. Additionally, by considering information from the seven stages of the multi-stage recursive model, the variables considered here provide more nuanced summary attitudinal measures than those based upon fewer factors. While further work is required to examine the worth of these two methodological advances in other settings, the results of this study are promising.

The article's findings suggest a number of questions worth future consideration. First, the models in Table 2-2 group voters of all parties together (although the variables and weights included in the calculation of these factors differ according to party). Future work can examine whether, and the extent to which, party choice moderates the relationship between TOVD and these attitudinal measures. For instance, is it the case that the victorious party is more successful than its opponents at attracting voters with inconsistent or weak attitudes, or those voters with negative summary evaluations towards the party voted for? Additionally, the introduction of the multi-stage recursive model as a framework upon which to base the calculation of attitudinal variables makes

it possible to focus upon short- and long-term factors separately, and it is conceivable that these two types of variables may have different impacts upon TOVD. Attitudinal measures based upon long-term factors like sociodemographic characteristics, underlying values and beliefs and partisanship may have a different relationship with TOVD than measures based upon shorter-term factors like economic evaluations, issues, leadership evaluations and opinions of government performance. For example, late deciding voters might conceivably be swayed by campaign events and focus upon some of these shorter-term factors, to the exclusion of long-term factors. If short-term and long-term attitudes are inconsistent with one another, however, such an individual may be considered here to be relatively conflicted. If his or her decision were based upon short-term factors alone, this person may not actually be experiencing a sense of internal conflict. The relative importance of short- and long-term factors to measures of consistency, intensity and direction can be evaluated to further elucidate the impact of these attitudinal measures upon TOVD.

An additional avenue for future research springs from the question of the relative impact of each of the three attitudinal dimensions considered here upon TOVD. Given the nature of the survey question used to evaluate subjective ambivalence (and thus attitudinal consistency), and given that these three attitudinal dimensions are generally correlated with one another, it is difficult to base any conclusions about the relative impact of these three attitudinal dimensions upon the unidimensional variables in Table 2-2. However, the results from the multi-dimensional variables suggest that the direction of summary evaluations may have a greater impact upon TOVD than does attitudinal intensity. Actual ambivalence, which taps into consistency and direction,

performs markedly better than Griffin's original ambivalence variable, which is based upon consistency and intensity. Since consistency is factored into both variables, this could suggest that direction may be more important to TOVD than intensity. That the revised version of Griffin's ambivalence performs much better than the original, but only slightly better than actual ambivalence (which already considers direction), provides additional evidence of the relative importance of direction. While further work is required to explore this possibility in greater detail, these results are suggestive, and validates the decision taken here to alter Griffin's formula.

Political actors may benefit considerably from an exploration of these and similar questions. Being able to identify voters with inconsistent or weak attitudes, and those who are most likely to vote against the bulk of their attitudes would no doubt be of interest to those hoping to influence the outcome of an election. Understanding the types of persuasive messages that these voters respond to could be the key to winning the support of undecided voters, stealing votes from opponents and winning elections.

2.5 - BIBLIOGRAPHY

Abelson, R.P. (1995). Attitude extremity. In R.E. Petty & J.A. Krosnick (Eds.) *Attitude strength: Antecedents and consequences* (pp. 25-41). Mahway, NJ: Lawrence Erlbaum.

Akaike, H. (1974). A new look at the statistical model identification. *IEEE transactions on automatic control, 19*, 716-723.

Alvarez M.R. & Brehm, J. (1997). Are Americans ambivalent towards racial policies? *American Journal of Political Science, 40*, 345-374

Alvarez, M.R. & Brehm, J. (2002). *Hard choices, easy answers*. Princeton: Princeton University Press.

Armitage, C.J. and Conner, M. (2000). Attitudinal ambivalence: A test of three key hypotheses. *Personality and Social Psychology Bulletin*, *26*, 1421-1432.

Bassili, J.N. (1996). Meta-judgmental versus operative indexes of psychological attributes: The case of measures of attitude strength. *Journal of Personality and Social Psychology*, *71*, 637-653.

Berelson, B, Lazarsfeld, P., & Gaudet, H. (1954) *Voting*. New York: Columbia University Press.

Blais, A, E. Gidengil, Nadeau, R. & Nevitte, N. (2002). *Anatomy of a Liberal victory: Making sense of the 2000 Canadian election*. Peterborough: Broadview Press.

Blais, A. (2005). Accounting for the electoral success of the Liberal Party in Canada: Presidential address to the Canadian Political Science Association. *Canadian Journal of Political Science*, *38,* 821-840.

Bowen, L. (1994). Time of voting decision and use of political advertising: the Slade Gorton-Brock Adams senatorial Campaign. *Journalism Quarterly*, *71*, 665-675.

Bradburn, N.H., & Sudman, S. (1979). *Improving interview method and questionnaire design – response effects to threatening questions in survey research.* San Francisco: Jossey-Bass.

Cacioppo, J. T., Gardner, W. L., & Berntson, G. G. (1997). Beyond bipolar conceptualizations and measures: The case of attitudes and evaluative Space. *Personality and Social Psychology Review, 1*, 3–25.

Campbell, A, Converse, P., Miller, W. & Stokes, D. (1960). *The American voter*: Chicago, University of Chicago Press.

Chaffee, S.H. & Rimal, R.N.. (1996). Time of vote decision and openness to persuasion in Mutz, D.C., Sniderman, P.M., & Brody, R.A (Eds.) *Political persuasion and attitude change* (pp. 267-291). Ann Arbor: University of Michigan Press.

Chaffee, S.H., & Choe, S.Y. (1980). Time of decision and media use in the Ford-Carter Campaign. *Public Opinion Quarterly, 44,* 53-69.

Clausen, A. R. (1968). Response validity in surveys. *Public Opinion Quarterly, 32*, 588-606.

Converse, P.E. (1962) Information flow and the stability of partisan attitudes. *Public Opinion Quarterly*, *26*, 578-599.

Conner, M. & Sparks, P. (2002). Ambivalence and attitudes. *European Review of Social Psychology*, *12,* 27-70.

Craig, S.C., M.D. Martinez & J.G. Kane. (2005). Ambivalence and response instability: A panel study, in S.C. Craig and M.D. Martinez (Eds.), *Ambivalence and the structure of political opinion* (Pp. 55-72). New York: Palgrave MacMillan.

Festinger, L.A. (1957). *A theory of cognitive dissonance*, Stanford: Stanford University Press.

Fournier, P., Nadeau, R., Blais, A., Gidengil, E. & Nevitte, N. (2001). Validation of time-of-voting-decision recall. *Public Opinion Quarterly*, 65: 95-107.

Fournier, P., Nadeau, R., Blais, A., Gidengil, E. & Nevitte, N. (2004). Time-of-voting-decision and susceptibility to campaigns. *Electoral Studies*, *23,* 661-681.

Fournier, P. (2005). Ambivalence and attitude change in vote choice: Do campaign switchers experience internal conflict? In S.C. Craig and M.D. Martinez (Eds.), *Ambivalence, politics, and public policy* (Pp. 27-46). New York: Palgrave Macmillan.

Gidengil, E., Fournier, P., Everitt, J., Nevitte, N. & Blais, A. (2009). *Anatomy of a Liberal defeat*. Paper presented at the annual meeting of the Canadian Political Science Association, Ottawa.

Heider, F. (1946). Attitudes and cognitive organization. *The Journal of Psychology*, *21,* 107-112.

Herzon, F.D. (1975). Intensity of opinion and the organization of political attitudes. *The Western Political Quarterly*, *28,* 72-84.

Kaplan, K.J. (1972). On the ambivalence-indifference problem in attitude theory and Measurement: A Suggested Modification of the Semantic Differential Technique. *Psychology Bulletin*, *77,* 361-372.

Katz, D. (1944). The measurement of intensity. In Hadley Cantril (Ed.), *Gauging Public Opinion* (Pp. 51-65). Princeton: Princeton University Press.

Katz, I., and Hass, R.G. (1988). Racial ambivalence and American value Conflict: Correlational and priming studies of dual cognitive structures. *Journal of Personality and Social Psychology*, *55,* 893-905.

Kenski, K.M. (2007). Gender and time of voting decision: Decision certainty during the 2000 presidential campaign. *Journal of Political Marketing, 6,* 1-22.

Kirkpatrick, S.A. (1972). Political attitudes and behavior: Some consequences of attitudinal ordering. In D.D. Nimmo & C.M. Bonjean (Eds.), *Political Attitudes and Public Opinion*, (Pp. 386-404). New York: David M^{c}Kay.

Lavine, H. (2001). The electoral consequences of ambivalence towards presidential candidates. *American Journal of Political Science* 45: 915-929.

Lazarsfeld, P.F., Berelson, B., & Gaudet, H. (1944). *The people's choice: How the voter makes up his mind in a presidential campaign*. New York: Duell, Sloan, and Pearce.

Lazarsfeld, P.F., Berelson, & B. Gaudet, H. (1948). *The people's choice: How the voter makes up his mind in a presidential campaign (second edition)*. New York: Columbia University Press.

Lewin, K. (1951). Field theory in social science. In D. Cartwright (Ed.), *Selected theoretical papers.* New York: Harper & Row.

Lewis-Beck, M., W.G. Jacoby, H. Norpoth & H.F. Weisberg. (2008). *The American voter revisited*. Ann Arbor: The University of Michigan Press.

Lucas, W. & Adams, W.C. (1978). Talking, television and voter indecision. *Journal of Communication*, *28*, 120-131.

MacDonald, T. K., & Zanna, M. P. (1998). Cross-dimension ambivalence toward social groups: Can ambivalence affect intentions to hire feminists? *Personality and Social Psychology Bulletin*, *24,* 427-441.

Martinez, M.D., S.C. Craig & J.G. Kant. (2005). Pros and cons: Ambivalence and public opinion. In Craig, S.C. & M.D. Martinez (Eds.), *Ambivalence and the structure of political opinion*, (Pp. 1-14). New York: Palgrave Macmillan.

M[c]Gregor, R.M., (working paper). Voter sincerity and the time-of-voting-decision.

M[c]Gregor, R.M., (working paper) Validation of time of vote decision recall: Rethinking exclusion criteria and data format.

Meffert, M.F., M. Guge, & M. Lodge. (2004). Good, bad, and ambivalent: The consequences of multidimensional political attitudes. In W. E. Saris & P. Sniderman (Eds.), *Studies in public opinion: Attitudes, nonattitudes, measurement error, and change* (Pp. 63-92). Princeton: Princeton University Press.

Miller, W.E., & J. M. Shanks. (1996). *The new American voter*. Cambridge: Harvard University Press.

Mutz, D. (2002). The consequences of cross-cutting networks for political participation. *American Journal of Political Science*, *46,* 838-855.

Nir, L. (2005). Ambivalent social networks and their consequences for participation. *International Journal of Public Opinion Research*, *17,* 422-442.

Petty, R. E., & Krosnick, J.A. (1995). *Attitude strength: Antecedents and consequences*. Mahwah, NJ: Lawrence Erlbaum.

Plumb, E. (1986). Validation of voter recall: Time of electoral decision making. *Political Behavior*, *8,* 302-312.

Priester, J. R., & Petty, R.E.. (1996). The gradual threshold model of ambivalence: Relating the positive and negative bases of attitudes to subjective ambivalence. *Journal of Personality and Social Psychology, 71,* 431-449.

Raden, D. (1985). Strength-related attitude dimensions. *Social Psychology Quarterly*, *48*, 312-330.

Riedel, J.A., & Dunne, J.R. (1969-70). When the voter decides. *Public Opinion Quarterly, 33,* 619-621.

Scott, W.A. (1968). Attitude measurement, in Gardner, L, E. Aronson (Eds.). *The handbook of social psychology (2nd edition)*. Reading, Mass: Addison-Wesley Pub. Co.

Tesser, A. & Martin, L. (1996). The psychology of evaluation. In Higgins, E.T. & Kruglanski, A.W. (Eds.), *Social psychology: Handbook of basic principles* (Pp. 400-432). New York: Guilford.

Thompson, M. M., Zanna, M. P., & Griffin, D. W. (1995). Let's not be indifferent about (attitudinal) ambivalence. In R. E. Petty & J. A. Krosnick (Eds.), *Attitude strength: antecedents and consequences* (Pp. 361-386). Mahwah, NJ: Lawrence Erlbaum

Tourangeau, R., Rasnki, K.A., Bradburn, N., & D'Àndrade, R. (1989). Carryover effects in attitude surveys. *Public Opinion Quarterly, 53,* 495-524.

UCLA Academic Technology Services, Statistical Consulting Group. *FAQ: What are Pseudo R-squareds?* From http://www.ats.ucla.edu/stat/mult_pkg/faq/general/psuedo_rsquareds.htm (accessed January 11, 2012).

Whitney, D. C., & Goldman, S.B. (1985). Media use and time of vote decisions: A study of the 1980 Presidential election. *Communication Research, 12,* 511-529.

Zaller, J. (1992). *The nature and origins of mass opinion*. Cambridge: Cambridge University Press.

Zaller, J. & Feldman, S. (1992). A simple theory of the survey response. *American Journal of Political Science*, *36,* 579-616.

3 - COGNITIVE DISSONANCE AND POLITICAL ATTITUDES: THE CASE OF CANADA

A substantial share of the literature in the field of voting behaviour is devoted to exploring the impact of political attitudes upon behaviour (see Gidengil, 1992; Blais *et al.*, 2002; Gidengil *et al*., 2009). That is, in attempting to explain vote choice, political attitudes generally are seen as explanatory variables. While psychologists have suggested that causation may run in the opposite direction, or that behaviour can shape attitudes (Bandura, 1989), with few exceptions (see Anderson *et al*., 2004 for one example) political scientists have made relatively little effort to explore this possibility.

If variables such as party evaluations are to be considered when attempting to explain vote choice, it seems appropriate that we should strive to develop an understanding of factors that influence these attitudes. If the act of voting, one's vote choice, election outcomes, or other relevant political factors can influence evaluations of parties, the exact nature of the relationships among these variables is worth examining. Such knowledge has implications that are relevant for research based upon existing data, as well as for survey design. In other words, I argue that vote choice should not be seen only as a dependent variable, and that the effects of the act of voting upon political attitudes should be recognized and studied. If, for example, party evaluations are influenced by one's behaviour, researchers should be aware of this when using such variables to explain behaviour.

Informed by the lessons of cognitive dissonance theory, this article explores the impact of cognitive, affective and behavioural factors upon changes in attitudes towards parties. The fundamental premise of dissonance theory is that individuals are motivated

to seek consistency among their cognitions[40] (Worchel *et al*., 2000). First proposed by Festinger (1957), the theory suggests that when pertinent cognitions are inconsistent (or dissonant) with one another, a sense of psychological discomfort can arise. One way of reducing this discomfort is to alter cognitions (only some of which are malleable) so that they become consistent (or consonant) with one another.[41] Employing pre- and post-election Canadian Election Study (CES) data from 1988, 2004 and 2006, this article explores the circumstances under which dissonance motivates individuals to change their attitudes towards parties. In doing so, this study provides insight into the complex relationship between behaviour, knowledge and beliefs, as well as the dynamic nature of political attitudes.

3.1 - POLITICAL ATTITUDES AND COGNITIVE DISSONANCE

Existing studies have shown that cognitive dissonance theory offers insight into a variety of social phenomenon, including religious behaviour (Festinger *et al*.; 1956), economics (Akerlof and Dickens, 1982; Goetzmann and Peles, 1997), worker productivity (Adams and Rosenbaum, 1962), protection from STDs (Aronson *et al*., 1991) and smoking (Feather, 1962). Interest in this theory developed relatively recently among political scientists interested in the study of elections and voting behaviour. Regan and Kilduff (1988) interviewed voters entering and leaving polling locations during the 1984 American presidential election and found that voting raised assessments of the likelihood of victory for the favoured candidate (the authors attributed this finding to cognitive dissonance). Anderson *et al*. (2004) have explored

[40] Cognitions are defined here are thoughts, pieces of knowledge or beliefs.
[41] Other approaches include making some cognitions unimportant or adding cognitions to bring harmony.

the impact of vote choice upon post-election economic evaluations, while Beasley and Joslyn (2001) and Mullainathan and Washington (2009) have examined the impact that behaviour can have upon evaluations of American presidential candidates. Elinder (2009) has performed a similar study using Swedish data, and Bølstad *et al*. (2010) have examined the impact of voting strategically upon post-election attitudes in Britain. Building upon these works, this article focuses on the role that cognitive dissonance plays in shaping attitudes towards political parties in Canada. More specifically, it explores the role that discomfort caused by dissonance plays in shifting attitudes regarding political parties between pre- and post-election study questionnaires.

Attitudes are defined here as one's perceived favourability or unfavourability towards a specific target (Zanna and Rempel, 1988). They can be influenced by cognitive (knowledge or beliefs), affective (feelings or emotional reactions) and/or behavioural (previous actions or responses) factors (Worchel *et al*., 2000). When asked to assign a rating to parties, individuals draw upon some combination of these cognitions to develop a response.[42]

Party evaluations are ideal measures of attitudes for a study of cognitive dissonance and politics. Regardless of whether voters are partisans or not, attitudes towards parties are known to have a strong relationship with vote choice (Rose and M^{c}Allister, 1990; Blais *et al*., 2002). Since elections force people to choose one alternative and simultaneously reject all others (provided that an individual votes), they provide a good natural experiment through which attitudes before election-day can be compared to those afterward to evaluate the impact that committing to a specific vote choice has upon attitudes. These attitudes are easily measured through surveys, and

[42] Affective and behavioural factors that one is aware of are considered cognitions.

since CES respondents are asked about each party individually, these measures provide a method whereby feelings towards parties can be compared. Moreover, party feeling thermometer questions allow for a significant amount of variation (the CES scale has 101 points), meaning that questions are relatively sensitive to attitude changes.

CES respondents are asked to rate parties once prior to the election, and again afterwards. The difference between the score given to the party voted for and that of the rejected alternatives can be calculated for each of the two sets of questionnaires. This difference is termed here the "evaluative distance" (ED) between alternatives, and it is calculated for each individual point in time. Changes in evaluative distance (ΔED), which are indicative of changes in the relative ratings for parties, can then be calculated by comparing pre- and post-election evaluative distances. Evaluative distances can, and often do, change between questionnaires, and the goal of this article is to evaluate the extent to which dissonance theory is compatible with observed changes in ED.

Elections are seen here as a stimulus for such change, provided that an individual votes. After voting, knowledge of one's behaviour becomes a cognition, which, combined with existing potentially conflicting cognitions (several of which are explored below), can lead to what is termed post-decisional dissonance (Worchel *et al*., 2000). In order to alleviate any discomfort caused by this dissonance, individuals are expected to shift their evaluations of parties so that they are compatible with inalterable cognitions (i.e. facts of which one is consciously aware). This can occur by increasing one's evaluation of the chosen alternative, decreasing the evaluation of the rejected alternatives, or both. Either way, the difference between the ratings of the alternatives increases. This process is termed the "spreading of alternatives" by Festinger (1964),

and can occur even if an individual has a relatively strong initial preference for the party voted for. On the other hand, those individuals who do not vote have no such need to alter their attitudes to correspond with their behaviour; they have avoided any potential dissonance that may arise from the act of voting. The relationship between attitudes and behaviour is thus reciprocal. Pre-election attitudes are factored into vote choice, and potentially even the choice of whether or not to vote, but these choices can influence post-election attitudes in return.

This article explores the influence of a variety of cognitive, affective and behavioural factors which, when triggered by an election and the act of voting, might have an impact upon attitude change. These factors, most of which have not previously been considered in studies of dissonance and political attitudes, include the importance that voters place upon their vote decision, partisan attachment, the effects of any unpleasant effort expended during the political process, and the point in time (relative to election-day) at which a vote choice became final. Additionally, election outcomes, or more specifically, whether one votes for a winning or losing party, are expected to have an impact upon ΔED. Dissonance theory suggests that, when triggered by the act of voting, each of these factors has the potential to influence attitudes towards parties.

This study adds to the existing literature in several additional ways. First, aside from Bølstad *et al*.'s (2010) study (which focuses exclusively upon strategic voters), there has yet to be an investigation of this nature in a multi-party setting with a single member plurality electoral system. This distinction is important, as party or electoral systems and the way in which individuals relate to parties may affect the manner in which the attitudes of citizens change. With respect to the party system, Canadians

have more viable electoral options than do Americans, and partisan attachment is relatively weak and unstable in Canada (Leduc *et al*., 1984). If ratings of parties fluctuate accordingly this provides good reason to expect that dissonance effects will be observable in this setting.

The electoral system may also influence patterns of attitude change. Canadians cast a ballot for candidates at the riding level, but these candidates represent parties at the national level.[43] It is thus possible for an individual to vote for the party that wins nationally *and* a candidate who loses at the local level (or vice-versa). Using Canadian data thus allows for an exploration of the relative impact of local and national level results upon attitude change.

The electoral system also allows for variations in the magnitude of electoral victories. This feature potentially is very important; whereas American presidential elections produce a clear winner (in that presidential power is not shared between parties), Canada's single member plurality system allows for *degrees* of victory. The party with the most seats may or may not win a majority of seats in the House of Commons (which would allow it to govern without compromising with other parties), and the extent of an electoral victory may influence the manner in which attitudes towards parties change. Additionally, even if a party does not win the largest share of seats or votes in a multi-party system, the election potentially may still be seen as a success by the party's supporters (NDP results from the 2011 Federal election provide an example of such a situation). Conversely, a party that wins the most seats may be perceived as a loser if, for example, it loses its majority in the House of Commons.

[43] The exceptions here are independent candidates and candidates from regional parties such as the Bloc Quebecois.

Such variation is worth examining. Accordingly, this article considers an election where the victorious party won a majority of seats in the House of Commons (the 1988 Federal election) and two where no party was able to do so (the 2004 and 2006 elections).

3.2 - SOURCES OF DISSONANCE

Cognitive dissonance research often focuses upon the impact that behaviour can have upon attitude change (this research is often referred to as the "free choice paradigm" in dissonance literature; see Brehm, 1956; Shultz and Lepper, 1996; and Stone, 1999). Once behaviour has occurred, knowledge of the behaviour becomes a cognition. In order to reduce dissonance from a behavioural commitment, individuals who hold attitudes which are incompatible with such behaviour shift those attitudes so that this is no longer the case. The negative aspects of the chosen alternative and the positive aspects of the rejected alternatives become dissonant with that decision. The free-choice paradigm has been used to explain post-decisional attitude change following many types of decisions. This includes research into attitude change after collective decisions made by small groups of individuals (Zanna & Sande, 1987), the devaluing of the attractiveness of alternative partners among individuals in committed relationships (Johnson & Rusbult, 1989) and with respect to different forms of participation in research experiments (Stone, 1999). To reduce dissonance, individuals are expected to alter their impressions of the alternatives, providing more positive (or less negative)

evaluations of the chosen alternative, more negative (or less positive) evaluations of the rejected alternatives, or both (Festinger, 1964).[44]

The act of voting is thus expected to lead to an increase in the evaluative distance between the party voted for and the rejected alternatives. This could translate into an increase in the rating for the chosen alternative after the election and a decrease in the rejected alternatives. However, since it is changes in evaluative distance which are the focus here, this requirement could also be met if all party ratings were to increase (provided that the chosen party's score increases more than those of the alternatives) or decrease (provided that the chosen party's score decreases less than those of the alternatives). To test the expectation that the act of voting influences evaluations of parties, ΔED values of voters are compared to those of non-voters.[45] Those who do not vote do not experience post-decisional dissonance, thus changes in ED should be negative for such individuals, relative to that of voters. The article's first hypothesis thus is as follows:

H1: Voters will exhibit a higher ΔED than will non-voters.

In addition to exploring the impact that the act of voting has upon attitude change, this article examines a number of other factors that dissonance theory predicts should lead to differences in *ΔED* among voters. The influence of these cognitive,

[44] Bem (1967) argues that the impact of behaviour on beliefs may not be caused by cognitive dissonance, but by individuals inferring their opinions from their actions (Bem's theory is referred to as self-perception theory). More recently, however, self-perception theory has waned as an explanation for dissonance phenomena as evidence has amassed that dissonance does indeed cause an unpleasant state of arousal (Zanna and Cooper, 1974; Hogg and Cooper, 2003).

[45] It is well established that some non-voters lie to interviewers and state that they did indeed vote (Silver *et al*., 1986). While there may be instances of this occurring in the cases under examination here, the existence of such individuals would serve to bias results against *H1* (such individuals would be classified as voters, but would not be subject to the same pressure to increase ED that voters are). Given these conditions, the data may provide an underestimation of the relationship posited by H1. Accordingly, misreporting of this type is not considered problematic here.

affective and behavioural factors is triggered by the act of voting and can lead to significant changes in ED. Specifically, the importance one places upon that decision, the amount of unpleasant effort invested in the political process, partisan attachment, the point in time relative to election day that one finalizes a vote decision, and the outcome of elections are expected to influence changes in attitudes towards parties.

Some of these factors (such as partisan attachment) presumably are factored into pre-election party evaluations, vote choice and post-election evaluations, while others have no obvious connection with either party ratings or vote choice (such as the importance that individuals place upon a vote decision). Dissonance theory predicts, however, that each one of these variables has the potential to lead to *changes* in attitudes towards parties after an election has taken place. Findings from existing dissonance research are thus used to inform our understanding of changes in the political attitudes of voters.

To begin with, it is anticipated that changes in ΔED will be influenced by the level of importance voters assign to an election outcome. The more importance an individual assigns to a decision, the greater the potential for dissonance is after the decision is made. Writes Festinger: "The magnitude of post-decision dissonance is an increasing function of the general importance of the decision" (Festinger, 1957: 262). If an outcome is unimportant to an individual there is no need for cognitions to be consonant with one another, as unimportant cognitions are irrelevant and cannot cause discomfort. However, if an individual believes a decision to be of importance, the potential for discomfort is high, and an individual feels more pressure to shift his or her attitudes so that they are compatible with one another. If, for example, an individual

does not believe that the outcome of an election matters since all of the parties are basically the same, he or she is not expected to feel a great deal of pressure to ensure consistency among cognitions. On the other hand, if the outcome does matter to a voter, dissonance will be high and attitudes are expected to shift as a result.

The next expectation relates to the notion of partisan attachment. As described by Campbell *et al*. (1954), partisanship is "the sense of personal attachment the individual feels towards the [party] of [one's] choice" (89) and is traditionally thought to be affective in nature. That is, it relates to feelings or emotional reactions towards political parties. Fiorina (1981) has challenged this view, however, arguing that partisan attachment stems from a rational evaluation or a "running tally" of evaluations of past party performances. Regardless of whether partisanship is affective or cognitive in nature, individuals with a partisan attachment are expected to have an increase in ED after voting for their most preferred party. At the time of the post-election interview, knowledge that one is a partisan (and the fact that one has stated as much to an election study interviewer) becomes a cognition that feeds into the process whereby party scores are determined. Partisanship contributes to a spreading of alternatives, as one must justify not only voting for a particular party, but also the long-standing attachment to that party. Thus, while partisans might be expected to have a high pre-election ED, the act of voting puts pressure on such individuals to increase ED even further after the election (provided that they have not already reached the measure's maximum value, or ceiling).

The remaining hypotheses are based upon relevant political behaviours, the first of which stems from an argument commonly made in the dissonance literature: that

dissonance is aroused when a person engages in an unpleasant activity in order to obtain some outcome that is desirable (Worchel *et al*., 2000; Harmon-Jones and Mills, 2001). The assumption here is that individuals do not like to exert undue effort or to suffer, and as they invest unpleasant effort, the more important the outcome becomes and the greater dissonance becomes after the outcome is known; there is a need to justify sunk costs. Dissonance can be aroused when subjects suspect that they have exerted effort for little purpose (Olson & Stone, 2004). This idea stems from the work of Aronson and Mills (1959), who administered initiations of varying degrees of unpleasantness to individuals who wanted to become members of a group. The authors found that the more unpleasant the initiation, the more desirable group membership became. More recent research has confirmed that effort does indeed cause participants to alter attitudes (see Cooper, 1980; Axsom & Cooper, 1985). In terms of politics, the more unpleasant participation in the political process is, the more desirable individuals see the victory of the party they vote for, and the greater the dissonance they feel if their pre-election attitudes are at all inconsistent with this desire.

The next behavioral hypothesis is based upon the point in time, relative to election day, at which an individual finalizes his or her vote choice. We know from the small amount of existing research on the topic of time-of-voting decision (TOVD) that many voters know long before an election which party or candidate they will support, while others take much longer to arrive at a final decision (Berelson *et al.*, 1954; Campbell *et al.*, 1960; Fournier *et al.*, 2001). While relatively little is known about the effects of TOVD, the expectation here is that those individuals who have early TOVD will have a higher ΔED than will individuals who make up their minds relatively late.

As with partisanship, knowledge that one decided long ago who to vote for becomes a cognition that is factored into post-election party ratings. While early deciders are likely to have a relatively large pre-election ED, they are expected to have a greater increase in ED than are late deciders, when all other factors are held constant. This article thus makes a novel contribution to the literature on TOVD.

Finally, the outcome of an election, and more specifically, the level of success achieved by one's preferred party, is expected to influence ΔED. As with behaviour, one cannot alter the outcome of an election *ex post facto*. Exposure to information has strong motivational properties (Brehm and Cohen, 1962), and Festinger (1957) notes that expressions of disagreement by others can cause dissonance when combined with existing cognitions (such as knowledge of one's voting behaviour). Unlike the hypotheses discussed above, however, the expectation here is that voting for a losing party will lead to a relative *decrease* in ED. Supporters of losing parties are expected to decrease evaluative distance as they realize that they have supported a party that has not received the approval of the rest of the electorate (Granberg and Nanneman, 1986). If one's self-concept is somehow harmed by the knowledge that one supported a losing party this may lead to dissonance (Aronson, 1968). Attitudes can also shift if subjects feel a sense of embarrassment about their actions (such as supporting a losing party) in order to 'save face' in front of the interviewer (Abelson, 1983). In effect, these voters are jumping onto a post-election bandwagon. Beasley and Joslyn (2001) refer to this as outcome-based dissonance, and dissonance of this nature is resolved by rating parties more *similarly* to one another (or decreasing evaluative distance). Findings consistent with the "loser effect" theory have been observed in the American context (see Stricker

1964; Bass and Thomas, 1980; Beasley and Joslyn, 2001; Granberg and Nanneman 1986), but they have yet to be properly explored in a Parliamentary system with more than two parties.

In summary, dissonance is expected to influence voters in the following ways:

H2: As the importance assigned to the vote decision increases, ΔED increases.
H3: Partisans will have a higher ΔED than will non-partisans.
H4: Those individuals who expend unpleasant effort during the political process will have higher ΔED than will those who do not.
H5: Individuals with an early TOVD will have a higher ΔED than will those who decide during the campaign.
H6: Voting for a losing party leads to a relative decrease in ΔED.

3.3 - DATA AND METHODOLOGY

The analysis below proceeds in two stages. The first examines the impact of voting on ΔED by comparing voters to non-voters (this variable is operationalized using a single post-election vote recall question[46]). The expectation is that the former group will exhibit a greater increase in evaluative distance (*H1*). Hypotheses 2 through 6 are then tested by focusing upon voters alone. All hypotheses are evaluated using data from the 1988, 2004 and 2006 Canadian Election Studies.[47] Party evaluation scores are determined through identical questions from the pre- and post-election segments of the

[46] While the percentage of CES respondents who report not voting is much smaller than actual turnout rates from these elections would predict, there remain enough such individuals to yield statistically significant results when this group is compared to voters.
If individuals are indeed influenced by the outcome of an election, they may feel pressure to report their vote choice inaccurately (if, for instance, they voted for a losing party), to state that they did not vote when they actually did (again, if the party they voted for lost the election), or that they did vote when they did not (if they see not voting as socially undesirable). The assumption necessarily made here, however, is that interviewees responded truthfully to the CES questions required for the analysis below.

[47] The reason for limiting this article to these elections warrants a brief discussion. The CES did not have a pre-election component until 1988, so elections held prior to that time cannot be used to explore attitude change. The 2008 CES only contains data on post-election party evaluations for a small fraction (roughly one quarter) of participants, and the 2011 data are not yet available. Finally, elections from 1993 to 2000 are excluded as they were contested by five major parties (the Canadian Alliance and Progressive Conservative Parties merged just prior to the 2004 election). From 2004 onwards, the old (three party) party system returned outside of Quebec, meaning that the results from 1988 can be compared to those from outside that province in 2004 and 2006. See footnote #61 for further discussion on the exclusion of data from Quebec.

CES, where respondents are asked to rate each party on a 101-point scale. The difference between the ratings of the party an individual votes for and the average rating of the parties not voted for are calculated for the pre-election responses, and then compared to post-election responses in order to calculate ΔED.[48]

There is some concern that endogeneity may pose a problem in the first portion of the analysis. In their examination of US presidential elections, Beasley and Joslyn (2001) conclude that the act of voting does indeed have the effect described above. The authors argue that dissonance reduction helps to explain changes in evaluations of presidential candidates between pre- and post-election waves of the American National Election Study. In response to Beasley and Joslyn, however, Mullainathan and Washington (2007) argue that change in evaluative distance is endogenous to the choice of whether to vote or not. They posit that evaluations of parties can contribute to one's decision of whether to vote or not — a strong like or dislike of a candidate can conceivably provide motivation to vote.[49] In essence, the assumption made by Mullainathan and Washington is that the people are less likely to vote if the pre-election spread between alternatives is small. Since pre-election ED is factored into ΔED, causality cannot be assumed to be unidirectional. Is it that people do not vote because

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[48] This formula for this calculation is as follows:
$\Delta\, ED = \left(vote_{post} - opponents_{post}\right) - \left(vote_{pre} - opponents_{pre}\right)$
For instance, if a Conservative voter gives a pre-election rating of 70 to that party, and the average scores for the opposition parties are 30, the initial evaluative distance is 40 points. If in the post-election questionnaire the Conservative rating increases to 75 and the opposition rating decreases to 25, ΔED is +10, or (75-35)-(70-40).

[49] Endogeneity of vote/non-vote decision and other variables has been received ample attention since the publication of Beasley and Joslyn's article. For instance, Gerber *et al*., 2003, and Fowler *et al*., 2008, have explored the impact of voting in previous elections, and the effect of genetics, respectively, upon voter turnout. It thus should be recognized that the decision of whether to vote or not can be influenced by factors present long before an election. However, the goal here is not to explain why individuals vote or abstain. Rather, the point is to evaluate the impact of the act of voting upon ED. Accordingly, while it is recognized here that factors other than initial ED can influence the vote/non-vote decision, consideration of endogeneity is limited to the relationship between the vote/non-vote decision and ED.

they do not see significant differences between parties, or could one's attitudes towards various parties be relatively similar because one is a politically uninterested and disengaged non-voter?[50]

Instead of focusing upon voter turnout, Mullainathan and Washington employ a substitute variable which is independent of voter preferences. They compare changes in the political attitudes of individuals above and below the voting age, assuming that the political attitudes of those too young to vote will change differently over time than will those of individuals who are of voting age. They eventually conclude that cognitive dissonance and the act of voting do indeed have an impact upon attitudes.

In this process, however, the authors simply assume endogeneity, rather than supporting their claim empirically. Making a substitution for the vote/non-vote variable is necessary if one is confident that the endogeneity is indeed a significant concern. Endogeneity can be examined statistically through a two-stage least squares (2SLS) regression, whereby instrumental variables are substituted for the potentially endogenous variable using simultaneous equations. 2SLS can be used to estimate the coefficient of a potentially endogenous regressor (which OLS cannot do), and to explore if the regressor is indeed endogenous. If endogeneity is found to be an issue, 2SLS results can be used to argue that the endogenous variable does (or does not) have a causal impact upon the dependent variable. Otherwise, 2SLS estimates are unnecessary as OLS estimates are considered consistent.

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[50] It should be noted that there are a significant number of individuals with a small pre-election evaluative distance who do vote, and many of those with a relatively high initial ED who do not, so causality aside, the relationship between these factors is far from perfect.
The mean value for pre-election ED for all individuals in 1988 was 27.9. Nonvoting rates were higher among those with an initial ED below the mean (9.2%) than they were among those with an initial ED above that value (6.4%). The corresponding values for 2004 are 32.5, 11.7% and 4.8%, and for 2006 they are 35.9, 7.3% and 4.2%.

Technically speaking, endogeneity is problematic in an OLS model if the explanatory variable is correlated with the error term. If endogeneity is present, OLS results cannot be used to suggest that an independent variable is having a causal impact upon a dependent variable. An instrumental variable can be used to solve this problem, provided that it is correlated with the explanatory variable of concern, but not with the dependent variable (and thus the error term). This approach reduces inconsistency and bias in equation estimates that can be caused by endogeneity (Wooldridge, 2009). The instrumental variable employed here is a measure of whether survey respondents believe that citizens have a duty to vote (Blais, 2000, found that a sense of duty increases the likelihood of voting). As the "duty" variable is unavailable in the 1988 CES, 2SLS is conducted for the 2004 and 2006 elections only.[51]

After running 2SLS regressions, post-estimation commands can be used to explore the strength and validity of the instrumental variables and the endogeneity of the original explanatory variable. If endogeneity is not found to be a problem, Beasley and Joslyn's method can be saved, and Mullainathan and Washington's concern is somewhat[52] allayed. However, 2SLS can be used whether or not endogeneity is present (Wooldridge, 2009). The substitution of instrumental variables inflates the standard error of estimates (relative to OLS results), but if both 2SLS and OLS results produce statistically significant findings, one can be fairly confident that there is indeed a relationship between the dependent variable and the potentially endogenous variable. Endogeneity is evaluated below, and the relationship between voting and changes in evaluative distance is examined using both OLS and 2SLS regression.

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[51] The duty variable is not correlated with the dependent variable here (ΔED). Regressing ΔED onto duty produces p-values of 0.335 and 0.619 respectively for the 2004 and 2006 data.

[52] This caveat is included to account for the probabilistic nature of the statistical methods used here.

The variables used to test *H2-H6* are operationalized using CES questions (Appendix 3-I lists all CES questions used here) and official election results. *H2*, which predicts that the more important a decision is to an individual, the greater the potential for dissonance, is operationalized in two slightly different ways, based upon the availability of CES questions. For 2004 and 2006, this is accomplished through a question on whether individuals agree or disagree with the statement that "all parties are basically the same; there isn't really a choice." If an individual believes that all parties are the same, his or her decision should not be important, since it should not matter who wins the election. However, if the person disagrees with this statement, one's decision *is* important.[53] This question is not asked in 1988, so a series of questions were used as a substitute for this variable. The issue of free trade dominated most of the 1988 campaign (Frizzell *et al*., 1989). CES respondents from that year were asked how strongly they supported or opposed free trade, and which election issue they personally felt to be most important. Over 80% of respondents claimed that free trade was the most important issue. Among this group, the degree to which one supported or opposed free trade is used as a measure of the importance being placed upon the election by that individual.[54] Each major party took a maximalist position on the issue in 1988 (the PC party was in favour of free trade, while the Liberals and NDP opposed it). Those individuals who considered free trade to be the most important election issue, but who did not have strong feelings towards the subject (either in favour or opposed to it) are

[53] Note that in 2004 this question is found in the post-election questionnaire, and thus responses may be influenced by election results and the voting behaviour of individual respondents. This is not an issue in 2006, however, where the question is located in the pre-election questionnaire. This difference is perhaps reflected in the fact that the p-value for this variable is lower in the 2006 model than it is in the 2004 (in the results below).

[54] The fewer than 20% of respondents who did not see free trade as the most important issue in the post-election questionnaire were excluded from the analysis below.

coded here as assigning relatively little importance to the election.[55] The second non-behavioural hypothesis (*H3*), the measure of partisanship, is derived through a single pre-election CES question explicitly pertaining to partisanship, and is coded as a dummy variable comparing loyal partisans to other voters.[56]

The remaining expectations stem from the impact that one's behaviour has upon ΔED. The measure of unpleasant effort, used to test *H4*, differs due to variations in the availability of CES data. In 2004, CES respondents were asked how much difficulty they anticipated in getting to the polling station on election day. The more difficult it is to get to the polls, the greater dissonance is expected to be. This question is absent in 2006, but for this election respondents were asked if they have donated to a political party in the last year. Those individuals who responded positively to this question are considered here to have expended unpleasant effort, and thus dissonance and attitude change are expected to be high for them. This hypothesis is not tested for 1988, as that version of the CES does not include a question about the difficulty of getting to a polling station, and only asks a small subset of interviewees about political donations.[57]

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[55] It might be argued that both importance and initial ED (considered below) are tapping into pre-election ambivalence and that they may be highly correlated with one another. However, a comparison of these variables to one another reveals a correlation of only 0.07 in 1988, 0.12 in 2004 and 0.23 in 2006. Multicollinearity is also not an issue, and the maximum variance inflation factor for either of these variables for any election is only 1.34 (for initial ED in 2006) – values above 10 are generally interpreted as a sign of high multicollinearity. Accordingly, the assumption here is that these variables are tapping into different phenomena. Initial ED is accepted as a measure of how difficult it is for one to make the vote decision, while the 'all parties are the same' variable is a valid measure of the importance an individual assigns to the election (perhaps as an indicator of political cynicism, assuming that cynics are less likely to believe the outcome of an election actually 'matters').

[56] Disloyal partisans are grouped as non-partisans here. Such voters have no need to justify their long-standing attachment to a particular party if they did not vote for it.

[57] In 1988 the 'donate' question is asked as a follow up only to those individuals who say that they have been contacted in the last year by a party looking for donations — less than 20% of respondents had been. This excludes the possibility, however, that people may make donations without first being contacted by parties. Such individuals are not identified in the 1988 data. Focusing only upon those individuals who were contacted by political parties, there is a statistically significant relationship between donating for a party and an increase in ΔED. However, the loss of over 80% of the dataset meant that standard errors were inflated significantly for all other explanatory variables. One alternative measure of this concept

To test *H5*, the TOVD variable, voters are classified as either campaign period or pre-campaign period deciders.[58] This information is obtained through a single post-election CES question, and is validated using M^{c}Gregor's (*working paper*) partially-restrictive method.

Finally, *H6*, the 'losing party' hypothesis, is tested using vote choice dummy variables. To capture variation in election results three federal elections that produced a variety of outcomes are considered here. In 1988 the PC party won its second consecutive majority government, albeit with a reduced number of seats in the House of Commons. In 2004 the reigning Liberal Party lost its majority, and was only able to form a minority government. In 2006 the Conservatives formed the government, but they also failed to win a majority of seats. In addition to testing the impact of voting for the party that loses at the national level, a riding-level variable is also included. Both national and local level variables are thus incorporated in the models below.[59]

Three political parties are considered in the following analysis: the Liberals, Conservatives (or Progressive Conservatives in 1988) and the NDP. Rather than considering only two parties in the calculation of ED (as Elinder, 2009, does in his examination of Sweden's multiparty system)[60] and as necessarily is the case in existing

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considered here was volunteering for a party. This was eventually rejected, however, out of concerns of multicollinearity with the "partisan" variable, as well as the fact that volunteering for a party may not necessarily be seen as "unpleasant" by participants. Accordingly, the 'effort' variable was omitted for 1988.

[58] An alternative approach is to subdivide the "campaign" deciding group into election-day and pre-election-day deciders. While election-day deciders do have a negative ΔED in comparison to earlier campaign deciders, the relatively low number of election-day deciders means that observed differences between these two groups are not statistically significant. Accordingly, these voters are grouped together as campaign period deciders.

[59] Government of Canada results were used to determine riding level outcomes: see www.parl.gc.ca — History of Federal Ridings since 1867.

[60] The Swedish case is complicated because, while the country has many parties (eight are currently represented in the *Riksdag*), these parties have for some time operated as two coalitions and have campaigned as such (the only ones currently excluded from this arrangement are the nationalist Swedish

American studies, the average scores of the *two* parties not voted for are compared to the rating of the party one voted for (so party evaluations from all three parties are considered).[61] Focusing only upon the second-most-favoured party in a multi-party setting could omit important information about attitude change towards the least-favoured party. Moreover, dissonance theory predicts that attitudes towards the two parties not voted for should be influenced in the same manner (i.e. they should both decrease together). In a discussion of decisions involving more than two alternatives, Festinger writes that it "adds very little complexity to the analysis of the dissonances which exists after the decision is made" (1957, 36). This matter, as it turns out, is moot, as when the analysis below is conducted considering only the first and second most preferred parties (i.e. the third party's ratings are ignored), the eventual conclusions are the same.

It must also be noted that, while dissonance theory predicts that evaluative distances should generally increase after one has voted, there are some cases where, between the pre-election questionnaire and election-day, individuals change their mind about their vote choice—such voters are termed "inconsistent" here. These individuals state a preference in the pre-election questionnaire[62] but then report voting for a

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Democrats, or *Sverigedemokraterna*). There are undoubtedly many cases where an individual's second-favourite party would be in the same coalition as one's most favoured party. It is thus not surprising that Elinder found no evidence of the effect of cognitive dissonance on political attitudes in that country.

[61] As Quebec's party system differed from that of the rest of Canada in 2004 and 2006 (the Bloc Quebecois, which only ran candidates in that province, won a majority of seats in Quebec in both elections), only data from outside of Quebec are considered for these years. The presence of the additional party makes data from that province incomparable to that of other provinces. For the sake of simplicity, those who voted for the Green Party or other minor parties are also excluded.

[62] Initial vote preferences are identified through multiple questions on vote intentions. Individuals are first asked who they think they will vote for. If they do not list a party in response to this question they are asked if there is a party they are leaning towards. Those individuals who do not list a party in response to this question are omitted from the analyses below. If these voters had been included, this likely could have biased results heavily in favour of *H1*. Individuals who make up their minds between the pre-election interview and election-day may be influenced by some event during the campaign that

different party when questioned after the election. Beasley and Joslyn (2001) omit inconsistent voters from their study, claiming that such individuals cannot be used to study changes in the strength of one's most preferred option *vis-à-vis* the alternatives if one's most preferred option changes. Among such individuals, according to data from the elections examined here, party ratings generally change significantly, and ΔED is almost always negative. While dissonance theory suggests that the act of voting should have an impact upon evaluative distance for such inconsistent individuals, it does not have any means of explaining why individuals change their minds between questionnaires—there could be many reasons for such a switch. While it is not denied here that a campaign has the potential to influence all voters, among inconsistent voters we can be *certain* that something happened between their pre-election interview and election day that caused them to change their minds. The exclusion of inconsistent voters decreases the possibility that campaign effects can account for observed attitude changes (note that campaign effects are considered in a control variable below). Accordingly, the second part of the analysis below focuses exclusively upon consistent voters — those individuals who eventually vote for the party that they favour in the pre-election questionnaire.

Even among such voters, however, it is possible that the campaign period may have an impact upon attitudes, and thus upon ΔED measurements. The pre-election CES questionnaire employs a rolling cross-section design (a small number of respondents are interviewed each day during the campaign), meaning that the length of time between the pre-campaign interview and election-day can differ substantially

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causes them to make their decision, and in turn potentially shift their evaluations of parties. Including such voters would make it more difficult to isolate the effects of voting. However, these voters are worthy of future study.

among respondents. In an effort to take campaign-period effects into account, a "debate" variable is added as a control to the analysis below.[63] Since leaders' debates are known to have an impact upon political opinions in Canada (Blais and Boyer, 1996; Blais *et al*., 2003), individuals are categorized on the basis of whether they were interviewed before or after the debates.[64] The idea here is to control for the effects of this potentially significant campaign event in order to further isolate the impact of the act of voting.[65]

For several reasons, initial evaluative distance also is included here as a control variable. Due to ceiling and floor effects, individuals who have a large initial ED have less room for evaluative distances to increase after voting. At the most extreme instance, a voter may have an initial evaluative distance of 100, meaning that it is impossible for evaluative distance to increase after the election. Comparing this individual to someone with a small initial evaluative distance is meaningless unless this factor is controlled for. Moreover, including pre-election evaluative distance serves to control for regression towards the mean. Probability theory suggests that stochastic processes should cause some individuals with large evaluative distances to develop less

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[63] The English and French debates are held on separate dates. Individuals are categorized as 'after debate respondents' if their pre-election questionnaire was administered after the second debate. The debates were held on Oct. 24 (French) and Oct. 25 (English) in 1988, June 14 (French) and June 15 (English) in 2004 and Dec. 15 (English) and Dec. 16 (French) in 2006.

[64] An alternative to this approach would have been to include a control variable that indicates the number of days between a respondent's pre-election interview and election-day, under the assumption that the longer this period is, the greater the potential for campaign effects to influence ΔED. There are no noteworthy changes to the results below when this alternative control is substituted for the "debate" variable.

[65] Average ΔED was higher for those individuals interviewed prior to the debates for all three elections. However, only in one election (2006) was this difference statistically significant, and even then this was only true at the 90% confidence level. The potential impact of differences in the date of the pre-election interview upon ΔED was also tested for each election through simple models containing an interaction of the vote variable and the debate variable (results not shown). The coefficients for this variable were statistically insignificant for each election, which suggests that the relationship between voting and ΔED is not influenced by pre-election interview date.

extreme evaluative distances after an election (Beasley and Joslyn, 2001; Campbell and Kenny, 1999). Controlling for pre-election ED accounts for this phenomenon.

Dissonance theory itself also predicts that initial evaluative distance should be related to ΔED. Festinger argues that difficult decisions should arouse more dissonance than should easy ones (Festinger, 1957; Harmon-Jones and Mills 1999). If an individual holds a similar opinion towards the options before him or her, the pressure to reduce dissonance should be significant after a decision is made. For example, if an individual were to give all parties a positive rating, the positive ratings of the parties that person does not vote for become dissonant with his or her voting behaviour. There thus is greater motivation to reduce dissonance after a difficult decision than after an easy one. In other words, if an individual is conflicted, or ambivalent prior to making a choice (this ambivalence may even be considered a cognition), after that decision is made the individual is expected to reduce dissonance by changing his or her attitudes to make them compatible with the decision. This type of ambivalence is termed a "native inconsistency" by M^{c}Gregor *et al*. (1999). Rather than being induced by a researcher, or influenced by the act of voting, these cognitive inconsistencies occur naturally, and they can have a significant impact upon attitude change after a stimulus such as an election. However, as it is impossible to disentangle the impact of dissonance from that of probabilistic regression towards the mean and ceiling and floor effects, initial evaluative distance is included here as a control only.

3.4 - RESULTS

The first goal of this article is to establish a relationship between the act of voting and attitude change in a multi-party single member plurality system. Table 3-1 contains three OLS models for each election under study, with ΔED as the dependent variable. This variable has a potential range from -200 to +200, but these exterior values are never approached in practice (relevant descriptive statistics are listed in Appendix 3-II). For each election Model 1 shows results with consistent and inconsistent voters grouped together (the base here is "voter"), while Model 2 differentiates between these two types of voters (the base thus becomes "consistent" voters). Model 3 contains 2SLS results. The "debate" variable and initial evaluative distance are included as controls in all models.[66]

[66] Data are not weighted, as they need not be representative of the population in order to explore the relationship between voting and attitude change. When data are weighted, however, the results differ only slightly and the study's conclusions remain unchanged.

TABLE 3-1: VOTING VS. ΔED

		Model 1	Model 2	Model 3
	Non-voter	**-4.47(1.63)[c]**	**-8.17(1.52)[c]**	
	Inconsistent voter		-20.92(1.18)[c]	
	Debate	0.68(.89)	-0.56 (0.83)	
1988	Initial ED	-0.46(.02)	-0.53(.02)[c]	*N/A*
	Constant	8.36(0.87)[c]	14.47(.87)[c]	
	N	1879	1879	
	R-Squared	.2225	.3346	
	Non-voter	**-6.11(1.93)[c]**	**-9.49(1.84)[c]**	**-17.20(9.96)[a]**
	Inconsistent voter		-20.46(1.58)[c]	-21.44(1.98)[c]
	Debate	-0.01(1.14)	-1.04(1.09)	-1.16(1.09)
2004	Initial ED	-0.31(.02)[c]	-0.37(.02)[c]	-0.39(0.03)[c]
	Constant	11.09(.99)[c]	16.01(1.00)[c]	17.33(1.88)[c]
	N	1385	1385	1382
	R-Squared	.1085	.2045	.1978
	Non-voter	**-6.51(1.96)[c]**	**-8.76(1.91)[c]**	**-15.16(7.71)[b]**
	Inconsistent voter		-15.46(1.46)[c]	-15.99(1.59)[c]
	Debate	-1.12(.99)	-1.82(.96)[a]	-1.70(.96)[a]
2006	Initial ED	-.33(.02)[c]	-0.38(.02)[c]	-0.39(.02)[c]
	Constant	8.21(1.11)[c]	12.36(1.14)[c]	12.97(1.45)[c]
	N	1701	1701	1690
	R-Squared	.1329	.1862	.1823

Entries report coefficients and standard errors (in parentheses). a: β significant at p <.10, b: β significant at p < .05, c: β significant at p <.01

The results in Table 3-1 provide solid support for *H1*. In all models, the coefficient for the non-voter variable is negative and statistically significant, meaning that those individuals who do not vote tend to have a negative change in ED relative to that of voters (in the case of Model 1) and consistent voters (in the case of Models 2 and 3).[67] The magnitude of the non-voter coefficient increases when consistent and

[67] While dissonance introduced by the act of voting is expected to exert an upward pressure upon ΔED, *H1* can still hold in instances where ratings of the party voted for decrease, if ratings of the rejected alternative decrease, or where ΔED tends to be negative for voters. Dissonance is only one of many factors that may influence party ratings, so it cannot be assumed that ratings of the party voted for will necessarily increase and ratings of the rejected alternatives will decrease after an individual has voted.

inconsistent voters are treated separately. The fact that the non-voter coefficients in Model 1 are statistically significant, and in the anticipated direction, provides strong evidence of the relationship between voting and ΔED, as the inclusion of inconsistent voters serves to bias these coefficients upwards. Unsurprisingly, inconsistent variables for Model 2, for all years, have negative coefficients of a large magnitude.

2SLS results (Model 3) are also congruent with this *H1*. 2SLS regressions should be interpreted in the same manner as the OLS models (the effects of the instrumental variable are shown through the "non-voter" results in Table 3-1). In both 2004 and 2006 the non-voter coefficient remains negative, as expected, reinforcing the claim that the act of voting does indeed lead to an increase in ΔED, and postestimation diagnostics suggest that the "duty" variable is a valid substitute for abstention.[68] However, the level of statistical significance of the non-voter coefficients is lower in the 2SLS results than in the comparable OLS models (model 2). The level of statistical significance decreased from the 99% level in both versions of model 2 to 90% and 95% in model 3 for 2004 and 2006 respectively. As mentioned above, one drawback of 2SLS is that it produces estimates that are less efficient than those produced by OLS (unless the instrumental variables perfectly explain the potentially endogenous variable) (Murray, 2006). As a result, the standard errors for the non-vote variable are relatively

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There may be instances (such as a particularly nasty campaign, for example) where attitudes towards parties in general (including the party voted for) decrease or increase after an election. Negative changes in ED for voters also are not incompatible with dissonance theory. As long as ratings of the party voted for decrease less than those of the rejected alternatives, and ΔED is negative for inconsistent voters relative to consistent voters, *H1* can be accepted. Similar logic applies to the other hypotheses explored here. For example, while dissonance theory predicts that ED should decrease for supporters of losing parties, this expectation would still be compatible with the observation that ED increases for such voters, provided that this increase is less than that experience by individuals who voted for the winning party. Simply put, *H1* receives support if the "non-voter" coefficients in Table 1 are negative.

[68] F-statistic values from the first stage of the 2SLS (which are indicative of the strength of the relationship between the potentially endogenous variable and the instrument) are 111.9 and 49.3 for the 2004 and 2006 data respectively. Values above 10 generally are considered sufficient to reject the null hypothesis that an instrument is a weak substitute (Stock *et al*., 2002).

high in the 2SLS models. Despite the loss of confidence, the probability of results from these two elections suggesting a relationship between abstaining and changes in evaluative distance, when such a relationship does not exist, is less than 0.5%.[69] Accordingly, as is the case with the OLS models, the 2SLS results support the expectation that the act of voting causes an increase in ED.[70] The act of voting does indeed appear to have the anticipated positive impact upon ΔED.

Now that the relationship between ΔED and the act of voting has received significant support, the remaining hypotheses can be examined. If this relationship had not been confirmed, it would be very difficult to argue that these other factors can influence attitudes when triggered by the act of voting. *H2-H6* are tested through a model for each election, where once again the dependent variable is ΔED.[71] Due to the manner in which the data are coded, the coefficients for the theoretical variables are expected to be positive, with the exceptions of the vote choice variables for the losing parties at the national and local level (the winning party serves as the national level vote choice base). OLS results are shown in Table 3-2.

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[69] A more precise estimate of the chances of a relationship not actually existing here is 0.41% (determined by multiplying the p-values for the non-voter variable from the two elections).

[70] As noted above, 2SLS is only necessary when a researcher is confident that endogeneity is indeed an issue. A Hausman test of exogeneity was conducted to evaluate whether endogeneity is indeed a problem here. The test evaluates the difference between OLS and 2SLS estimators, and if the difference is found to be statistically significant, OLS results are to be considered inconsistent, and 2SLS results are to be used. The null hypothesis of the test is that potentially endogenous variable is exogenous, thus while the test cannot confirm endogeneity, it *can* reject exogeneity. The test produces p-values of 0.40 and 0.43 for 2004 and 2006 respectively. Accordingly, endogeneity has not been proven to be a statistical problem here. For those unconvinced by the results of this test, however, 2SLS provide strong evidence that the act of voting does indeed lead to an increase in evaluative distance.

[71] Initial ED is coded on a scale from -100 to 100, while all other variables range from 0 to 1. Partisanship, TOVD, vote choice and the 'debate' variables are dummies, while the 'importance' variable is ordinal. The effort variable is ordinal in 2004, and binary in 2006.

TABLE 3-2: CORRELATES OF ΔED

		1988	2004	2006
Cognitive	Importance of Vote	9.34 (1.72) [c]	3.17 (2.16)*	4.00 (1.53) [c]
Affective	Partisanship	3.50 (1.18) [c]	7.18 (1.61) [c]	3.33 (1.19) [c]
Behavioural	Unpleasant Effort		7.91 (3.68) [b]	5.10 (1.52) [c]
	Pre-campaign TOVD	4.08 (1.11) [c]	2.51 (1.44) [a]	3.78 (1.13) [c]
	Supported Losing Local Candidate	-3.19 (1.06) [c]	0.19 (1.39)	-0.03 (1.00)
	Liberal Voter	-5.71 (1.23) [c]	*base*	-7.90 (1.11) [c]
	(Progressive) Conservative Voter	*base*	3.12 (1.47) [b]	*base*
	NDP Voter	-2.82 (1.39) [b]	1.38 (1.97)	-3.12 (1.36) [b]
Controls	Debate (After)	0.82 (1.07)	-0.25 (1.43)	-1.70 (1.03)
	Initial ED	-0.57 (0.03) [c]	-0.38 (0.03) [c]	-0.47 (0.01) [c]
	Constant	7.62 (1.79) [c]	5.00 (2.38) [b]	10.38 (1.73) [c]
	N	1028	702	1311
	R-Squared	0.3384	0.1724	0.2198

Entries report coefficients and standard errors (in parentheses).
a: β significant at p <.10, b: β significant at p < .05, c: β significant at p <.01, *: p = 0.14

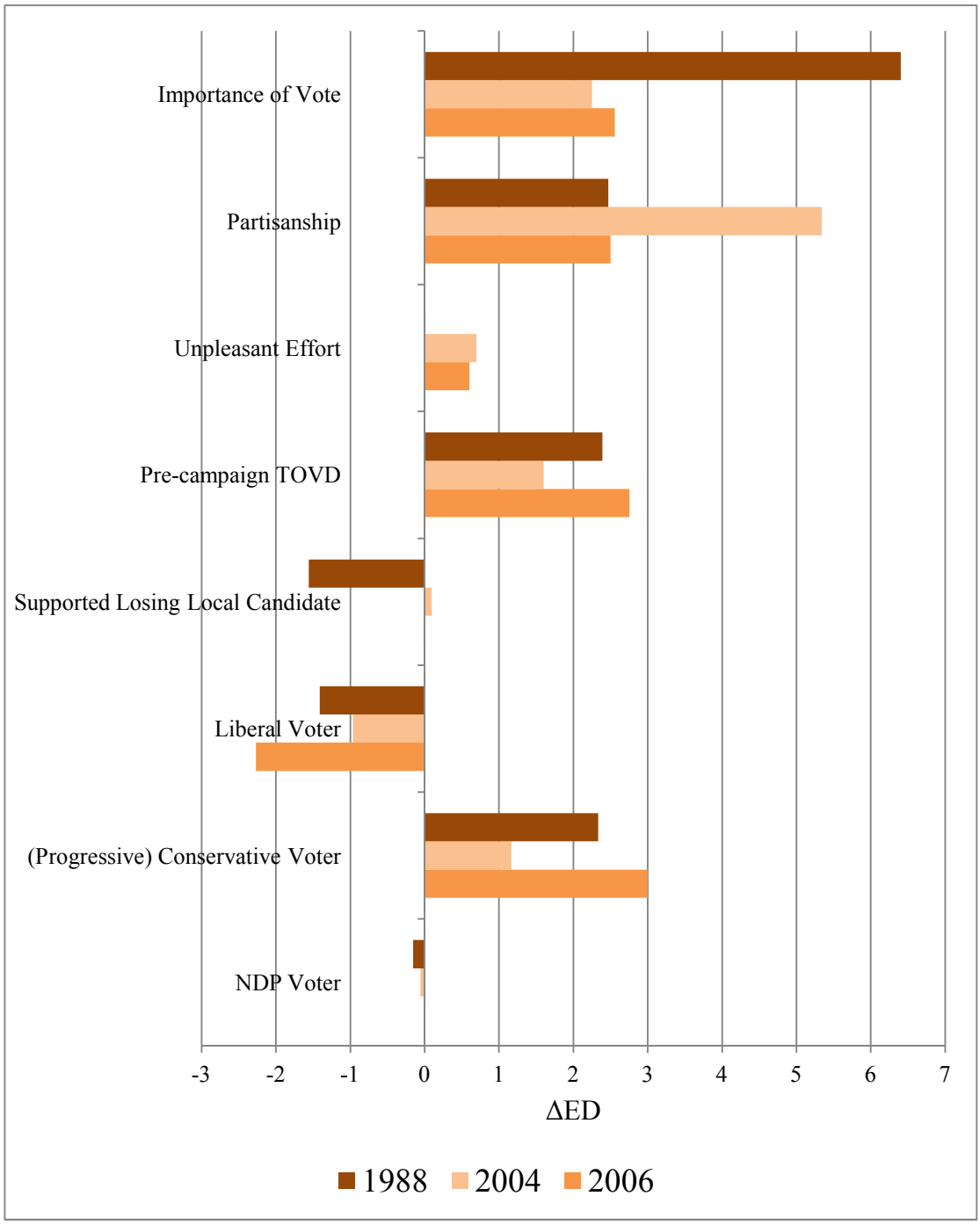
While regression coefficients provide an indication of the *potential* that each explanatory variable has to influence attitude change (*ceteris paribus*, a large coefficient indicates a large potential), they do not express exactly how much of an impact each variable is *actually* having. In other words, they cannot convey how different the outcome would be had each variable not mattered. The actual impact of each variable upon population wide ΔED trends is a function not only of the coefficient size, but also the share of the population that exhibits the characteristics considered in Table 3-2. Even if a variable has the potential to have a large impact upon ΔED, if few individuals exhibit this characteristic, it may be relatively unimportant in explaining an aggregate level outcome. The actual impact of each explanatory variable is determined here using post-estimation, setting each respective explanatory variable to its minimum value, while holding all other variables at their present values, and then comparing predicted to actual average values of ΔED. This difference reflects the manner in which ΔED would

differ if each individual variable had not mattered to respondents, and thus is indicative of the actual impact that these variables are having upon attitude change.[72] Figure 3-1 expresses the magnitude (through the length of each bar) and direction of the influence (bars to the right of the centre line indicate that ΔED is higher than it would have been had a factor been irrelevant) for each variable. For example, a bar that goes to a value of *X* means that average actual ΔED values are *X* points higher than it would have been if that variable had been irrelevant. The results for the party choice variables should be interpreted as the difference between the average ΔED values predicted if no one in the sample had voted for that party and the actual average ΔED value.[73]

[72] Predicted values are shifted to control for the mean predicted value for ΔED for each election, thus making the results of the three elections comparable (aggregate ΔED values vary slightly from election to election).

[73] The impact of party vote choice variables are determined by setting values of each respective party to zero, as well as changing values for the other two parties to reflect the relative proportion of the vote share received by these two parties.

FIGURE 3-1: IMPACT OF EXPLANATORY VARIABLES UPON ΔED



Hypotheses 2-6 receive varying levels of support from the above results. The importance of one's vote decision (*H2*) has a statistically significant impact upon ΔED,

in the expected direction, in 1988 and 2006. In fact, this variable has the greatest impact upon changes in evaluative distance of any variables considered in Figure 3-1.[74] Perhaps surprisingly, this variable falls just short of statistical significance in 2004 (p=0.14). This may be in part because, unlike in 1988 and 2006, the question used to operationalize this variable is located in the post-election segment of the CES, and responses may have somehow been influenced by the election. One way to reduce dissonance is to downplay the relative importance of some cognitions, and an election result that conflicts with one's preferences may cause some individuals to downplay the importance of the decision, or the election itself.

The lone affective variable considered here, Partisanship (*H3*), displays a positive and highly significant relationship with ΔED in all elections. A sense of personal attachment towards a party leads to an undeniable increase in ΔED once one votes for that party. This variable also had a relatively large impact upon population level ΔED, especially in 2004.

The data also reveal that those individuals who exerted unpleasant effort during the political process had a higher ΔED than those who did not (*H4*). This applies in 2004, where this variable is based upon how difficult it is for an individual to get to his or her polling station, and in 2006, where it is based upon making financial donations to a party. Such individuals are motivated to increase ED after voting in order to justify their effort. Despite the fact that the OLS coefficients for this variable are relatively high, however, this factor has very little actual impact upon ΔED — the bars for this

[74] Care should be taken when comparing the impact of this factor from one election to the next, as this variable is operationalized differently in 1988 than it is in 2004 and 2006.

variable in Figure 3-1 both have a magnitude of less than 1 unit (reflecting the fact that few respondents expended unpleasant effort of this type in these years).

H5, which posits that an early TOVD should be associated with a positive ΔED, also receives support from the above results. All other things equal, an early TOVD is associated with a positive ΔED, for all three elections. Those individuals who have long known who they would vote for need to reconcile the knowledge of their early TOVD with their attitudes towards parties. The act of voting serves to reinforce the preferences of early deciders.

In contrast to these positive findings, the expectation that supporters of losing parties should experience a relative decrease in ED (*H6*) receives only mixed support from the data. With respect to the local level, only in 1988 did voting for a party that lost in one's riding have an independent impact upon ΔED. This variable had no discernable influence in either 2004 or 2006. The fact that these results conflict so strongly with one another (p = 0.003 in 1988, but the coefficient for this variable is positive in 2004, and, while in the anticipated direction in 2006, p is only 0.974) is somewhat surprising, as dissonance theory provides no reason to expect such large differences in the influence of riding level results from year to year. Although future work is required to properly explore this finding, these results could suggest that the importance of local politics may have declined relative to that of the national level between 1988 and 2004.[75]

National level data are similarly mixed with respect to *H6*. The results in Figure 3-1 suggest that, in all three elections, Liberal voters dragged down the population

[75] The interaction of the national and local 'loser' terms (representing those individuals who voted for a party that lost both locally and nationally) produced statistically insignificant results for all three elections.

average value for ΔED, while Conservative voters drove this variable up. Predicted ΔED values for each party are displayed in Table 3-3 (values are centred around the mean value of ΔED for each year).[76]

TABLE 3-3: PREDICTED IMPACT OF PARTY CHOICE UPON ΔED

	1988	2004	2006
Liberal Voter	-3.51	-1.63	-4.76
(Progressive) Conservative Voter	2.19	1.49	3.14
NDP Voter	-0.62	-0.25	0.02

Conservative voters have the highest average ΔED of the three parties in all three elections, despite the fact that this party placed second in 2004. Liberal voters, on the other hand, experienced a relative decrease in ΔED after all three elections, even though the party won a plurality of seats in 2004. The predicted ΔED of NDP supporters differed very little from the population average in any election.[77] Though unexpected, Liberal and Conservative results from 2004 should not necessarily invalidate *H6*. Being reduced from a majority to a minority in the House of Commons may have caused some voters to view the outcome of the election as a loss for the Liberals (who had held a majority of seats in the House of Commons since 1993), and even perhaps as a win for the Conservatives. It is conceivable that one's perception of how well one's preferred party has performed may be influenced by past results. If so, the Conservative increases and Liberal decreases observed in 2004 are not that surprising. Liberal voters may have been disappointed by the election results, while Conservative voters may have been relatively satisfied. Future work can be conducted

[76] As above, these values are determined through post-estimation, manipulating the vote choice variable and keeping all other values unchanged.
[77] With the exception of Liberal and NDP voters in 2004, differences in ΔED by party were statistically significant at the 95% confidence level or greater.

to explore whether this result is reproduced in similar situations (for example, the 2011 election may be worth examining, as although the NDP did not win the election, the party achieved its best-ever result).

3.5 - CONCLUSION

Despite the partial failure of *H6*, dissonance theory remains largely congruent with observed changes in attitudes towards parties. The act of voting does indeed appear to cause a shift in attitudes, thus confirming the findings of Beasley and Joslyn (2001) in the Canadian context. Additionally, the other cognitive, affective and behavioural factors explored here have all been found to have statistically significant relationships with attitude change. The importance one assigns to a vote decision, partisan attachment, expending unpleasant effort, TOVD and the outcome of an election *vis-à-vis* one's vote choice all have an impact upon attitude change.

Additionally, the impact of voting-induced dissonance upon attitudes has been shown to be sizeable. According to the 2006 model in Table 3-2, for instance, an individual who considers the election to be important, is a partisan, exerts unpleasant effort, and is an early-deciding Conservative voter is expected to have a change in ED of +7.5 points. In contrast, one who believes one's decision to be unimportant, is non-partisan, exerts no unpleasant effort, has a late TOVD and votes Liberal has ΔED of -16.6.[78] These results represent a swing of 24.1 points, and the 1988 and 2004 elections

[78] Negative values for ΔED can be the result of voting for a losing party (*H6*), but it should be stressed that there are other factors, not explored here, which could also lead to negative changes in ΔED. The models above include variables related to dissonance theory, but they cannot perfectly explain ΔED (the R-Squared values from Table 3-2 range from 0.17 to 0.34). The goal here is not to explain population level ΔED patterns; rather it is to compare individuals who exhibit the factors explored by *H2-H6* to those who do not. These comparisons produce results which are generally compatible with dissonance theory.

produce similar findings. Individuals who exhibit the cognitive, affective and behavioural characteristics which dissonance theory predicts should lead to an increase in ΔED (when triggered by the act of voting) have very different patterns of attitude change than do individuals who do not.

While the finding that political attitudes can be influenced by one's behaviour, election results, and other political attitudes perhaps is not surprising, it is important to develop an understanding of how exactly these factors interact with one another. This article has used dissonance theory to explore the causal relationships between some of these factors. In doing so, it has offered insight into the mechanism by which cognitions, when triggered by an election, can influence one's attitudes towards parties. Nevertheless, while dissonance theory goes a long way in explaining changes in political attitudes, more research is required to develop a fuller understanding of other causal mechanisms linking political attitudes to behaviour, as well as with other cognitive and affective factors.

Finally, the results above suggest strongly that, when attempting to explain vote choice, researchers must be conscious of the impact that an election can have upon subjective measures such as attitudes towards parties. While pre-election party evaluations can be used to explain vote choice, vote choice can, in turn, be used to explain post-election party evaluations. Responses to subjective survey questions may differ substantially depending upon whether they are measured prior to or after an election, and endogeneity will almost certainly be a concern when post-election data are

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Future work can investigate what types of individual-level factors make some voters more resistant or susceptible to dissonance.

employed.[79] As an illustration, explaining vote choice using a logistic regression model for each party reveals significant differences in pseudo-R^2 values when models that use pre-election party ratings as independent variables are compared to those that employ post-election ratings (party evaluations are the only explanatory variables considered in this example). Using 2006 data, when Conservative vote choice is the dependent variable the R^2 value is 0.58 when pre-election party ratings are the explanatory variables, but this value increases to 0.64 when post-election data are employed. Liberal (0.40 versus 0.43) and NDP (0.33 versus 0.37) results display a similar pattern.[80] These differences suggest that the use of post-election data can introduce serious bias into vote choice models. Thus, the final lesson to be taken from this article is that great care must be taken when using data collected after an election has taken place; whenever possible, subjective data should be gathered prior to election day.

[79] Anderson *et al.* (2004) have already confirmed this with economic evaluations — future work is needed to see if this applies to other factors as well, such as policy preferences, and whether and how the effects of cognitive dissonance can be controlled for.

[80] All coefficients in all models are statistically significant at the 99% confidence level.

3.6 - BIBLIOGRAPHY

Abelson, R. P. (1983). Whatever Became of Consistency Theory? *Personality and Social Psychology Bulletin, 9*, 37-54.

Adams, J.S & Rosenbaum, W.B., (1962). The relationship of worker productivity to cognitive dissonance about wage inequities. *Journal of Applied Psychology, 46*, 161-164.

Akerlof, G.A., & Dickens, W.T. (1982). The economic consequences of cognitive dissonance. *The American Economic Review 72*, 307-319.

Anderson, C.J., Mendes, S.M., & Tverdova, Y.V. (2004). Endogenous economic voting: Evidence from the 1997 British election. *Electoral Studies, 23*, 683-708.

Aronson,E. & Mills, J., (1959). The effect of severity of initiation on liking for a group. *Journal of Abnormal and Social Psychology, 59*, 177-181.

Aronson, E., (1968). Dissonance theory: Progress and problems. In: Aronson, E., Abelson, R., M^{c}Guire, W, Newcomb, T., Rosenberg A. & Tannenbaum, P. (Eds), *Theories of cognitive consistency: A sourcebook*, pp 5-27. Chicago: Rand-M^{c}Nally.

Aronson, E., Fried, C.B., & Stone, J. (1991). Overcoming denial and increasing the intention to use condoms through the induction of hypocrisy. *American Journal of Public Health*, *81*, 1636-1638.

Axsom, D., & Cooper, J. (1985). Cognitive dissonance and psychotherapy: The role of effort justification in inducing weight loss. *Journal of Experimental Social Psychology, 21*, 149–160.

Bandura, A., (1989). Social cognitive theory. In: Vasta, R. (Ed.), *Six theories of child development,* pp. 1-60). Greenwich: JAI Press.

Bass, L. & Thomas, D. (1980). Dissonance and perception during a presidential campaign: Pre- and post-election findings from the Carter-Ford Contest. *Journal of Social Psychology*, *112*, 305-306.

Beasley, R. & Joslyn, M., (2001). Cognitive dissonance and post-decision attitude change in six presidential elections. *Political Psychology*, *22*, 521-540.

Bem, D.J., (1967). Self-Perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review*, *74*, 183-200.

Berelson, B.R. , Lazarsfeld, P.F., & M^{c}Phee, W.N. (1954). *Voting*. Chicago: University of Chicago Press.

Blais, A. (2000). *To vote or note to vote: The merits and limits of rational choice Theory.* Pittsburgh: University of Pittsburgh Press.

Blais, A. & Boyer, M. M., (1996). Assessing the impact of televised debates: The case of the 1988 Canadian Election. *British Journal of Political Science, 26*, 143-164.

Blais, A., Gidengil, E., Nadeau, R., & Nevitte, N. (2002). *Anatomy of a Liberal Victory: Making Sense of the 2000 Canadian Election*. Peterborough: Broadview Press.

Blais, A., Gidengil, E., Nadeau, R., & Nevitte, N. (2003). Campaign dynamics in the 2000 Canadian election: How the leader debates salvaged the Conservative party. *Political Science and Politics*, *36*, 45-50.

Brehm, J.W. (1956). Postdecision changes in the desirability of alternatives. *Journal of Abnormal and Social Psychology*, *52*, 384-389.

Brehm, J. W., & Cohen, A. R., (1962). *Explorations in Cognitive Dissonance*. New York: John Wiley & Sons.

Bølstad, J., Dinas, E., Riera, P. & Mayoral, J.A. (2010). Tactical voting and party preferences: A test of cognitive dissonance theory. *Paper under review.*

Campbell, A, Gurin, G., & Miller, W.E. (1954). *The Voter Decides*. Evanston, Row, Peterson.

Campbell, A., Converse, P.E., Miller, W.E., & Stokes, D.E. (1960). *The American Voter*. Chicago, University of Chicago Press.

Campbell, D.T. & Kenny, D.A. (1999). *Primer on regression artifacts*. New York: Guilford Press.

Clarke, H.D. & Stewart, M.C., (1987). Partisan inconsistency and partisan change in federal states: The case of Canada. *American Journal of Political Science*, *31*, 383-407.

Cooper, J. (1980). Reducing fears and increasing assertiveness: The role of dissonance reduction. *Journal of Experimental Social Psychology, 16*, 199–213.

Elinder, M., (2009). Correcting Mistakes: Cognitive Dissonance and Political Attitudes in Sweden and the United States. *Working paper*, Uppsalla Universitet Department of Economics, 2009:12.

Feather, N.T. (1962). Cigarette smoking and lung cancer: A study of cognitive dissonance. *Australian Journal of Psychology, 14*, 55-64.

Festinger, L., Riecken, H.W. & Schachter, S. (1956). *When prophecy fails: A social and psychological study of a modern group that predicted the end of the world.* Minneapolis: University of Minnesota Press.

Festinger, L. (1957). *A theory of cognitive dissonance*. Evanstan: Row, Peterson.

Festinger, L. (1964). *Conflict, Decision, and Dissonance*. Standord: Stanford University Press.

Fiorina, Morris P. (1981). *Retrospective Voting in American Elections*. New Haven: Yale University Press.

Frizzell, A., Pammett, J.H., & Westell, A. (1989). *The Canadian general election of 1988*. Ottawa: Carleton University Press.

Fournier, P. Nadeau, R., Blais, A, Gidengil, E. & Nevitte, N. (2001). Validation of time-of-voting-decision recall. *Public Opinion Quarterly*, *65*, 95-107.

Fowler, J.H., Baker, L.A., & Dawes, C.T. (2008). Genetic variation in political participation. *American Political Science Review, 102*, 233-248.

Gerber, A.S., Green, D.P., & Scachar, R. (2003). Voting may be habit forming: Evidence from a randomized field experiment. *American Journal of Political Science, 47*, 540-550.

Gidengil, E. (1992). Canada Votes: A Quarter Century of Canadian Election Studies. *Canadian Journal of Political Science, 25*, 219-248.

Gidengil, E., Fournier, P., Everitt, J., Nevitte, N. & Blais, A. (2009). *The Anatomy of a Liberal Defeat*. Paper prepared for presentation at the annual meeting of the Canadian Political Science Association, May 2009, Ottawa.

Goetzmann, W. N. & Peles, N. (1997). Cognitive dissonance and mutual fund investors. *Journal of Financial Research, 20*, 145–158.

Government of Canada. *History of Federal Ridings since 1867*. Online: <http://www.parl.gc.ca/About/Parliament/FederalRidingsHistory/hfer.asp?Language=E&Search=G>. Accessed May 2, 2011.

Granberg, D. & Nanneman, T., (1986). Attitude Change in the Electoral Context as a function of expectations not being fulfilled. *Political Psychology*, *7*, 753-765.

Harmon-Jones, E. & Mills, J. (1999). An introduction to cognitive dissonance theory and an overview of current perspectives on the theory, Harmon-Jones, E. and Mills, J, (Eds.), *Cognitive Dissonance: Progress on a pivotal theory in social psychology*, (pp. 3-24). Washington: American Psychological Association.

Hogg, M. & Cooper, J. (2003). *The SAGE Handbook of Social Psychology*. Sage Publications, London.

Johnson, D. J., & Rusbult, C. E. (1989). Resisting temptation: Devaluation of alternative partners as a means of maintaining commitment in close relationships. *Journal of Personality and Social Psychology, 57*, 967–980.

Leduc, L., Clarke, H.D., Jenson, J., & Pammett, J.H. (1984). Partisan instability in Canada: Evidence from a new panel study. *The American Political Science Review*, *78*, 470-484.

M^{c}Gregor, R.M., (working paper) Validation of time of vote decision recall: Rethinking exclusion criteria and data format.

M^{c}Gregor, I., Newby-Clark, I.R., & Zanna, M.P. (1999). Remembering Dissonance: Simultaneous accessibility of inconsistent cognitive elements moderates epistemic discomfort, in Harmon-Jones, E. and Mills, J, (Eds.), *Cognitive Dissonance: Progress on a pivotal theory in social psychology* (Pg. 325-353). Washington: American Psychological Association.

Mullainathan, S. & Washington, E. (2009). Sticking with Your Vote: Cognitive Dissonance and Political Attitudes. *American Economic Journal: Applied Economics, 1*, 86-111.

Murray, M.P. (2006). Avoiding Invalid Instruments and Coping with Weak Instruments. *Journal of Economic Perspectives*, *20*, 111-132.

Olson, J.M. & Stone, J. (2004). The Influence of Behavior on Attitudes. In D. Albarracin, Johnson, B.T., & Zanna, M.P. (Eds.) *The handbook of attitudes* (pp. 223-271). Mahwah, NJ: Erlbarum.

Regan, D., & Kilduff, M. (1988). Optimism about elections: Dissonance reduction at the ballot box. *Political Psychology*, *9*, 101-107.

Rose, R., & M^{c}Allister, I. (1990). *The loyalties of voters: A lifetime learning model*. London: Sage Publications.

Shultz, T. R., & Lepper, M. R. (1996). Cognitive dissonance reduction as constraint satisfaction. *Pscyhological Review, 103*, 219-240.

Silver, B.,D., Anderson, B., & Abramson, P.R., (1986). Who overreports voting? *American Political Science Review*, *80*, 613-24.

Stock, J., Wright, J. & Yogo, M. (2002). A survey of weak instruments and weak identification in generalized method of moments, *Journal of the American Statistical Association, 20*, 518–29.

Stone, J. (1999). What Exactly Have I Done? The Role of Self-Attribute Accessibility in Dissonance, in Harmon-Jones, E. and Mills, J, (Eds.), *Cognitive Dissonance: Progress on a pivotal theory in social psychology* (pp. 175-200). Washington: American Psychological Association.

Stricker, G. (1964). The Operation of Cognitive Dissonance on Pre-and Post-election Attitudes. *Social Psychology*, *63*, 111-119

Wooldridge, J.M. (2009). *Introductory Econometrics: A Modern Approach (Fourth Edition)*. Florence, KY: South-Western Cengage Learning.

Worchel, S., Cooper, J., Goethals, G.R. & Olson, J.M. (2000). *Social Psychology*. Stamford: Wadsworth Thomson Learning.

Zanna, M.P. & Cooper, J. (1974). Dissonance and the pill: An attribution approach to studying the arousal properties of dissonance. *Journal of Personality and Social Psychology*, *29*, 703-709.

Zanna, M.P. & Rempel, J.K. (1988). Attitudes: A new look at an old concept, in Bar-Tal, D. & Kruglanski, A.W. (Eds.), *The social psychology of knowledge* (pp. 315-334). Cambridge: Cambridge University Press.

Zanna, M. P., & Sande, G. N. (1987). The effect of collective actions on the attitudes of individual group members: A dissonance analysis. In M. P. Zanna, J. M. Olson, & C. P. Herman (Eds.), *Social influence: The Ontario symposium* (Vol. 5, pp. 151–163). Hillsdale, NJ: Lawrence Erlbaum Associates.

4 - VOTER SINCERITY AND THE TIME-OF-VOTING-DECISION

Traditional explanations of time-of-vote-decision (TOVD) patterns have assumed that campaign deciders are relatively uninterested and inattentive to political information (Lazarsfeld *et al*., 1954; Campbell *et al*., 1960). This assumption has been challenged in recent years, however, with many scholars arguing that some campaign-period deciders are as attentive as, or even more attentive than, those individuals who know long before a campaign begins who they are going to vote for (Chaffee and Choe 1980; Whitney and Goldman, 1985; Dalton, 2006). Indeed, there is increasing evidence that campaigns and sometimes specific campaign events play an important role in the outcome of elections (Holbrook, 1995; Johnston *et al*. 1992; Blais *et al*. 2003; Fournier *et al*., 2004). Some (though certainly not all) late deciders thus appear to be factoring information gathered during the campaign period into their vote decisions.

But what type of information is important to late deciders? Existing work on TOVD tends to assume that individuals who postpone their vote decisions are interested in information specifically about parties, politicians and policies (see Lazarsfeld *et al*., 1948; Campbell *et al*. 1960). This information is factored into their vote calculus and helps to determine which party is one's most preferred. A few scholars, however, have explored the relationship between an individual's perception of the relative competitive positions of parties (i.e. how much of a chance each party has of winning) and TOVD. Kirkpatrick (1972) has found that some American voters delay their vote decisions when they prefer one candidate but expect another to win. This finding is compatible

with cross-pressure theory (see Lazarsfeld *et al*., 1948, 1954), which posits that the existence of conflicting determinants of behaviour can lead to avoidance of decision-making and fluctuation of opinion, as well as cognitive balance theory (Heider, 1946), which argues that incompatible affects and cognitions can produce psychological tensions that lead to a delay in TOVD. In their study of the Dutch electorate, Irwin and Holsteyn (2008) have argued against overlooking the possibility that some late deciders are waiting to collect information not on parties, politicians or leaders, but on how other voters are likely to behave. These voters make their decisions not only upon the basis of individual preferences, but upon their competitive expectations. These expectations are important because they can cause an individual to vote for a party that is not his or her genuine first preference (if one's goal is to affect an election's outcome) (Duverger, 1963).

This article's primary objective is to explore the TOVD patterns of insincere voters (those voters who vote for a party which is not their most preferred). It is argued here that competitive expectations, as determined through exposure to information during the course of a campaign, can cause individuals to abandon their preferred party. As information on the competitive prospects of parties is widely available and frequently updated during the course of an election campaign (Andersen, 2000), it stands to reason that individuals who base their vote decisions upon such factors will make their vote decisions during that period. In contrast, voters who do not factor competitive considerations into their vote decisions will not be influenced by polling results, or any other source of information about the competitive positions of parties that they may be exposed to during the campaign period. Accordingly, the fundamental

expectation here is that insincere voters will tend to make their vote decisions later than will sincere voters.

Research on insincere voters, however, is largely limited to the study of strategic (or tactical) voters (see Black, 1978; Blais and Nadeau, 1996; Blais *et al*., 2001). Usually overlooked is another type of insincere voter: the protest voter. Protest voters, as defined here, express their political dissatisfaction by supporting an uncompetitive non-traditional party that is not their genuine first preference. That these individuals are relatively neglected by academics is surprising, given that citizens in most industrialized countries are becoming increasingly cynical about their governments and political systems, less deferential to authority and more willing to express their dissatisfaction through protest (Nevitte, 1996; Norris, 2011). Moreover, among the small volume of literature that is devoted to the subject, it has been recognized that protest voting could help to account for the rise and persistence of minor parties in single member plurality settings (Kang, 2004), thus helping to account for this failure of Duverger's (1963) law. Accordingly, the secondary objective of this article is to outline a new method of identifying protest voters using Canadian Election Study (CES) Data.

Finally, this study contributes to the literature on campaign effects. While scholars from the original Columbia and Michigan schools contended that campaigns have little impact upon election outcomes (Lazarsfeld *et al.,* 1948; Berelson *et al*., 1954, Campbell *et al*., 1960), if competitive considerations are shown to have an impact upon TOVD, this would provide compelling evidence that, for a particular subset of the population, the campaign is having a significant impact. Examining the relationship between vote sincerity and TOVD may also provide insight into potential campaign

strategies. If insincere voters are indeed making their vote choices during the campaign period, parties may wish to make appeals specifically to these individuals. Parties that hope to attract strategic votes may wish to make particular rivals seem uncompetitive, and perhaps counter-intuitively, those hoping to attract protest votes may wish to make their own prospects for victory appear bleak. Knowledge of the TOVD patterns of specific types of individuals could be of significant practical value to political actors.

4.1 - TOVD AND CAMPAIGN EFFECTS

An important factor to consider when explaining TOVD patterns is the influence of campaign effects. Exposure to campaign-period events and information can help undecided voters to form a preference, or cause some voters who may have previously decided to change their minds. Even among those voters who claim to have finalized their vote decisions prior to the start of a campaign, we cannot be certain that the campaign period has had no effect. Preferences can be weakened or reinforced during the course of a campaign, even if one's vote choice remains the same. Since both vote choice and changes in vote choice are discontinuous variables, however, we cannot be certain whether the campaign matters for such voters in these respects. Regardless, the *potential* for campaign events to influence attitudes is undeniable.

Scholars have traditionally held the view, however, that campaigns have only minimal effects upon voters. Early voting studies (Lazarsfeld *et al.,* 1948; Berelson *et al*., 1954, Campbell *et al*. 1960) concluded that campaigns are rarely able to overcome prejudices and knowledge that voters might have at the start of the campaign period. More recent work, however, has challenged this position. Jacobson (1983) and Bartels

(1987) have argued that campaigns are of significant importance in American congressional races and presidential primaries. Canadian authors (see Johnston *et al*., 1992; Blais *et al*., 2003) have echoed this finding, concluding that, under certain circumstances and for certain voters, campaign events can have a significant impact upon vote choices.

The 'minimal effects' position is also inconsistent with even a basic analysis of CES data. Whereas Lazarsfeld *et al*. found that only 8% of voters in the 1940 presidential election switched their vote preference from one candidate to another during the campaign, the corresponding values for the 2006 and 2008 Canadian elections (those considered here) are at least 13.7% and 13.2% respectively.[81] Given that the difference in vote shares between the first and second parties in both of these elections was roughly 6%, these values are not insignificant. While the fact that so many voters change their minds during the course of the campaign does not necessarily prove that they are responding to the campaign, these values do suggest that the *potential* for campaign effects is substantial, even among voters who have a preference at the start of a campaign.

Recent work on the relationship between campaign effects and TOVD also conflicts with the 'minimal effects' thesis. Fournier *et al*. (2004) show that campaign period media coverage and leader debates have a measurable impact upon the opinions of campaign deciders, and argue that campaigns do indeed affect the stability of vote

[81]These values are calculated by comparing pre-election vote intention to post-election vote recall, and represent the lowest possible values for the percentage of voters who change their minds during the course of the campaign. Because the CES employs a rolling cross-section design, and many respondents are interviewed quite late in the campaign, some of the respondents who list the same party for both interviews may have actually changed their mind during the campaign, but prior to their interview. Accordingly, these values are conservative estimates only.

choices during a campaign. Moreover, TOVD data are often used as evidence of the presence of campaign effects (Whitney and Goldman, 1985; Bowen, 1994; Gopoian and Hadjiharalambous, 1994). Accordingly, the 'minimal effects' position is firmly rejected here; campaign events can, and do, have a relationship with TOVD.

This article expands upon existing work on the relationship between campaign effects and TOVD by exploring the extent to which an individual's impression of the competitive positions of parties influences the time at which vote preferences are finalized. Competitive expectations have been shown to be influenced by objective contextual information and personal preferences (Blais and Bodet, 2006), and one type of objective contextual information which voters are commonly exposed to through the media is polling information. Polls are conducted regularly prior to the start of campaigns, and pre-campaign polls can inform the competitive perceptions of voters (Fey, 1997). However, the media have a strong motivation to conduct polls more frequently during a campaign (Patterson, 1980), and they can tend to focus on 'horse-race journalism' as opposed to more substantive issues during this period (Andersen, 2000).[82] Campaigns thus provide voters with an excellent opportunity to update their expectations with respect to each party's chances of success (Blais *et al*., 2006; Johnston and Vowles, 2006). Additionally, the link between polls and opinion has been established experimentally (Ceci and Kain 1982; Nadeau *et al*. 1993; Forsythe *et al*. 1993) and using election study data (Blais *et al*. 2006). Those voters who form or change their vote choice in light of campaign period poll results are, by definition,

[82]CES data suggest that most people are exposed to polls during the campaign. 59% of pre-election respondents in the 2006 dataset claimed to have seen a poll in the last week (the question was not asked in 2008). This number would likely be higher if the question had asked about the entire campaign period, rather than only the last week.

considered relatively late deciders.[83] Thus the expectation here is that voters who factor competitive expectations into their decisions are more likely than those who do not to have a late TOVD.

The challenge with testing this contention, however, is in identifying those specific voters who factor competitive considerations into their decisions. This article does so by focusing on two specific types of individuals: strategic and protest voters. Both types of voters, as operationalized here, factor competitive circumstances into their voting decisions, although to different effects. The former casts a ballot for a party that is competitive, while the latter votes for an uncompetitive party. Since competitive circumstances have the potential to be dynamic, it makes sense for individuals who wish to take this factor into account to wait until the election is near before making their choices. In contrast, those individuals who do not base their vote decisions upon how much of a chance each party has of winning have no such need to delay their TOVD.

4.2 - VOTER SINCERITY

Under particular circumstances, the competitive dynamics of an election can prompt an individual to vote for a party other than that which is his or her most preferred. Such a vote is commonly termed 'insincere.' The most studied form of insincere voting, at least in countries with single member plurality electoral systems, is strategic (or tactical) voting. A strategic vote is a vote for a party or candidate that is not one's favourite, cast in the hope of affecting the outcome of an election (Blais *et al*.,

[83]While polls are an obvious source of such information, they are not the only one. It is not necessary for voters to be politically attentive or to be exposed to poll results first hand to develop an opinion about the viability of each party.

2001). Specifically, the goal of a strategic voter is to prevent a party that is disliked from winning. The strategic voter recognizes that his or her most preferred party has little or no chance of victory, and supports the party that has the best chance of defeating his or her least preferred competitive option.[84] The literature on this subject is well established in Canada (see Black, 1978; Blais and Nadeau, 1996; Blais *et al*., 2001; Blais *et al*., 2005; and Merolla and Stephenson, 2007 for some noteworthy examples).

Voters not classified as strategic are often assumed to be 'sincere' (Blais et al., 2001, Blais et al., 2005; Felsenthal and Brichta, 1985; Ballester and Rey-Biel, 2008). If an individual is not voting strategically, it is assumed that he or she is casting a ballot in support of the party that, for whatever reason, is that person's genuine first preference. This assumption, however, overlooks the possibility that there are voters who may be both non-strategic *and* insincere. Failing to recognize such voters adds undesirable noise or bias to any study of sincere voters. It is thus argued here that at least[85] one other group of non-strategic voters should be differentiated from sincere voters: protest voters.

Protest voters have received relatively little attention in the scholarly literature, and the conceptual and operational definitions of the term are much less well-established and consistent than they are for strategic voters. Bowler and Lanoue (1992), who examine strategic and protest voting for the NDP in the 1984 Canadian Federal Election, describe protest voters as citizens who are expressing dissatisfaction with

[84]In a three party system the third ranked party is, by definition, the genuinely least preferred option. However, when more parties are present the party that the strategic voter hopes to see lose may not be the most disliked. It may simply be more disliked than the most favoured and one other party (the party voted for).

[85]It is possible that the same assumption is being made incorrectly here as well (except with the inclusion of protest voters as an additional type of non-sincere voters). It is entirely possible that some other type of voter, not discussed here, should also be considered insincere.

"current economic and/or political circumstances" (491). Besides voting for the NDP, and believing the NDP to be uncompetitive in the local riding, to these authors a protest voter must either believe that the government has had a negative effect on his or her own life or be generally dissatisfied with the performance of the incumbent government. These last two factors, however, focus only upon attitudes towards the incumbent party. Since the most obvious vote option for an individual unhappy with the governing party is to vote for the opponent that has the best chance of defeating that party, however, the link between dissatisfaction with the governing party in particular and a protest vote seems somewhat tenuous. Being dissatisfied with the governing party in particular should not alone mean that one is a protest voter.

As Heath *et al.* (1985) describe the concept, a protest vote is not a reaction to dissatisfaction with the governing party alone. Rather, protest voters cast their ballots in response to perceived failures by the "natural" (or traditional) parties (113). Van der Brug *et al*. (2000) go even further and posit that protest voters have a cynical attitude towards politics in general and are dissatisfied with the political system as a whole. To these authors, protest voters are repulsed from traditional parties, rather than necessarily being attracted to the non-traditional party that they vote for.

Most scholars agree that the goal of protest voters is to send a signal of dissatisfaction to either a particular party, or the traditional parties in general, rather than to influence the outcome of an election. Kselman and Niou (2011) posit that protest votes can be meant as a signal of dissatisfaction towards one's most preferred party in order to see downstream changes within the party, while Carter and Guerette (1984) describe protest voting as a type of "expressive voting." The theory of expressive

voting, developed by Brennan and Buchanan (1984), states that voters not only have a preference for realizing one outcome over another, but they also have preferences for expressing support for one outcome over another—these two goals do not always result in a vote for the same party or candidate. For example, while one may want Party X to win an election, Party Y may be supportive of some policy that the person favours. In order to express support for that particular policy, the person votes for Party Y. Alternatively, a candidate from Party X may have experienced some recent scandal, and while the voter still wants Party X to win, he or she may vote for Party Y in order to express disapproval of the scandal.[86] To Carter and Guerette (1984), protest voters do not actually want the party they vote for to win. Rather, their motivation for voting the way they do is to express some form of political dissatisfaction; their votes are used to make a political statement. Regardless of the intended target of this statement, however, the goal of protest voters is not to influence an election's outcome.[87]

Like strategic voters, therefore, protest voters vote for a party other than that which is their most preferred. Unlike strategic voters, however, protest voters are not motivated by the desire to see the party they vote for emerge victorious. They are not voting for a party because they like it; rather, they vote for that party to express some form of dissatisfaction. Because protest voters do not actually wish to influence an

[86]Brennan and Buchanan (1984) go so far as to state that, since the chances of a single vote determining the outcome of an election are so small, it is unreasonable for voters to cast preferential rather than expressive votes. In other words, the goal of all voters should be to send a message through their vote, rather than attempt to influence the outcome of an election. While the mere existence of sincere voters proves that many voters reject this approach, it is accepted here that there will be at least some voters who will cast an expressive, rather than a preferential, vote.

[87]Another form of protest is simply abstaining from voting — this option ensures with absolute certainty that one's vote will not influence an election's outcome. See Kang (2004) for a detailed account of why individuals may choose either to abstain or cast a protest vote. Spoiling one's ballot can also be interpreted as a protest vote (according to Elections Canada, 0.6 and 0.7% of ballots were spoiled in the 2006 and 2008 elections respectively). The 2006 and 2008 versions of the CES do not, however, have a "spoiled ballot" option for the vote choice question.

election's outcome, they will only support parties which are uncompetitive (Bowler and Lanoue, 1992 only consider votes for the NDP to be protest votes if the party was not competitive at the district level). The goal of protest voters thus is to send a message to a traditional party or parties, not to see a non-traditional party win power.

A protest voter thus is defined here[88] as a politically dissatisfied individual who votes for an uncompetitive non-traditional party that is not his or her most preferred option.[89] The requirement that protest voters be politically dissatisfied stems from Health *et al*. (1985) and Van der Brug's (2000)'s assertion that protest voters are unhappy with traditional parties or politics more generally, and the condition that these voters support an uncompetitive and non-traditional party is borrowed from Bowler and Lanoue (1992). The fact that protest voters vote for a party other than that which is their most preferred makes them insincere voters.

For both strategic and protest voters, therefore, specific (albeit different) competitive scenarios are a necessary condition for casting an insincere ballot. Strategic voters would not need to vote strategically if they believed their most preferred party was competitive, and protest voters would not risk voting for a non-traditional party if they believed that the target of their vote had a chance of victory.[90]

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[88] As mentioned above, there is no consistency in the literature with respect to the way in which a 'protest vote' is operationalized. This definition represents a new approach, and the conclusions of this article should be interpreted with this in mind.

[89] Somewhat ironically, whereas strategic voting is predicted by Duverger's (1963) law (which states that, under a single member plurality electoral system, supporters of small parties will not "waste" their votes by voting for their most preferred party if it has little chance of winning), protest voting is perhaps the strongest contradiction to this theory. These voters are not only voting for a party that is not their favourite, they are doing so precisely because that party has no chance of winning. Nevertheless, casting either a strategic or protest vote is an instrumentally rational act; both types of voters decide upon the goal that they wish to achieve, and calculate the best method to achieve it.

[90] Subjective rather than objective measures of competitiveness are used here. Whereas Bowler and Lanoue (1992) base their determinations of competitiveness upon (objective) election results, it is argued here that it is the subjective perception of voters that will cause them to vote insincerely. In other words,

For insincere voters, perceptions of competitive circumstances can have a significant impact upon individual, if not aggregate level voting patterns.

This is not to say, however, that sincere voters do not factor competitive considerations into vote decisions. Indeed, many people who vote for their most preferred party, when that party is competitive, may not do so if the party were not in a position to win. As such, there almost certainly are a number of voters classified here as 'sincere' who might be strategic voters under different circumstances.[91] If individuals who take competitive expectations into account do indeed tend to have a late TOVD, then the same might also be expected of these *potentially* insincere voters. While it is impossible to identify such individuals without either experimentation or more detailed survey data, this problem is not fatal to this study. If those voters who factor competitive considerations into their decisions do indeed have a delayed TOVD, the categorization of these individuals as sincere would simply bias estimates for the 'sincere' group towards a later TOVD. Bias of this type serves to enhance the validity of any observed differences in the TOVD patterns of sincere and insincere voters. This article turns now to a more detailed discussion of the identification of strategic and protest voters.

4.3 - DATA AND METHODOLOGY

Individuals are classified here as either strategic, protest or sincere voters; strategic and protest voters are identified, and all other respondents are assumed to be

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some voters may actually cast strategic votes for uncompetitive parties, or protest votes for competitive ones.

[91]There is no such concern with protest voters. Provided that a voter believes that at least one candidate who does not represent a traditional party is uncompetitive in his or her riding, that person has a potential outlet for a protest vote.

sincere voters. These three categories are mutually exclusive and collectively exhaustive. Strategic voters are classified following the "direct" method laid out by Blais *et al*. (2005) while protest voters are identified using the definition outlined above. Data from the 2006 and 2008 Canadian federal elections are considered individually (due to slight differences in question format) before being combined into a single dataset in order to increase sample size. The CES questions used in the analysis are listed in Appendix 4-I.

To be a strategic voter an individual must meet a series of criteria. First, strategic voters must report voting for a party that is not their favourite (this is determined though a single post-election question[92]). Respondents who claim not to have voted for their most preferred party are asked a follow up question about which party is their favourite. An individual is only classified as strategic if he or she assigns a higher party or leader rating to the favourite party[93] than the party voted for, or if he or she claims to have a particular fondness for the local candidate representing the

[92] The question is "Was [the party voted for] the party you liked the most?" Some existing estimates of strategic voting rates in Canada do not take this question into consideration. Instead they rely upon party feeling thermometers to determine a voter's ranked preferences (see Blais and Nadeau, 1996 for an example). However, the link between this question and feeling thermometer responses arguably is quite weak. Among those individuals who voted for a party that was not their favourite, 27.7% gave a higher feeling thermometer rating to the party voted for than to any other party. Conversely, among those individuals who claim to have voted for their favourite party, 9.7% gave a lower thermometer rating to the party voted for than for at least one other party. This illustrates just how sensitive the process of identifying strategic voters is to variations in method.

[93] The 2006 CES does not include questions about rating the Green Party or leader (information on the local candidate is available). Those who claim to prefer the Green Party to the party voted for are assumed to be telling the truth and are not removed from the pool of strategic voters at this stage in the process. This has the potential to inflate slightly the estimated rate of strategic voting in 2006. However, no individuals classified as strategic voters voted for the Greens in this year, and less than 14% of respondents who claim not to have voted for their most preferred party stated that the Greens were actually their favourite. Accordingly, the impact of these missing questions is minimal.

favourite party[94] (this is to ensure that the 'favourite' party is most preferred in at least one of these senses).[95] Competitive expectations also play an important part in the identification of strategic voters. To be classified as a strategic voter, the party one votes for must have a better chance of winning at the local level[96] than the favoured party,[97] and some other party must have a chance of winning[98] (the assumption here is that this other party is the one that the voter does not want to win the election).

The method of identifying protest voters used here differs in important ways from the approach of Bowler and Lanoue (1992). To those authors, protest voters must either hold the government responsible for any deterioration in personal economic circumstances[99] or be strongly dissatisfied with the performance of the current

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[94] Respondents who vote for a party other than the Liberals, Conservatives, NDP, Bloc or Greens are removed as these are the only parties where questions about parties, leaders and local candidates are asked.

[95] Klingemann and Wessels (2002) delineate three types of sincere voting: sincere party voting (where the party is the voter's most preferred), sincere candidate voting (where the candidate is the most preferred) and sincere policy voting (where the voter supports the policies of a party). The method adopted here is based upon that of Blais et al. (2005), which only takes parties, leaders and candidates into account. The inclusion of additional factors such as policy preferences would make the operational definition of a strategic voter less restrictive, as individuals would be classified as strategic simply for having as few as one factor which aligns with the party reported as one's favourite. In theory, if enough factors are considered in this manner, all of those individuals who report not voting for their favourite party could be classified as strategic. As such, this analysis is limited to parties, leaders and local candidates.

[96] Blais *et al*. (2001) have shown that it is perceptions of competitiveness at the local, rather than national level that influence strategic voters.

[97] The questions used to gauge competitive perceptions differ slightly for the two elections. In 2008 individuals are only able to list two parties as competitive, while in 2006 individuals are given the chance to identify as many as three parties that may have a chance of winning in their riding. In 2006 the favourite party is not considered competitive if it is not listed as the first or second most competitive party.

[98] Individuals who believe that only one party has a chance of victory cannot be strategic voters. A strategic vote is motivated by the intention of affecting the outcome of an election (Blais *et al*., 2001), and if an individual believes that only one party has a chance of victory, by definition, this person cannot believe that his or her vote will affect the outcome. An important part of strategic voting is the desire to avoid wasting one's vote for a party or candidate that has no chance of winning (Alvarez and Nagler, 2000).

[99] In making the case that a deterioration of one's personal economic conditions may cause one to become a protest voter Bowler and Lanoue reference Munroe and Erikson (1986), arguing that this piece "demonstrate(s) that economic concerns can have profound effects on NDP support" (Bowler and Lanoue, 1992, 491). However, while Monroe and Erikson do argue that the NDP is seen by many as an economic alternative to the Liberal and Conservative Parties, the authors "find no evidence that

government. However, this approach only taps into sentiment towards the governing party. Protest voters, as defined here, are politically disaffected — they are unsatisfied with Canadian democracy and its politicians and political parties *in general*, not only the governing party.[100] This distinction is important; protest voters here are dissatisfied with the greater political system rather than just a single party. Accordingly, and following Bowler and Lanoue, a protest vote must be cast for a non-traditional party. Individuals who are dissatisfied and who wish to send some sort of message of protest through their vote are not likely to do so by voting for the Liberal or Conservative Parties. Protest voters must therefore vote either for the NDP, the Bloc Quebecois or the Green Party.[101]

As with strategic voters, protest voters cast a ballot for a party that is not their most preferred.[102] The party voted for cannot receive the highest score with respect to

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deteriorating economic conditions prompt Canadians to withdraw their support from the major political parties" (Monroe and Erikson, 1986, 616). Accordingly, the assumption that a worsening of personal economic circumstances could lead to protest votes for the NDP, as opposed to votes for the opposition traditional party, is perhaps unwarranted.

[100]Dissatisfaction scores are based upon an index which considers questions about one's level of satisfaction with democracy, feelings towards parties in general, the extent to which one believes that all parties are the same, and the trustworthiness of politicians. A score above the midway point of the index (0.5) is required for one to be considered dissatisfied — 54% of individuals have a score of greater than 0.5. An alternative to this approach would have been to focus upon the most dissatisfied half, or perhaps third of the population, in order to identify the most dissatisfied individuals make this measure more restrictive.

[101]Protest voters want to show their discontent with the political elite by voting for a party that is a relative outcast in the political arena. The Green Party had never won a seat in the House of Commons leading up to these elections, and thus are the perfect target for protest votes. While the NDP had a sizable presence in the House of Commons, few CES respondents saw them as national contenders, and prior to the 2011 election the party had never placed higher than third in vote or seat share. The Bloc Quebecois only runs candidates inside Quebec and thus cannot form a majority government. Other minor parties may also be the recipients of protest voters. Such votes are not considered here, however, as the CES does not contain leader or party feeling thermometer questions for all minor parties.

[102]Unlike when classifying strategic voters, the "was the party voted for your favourite" question is not used when indentifying protest voters. A dissatisfied voter might conceivably interpret this question very differently than a strategic voter. The former would likely interpret this question in a manner that does not necessarily require a positive attraction towards a party. Indeed, someone dissatisfied with political parties in general (one of the measures used to create the dissatisfaction index) may respond to this question by listing the party that he or she dislikes the least. This distinction is important. Whereas strategic voters would cast a ballot for their most preferred party if that party was competitive, the

party or leadership evaluations, and the voter must not have a preference for the local candidate of the party voted for (this check is included to ensure that the party voted for is not most preferred in any of these senses). This fits with the requirement that protest voters do not actually want the party that they vote for to win; they vote not to have a decisive impact upon the election but to send a message of protest. Accordingly, in contrast to their strategic counterparts, protest voters believe that the party they vote for has no chance of winning (for both strategic and protest voters, the focus is upon riding-level rather than national-level competitive expectations).

The relationship between vote sincerity and TOVD, the study's dependent variable, is evaluating using multinomial logistic regression. Voters are classified as either election-day deciders, campaign deciders (excluding election-day) or pre-campaign deciders. This information is determined through a single post-election CES question (individuals are asked when they decided how they were going to vote) and is validated according to M^{c}Gregor's (*working paper*) partially restrictive approach.

In addition to vote sincerity, several control variables are considered. Gender, age, partisanship, levels of political interest and attention to politics are known to have a relationship to TOVD (Kenski, 2007; Fournier *et al*., 2001; Chaffee and Choe, 1980; Campbell *et al*., 1960). Voter ambivalence (or cross-pressures) (Berelson *et al*. 1954, M^{c}Gregor *working paper*) has also shown to lead to a delay in TOVD. These variables are included as controls below.[103]

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attraction of a protest voter's genuine first preference is not strong enough to cause that person to vote for that party even if that party were competitive. Accordingly, party and leader feeling thermometers, as well as evaluations of the local candidates are used to determine if the party voted for is an individual's genuine first preference in any of these respects.

[103] Other variables were considered as controls, but eventually ruled out. For example, Lucas and Adams (1978) note that late deciders are less likely to discuss politics with others than are early deciders. However, this is rejected here as a cause of TOVD, as this relationship is likely spurious, and is related

One final test of the relationship between vote sincerity and TOVD is conducted here before it can be safely concluded that there is a genuine relationship between these factors. The operational definitions of strategic and protest votes are based upon a number of disparate factors, and it is conceivable that any observed relationship between vote sincerity and TOVD may be a result of some spurious factor included in these definitions. Two additional variables are thus considered to take this possibility into account.[104] First, if competitive expectations do indeed prompt insincere voters to delay their TOVD in order to collect more information on the competitiveness of each party, this factor should be controlled for. Since strategic voters vote for competitive parties and protest voters vote for uncompetitive ones, any pattern with respect to this variable could bias results significantly. Accordingly, individuals are classified on the basis whether or not they believe the party voted for is competitive at the local level (a third option for this variable is not knowing if the party is competitive). Second, the specific party that one votes for may also conceivably have an impact upon the observed relationship between TOVD and vote sincerity. The Liberal Party received almost twice as many strategic votes as any other party and protest votes, by definition, can only be cast for the NDP, Bloc and Green Party. Bandwagon, underdog, or other campaign effects may lead to differences in the TOVD patterns of parties. Vote choice is thus included below as an independent variable.[105]

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strongly to measures of interest. Education was also considered, but the impact of this variable has been described as very small in Canada (Fournier *et al*., 2004), so it is excluded from the analysis below.

[104]Since these factors form part of the operational definitions of strategic and protest voters, including them introduces some minor multicollinearity to the model below. While this inflates the standard errors of the strategic and protest voting coefficient estimates, even high multicollinearity leaves estimates unbiased (Fox, 1991).

[105]While there is not necessarily a theoretical reason to expect dissatisfied voters (which all protest voters are) to have an early or late TOVD, it turns out that such voters do tend to have a later TOVD than the sample as a whole. However, even when a dissatisfaction variable is included in the model below the

4.4 - RESULTS

According to the methods of identifying strategic and protest voters outlined above, 5.92% and 4.09% of voters cast a strategic ballot in 2006 and 2008 respectively. Rates of protest voting were 1.51% in 2006 and 1.59% in 2008.[106] Data from these two elections have been pooled to evaluate the relationship between vote sincerity and TOVD. Since the 2006 and 2008 datasets are part of a panel study, some respondents participated in the CES for both elections. Only data from 2008 are considered for such individuals.[107]

Multinomial logistic regression results, with TOVD as the dependent variable, are shown in Table 4-1. The strategic and protest vote coefficients are expected to be positive in all cases (a sincere vote is the base category). Results are shown for a basic model, containing only vote sincerity and the control variables discussed above, and a larger model, including competitive expectations and party choice.[108] All variables are

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relationship between vote sincerity and TOVD remains in the same direction, with the same level of statistical significance.

[106]While not of direct relevance to this article, it is interesting to note the net impact of insincere voting on the vote shares of the major parties. This can be calculated according to the following formula:
Impact = (strategic votes gained + protest votes gained) – (strategic votes lost + protest votes lost).
In 2008 the Liberals were the biggest beneficiary of insincere voting (gaining 1.25% of the overall vote share), followed by the Bloc (0.69%) and the Conservatives (0.54%). The NDP and Green Party suffered, losing 1.30% and 1.11% respectively. The NDP was only able to recover 29% of the votes it lost to strategic voting through protest votes. The corresponding value for the Greens, however, is much higher, at over 67%.

[107]Strategic and protest voters, respectively, make up 6.8% and 1.3% of the pooled dataset. The process of identifying protest voters eliminates more cases than does that used to identify strategic voters (more CES questions are required in the former process and cases with even a single empty response are omitted), so the percentage of strategic voters is slightly inflated, and the percentage of protest voters is deflated here in comparison to the values listed above. However, since the aim here is to evaluate the relationship between TOVD and voter sincerity, the sample need not necessarily be representative of the population.

[108]Multicollinearity is not a major concern in the larger model. The highest variance inflation factor score of any variable is only 1.47 (for the "competitive" variable). Even with these additional variables are added, a joint f-test for strategic and protest voters returns a p-value of less than 0.01, indicating that these variables are making a significant contribution to explaining variation in the dependent variable.

coded as dummies to simplify the interpretation of the results.[109]

TABLE 4-1: CORRELATES OF TOVD

		Campaign vs. Pre-Campaign		Election-day vs. Pre-Campaign		Election-day vs. Campaign	
Strategic Vote	*Base = sincere vote*	.77(.24)[c]	.68(.25)[c]	1.24(.31)[c]	1.21(.32)[c]	.47(.29)	.53(.30)[a]
Protest Vote		1.85(.66)[c]	1.38(.68)[b]	2.08(.74)[c]	1.32(.77)[a]	.23(.53)	-.06(.57)
Gender	*Female = 1*	.29(.12)[b]	.24(.12)[b]	.29(.19)	.25(.19)	.01(.19)	.01(.19)
Age		-.35(.12)[c]	-.32(.12)[b]	-.51(.19)[c]	-.46(.19)[b]	-.17(.19)	-.14(.20)
Partisan		-.94(.17)[c]	-.91(.17)[c]	-1.25(.23)[c]	-1.21(.24)[c]	-.31(.22)	-.29(.22)
Interest		-.04(.19)	.01(.20)	-.50(.26)[b]	-.42(.26)	-.46(.26)[a]	-.43(.27)
Attention		.73(.24)[c]	.76(.25)[c]	-.19(.29)	-.17(.29)	-.92(.31)[c]	-.93(.31)[c]
Ambivalence		.48(.12)[c]	.49(.12)[c]	1.01(.26)[c]	1.03(.20)[c]	.52(.20)[c]	.54(.21)[c]
Competitive	*Base = Uncompetitive*		-.01(.18)		-.41(.27)[a]		-.41(.27)
Unknown			-.40(.39)		-.75(.61)		-.25(.63)
Liberal Vote	*Base = Conservative Vote*		.58(.15)[c]		.79(.25)[c]		.21(.26)
NDP Vote			1.00(.17)[c]		1.11(.28)[c]		.11(.28)
Bloc Vote			.37(.23)[a]		.64(.39)[a]		.27(.41)
Green Vote			1.06(.28)[c]		1.09(.41)[c]		.03(.40)
Constant		-.55(0.3)[c]	-1.07(.36)[c]	-.65(0.39)[c]	-1.02(.56)[c]	-.10(.40)	.05(.49)
Pseudo R^2		0.0658	0.0887				
N		1480	1480				

Entries report coefficients and standard errors (in parentheses).
a: β significant at p <.10, b: β significant at p < .05, c: β significant at p <.01

The results in Table 4-1 support the expectation that insincere voters will tend to have a later TOVD than their sincere counterparts.[110] When comparing campaign to pre-campaign (the first two columns in the table), and election-day to pre-campaign TOVD (the third and fourth columns), the coefficients representing protest and strategic

[109]The age variable compares individuals who are 50 or older at the time of the election to those under 50. For the interest and attention variables a score of 1 is assigned to those individuals who respond with values of 5 or greater (on a scale of 0-10) for the respective interest and attention survey questions. Individuals are considered ambivalent if they claim that they have "mixed" feelings towards their most preferred party, while those who have "all positive" or "mostly positive" feelings towards that party are assigned a score of 0 for this variable.

[110] Data are not weighted, as this analysis is based upon a combination of data from multiple elections. New weight values would need to be created, based upon data from both elections, in order to apply weights properly here.

voters are positive, suggesting that such individuals are more likely to make their decisions after the campaign begins than are sincere voters. These relationships exist even after taking into account competitive expectations and party choice (i.e. even when estimates are potentially less efficient these relationships remain statistically significant). The coefficients for these variables when comparing election day to the campaign period (the final two columns in the table) are of a smaller magnitude than those comparing the other TOVD periods, and three of four fail to be of statistical significance, even at the generous 90% confidence level. Thus it cannot safely be concluded that there are differences between sincere and insincere voters with respect to these two TOVD periods. On balance, however, the results provide compelling evidence of a relationship between vote sincerity and TOVD. Insincere voters are much more likely than their sincere counterparts to have a campaign period or election-day TOVD.

In addition to presenting raw regression results, the predicted probability of having a pre-campaign, campaign and election-day TOVD was estimated for each value for each variable in Table 4-1. These probabilities are calculated through postestimation, by manipulating values of each variable individually. For each line in Figure 4-1, the variable under examination was set to its maximum value,[111] while all other variables are left at their current value. These results are presented graphically in Figure 4-1, and provide an intuitive method to quickly compare the potential influence of each factor considered here upon TOVD.[112]

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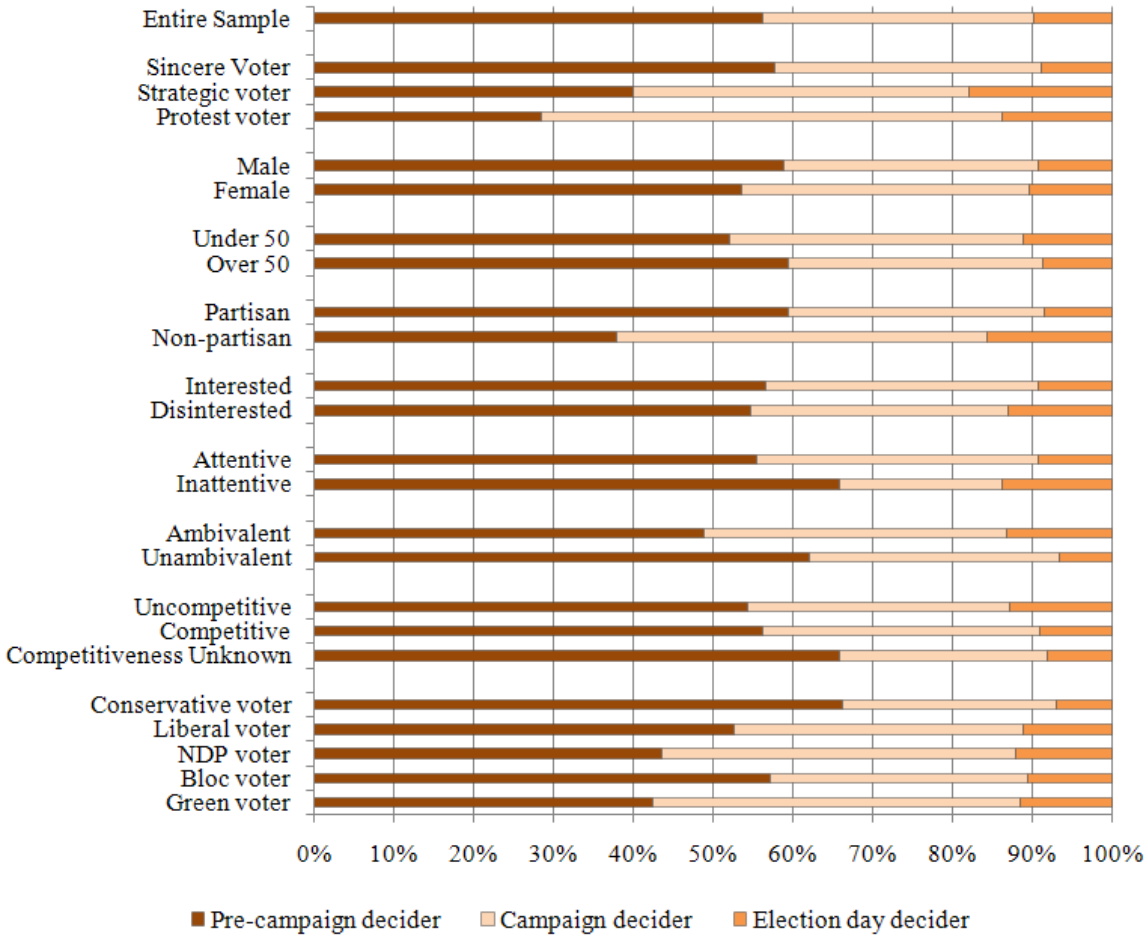
[111] Corresponding variables are set to zero. For example, when evaluating sincere voters, the strategic and protest variables are set to 0.

[112]The word "potential" must be included here, as the actual impact of each variable depends upon how values for each variable are distributed among the population. Even if an attitude has a significant potential to influence TOVD, if few individuals exhibit the attribute, it has relatively little impact upon TOVD patterns.

FIGURE 4-1: PREDICTED DISTRIBUTION OF TOVD



The above results illustrate a conspicuous difference between sincere and insincere voters. More than half (57.8%) of sincere voters are expected to have a pre-campaign TOVD. In contrast, rates of pre-campaign deciding for strategic and protest voters are 40.0% and 28.4% respectively. Protest voters are the least likely of any variable considered in Figure 4-1 to have an early TOVD, and among these other factors only non-partisans (37.8%) have higher rates of pre-campaign deciding than do strategic voters. Insincere voters are also much more likely than their sincere counterparts to have a late TOVD. Fewer than 9% of sincere voters are predicted to make up their minds on election-day. Strategic voters have the highest rate of election-day TOVD of

those factors considered here (18.0%), followed by non-partisans (at 15.7%) and then protest voters (at 13.8%). The extent of the relationship between vote sincerity and TOVD thus appears clear: insincere voters are much more likely to have a late TOVD than are their sincere counterparts.

The control variables act largely as expected. Gender, age and partisanship all have the anticipated relationship with TOVD, although the coefficients comparing election-day to the campaign period are insignificant for these variables. There is no significant difference in the interest level of campaign and pre-campaign deciders, but election-day deciders are more uninterested than either campaign or pre-campaign deciders. Campaign-period deciders tend to be more attentive than both pre-campaign deciders and election-day deciders, though there is no discernable difference between election-day and pre-campaign deciders in this respect. Finally, ambivalence is strongly related to a late TOVD — this variable is statistically significant at the 99% confidence level in all cases. Of these control variables, partisanship and ambivalence display the greatest differences in TOVD in Figure 4-1, suggesting that these factors have the greatest potential to influence the time at which individuals make their vote decisions.

While strategic and protest voters are expected to factor competitive expectations into their vote decisions (thus causing a delay in TOVD), the above results say little about the effect that competitive perceptions have upon TOVD for the population as a whole. The TOVD patterns of individuals who vote for competitive parties do not differ significantly from either those individuals who vote for uncompetitive parties or those who are unaware of the competitive circumstances of the party they vote for. It was noted earlier that sincere voters may or may not take

competitive expectations into account when making their decisions, so this finding is not surprising. Further work is needed to determine under what circumstances competitive expectations are factored into the decision making calculus of sincere voters. Disaggregating sincere voters in some way may produce statistically significant results for this variable.

Finally, the party choice results reveal an interesting pattern. Conservative voters (the base in Table 4-1 and the party that won both the 2006 and 2008 elections) are more likely than supporters of any other party to have a pre-campaign TOVD — the difference when comparing the campaign and pre-campaign period is statistically significant for all parties. Conversely, supporters of the Green Party and the NDP are least likely to make up their minds before the campaign begins (while there is no statistically significant difference between these two parties in this regard, they do differ at the 95% confidence level from all other parties). This finding may reflect the fact that these parties are the greatest beneficiary of protest votes. The fact that Liberal voters are less likely to have a pre-campaign TOVD than Conservative voters (the only two parties who cannot be the beneficiary of protest votes) may be partially because the Liberals received almost twice as many strategic votes as the Conservatives (44% versus 23% of the strategic votes cast).

4.5 - CONCLUSION

This article has shed light upon two understudied topics: protest voting and the relationship between vote sincerity, competitive expectations and the time at which vote decisions are finalized. Largely overlooked, protest voters have been found to make up

a noteworthy segment of the Canadian population - over 1.5% in both elections considered here. The above results also reveal noteworthy differences between the TOVD patterns of sincere and insincere voters. These findings thus provide insight into the extent to which campaign effects may be able to persuade voters to act in a manner which belies their genuine preferences. The results also suggest that protest voters warrant further academic attention, and that studies of voter sincerity should avoid simply categorizing non-strategic voters as sincere by default. At least in this instance, protest voters have been shown to behave very differently than sincere voters.

While the relationship between vote sincerity and TOVD has been clearly established, further work is required to map out this relationship in greater detail. It stands to reason that those individuals who factor competitive circumstances into their vote decisions may delay their decisions. Nevertheless, more research is required to explore the relationship between changes in competitive evaluations and changes in vote preferences. A time series analysis of this nature could explore with more precision the causal relationship between competitive evaluations and vote sincerity. It could also help to distinguish those sincere voters who are potential strategic voters from those who would not defect even if their most preferred party were uncompetitive.

In addition to the observation that voter sincerity is indeed correlated with a late TOVD, an examination of patterns of preference formation and stability can offer insight into the effects of campaigns upon insincere voters. CES respondents are asked during the campaign period which party they plan to vote for, or if they have yet to make their decision. Only 15.2% of sincere voters reported being undecided at this point, while the corresponding value for insincere voters is 42.6%. Among those who

did express a vote intention in the pre-election questionnaire, 9.6% of sincere voters reported voting for a different party when interviewed after the election. This value is 34.0% for insincere voters.[113] Thus not only are insincere voters less likely to have a preference when first interviewed, but they are also much more likely to change their preferences during the campaign.

These patterns suggest that insincere voters may be particularly susceptible to campaign effects. Changes in competitive circumstances, appeals from politicians with respect to strategic voting and campaign period events that might cause voters to become politically dissatisfied (perhaps negative advertising or some sort of scandal) have the potential to significantly influence TOVD patterns, rates of insincere voting and thus aggregate level election results. While future research is required to determine the extent to which this potential is actually met, this article's findings suggest that the study of the relationship between campaign effects and vote sincerity deserves more scholarly attention than it currently receives.

[113]For both comparisons differences are significant at the 99% confidence level.

4.6 - BIBLIOGRAPHY

Alvarez, R.M., & Nagler, J. (2000). A new approach for modeling strategic voting in multiparty elections. *British Journal of Political Science*, *30*, 57–75.

Andersen, R. (2000). Reporting public opinion polls: the media and the 1997 Canadian election. *International Journal of Public Opinion Research*, 12, 285-298.

Ballester, M.A. & Rey-Biel, P. (2008). Sincerity in Simple and Complex Voting Mechanisms. Unitat de Fonaments de l'Analisi Economica (UFAE) and Institut d'Analise Economica (IAE) working paper number 722.08.

Bartels, L. M. (1987). Candidate choice and the dynamics of the presidential nominating process. *American Journal of Political Science*, 31, 1–30.

Berelson, B., Lazarsfeld, P.F. & M^{c}Phee, W.N. (1954). *Voting*. Chicago: University of Chicago Press.

Black, J.H. (1978). The multicandidate calculus of voting: applications to Canadian federal elections. *American Journal of Political Science, 22*, 609-638.

Blais, A. & Bodet, M. (2006). How do voters form expectations about the parties' chances of winning the election? *Social Science Quarterly*, *87*, 477-493.

Blais, A, Gidengil, E., Nadeau, R. & Nevitte, N. (2003). Campaign dynamics in the 2000 Canadian election: how the leader debates salvaged the Conservative Party. *PS: Political Science & Politics*, *36*,45-50.

Blais, A., Gidengil, E. & Nevitte, N. (2006). Do polls influence the vote? In H.E. Brady & R. Johnston (Eds.), *Capturing Campaign Effects* (pp. 263-279). Ann Arbor: University of Michigan Press.

Blais, A. & Nadeau, R. (1996). Measuring strategic voting: A two-step procedure. *Electoral Studies, 15*, 39-52.

Blais, A., Nadeau, R., Gidengil, E. & Nevitte, N. (2001). Measuring strategic voting in multiparty plurality elections. *Electoral Studies*, *20*, 343-352.

Blais, A., Young, R., & Turcotte, M. (2005). Direct or Indirect? Assessing to Approaches to the Measurement of Strategic Voting. *Electoral Studies, 24*, 163-176

Bowen, L. (1994). Time of voting decision and use of political advertising: the Slade Gorton-Brock Adams Senatorial Campaign. *Journalism Quarterly*, *71*, 665–675.

Bowler, S. & Lanoue, D. (1992). Strategic and protest voting for third parties: the case of the Canadian NDP. *Western Political Quarterly*, *45*, 485-499.

Brennan, G. & Buchanan, J. (1984). Voter choice: evaluating political alternatives. *American Behavioral Scientist*, *28*, 185-201.

Campbell, A, Converse, P., Miller, W. and Stokes, D. (1960). *The American Voter*. Chicago: University of Chicago Press.

Carter, J. R. & Guerette, S.D. (1992) An Experimental Study of Expressive Voting. *Public Choice*, *73*, 251-260.

Ceci, S., & Kain, E. (1982). Jumping on the Bandwagon with the Underdog: The Impact of Attitude Polls on Polling Behavior. *Public Opinion Quarterly, 46*, 94-104.

Chaffee, S. H., & Choe. S.Y. (1980). Time of decisions and media use in the Ford-Carter Campaign. *Public Opinion Quarterly, 44*, 53-69.

Dalton, P. D. (2006). *Swing voters: understanding late deciders in late modernity*. New York: Hampton Press.

Duverger, M. (1963). *Political Parties*. New York: John Wiley.

Election Canada. (2006 and 2008). *Official Voting Results* Elections.ca (Accessed Feb. 06, 2011).

Felsenthal, D. S., & A. Brichta. (1985). Sincere and strategic voters: an Israeli study. *Political Behavior*, *7*, 311-23.

Fey, M. (1997). Stability and coordination in Duverger's law: a formal model of pre-election polls and strategic voting. *The American Political Science Review*, *91*, 135-147.

Forsythe, R., R. Myerson, T.A. Rietz, & R. Weber. (1993). An experiment on co-ordination in multi-candidate elections: the importance of polls and election histories. S*ocial Choice and Welfare, 10*, 223-47.

Fox, J. (1991). *Regression Diagnostics.* Sage University Paper Series on Quantitative Applications in the Social Science, 07-079. Newbury Park: Sage Publications.

Fournier, P., Nadeau, R., Blais, A., Gidengil, E. & Nevitte, N. (2001) Validation of time-of-voting-decision recall. *Public Opinion Quarterly*. *65*, 95-107.

Gopoian, D., & Hadjiharalambous, S. (1994). Late Deciding Voters in Presidential Elections. *Political Behavior, 16*, 55–78.

Heath, A., Jowell, R. and J. Curtice. (1985) *How Britain Votes*. Oxford: Pergamon Press.

Heider, F. (1946). Attitudes and cognitive organization. *Journal of Psychology, 21*, 107-112.

Holbrook, T.M. (1995). *Do campaigns matter?* Thousand Oaks, Sage.

Irwin, G.A. & Van Holsteyn, J.J.M. (2008). What are they waiting for? strategic information for Late Deciding Voters. *International Journal of Public Opinion Research, 20,* 483-493.

Jacobson, G. (1983). *The Politics of Congressional Elections*. Boston: Little, Brown.

Johnston, R., Blais, A., Brady, H.E. & Crete, J. (1992). *Letting the people decide: dynamics of a Canadian election*. Montreal: M^{c}Gill-Queen's University Press.

Johnston, R., & Vowles, J. (2006). Strategic learning in campaigns with proportional representation: evidence from New Zealand, in H. E. Brady and R. Johnston, (Eds.) *Capturing Campaign Effects*. (pp. 280-306). Ann Arbor: University of Michigan Press

Kang, W.T. (2004). Protest voting and abstention under plurality rule elections: an alternative public choice approach. *Journal of Theoretical Politics,* 16, 79-102.

Kenski, K. (2007). Gender and time of voting decision: decision certainty during the 2000 presidential campaign. *Journal of Political Marketing, 6*, 1-22.

Kirkpatrick, S.A. (1972). Political attitudes and behavior: some consequences of attitudinal ordering. In *Political Attitudes & Public Opinion*, Nimmo, D.D. and Bonjean, C.M, (Eds.). Pp. 386-404. David M^{c}Kay Company, New York.

Klingemann, H., & Wessels, B. (2002) Sincere voting in different electoral systems. Paper prepared for the Berlin Conference, The Comparative Study of Electoral Systems (CSES), 21-14, February 2002.

Kselman, D. & Niou, E. (2011). Protest Voting in Plurality Elections: a Theory of Electoral Signalling. *Public Choice, 148,* 395-418.

Lazarsfeld, P.F., Berelson, B. & Gaudet. (1948). *The people's choice: how the voter makes up his mind in a presidential campaign.* New York: Columbia University Press.

Lucas, W.A. & Adams, W.C. (1978). Talking, television and voter indecision. *Journal of Communication, 28*, 120-131.

M^{c}Gregor, M. (*Working paper*). Explaining the time-of-voting-decision using measures of attitudinal conflict, intensity and direction.

Merolla, J. & Stephenson, L. (2007). Strategic Voting in Canada: A Cross-Time Analysis. *Electoral Studies, 26*, 235-246.

Munroe, K., & Erikson, L. (1986). The Economy and Political Support: The Canadian Case. *Journal of Politics, 48*, 616-47.

Nadeau, R., Cloutie, E. & Guay. J.H. (1993). New evidence about the existence of a bandwagon effect in the opinion formation process. *International Political Science Review, 14*, 203-213.

Nevitte, N. (1996). *The decline of deference: Canadian value change in cross-national perspective*. Toronto, University of Toronto Press.

Norris, P. (2011). *Democratic deficit:* c*ritical citizens revisited*. Cambridge: Cambridge University Press.

Patterson, T. E. (1980). The mass media election: how Americans choose their president. New York: Praeger.

Van der Brug, W., Fennema, M. & Tillie, J. (2000). Anti-immigrant parties in Europe: ideological or protest vote? *European Journal of Political Research, 37*, 77-102.

Whitney, D.C. & Goldman, S. (1985). Media use and time of vote decision: a study of the 1980 presidential election. *Communication Research, 12*, 511–529.

5 - "CORRECT" VOTING AND THE COMPARATIVE MANIFESTOS PROJECT

Although voter turnout rates in most industrialized nations are trending downwards, and citizens are increasingly turning to alternative forms of political participation (Nevitte, 1996; Norris, 1999), the process of deciding who will govern through the act of voting remains of significant import. Elections provide one of the few opportunities voters have to exert some influence over the governing of their societies, but are they taking full advantage of this opportunity? Political scientists have long suspected that voters fail to meet the standards that democratic theory asks of them (see Berelson, 1952, Campbell *et al*., 1960). Citizens are expected not only to participate, but also to be interested in and attentive to politics. Yet interest and attention are insufficient. These attributes do not necessarily translate into a knowledgeable electorate, which many, such as Rousseau (see Wraight 2008) and Mill (1862), see as vital to the health of a democracy. Without knowledge, the ability of individuals to identify the candidate which best reflects their views and interests is severely diminished.

If voters are unable to identify this candidate, a major argument in favour of democracy is undercut. Plato's "guardianship," a theoretical competitor to democracy, supposes that ordinary people are unable to recognize and defend their own interests, and every voter that casts a ballot for a candidate or party without understanding the outcomes associated with his or her decision lends support to this position. If a large share of the electorate behaves in this manner, the well-being and even the legitimacy of

a democracy could be damaged. If voters are unable to identify the party that best reflects their own opinions, the party elected to govern and the composition of legislatures are unlikely to accurately reflect the wishes of the electorate. Put another way, democracy suffers when individuals vote "incorrectly."

This article introduces a new method of evaluating the ability of individuals to vote for the political party with policy positions closest to their own — to vote "correctly." Knowledge is not the key variable here. Rather, the question is whether individuals are capable of identifying and voting for the party that best reflects their own self-reported preferences and interests. Following Lau and Redlawsk (1997), a "correct vote" is defined as the vote choice individuals would make under conditions of perfect information. In other words, a vote is "correct" if it is cast for the party which a voter *should* vote for, based upon a fully-informed comparison of his or her policy positions and those of the parties contesting an election.

In contrast to most of the established literature on correct voting, this article focuses exclusively upon a comparison of the issue positions of individuals and those of political candidates. Existing methods of measuring correct voting rates often consider variables such as one's party identification or opinions of the incumbent party (See Lau and Redlawsk 1997, 2006, Lau *et al.* 2008a, Lau *et al*. 2008b). While evaluations of parties and politicians may influence vote choice, and parties and politicians are important parts of the political process, it is the outputs of that process - policy outcomes - that have a direct, tangible impact upon the citizenry. Furthermore, just as it is possible for individuals to vote incorrectly, it is possible for individuals to have an inaccurate understanding of government performance or to identify with the party that

does not represent their best interests (see Frank, 2004). Individual policy preferences, estimated using Canadian Election Study (CES) data, are compared to the positions of parties, derived from data from the Comparative Manifestos Project (CMP), in seven dimensions of political competition. For illustrative purposes, this new method is applied to the 2004 Canadian federal election. While the study's data are exclusively Canadian, this new method is applicable to other settings.

The article then examines the impact of the campaign period upon correct voting rates. Individuals have the opportunity to learn about party policy positions during the campaign, but whether they use this opportunity to make a 'better' vote choice has yet to be determined. If the campaign period helps the electorate to vote correctly, and correct voting is seen as desirable, the campaign can be said to have a positive impact upon the legitimacy and quality of a democracy. The amount of attention that respondents report having paid to the campaign is employed as a proxy for campaign knowledge (which includes knowledge of party promises), and the time-of-vote-decision (TOVD) is introduced as a moderating variable to explore in detail the relationship between attentiveness and correct voting. As the method of operationalizing a correct vote introduced here is based upon policy, if attention to the campaign is found to improve one's ability to vote correctly, this approach would receive some validation.

5.1 - CORRECT VOTING

While one might understandably be hesitant to use terms such as "correct" or "incorrect" when evaluating the quality of vote choices, there is no doubt that correct

voting is seen by many as desirable.[114] There are any number of reasons why individuals choose to vote the way that they do, and few people leaving a voting booth would claim to have made an "incorrect" decision. Indeed, in one sense of the term, anyone who puts a checkmark next to the name of the person that he or she intended to vote for has voted "correctly." Yet the definition of a correct vote adopted here does suggest that some vote choices are simply *better* than others.[115] If one accepts the assertion that the ability of citizens to identify the party that best reflects their views is an important measure of the quality of a democracy, as Lau and Redlawsk (1997) suggest, then a vote choice can have either positive or negative implications for a democracy's legitimacy. Similarly, if one accepts that the delegation of authority from voters to politicians is successful when the welfare of the voter is enhanced (as determined subjectively by voters themselves) (Lupia and M^{c}Cubbins 1998), and the idea that democracy succeeds when the actions of government reflect the wishes of the citizenry (Dahl, 1967), then the entire electoral process is validated when citizens make correct decisions.

Lau and Redlawsk (1997) were the first to explore the concept, and did so through experimentation with fictional elections and analysis of National Election Study (NES) data. In the latter case the authors introduced a "normative naïve" approach to determining if individual votes are cast correctly. The approach is naïve because it takes each individual respondent's value preferences (as determined through survey

[114] This study of correct voting is based upon the assumptions of rational choice theory. It assumes that voters will attempt to make decisions in order to maximize their personal utility, and that a single vote choice will allow them to do so.

[115] The analysis and conclusions below are based upon this necessarily normative claim, as well as the epistemological assumption that it is possible to assess correct voting in an empirical manner using survey and manifesto project data.

data) into account and normative because the policy positions of candidates are determined subjectively by 'experts' (this is discussed in greater detail below). Correct voting rates were eventually estimated at roughly 75% for presidential elections from 1972 to 1988. More recent work has explored the impact of social networks on correct voting (see Sokhey and M^{c}Clurg *forthcoming*, Ryan 2011), correct voting and direct democracy (Hobolt 2007, Nai 2010) and factors that have an influence over one's likelihood of voting correctly (Lau *et al*. 2008a, Walgrave *et al*. 2009).

The only work to explore the concept of correct voting in Canada is a comparative study by Lau *et al*. (2008b). The authors use data from the Comparative Study of Electoral Systems to evaluate correct voting in 32 countries. Due to data limitations, the authors rely upon party feeling thermometers, self-placement on a left-right scale and retrospective economic evaluations when determining whether votes are correct (in other words, policy opinions are not considered). They eventually arrive at a correct voting rate of over 70% for the 2004 federal election. Also worth mention is the "Vote Compass" project, which, while sponsored by the Canadian Broadcasting Corporation (2011), was designed and managed by a group of academics. The Vote Compass asks participants their opinions on a variety of policy issues and was designed to show users one's location in a two dimensional ideological space *vis-à-vis* each of the major political parties (party positions were estimated by the academics overseeing the project). Since the eventual vote choices of respondents are unknown, however, Vote Compass data cannot be used to explore correct voting rates.[116] This article represents, therefore, the first study of correct voting exclusive to Canada.

[116] While the Vote Compass does give respondents an opportunity to answer a question on vote intention, it is unable to account for individuals who are undecided at the time of taking the survey, or who change their minds before election day.

Employing Canadian data to illustrate this new method of evaluating correct voting is appropriate for several reasons. To begin with, it expands the correct voting literature in a non-American context. Lau and Redlawsk (1997, 2006, 2008a) have primarily focused upon the US, with its two party presidential system. In contrast, Canada has a multi-party parliamentary system, and a significant regional party in the form of the Bloc Quebecois. A detailed exploration of Canadian data thus provides insight into how correct voting may be evaluated in other settings with similar electoral or party systems. Focusing upon Canada also illustrates the flexibility of this new method of operationalising correct voting, and demonstrates the importance of taking country specific factors into account when exploring this concept. Because of the existence of the Bloc (a separatist party which only runs candidates in Quebec), voters from outside that province must be evaluated independently from Quebecers, and the important issue of Quebec nationalism must be taken into account. Canadian data thus are well suited to this study.

In addition to being the first work on the subject of correct voting to consider the Canadian case in detail, this article is unique in that it focuses exclusively upon policy positions. The fundamental premise of all studies of correct voting is the same (objective facts about candidates are compared to the subjective opinions of voters), and an important part of such analyses is the determination of which kind of factors should be used in this comparison. Existing work on correct voting considers many factors other than policy. When introducing the concept, Lau and Redlawsk (1997) considered the issue positions of parties and individuals, but they also factored in respondents' party identification, ratings of the incumbent government's performance and candidate

social group linkages.[117] and, with minor modifications, this approach has been largely adopted in later work on the topic (see Lau and Redlawsk 2006, Lau *et al*. 2008a).

It is argued here, however, that correct voting should be evaluated on the basis of a comparison of the policy positions of individuals to those of parties. The arguments noted above from Plato (that voters should understand the potential outcomes associated with their vote decision), Dahl (that the actions of government should reflect the wishes of the citizenry) and Lupia and M^{c}Cubbins (that a democracy benefits when the welfare of the voter is enhanced) all imply that vote decisions should be made on the basis of the impact that government decisions, or policies, have upon the citizenry. Evaluations of incumbent performance only provide information on the (past) policy stances of one party, and focusing upon evaluations of leaders and social group linkages provides dubious insight into the policy outcomes that would result from the election of various parties or politicians. Being part of, or identifying with a group associated with a particular party, for example, does not mean that one's interests are best served by supporting that party.

Moreover, if one recognizes that it is possible to vote incorrectly, it must also be acknowledged that it is possible to identify incorrectly with a party or to develop an incorrect understanding of the performance of an incumbent government. Simply having an attachment to a party, for instance, does not imply that the party shares a person's values and beliefs (see Frank, 2004). While we know that heuristics like party identification have the potential to help individuals make good vote choices (Lupia and M^{c}Cubbins 1998), it is also possible that such sources of information may omit facts or

[117] Election Study respondents were asked how close they feel to social groups with close links to candidates. For instance, in 1972, the groups associated with Nixon were businessmen, southerners and conservatives, while those associated with M^{c}Govern were liberals, the poor and blacks.

provide untruths, potentially leading voters astray. "Low information rationality" (Popkin, 1991), or relying heavily upon such cues, may thus sometimes lead one to vote incorrectly. Additionally, since party identification, evaluations of government performance and sociodemographic characteristics (or group status) are known to have a strong relationship with vote choice (see Blais *et al*. 2002), including them in the calculation of correct voting rates has the effect of biasing estimates upwards.[118] Accordingly, correct voting rates are calculated here using policy stances alone.

Developing an accurate measure of party policy positions, however, is the most challenging component of any study of correct voting. Just as heuristics have the potential to lead one to vote incorrectly, subjectively determined estimates of party positions are susceptible to filtration or distortion. In their 1997 article, Lau and Redlawsk's estimates of party positions are determined by political science professors and graduate students and an elected official, and in a later version of their work (2006), they use the responses of election study subjects themselves to assign policy positions to presidential candidates (unlike the CES, the American National Election Study asks respondents to estimate the positions of candidates with respect to a variety of issues). The responses of 'experts,' or those above the median with respect to political knowledge questions, were used to estimate candidate positions. Another approach to estimating party policy positions is provided by Benoit and Laver (2006), who base their estimates of party policy positions upon surveys administered to "experts" (in this case, recognised political experts such as political science professors). As with Lau and

[118] A similar argument can be made about the factors considered by Lau *et al*.'s (2008b) comparative paper (party feeling thermometers, self-placement on a left-right scale and retrospective economic evaluations).

Redlawsk's work, however, Benoit and Laver's estimates are determined subjectively.[119]

The concern with such approaches is that even the most knowledgeable survey respondents or political experts may provide inaccurate estimates. These individuals are simply relaying their impressions of party positions, which are subject to internal biases or widespread misconceptions, among other things. Even if Benoit and Laver's experts are more reliable than Lau and Redlawsk's (2006) National Election Study experts, their estimates are similarly based upon subjective evaluations of party policies.

Recognizing this data limitation,[120] Walgrave *et al*. (2009) adopt a new method of estimating party positions in their examination of correct voting in Flemish Belgium. The authors argue that the actual positions of parties can only be obtained from the parties themselves. To that end they conduct interviews with politicians, asking about positions on a wide range of issues. They then ask voters the same questions, and are thus able to calculate correct voting rates quite neatly.

In line with Walgrave *et al*., an attempt has been made here to employ a more objective measure of party policy positions. As primary sources of information, official party manifestos are one source for such a measure. They provide unfiltered and undistorted insight into the campaign-period positions of parties on a variety of issues, as well as the importance that parties place upon each respective issue. Manifestos are the tools that parties themselves use to clearly lay out their policy positions, and even if campaign promises are not eventually kept, politicians can be held accountable for

[119] For a thorough comparison of these two methods of estimating party positions see Volkens (2007).
[120] Lau *et al*. (2008) also recognize this limitation, and call upon other researchers to devise an objective measure of party positions that does not rely upon survey respondents.

published promises, and they thus have an incentive to adhere to proposed policies (Laver and Hunt, 1992).

Accordingly, party policy positions are estimated here using data from the Comparative Manifestos Project – this is the first study of correct voting to use this dataset.[121] The CMP analyses official party manifestos using quantitative content analysis,[122] assigning a score for each party for 56 pre-defined categories spanning seven policy domains.[123] By combining category scores it is possible to determine party positions with respect to a variety of policy dimensions (this process is described in more detail below) (Klingemann *et al.*, 2006). Party positions for these dimensions can then be compared to the positions of individuals, which are based upon CES data, to determine if individuals have voted correctly.[124]

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[121] The CMP has a publicly available dataset that includes information from over 3300 manifestos and 55 countries, in some cases going as far back as 1945.

[122] CMP coders undergo extensive training to maximize inter-coder consistency, or reliability. This training "set[s] and enforce[s] central standards on coders" by laying out a set of rules to help coders decide how to properly categorize quasi-sentences (Volkens 2001, 94). Trainees are required to code a series of previously coded texts, and their results are compared to previously established results.

[123] Each manifesto is broken up into a series of mutually exclusive "quasi-sentences," which are coded to correspond to one of the 56 categories. Quasi-sentences may be an entire sentence, but they can also be part of a sentence. If a sentence expresses more than one idea it is divided into quasi-sentences. The score for each category is normalized (by dividing by the total number of quasi-sentences) to control for manifesto length. The policy domains are external relations, freedom and democracy, political system, economy, welfare and quality of life, fabric of society and social groups.

[124] Another potential source of party policy estimates worth mentioning stems from the work of Benoit and Laver (2006). The authors use surveys which ask "experts" (in this case the term does not apply to election study respondents, but rather to recognized experts in the field, such as political science professors) to provide subjective estimates of party positions. The data provided by Benoit and Laver are of a format that can be manipulated and compared to the positions or individuals in a manner similar to the way in which CMP data are used here. Regrettably, however, the authors conducted their survey of Canadian experts shortly before the 2004 merger of the Progressive Conservative Party and the Canadian Alliance. The data are thus inapplicable to the 2004 election, which was fought shortly after the merger (although this dataset could theoretically be applied to earlier elections if so desired).

Even if such estimates were available, however, there are important reasons why the CMP remains the preferred source of data here. To begin with, while Benoit and Laver (2007) contend that their approach is superior to that of the CMP, the fact is that their data relies upon *subjective* evaluations by experts. Even though Benoit and Laver's experts are likely more reliable than Lau and Redlawsk's (2006) National Election Study experts, the estimates of such individuals are similarly based upon subjective interpretation of party policies. Among other factors, bias, knowledge levels and the sources of information used by experts can negatively affect the accuracy of estimates. Only a primary source of

Once individual and party policy positions are determined, the article turns to evaluate the impact of the campaign period upon correct voting rates. It is generally accepted that campaigns have an impact upon the choices of Canadian voters (Johnston *et al*., 1992; Jenkins 2002; Blais *et al*. 2003), and the question asked here is whether the campaign has a positive effect upon correct voting rates. Individuals have the opportunity to learn about party policy positions during the campaign, but whether they use this opportunity to make a 'better' vote choice has yet to be determined.

Existing work suggests that political knowledge should improve one's ability to vote correctly (Lau *et al*. 2008a, Lau *et al*. 2008b, Walgrave *et al*., 2009). The relationship between knowledge and correct voting has been explored using measures of general political knowledge (Lau *et al*. 2008a, 2008b).[125] Alternatively, education has been used as a proxy for knowledge (Walgrave *et al*. 2009). Neither of these measures, however, provide insight into whether voters are using the campaign period to gather information, and thus cannot be used to explore the question of whether exposure to information during the campaign period improves one's chances of voting correctly.

In this study, the amount of attention that respondents report having paid to the campaign is employed as a proxy for campaign-specific knowledge (which includes knowledge of party promises). Official party platforms for the 2004 election were

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information can produce the unbiased estimates desired here. Additionally, party manifestos provide a snapshot of party positions during a campaign, when many voters are still making up their minds. In contrast, Benoit and Laver's estimates were produced between elections, and are thus of less relevance to any particular election (Budge, 2000). Such an approach fails to account for the possibility that party positions may shift from one election to the next.
For a more thorough comparison of these two methods of estimating party positions see Volkens (2007).

[125] For the 2004 CES a measure of general political knowledge of factors like the name of one's provincial premier or the governor general.

released either shortly before, or in the early stages of the campaign,[126] so an assumption made here is that those individuals who are highly attentive during the course of the campaign are more likely than individuals who are relatively inattentive to be exposed to and absorb information on party policies.[127] A dummy measure of attentiveness has been created, and CES respondents are classified as either high or low attention.[128]

Even if a relationship between attentiveness and correct voting can be established, however, the question of whether this relationship is causal is less clear. While it stands to reason that attentiveness and knowledge of campaign-period information should help one to vote correctly, we know that a high level of knowledge is not necessary to make good vote decisions (Lupia and M^{c}Cubbins 1998; Popkin 1991). We also know that a significant segment of the electorate is composed of individuals who make their vote decisions long before the campaign begins (Berelson *et al*. 1954; Campbell *et al*. 1960; Fournier *et al*. 2004), meaning that their decisions are made before party platforms are released. If knowledge of election-specific party policies is either necessary or sufficient to vote correctly, and if many policy promises

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[126] The 2004 election campaign ran from May 24 to June 28. The Bloc released their official platform on May 16, the NDP on May 26, the Liberals on June 3 and the Conservatives on June 5.

[127] An alternative to this approach would be to compare knowledge of policy promises to TOVD. The 2004 CES contains a battery questions pertaining to knowledge of specific party policy proposals, allowing for the creation of a measure of knowledge of party promises. Respondents were presented with a series of policy proposals and then asked which party had put forward the proposal.
However, while data allow us to measure respondents' knowledge at the time of the pre-election interview, they do not provide an indication of how knowledgeable voters were at the time that vote decisions were made. While the data do reveal a strong relationship between knowledge of party proposals and correct voting, because it is impossible to tell how much individuals knew at the point in time that they made their decisions, this information cannot be used to support the argument that knowledge of policy promises increases one's ability to vote correctly.
As it turns out, attention to the campaign is positively correlated with knowledge of party promises, at the 99% confidence level.

[128] This dummy variable categorizes respondents on the basis of the amount of attention reported paid to various forms of media during the campaign. Those individuals who score above the mean attention value for the sample are coded here as high attention.

are made during the campaign period, one might reason that these early deciders stand to have a relatively low probability of voting correctly. The literature on TOVD suggests, however, that it is exactly these early deciders who are the most knowledgeable, interested in politics and attentive during the course of a campaign (Campbell *et al*. 1960; Chaffee and Choe 1980; Fournier *et al*. 2001.). It is thus worthwhile to disaggregate voters on the basis of TOVD to see if the relationship between correct voting and campaign period attentiveness holds for various time periods.

If attention to the campaign does indeed have a positive impact upon correct voting, the introduction of TOVD as a moderating variable between these factors suggests a series of testable implications. First, attention to the campaign should not influence rates of correct voting among pre-campaign deciders. Since these individuals have already made up their minds, they cannot be influenced by party promises announced during the course of a campaign. The second implication of such a relationship is that, among campaign deciders, attention to the campaign should improve the ability of campaign deciders to vote correctly. These voters, by definition, have the capacity to be influenced during the campaign period, and the more attention they pay to the campaign and the more they know about party proposals, the more likely they should be to vote correctly. Finally, if attention to the campaign does have a positive impact upon correct voting rates, late deciders should have higher rates of correct voting than should early deciders. Since many party positions are announced and receive media attention during the course of the campaign (as noted above, official party platforms for the 2004 election were released either shortly before, or in the early

stages of the campaign), voters who use the campaign period to make their vote decisions will have access to information that those who are previously decided will not. As such, we might expect campaign-period deciders to have relatively high rates of correct voting. These implications are tested after correct voters are identified according to the method outlined in the subsequent section of this article.

5.2 - DATA AND METHODOLOGY

The methodology and results below are based upon the spatial theory of party competition. That is, it is assumed that the preferences of parties and individuals can be placed upon a continuous scale ranging from left to right (with endpoints of -1 for the left and +1 for the right). Following Downs (1957), the assumption here is that it is possible to understand voting behaviour on the basis of the preferences of individuals, and the distance between those preferences and the policy stances of the parties on a bipolar scale. If individuals and parties can be located on such a scale, the distance between them can be calculated, and the "correct" vote choice can be identified. In one-dimensional competition, the most proximate party is the one that should receive an individual's vote. In other words, an individual will vote for Party *X* if the distance between that individual and party *X* is less than the distance between that individual and any other party.

While theoretically attractive, the spatial model of party competition can be difficult to apply in practice. Political competition is rarely, if ever, based upon a single dimension. To determine an overall distance between voters and parties in a multi-dimensional competition all relevant dimensions must be identified, and the distance

between parties and voters must be determined in each dimension. Dimensions can be evaluated individually, but it is important that information from each dimension be combined to generate an overall distance between an individual and each party.

Accordingly, the policy positions of individuals and parties with respect to six (or seven in the case of Quebec) dimensions are considered here.[129] The distances for each dimension are combined to arrive at a measure of overall distance as follows:

$$Dist_{PartyX:\ overall\ unweighted} = \sum_{i=1}^{y} |Position_{i\ voter} - Position_{i\ Party\ X}| \quad \textbf{(5-1)}$$

Where $y = 7$ for Quebec and 6 for ROC.

While equation (5-1) is able to account for more than one dimension, it remains flawed in that it weights each dimension of competition equally. It overlooks the fact that some issues may vary in importance to individuals and parties. In other words, this formula fails to recognize the fact that an individual may assign a relatively high degree of importance to some issues, and little to others. For instance, a voter who believes that environmental protection is the most important election issue may choose to support the party that he or she is closest to with respect to that dimension, even if that party is a great distance from that individual in other dimensions. Position and salience are two distinct components of policy positions (Laver, 2001), and a method of calculating distances with respect to multiple policy dimensions must take both components into consideration.

[129] While the list of policy areas considered here is not exhaustive, it undeniably represents a significant proportion of the overall list of policies that parties focus on during an election. Better data would allow for a more extensive examination of policy dimensions, but it likely is impossible to take into account every possible factor upon which individuals base their decisions.

While the format of CES data makes it impossible to determine the relative weight that individuals place upon each dimension,[130] it is possible to determine the weight that each party places upon each dimension.[131] Specifically, CMP data allows for the calculation of issue salience (or the importance which a party assigns to a particular dimension).[132] The share of a manifesto devoted to a various topics is reflected in CMP category counts (which can be combined to determine salience scores for policy dimensions). By considering the share of party manifestos devoted to each dimension, it is possible to estimate the relative importance that the parties assign to those dimensions. While using party saliencies to calculate the importance of each dimension may be less desirable than using individuals' preferences,[133] since the latter

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[130] The 2004 CES does contain a question about which issue individuals consider to be the most important. However, information on the relative importance that each respondent places upon the dimensions considered here is required to properly incorporate individual, rather than party, saliencies.

[131] While there will be significant variation with respect to the importance that individuals place upon various issues, the assumption made here is that parties design their manifestos to reflect the weight that they believe voters assign to each dimension (or at least the voters that they wish to attract). In other words, if a party wishes to attract voters who believe that environmental policy is important, that party will devote a relatively large portion of its manifesto to that topic.

[132] The CMP is designed to reflect the "saliency theory" of voting. The theory asserts that all party platforms endorse the same positions, with only minor exceptions. Parties differentiate themselves by emphasizing issues on which they have the best reputation with voters (Budge *et al*., 2001). Seen another way, when dealing with "valence issues" (those that virtually all voters are in agreement) parties must try to set themselves apart from others (Stokes, 1963). In line with this theory, Budge (1987) notes that party manifestos may gloss over policy areas that opponents are deemed to have an advantage in, and emphasize areas that the party feels it has an advantage in (suggesting that parties can "own" an issue). However, the estimates of party positions here control for the share of a party's manifesto devoted to an issue, thus taking the notion of issue ownership into account. Additionally, not every issue is one-sided, meaning that not all parties will endorse the same position (see Table 5-III-1 in Appendix 5-III). For instance, protectionist measures may be supported by some parties, and opposed by others. By combining positive and negative CMP variables into a single index for each dimension, however, it is possible to have parties located on both sides of an issue, and to thus make the data compatible with the spatial theory of party competition.

[133] A concern with using manifestos to determine salience scores is the fact that voters (even those who support the same party) differ with respect to the importance they place upon issue or dimension. This individual-level variation cannot be fully accounted for by using manifestos to determine salience scores. Since individual-level data of this sort are unavailable, the alternative to this approach is to weight dimensions equally. This ignores the possibility, however, that some issues are clearly more important than others during an election. For example, when asked which election issue is most important (and provided with five options), 48.8% of CES respondents answered "health care," while only 4.3% stated that they believed the "environment" to be the most important. Thus, while the approach to accounting

method is not an option, distances between parties and individuals are determined as follows:

$$Dist_{PartyX:\,overall\,weighted} = \sum_{i=1}^{y} |Position_{i\,voter} - Position_{i\,Party\,X}| \times Salience_i \quad \textbf{(5-2)}$$

Where salience is calculated for each dimension for each party.[134] The party with the lowest value from equation (5-2) is considered an individual's correct vote choice.

In order to properly compare the policy positions of individuals to those of parties, data from the CMP[135] and CES[136] must be converted to a format whereby they are compatible with one another. In theory, CES questions can be matched up with the seven existing CMP policy domains — external relations, freedom and democracy, political system, economy, welfare and quality of life, fabric of society and social groups (each of which is based upon a combination of CMP variables). However, because the data are not created specifically with Canada in mind, there are some factors which do not apply in this context (for example, the CMP contains a "Marxist analysis" variable which is largely meant to apply to former communist countries — all Canadian parties have a value of 0 for this variable). The CES poses an additional complication, as the questions contained in this dataset do not always correspond neatly with CMP policy domains. As a result, the policy dimensions considered here do not match exactly with those in the CMP.

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for dimension salience employed here is imperfect, is it nevertheless preferable to ignoring issue salience altogether.

[134] The issues covered here do not account for all of the variables in the CMP, thus the sum of the salience values for each party do not add up to 100% (see Table 5-III-1 in Appendix 5-III for salience scores). Salience values are calculated by dividing the salience score for a dimension by the sum of all salience scores for all of the dimensions considered here (in order to control for the percentage of each manifesto devoted to these dimensions).

[135] CMP data are available online at: http://manifesto-project.wzb.eu/

[136] CES data are available online at: http://www.queensu.ca/cora/ces.html

To overcome these issues, combinations of CMP variables are used to generate seven new policy categories: US-Canada relations/protectionism, militarism (which is indicative of positions on military spending and peace), social conservatism (which reflects positions on traditional morality, multiculturalism, law and order and feelings towards women and minorities), planned vs. market economy (which taps into positions on the debate between government intervention and the free market), environmental protection,[137] state-provided services and social justice (which evaluates positions on welfare and education spending, as well as the redistribution of wealth) and, for Quebec only, sovereignty.[138]

For each policy dimension, scores for party and individual policy positions are calculated by combining multiple variables, and normalized to fit on a scale from -1 to 1, thus making the calculation of the distance between individuals and parties using equation (2) possible. Multiple CES questions are used to calculate the positions of individuals for each policy dimension (with the exception of the sovereignty dimension, where a single question is considered). The descriptions of CMP variables provided by Klingemann *et al*. (2006) are matched with corresponding CES questions in order to

[137] This policy dimension assumes that environmental protection and economic growth are in tension with one another. While this assumption may not necessarily be true, both CMP and CES data explicitly accept it. The CES contains a question about the importance of the environment relative to job creation, and the CMP category "anti-growth" economy is meant to take into account mentions of the relationship between economic growth and the environment.

[138] It is common practice for CMP variables to be combined in this fashion to create indices. Klingeman *et al*. combine 26 CMP variables, from all seven policy domains, into a single left-right variable (2006). Similarly, Benoit and Laver (2007) have proposed indices for "state involvement in economy" and "social liberal-conservatism" and Lowe *et al*. (2011) have created similar indices for "free market economy," "environmental protection" and "state-provided services." For this study, index design is based heavily upon the format of CES data. As such, while ideas are borrowed from the work of previous scholars in this field (i.e. the state-provided services and social justice variable used here is very similar to the state-provided services variable proposed by Lowe *et al*.), most indices used here have been created specifically for this article (the one variable borrowed from previous work is Lowe *et al*.'s environmental protection variable). Policy dimensions are thus selected on the basis of the availability and compatibility of CMP and CES data.

make the two scales compatible with one another. In the case of party positions three to seven CMP variables are used while for individual positions two to seven CES questions are combined for each dimension.

CMP variable descriptions are evaluated to determine how best to match data from the two datasets. For example, the 'State Provided Services and Social Justice' dimension is based upon four CES questions and five CMP variables. The CES questions ask respondents if the government should spend more, less or about the same on welfare, healthcare and education, respectively, and if more or less should be done to reduce the gap between the rich and poor. The CMP variables for this dimension are based upon welfare state expansion and limitation, education expansion and limitation, and social justice. The welfare state CMP variables are based upon mention of healthcare, child care, elder care and social housing, and correspond with the CES questions on healthcare, welfare and the rich/poor divide. The education variables are based upon mention of a need to expand or limit education expenditures, and correspond with the CES education question. Finally, the social justice variable taps into concepts like the need for special protection for the underprivileged, the fair distribution of resources and the removal of class barriers. This variable thus corresponds nicely with the CES question on reducing the gap between rich and poor. The CMP and CES data included here were thus carefully chosen carefully as to ensure compatibility. The variables used to calculate party[139] and individual positions are

[139] Overall party positions were calculated by averaging the positions from all dimensions (excluding sovereignty). From left to right (on a scale from -1 to 1), the NDP has a score of -0.53, the Bloc -0.29, the Liberals +0.07, and the Conservatives +0.35. This fits with conventional wisdom that the Conservatives are a right-wing party, the Liberals a centrist party, and the NDP and Bloc are social democratic, left-wing parties (Johnston, 2008, placed the parties in these same relative positions in his Canadian Political Science Association presidential address). This finding provides some external validation of party estimates.

listed in Appendices 5-I and 5-II[140] respectively. Appendix 5-III contains a detailed description of how CMP and CES data are converted to scores ranging from -1 to 1, as well as descriptive statistics for estimates for each party and individual policy dimension.

A few other important methodological details should be mentioned. The analysis conducted here considers the 2004 federal election. The CMP does not yet have data on the 2008 election, and the 2006 CES does not contain a mail-back portion of the survey (meaning that it has far fewer questions that can be used to determine individuals' positions). 2004 is thus the most recent Canadian election for which data are available. Additionally, due to differences in party systems Quebec is considered independently from the rest of Canada (ROC). Additionally, since the CMP has no information on the Green Party or other minor parties, only the Liberals, Conservatives, NDP and Bloc are considered, and individuals who did not vote for these major parties are excluded from the following analysis.

Finally, to examine the impact of the campaign period upon correct voting, individuals are classified on the basis of attentiveness[141] and TOVD. A dummy variable for attentiveness is created to allow for comparison of relatively attentive and inattentive individuals. The validity of TOVD responses is evaluated using M^{c}Gregor's

[140] Cronbach's alpha scores, based upon CES data, for the dimensions based upon multiple questions range from roughly 0.5 to 0.6 (values of 0.7 or greater generally are considered desirable). This measure is indicative of how highly correlated survey responses for the questions included in each dimension are with one another, and can be used as evidence that factors included in indices of this nature tap into some common, latent variable. More important than high alpha scores, however, is that the CES and CMP variables being compared to one another are indeed compatible. A slightly low alpha score is acceptable if the survey questions correspond closely to the CMP variables. The discussion of the "state provide services and social justice" dimension above provides an example of matching variables in this manner.

[141] Attentiveness scores are based upon a series of questions on how much attention respondents claim to have paid to various forms of media (on a scale from 0-10). The highest value from these questions is used to assign attentiveness scores. Individuals who have an attentiveness value above the sample's mean are considered highly attentive, and those below the mean are considered inattentive.

(*working paper*) partially restrictive method, and cases with invalid responses are removed from the dataset.[142]

5.3 - CORRECT VOTING RATES

Before combining political dimensions to identify a single correct vote for each individual it is worthwhile to briefly evaluate each dimension of political competition individually. Table 5-1 contains the correct voting results, by dimension, for ROC and Quebec respectively.[143] Note that since the Liberals, NDP, and Conservatives all have the same position in the sovereignty dimension, they are grouped together in that segment of the table.

[142] Contrary to M^{c}Gregor's research note, of this dissertation, all five TOVD groups are evaluated here (rather than combining the pre-debate, around debate, and after-debate groups into one period). Since only one election is being considered, comparisons to later elections are not made, thus it is unnecessary to collapse these TOVD groups (the findings in Figure 5-1 do not change, however, even if these categories are collapsed). However, CES respondents with a TOVD that matches their interview dates are retained here (rather than being thrown out, as the fully restrictive approach, outlined in the research note, suggests).

[143] Results in Tables 5-1 and 5-2 are based upon unweighted CES data. However, when national weights are applied, while the values in Table 5-1 change slightly, the trends remain the same.

TABLE 5-1: RATES OF CORRECT VOTING BY POLICY DIMENSION

Policy Dimension		ROC			Quebec			
		LIB	CON	NDP	LIB	CON	NDP	Bloc
Foreign special Relationship/ Protectionism	% who should vote	4.4	59.4	36.2	1.5	13.2	23.4	61.9
	% of those who should that do	15.6	46.5	32.4	75.0	11.4	12.9	53.0
	% of those who do that should	1.9	65.0	57.7	4.1	14.3	47.1	60.8
	Overall rate of Correct voting		40.1			38.5		
Militarism	% who should vote	5.5	14.7	79.8	2.3	2.5	76.2	19.0
	% of those who should that do	26.8	73.6	23.2	45.5	25.0	6.6	28.6
	% of those who do that should	4.0	25.8	88.9	3.0	6.7	81.5	10.9
	Overall rate of Correct voting		30.8			11.7		
Social Conservatism	% who should vote	50.3	32.5	17.2	14.4	14.8	18.9	51.9
	% of those who should that do	38.7	60.9	39.3	21.1	17.9	16.0	51.8
	% of those who do that should	52.3	15.9	32.9	10.4	25.0	47.1	50.0
	Overall rate of Correct voting		46.0			35.6		
Planned vs. Market Economy	% who should vote	53.9	5.6	40.5	56.9	3.4	33.2	6.6
	% of those who should that do	36.9	81.4	30.6	37.2	31.3	8.9	45.2
	% of those who do that should	53.3	11.0	59.4	60.6	11.1	51.9	5.9
	Overall rate of Correct voting		36.9			28.1		
Environmental Protection	% who should vote	66.3	7.3	26.4	63.5	0.0	28.9	7.5
	% of those who should that do	36.1	34.7	28.8	29.6	n/a	11.7	65.0
	% of those who do that should	64.4	5.9	37.9	64.9	n/a	52.9	9.0
	Overall rate of Correct voting		34.0			27.1		
State Provided Services and Social Justice	% who should vote	15.1	56.3	28.7	19.3	17.2	37.1	26.4
	% of those who should that do	44.6	52.4	27.0	29.3	7.3	5.6	39.7
	% of those who do that should	18.1	69.8	37.2	16.1	13.3	38.5	21.0
	Overall rate of Correct voting		43.9			19.5		
Sovereignty	% who should vote					53.5		46.5
	% of those who should that do					82.9		87.4
	% of those who do that should					88.4		81.6
	Overall rate of Correct voting					85.0		

For each dimension Table 5-1 shows (a) the percentage of individuals that should vote for a party, (b) among those that should vote for a party, the percentage that actually do, (c) among those who do vote for a party, the percentage that actually should, and (d) overall levels of correct voting. Whereas (b) is indicative of how

successful parties are at attracting those voters who *should* be voting for them, (c) reflects how successful parties are at attracting voters who *should not* support them. A party that receives most of the votes it should, while at the same time getting a large share of its votes from individuals who should be supporting other parties, will likely be quite successful. A high value indicates success for parties for (b), while a low value is desirable for (c).

Considering that if voters were to cast their ballots randomly, 33% of people could be expected to vote correctly in ROC (since only three major parties are present) and 25% in Quebec (with 4 parties), the results for (d) in Table 5-1 are only minimally encouraging. While in almost all cases observed rates of correct voting surpass these values (the exception being militarism in Quebec), the results remain far below the 75% found by Lau and Redlawsk (1997) for US Presidential elections and the greater than 70% success rate calculated by Lau *et al*. (2008b) for the 2004 Canadian Federal Election (this second difference is not surprising considering the significant methodological differences between that study and the approach used here).

The overall rates of correct voting may provide some insight into which issues individuals see as most important, or perhaps which issues individuals seem to know more about. If a perfectly-informed individual agrees with one party on some issues and another party on others, this conflicted individual may choose to base his or her vote upon a dimension that is of the greatest importance to him or her. Similarly, if an individual only knows about one issue (perhaps the most high profile issue in a campaign), this individual might be expected to vote based upon this dimension. Perhaps unsurprisingly, the highest correct voting rates are found in Quebec along the

sovereignty dimension. While results from this dimension are not directly comparable to other data in Table 5-1 (due to differences in data format), the fact that the Bloc was highly successful in attracting those who should vote for them based upon this dimension (87.4% of respondents who should have voted Bloc in this dimension did so — the highest value in Table 5-1) indicates the importance of this dimension. Conversely, correct voting rates are lowest for the militarism dimension. Again, this could suggest either that voters do not assign a high degree of importance to this issue, or that they are unknowledgeable with respect to the party positions in this dimension.

Based upon single dimensions alone, there are some cases where parties should receive very little, or even none of the vote. For example, the Conservatives should have no voters based upon the environmental protection dimension, while the Liberals should only attract 0.4% of the vote in the foreign special relationship/protectionism dimension. On the other hand, the Conservatives should be highly successful in the state-provided services and social justice dimension, and the Liberals should receive the support of a majority of votes based upon the social conservatism, planned vs. market economy and environmental protection dimensions. In very few cases, however, when values for (a) surpass 50% do values for (b) also go above 50%. In other words, when parties should seemingly have a "lock" in a dimension, they generally are unable to capitalize substantially. On the other hand, there are a number of cases where values of (c) are very low, suggesting that parties which should not be successful in a dimension are, in fact, getting the support of voters who should not (at least when one dimension is considered) be voting for them. This could mean that parties are either attracting

individuals on the basis of other dimensions, or that voters simply do not have an accurate knowledge of party positions.

To properly determine rates of correct voting, however, all dimensions must be considered simultaneously. Again, elections are rarely, if ever, fought along a single dimension (at least for all voters), and different combinations of dimensional distances between voters and parties and the salience of each issue theoretically can produce overall rates of correct voting that vary substantially from those contained in Table 5-1. As such, Table 5-2 shows information on overall rates of correct voting, calculated using equation (5-2).

TABLE 5-2: OVERALL RATES OF CORRECT VOTING

	ROC (n = 952)			**Quebec** (n = 256)			
	LIB	**CON**	**NDP**	**LIB**	**CON**	**NDP**	**Bloc**
% who should vote	22.1	33.9	44.0	12.1	10.2	28.5	49.2
% of those who should that do	41.4	66.9	29.8	54.8	34.6	13.7	88.9
% of those who do that should	24.2	54.3	64.4	23.6	32.1	58.8	80.6
Overall rate of Correct voting		45.0			57.8		

The overall rates of correct voting are 45.0% in ROC and 57.8% in Quebec.[144] The value for Quebec is buoyed by the ability of the Bloc to attract a significant percentage of voters that should vote for them (88.9%). *Nationally, the overall correct voting rate in 2004 is 47.5%.*[145] Overall, it is the NDP that suffers the most from its inability to attract voters that should be voting for the party. Only 29.8% and 13.7% of individuals that should be supporting the party, in ROC and Quebec respectively, end up doing so. On the other hand, it is the Liberal Party that benefits most from incorrect

[144] Correct voting rates are slightly lower when dimensions are not weighted to take salience into account: 39% in ROC, and 56.6% in Quebec.
[145] This value is calculating using a national sampling weight. The unweighted value is 47.7%.

voting. In both ROC and Quebec, less than a quarter of individuals that vote for the party should be voting Liberal. For their parts, the Conservatives and Bloc have similar values for their respective (b) and (c) scores, indicating that they come out relatively even with respect to the balance between not attracting voters they should and attracting voters they should not be able to.

Among the CES respondents included in this study, party vote shares for the 2004 election were as follows: Liberals: 35.8%, Conservatives: 35.3%, NDP: 17.4% and the Bloc: 11.5.[146] If these same individuals had voted "correctly" the results would have been as follows: Liberals, 20.0%; Conservatives, 28.9%; NDP, 40.7%; and the Bloc, 10.0%. In other words, every party except the NDP benefitted from incorrect voting, while the NDP was punished significantly by this phenomenon. [147] The results indicate that the median voter seems to be closer to the NDP than election results would suggest.[148] While it is difficult to say what exactly an acceptable level of correct voting is, the fact that a different party would theoretically have won the election had everyone

[146] This differs somewhat from the actual election results because the sample here is not representative of the population (for instance, Quebec is oversampled in the CES). Recall also that individuals who supported minor parties or candidates are excluded here.

[147] It might be argued that one reason why the NDP are the "correct" vote choice for so many voters is because, since the party had no realistic chance of forming government in 2004, it had the privilege of being able to largely ignore budget constraints. For instance, the party could propose spending increases and/or tax freezes or cuts without having to worry about actually implementing and being held accountable for their decisions. Such policies are obviously popular among the electorate, even if they are not necessarily financially sound. However, members of the public who might be aware of the fact that the NDP is able to ignore budget constraints might reasonably be expected to vote for a different party (they would thus be classified as "incorrect" here). Future work can evaluate whether correct voting patterns are influenced by political knowledge of this nature.

[148] The results challenge Benoit and Laver's (2004) assumption that election results and knowledge of party policy stances can be combined to estimate the position of the median voter. Such an approach is based upon the notion of "revealed preferences." That is, the assumption here is that individuals, by definition, prefer the candidate that they voted for. Lau and Redlawsk (2006) reject this assumption as a "pretty unrealistic description of human behaviour." Simply put, individuals do not always make utility-maximizing decisions.

voted correctly is, to say the least, a significant finding.[149] The party that "should" have formed government in 2004 was instead relegated to fourth place.[150]

5.4 - CORRECT VOTING AND THE CAMPAIGN PERIOD

Now that the rate of correct voting has been estimated, this article turns to explore the impact that the campaign period has upon correct voting rates. If correct voting is desirable, as is argued here, then the campaign can be said to have a positive impact if it improves the ability of the electorate to vote correctly. That is, if voters are able to use the campaign period to gather information about party policies and match those policies with their own preferences, the campaign can be said to have a constructive effect. Alternatively, if voters are either unwilling or unable to use the campaign period to improve the quality of their vote choices, it could suggest that campaigns are having a negative impact upon the level of correct voting. If so, it might be argued that the campaign contributed to the arguably low rate of correct voting estimated above.

The data suggest that attention to the campaign is positively correlated with voting correctly. The cross-tabulation of these variables indicates that attentive voters have higher correct voting rates than inattentive voters. 52.6% of attentive voters (n=568) voted correctly, while this value is only 43.8% for inattentive voters (n=539)[151] (recall that the overall rate of correct voting is 47.5%). Results also suggest, however,

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[149] It is possible, even with low levels of correct voting, to have an election result that mirrors the result that should occur if everyone votes correctly. This would occur if each party gained roughly the same number of incorrect votes as it lost. This does not, however, turn out to be the case here.

[150] Since it has never formed government at the federal level, many voters simply do not see the NDP as a viable option, which may in part explain its poor performance. Nevertheless, it is almost certainly the case that many voters who should see themselves as closest to the NDP failed to do so.

[151] A chi-square test shows the difference between these groups to be significant at the 99% level.

that late-campaign deciders tend to be less attentive than pre-campaign deciders. The share of pre-campaign deciders who are highly attentive is 55.1%, compared to 47.7% for voters who made their vote decisions during the campaign. The fact that attentiveness and correct voting are related to one another, therefore, is insufficient to argue that the campaign period has a positive impact upon correct voting rates.

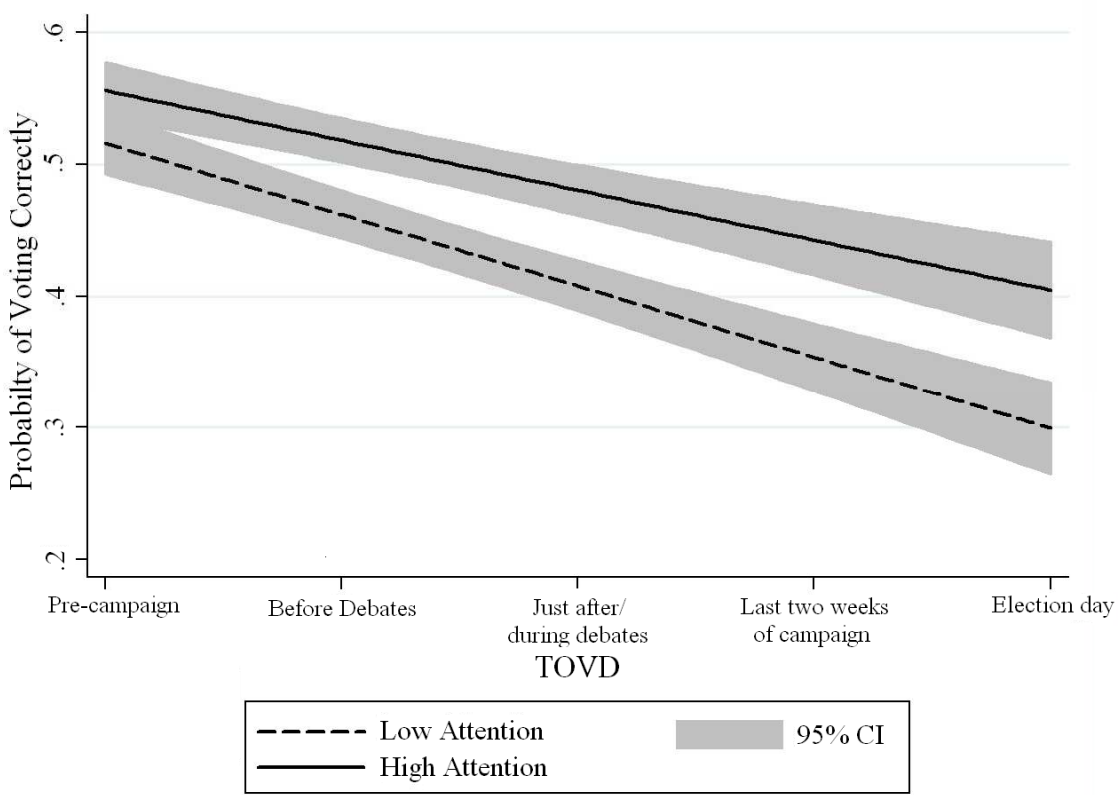
This impact can be evaluated by employing TOVD as a moderating variable between these two factors (the 2004 CES presents respondents with five TOVD options: pre-campaign, before the debates, during or just after the debates,[152] the last two weeks of the campaign and election day[153]). Once again, if campaigns do help individuals to vote correctly, we would expect to find three patterns. First, attention to the campaign should not influence rates of correct voting among pre-campaign deciders. Second, among campaign deciders, attention to the campaign should increase one's chances of voting correctly. Finally, if attention to the campaign does have a positive impact upon correct voting rates, late deciders should have higher rates of correct voting than should early deciders.

To evaluate these expectations, the attentiveness variable has been interacted with TOVD, and regressed onto a binary correct voting variable (correct/incorrect). The predicted probability of voting correctly for each TOVD period has been calculated for high- and low-attention voters, and the lines of best fit for these values have been graphed — these results are shown in Figure 5-1. Several variables expected to

[152] The debates were held on June 14th and 15th. This TOVD period was coded to cover the 14th to the 16th (the additional day was included to account for people who decided "just after" the debates).
[153] 48.9% of respondents are classified as pre-campaign deciders, 14.0% decided before the debates, 7.2% decided during or just after the debates, 19.2% after the debates, while the remaining 10.8% of respondents have an election-day TOVD.

influence correct voting rates (namely age,[154] partisanship[155], party choice[156], voter motivation[157] and a Quebec variable[158]) are included as controls in the model (the regression results for this model are shown in Appendix 5-IV).[159]

FIGURE 5-1: TOVD AND CORRECT VOTING BY ATTENTIVENESS



[154] Lau et al. 2008b and Walgrave *et al*. (2009) find age to be related to correct voting. The argument is that older voters are more experienced and are better able to correctly identify the party which best reflects their own preferences.
[155] Lau *et al*. (2008a) posit that heuristics are positively related to correct voting.
[156] Walgrave *et al*., 2009, suggest that supporters of the winning party will be more likely to vote incorrectly – this is one of the reasons why the party wins.
[157] Lau *et al*., 2008b, argue that motivated individuals are more likely to vote correctly. Those individuals who disagree with the statement that "All federal parties are basically the same; there isn't really a choice" are considered motivated.
[158] Lau *et al*., 2008a and Walgrave *et al*., 2009 suggest that voting correctly should be more difficult if more viable parties are contesting the election. However, Table 5-2 reveals a higher rate of correct voting rate in Quebec than in the rest of Canada. Regardless, this variable is included to account for this difference.
[159] When not controlling for these other factors, the patterns observed here remain unchanged.

The results in Figure 5-1 are compatible with two of the three expectations discussed above. First, as was expected, there is no statistically significant difference in the correct voting rates of attentive and inattentive pre-campaign deciders. Campaign period information is not factored into the decisions of these voters, and any learning that these individuals do during the course of the campaign has no impact upon their vote choice. Figure 5-1 is also compatible with the expectation that attentive campaign deciders will have higher rates of correct voting than will inattentive campaign-period deciders. Attentive individuals with a TOVD ranging from the debates to election-day have a correct voting rate of 45.2%, compared to only 34.8% for inattentive individuals with the same TOVD.[160] For campaign deciders, therefore, attentiveness does appear to improve the likelihood that one will vote correctly.

The findings in Figure 5-1 conflict, however, with the third expectation listed above. In order to safely conclude that the campaign period has a positive impact upon correct voting rates, late campaign-period deciders should be found to be more likely to vote correctly than should pre-campaign deciders. This is, however, the opposite of what has been observed here. Despite the fact that late deciders have additional time to absorb campaign information before making their decisions, it is pre-campaign deciders who have the highest rates of correct voting. Overall, pre-campaign deciders also have the highest correct voting rate, at 54.9%, followed by pre-debate (44.5%), around debate (44.4%), post-debate (40.1%) and election-day (35.3%) deciders.[161] This pattern

[160] This difference is statistically significant at the 95% confidence level. There is no statistically significant difference in the correct voting rates of early-campaign deciders on the basis of attentiveness. There is no statistically-significant difference in the correct voting rates of attentive and inattentive pre-debate deciders. These individuals have relatively little time to collect campaign information before making their decisions, so it is unsurprising that they behave like pre-campaign deciders in this respect.

[161] The sample size is 1055. With the exception of pre-debate and debate deciders, all differences are statistically significant at the 99% level.

holds for both the high- and low-attention groups. High-attention election-day deciders have a correct voting rate almost 15 percentage points lower than do high-attention pre-campaign deciders, while the corresponding value for low-attention voters is over 22%.[162] Thus, while being attentive during the campaign does help undecided voters identify their 'correct' vote choice, those voters who are decided before the campaign begins are the most likely to vote correctly.

In summary, then, paying attention to the campaign does improve the chances of voting correctly for campaign period deciders, while attentiveness has no relationship with correct voting for pre-campaign deciders. However, campaign period deciders have been found to have lower levels of correct voting than pre-campaign deciders, and this difference holds among high and low attention groups. It is therefore difficult to argue, at least on the basis of this information, that the campaign period has a positive impact upon the legitimacy and quality of Canadian democracy, at least as far as correct voting rates are concerned.

5.5 - CONCLUSION

This article contributes to the growing literature on the study of correct voting and provides researchers with a new way of operationalizing party policy positions. Data from the Comparative Manifestos Project are reliable (since they are based upon statements from parties themselves), determined through an objective measurement process and publicly available for 55 countries. In contrast to existing approaches, this new method focuses exclusively upon policy when evaluating the ability of voters to

[162] These differences are statistically significant at the 95% and 99% level respectively.

identify the party that best corresponds with their individual beliefs and preferences. It thus excludes some of the factors considered in previous studies of correct voting that can serve to bias estimates of rates of correct voting upwards (such as party identification), or which have only a tenuous relationship with government outputs (including group association).

While the data considered here are Canadian, this new approach can be applied to other settings and can be tailored to take country-specific policy issues and dimensions into account. Specialization of this nature is desirable, as it allows for the creation of country-specific explorations of correct voting patterns. The inclusion of the sovereignty dimension in Canada is an excellent example of why such an approach is attractive. This dimension is vital to political competition in Quebec in particular, and helps to explain why rates of correct voting are higher in that province than in ROC. On the other hand, because of the importance of this dimension, Quebecers exhibit lower rates of correct voting in all other dimensions than do voters in ROC. This method thus allows researchers to consider the relative importance of each dimension of political competition.

This new method should also be applied in future work to help explain correct voting patterns. The rate of correct voting calculated here for the 2004 Canadian federal election arguably is low — fewer than half of CES respondents were found to have voted for the party that best reflects their individual policy preferences. The fact that Canadian parties have been described as brokerage parties (suggesting that they are non-ideological in nature and aim for consensus building) (Brodie and Jensen, 1996), may or may not have contributed to this finding. Nevertheless, CMP data reveal

significant differences between the parties in many dimensions (see Appendix 5-III), meaning that, in most dimensions, it should not be too difficult for knowledgeable voters to distinguish between the parties. The results suggest that the majority of respondents were either unable to identify the party that best represents their views, or were for some reason unwilling to vote for the "correct" party (e.g. they may have considered the mechanical effects of the electoral system when making their vote decisions). Future research can apply the method introduced here to explain this outcome more fully, and to calculate and explain correct voting rates in other settings.

Evaluation of the relationship between attention to the campaign and correct voting has provided some validation of this new method, as attention has been found above to be positively correlated with correct voting. Employing TOVD as a moderating variable has provided additional insight into the exact nature of the relationship between these factors, and has revealed that attentiveness does have a positive impact upon correct voting rates for campaign deciders, and no impact for pre-campaign deciders. However, while being attentive during the campaign does increase the chances of voting correctly for campaign-period deciders, the fact is that pre-campaign deciders (who have made up their minds without the benefit of campaign period information) have the highest rates of correct voting. There are a number of potential reasons for this. For instance, it may be that media coverage during the course of a campaign focuses primarily upon non-policy matters (examples of non-policy based political stories from the recent 2011 Canadian federal election include allegations that the Conservative Party acted inappropriately in evicting students from party rallies, or that the leader of the NDP visited an illegal massage parlour in the

1990s). Alternatively, those campaign period deciders who claim to be attentive may be seeking out information that is not policy-based. In other words, either the media or voters themselves may be focusing on politics, but not on policy, which can be problematic if focusing on these other factors causes voters to be persuaded to vote incorrectly. More research is, of course, required to examine these possibilities.

Another interpretation of the results would be to suggest that campaigns do help citizens to vote correctly, provided that voters are attentive, but that it may be insufficient to only be attentive during the campaign period. If one wishes to vote correctly it may be important to also pay attention to politics *between* campaigns. While the CES does not contain a question on how attentive voters are between elections, general knowledge (as measured through a series of questions which are not campaign specific) can be used as a proxy for this factor. CES data reveal that attentive pre-campaign deciders have higher levels of general political knowledge than do attentive campaign deciders.[163] Thus, while both groups are coded as being attentive during the campaign, the group with higher general political knowledge has a higher rate of correct voting. This could suggest that, even without campaign specific knowledge, voters who are attentive between campaigns are able to predict which parties are most likely to put forward various policy proposals. The chances that the left-wing NDP will propose an increase in military spending, for example, are relatively low compared to the chances that the right-wing Conservatives will make the same promise (which the Conservatives did in 2004). These voters thus may not need to wait for the release of official party platforms in order to know enough to vote correctly. If

[163] As determined by creating a dummy variable for general knowledge, similar to that created for attentiveness. 76.2% of attentive pre-campaign deciders have high general knowledge, while the value is 67.7% for attentive campaign period deciders. This difference is significant at the 99% level.

this is the case, then the solution to concerns about the quality of the average voter may be as simple as convincing the electorate of the importance of being attentive to and knowledgeable about politics before, during and after the campaign period. Such a modest project is, however, best left for another time.

5.6 - BIBLIOGRAPHY

Bennet, W. L. (1992) *The governing crisis: media, money, and the marketing in American elections*. New York: St. Martin's Press.

Benoit, K., Laver M. (2007) Estimating party policy positions: Comparing expert surveys and hand coded content analysis. *Electoral Studies, 26*, 90–107.

Berelson, B. (1952) Democratic theory and public opinion. *Public Opinion Quarterly*, *16*, 313-30.

Blais, A., Gidengil, E., Nadeau, R., & Nevitte, N. (2002) *Anatomy of a Liberal victory: Making sense of the vote in the 2000 Canadian election.* Peterburough: Broadview Press.

Blais, A., Gidengil, E., Nadeau, R., & Nevitte, N. 2003. Campaign Dynamics in the 2000 Canadian Election: How the Leader Debates Salvaged the Conservative Party. *Political Science and Politics*, *36*, 45-50.

Brodie, J., & Jenson, J. (1996) Piercing the smokescreen: Stability and change in brokerage politics. In A. Gagnon & B. Tanguay (Eds.), *Canadian Parties in Transition, 2nd Edn* (pp. 52-74). Peterborough: Broadview Press.

Budge, I. (1987). The internal analysis of election programmes. In: I. Budge, D. Robertson, & D. Hearl, (Eds.), *Ideology, strategy and party change. Spatial analysis of post-war election programmes in 19 Democracies* (Pp. 15-38). Cambridge: Cambridge University Press.

Budge, I. *(*1999). *Estimating party policy preferences: From ad hoc measures to theoretically validated standards. Number 139 in "Essex Papers in Politics and Government."* University of Essex and Department of Government.

Budge, I. (2000). Expert judgments of party policy positions: Use and limitations in political research. *European Journal of Political Research*, *37*, 103-113.

Campbell, A., Converse, P., Miller, W.E., & Stokes, D.E. (1960). *The American Voter*. New York: John Wiley & Sons.

Canadian Broadcasting Corporation (2011), Vote Compass. Accessed 2 April, 2011. Available at: <http://votecompass.ca/>

Canadian Opinion Research Archive, Canadian Election Study data, Accessed 14 January, 2011. Available at: <http://www.queensu.ca/cora/ces.html>.

Chaffee, S. H., & Choe. S.Y. (1980). Time of decisions and media use in the Ford-Carter Campaign. *Public Opinion Quarterly. 44*, 53-69.

Dahl, R. A. (1967). *Pluralist democracy in the United States: Conflict and consent*. Chicago: Rand M^{c}Nally.

Downs, A. (1957). *An Economic Theory of Democracy*. New York: Harper and Row.

Frank, T. (2004). *What's the matter with Kansas? How conservatives won the heart of America*. New York: Metropolitan Books.

Fournier, P., Nadeau, R., Blais, A., Gidengil, E. & Nevitte, N. (2001) Validation of time-of-voting-decision recall. *Public Opinion Quarterly*. *65*, 95-107.

Fournier, P., Nadeau, R., Blais, A., Gidengil, E. & Nevitte, N. (2004). Time-of-voting decision and susceptibility to campaigns. *Electoral Studies*, *23*, 661-681.

Hobolt, S. (2007). Taking Cues on Europe? Voter Competence and Party Endorsements in Referendums on European Integration. *European Journal of Political Research, 46*, 151-182.

Jenkins, R.W. (2002). How campaigns matter in Canada: Priming and learning as explanations for the Reform Party's 1993 campaign success. *Canadian Journal of Political Science*, *35*, 383-408.

Johnston, R., Blais, A., Brady, H.E. & Crete, J. 1992. *Letting the people decide: dynamics of a Canadian election*. Montreal: M^{c}Gill-Queen's University Press.

Kim, H., & Fording, R.C. (2002). Government partisanship in western democracies, 1945-1998. *European Journal of Political Research*, *41*, 187–206.

Klingemann, H. D., Volkens, A., Bara, J.L., Budge, I., & M^{c}Donald, M.D. (2006). *Mapping policy preferences II: Estimates for parties, electors, and governments in Eastern Europe, European Union and OECD 1990-2003*. New York: Oxford University Press.

Lau, R.R., Andersen, D.J., & Redlawsk, D.P. (2008a). An exploration of correct voting in recent U.S. presidential elections. *American Journal of Political Science, 52*, 395-411.

Lau, R.R., Patel, P., Fahmy, D.F., & Kaufman, R.R. (2008b). Correct voting across 32 democracies (and 51 Elections). Paper presented at the 2008 annual meeting of the Midwest Political Science Association, April 3-6, Chicago.

Lau, R.R., Redlawsk, D.P. (1997). Voting correctly. *The American Political Science Review, 91*, 585-98.

Lau, R.R., & Redlawsk, D.P. (2006). *How voters decide: Information processing during election campaigns*. New York: Cambridge University Press.

Laver, M., (2001). Position and salience in the policies of political actors. In: Laver, M. (Ed.), *Estimating the Policy Positions of Political Actors* (Pp. 66-75). New York: Routledge,.

Laver, M. & Hunt, W.B. (1992). *Policy and Party Competition*. New York: Routledge.

Lowe, W., Benoit, K., Mikhaylov, S., & Laver, M. (2011). Scaling policy preferences from coded political texts. *Legislative Studies Quarterly, 36*, 123-155.

Lupia, A. and M^{c}Cubbins, M.D. (1998). *The democratic dilemma: Can citizens learn what they need to know?* New York: Cambridge University Press.

Manifesto Project Database. Accessed 14 January, 2011. Available at: <http://manifesto-project.wzb.eu/?>.

Mill, J.S. (1862) *Considerations on representative government*. New York: Harper.

Nai, A. (2010). *Explaining correct voting in Swiss direct democracy*. Presented at the annual meeting of the Swiss Political Science Association, Geneva, January, 2010.

Nevitte, N. (1996). *The decline of deference: Canadian value change in cross national perspective*. Peterborough: Broadview Press.

Norris, P. (1999). *Critical citizens: Global support for democratic government*. New York: Oxford University Press.

Pew Research Center Publications. (2011) *Growing Number of Americans Say Obama is a Muslim*. Accessed 1 Feb, 2011. Available at: <http://pewresearch.org/pubs/1701/poll-obama-muslim-christian-church- out-of-politics-political-leaders-religious>.

Popkin, S.L. (1991). *The reasoning voter: Communication and persuasion in presidential campaigns*. University of Chicago Press: Chicago.

Rabinowitz, G. & Macdonald, S.E. (1989). A directional theory of issue voting. *The American Political Science Review, 83*, 93-121.

Ryan, J.B. (2011). Social networks as a shortcut to correct voting. *American Journal of Political Science, 55*, 753-766.

Sokhey, A. *and* Scott M^{c}Clurg. *N.D. (Forthcoming).* Social networks and correct voting. *Journal of Politics.*

Stokes, Donald E. (1963). Spatial models of party competition. *American Political Science Review*, *57*, 368-377.

Volkens, A. (2007). Strengths and weaknesses of approaches to measuring policy positions of parties. *Electoral Studies, 26,* 108-120.

Walgrave, S, Lefevere, J., Pepermans, K., & Nuytemans, M. (2009). *Why representation fails. Determinants of incorrect voting in a crowded party system.* Presented at the Workshop on Political Representation New Forms of Measuring and Old Challenges., November, 2009.

Wraight, C.D. (2008). *Rousseau's the social contract: A reader's guide*. Continuum: New York.

6 – VALIDATION OF TIME-OF-VOTING-DECISION RECALL: RETHINKING EXCLUSION CRITERIA AND DATA FORMAT (*RESEARCH NOTE*)

The validity of survey data is important to many fields of inquiry. If survey participants give incorrect responses, conclusions of studies based upon such data are meaningless; it is impossible to properly explore relationships between variables when one or more of those variables are based upon significantly flawed data. Inaccurate data will, at best, introduce noise into a study's results, thus reducing the certainty of conclusions. At worst, they can introduce bias, which could lead to inaccurate conclusions.

One variable that political scientists have been especially concerned about with respect to validity is time-of-voting-decision (TOVD) recall (see Campbell *et al*., 1954; Plumb, 1986; Chaffee and Rimal, 1996). In national election studies around the world, this variable is measured through a post-election question which asks respondents to report when vote decisions became final. There are concerns, however, that respondents may not be able to recall accurately when a vote decision is made (Campbell *et al*. 1954), that it may not always be possible to determine when one's mind is made up if such a decision is made unconsciously (Plumb, 1986), or that respondents may intentionally be dishonest and provide researchers with responses thought to be socially acceptable (Bradburn *et al*., 1979). Not surprisingly, then, studies of American data have found TOVD recall to be largely invalid, with validity rates estimated as low as 40% (Plumb, 1986) or 58% (Chaffee and Rimal, 1996).

In spite of the American findings and general concerns about the quality of TOVD recall data, Canadian TOVD data have been found to be largely reliable. Fournier *et al*. (2001) examine data from the 1997 Canadian Election Study (CES), and conclude that CES TOVD recall data reflect a "good approximation" (100) of actual TOVD results in this country. The authors find the voting behaviour of roughly 80% of respondents to be consistent with reported TOVD. This difference between the American and Canadian data may be a result of the different methodologies employed to explore TOVD validity, variations in campaign lengths, American and Canadian questionnaires,[164] party systems, political cultures or other factors. Whatever the reason(s), the fact that TOVD recall can generally be considered valid in Canada means that, while American data must be treated with caution, this variable is of use in Canada, and has the potential to be applied to countries with similar political systems and electoral studies (such as Great Britain or Australia).

The goals of this research note are to build upon Fournier *et al*.'s work to suggest a new method of sorting election study respondents on the basis of TOVD validity, to provide justification for this new method, and to illustrate the importance of the removal of invalid cases. Fournier *et al*. not only show that CES TOVD recall data are relatively accurate, but their paper suggests a method which allows for the identification of invalid cases. Their approach, and the approach introduced here, can be applied to any country that has an election study with pre-and post-election components.

[164] The NES has many more TOVD options than does the CES, and covers a much longer period of time. This stems from the fact that American campaigns (including primaries) are much longer than those in Canada.

TOVD recall validity is determined on the basis of three factors. The first, TOVD recall, is measured through a single post-election question. The options provided to respondents can vary, but for example, the options in the 2004 CES are: before the campaign, before the debates, just after/during the debates, last two weeks of campaign and election-day. The second factor is the stability of vote intention/choice between the pre- and post-election CES questionnaires. If pre-election vote intention does not match post-election vote choice the respondent is considered 'unstable' (this includes individuals who express no vote preference during the campaign). Otherwise, respondents are classified as having a stable vote preference. The third factor is the date of each respondent's pre-election interview. The CES employs a rolling cross-section design, meaning that the date of the pre-election questionnaire can vary significantly (interviews generally begin on the first day of the campaign and conclude the day before the election). Interview dates can be matched with TOVD time periods. TOVD validity is determined by comparing interview date to the stability of vote choice.[165] Table 6-1 shows the possible combinations of these variables.

TABLE 6-1: STABILITY OF VOTE CHOICE VS. INTERVIEW DATE

	Stable vote preference	Unstable vote preference
TOVD before interview	Scenario 1 (S1)	Scenario 2 (S2)
TOVD matches interview	Scenario 3 (S3)	Scenario 4 (S4)
TOVD after interview	Scenario 5 (S5)	Scenario 6 (S6)

Fournier *et al.*'s method (hereafter referred to as the "fully restrictive" approach) classifies the TOVD responses of S1 cases as valid. For these cases reported TOVD is before the pre-election questionnaire, and the pre- and post-election vote choices

[165] The assumption made here, and by Fournier *et al.*, is that responses to other questions are valid.

correspond with one another. Unstable respondents who claim to have a TOVD earlier than the pre-election questionnaire (S2) are considered invalid. If a vote choice is made prior to the pre-election interview, pre- and post-election vote choice responses should match. Also considered invalid are S5 cases, for whom reported TOVD is after the interview and vote choice is stable. S6 cases (those with a reported TOVD after the pre-election interview) are considered valid; vote choice should not be stable if a decision has yet to be made. Notably, Fournier *et al*. exclude S3 and S4 respondents from their analysis, not because these cases are considered invalid, but because validity cannot be determined (when the interview and TOVD periods coincide it is impossible to determine if interviews were conducted before or after a vote decision is made). The 80% overall validity rate reported by Fournier *et al*. authors does not consider S3 and S4 cases.[166] *In summary then, S1 and S6 cases are considered valid, S2 and S5 cases invalid, and the validity of S3 and S4 cases is indeterminate.*

Excluding S3 and S4 cases, however, has become especially problematic since the format of the TOVD question was changed in 2006. In that iteration of the CES, the number of TOVD options available to respondents was reduced from five to three

[166] While the fully restrictive approach discards S3 and S4 cases *because* their TOVD validity is uncertain, S1 and S5 cases are classified as valid, *despite* the fact that their validity is uncertain. S1 respondents are considered valid since vote choice is stable, and reported TOVD falls before the pre-election interview. However, it is possible that some S1 respondents change their mind between the time of their pre-election interview and election day, only to change their opinions again, with their preference returning to the party that they initially stated a preference for (thus making TOVD recall invalid). A similar concern applies to S5 respondents, who are considered unreliable since their reported TOVD is after the pre-election interview, yet their vote choice responses are stable. These voters also could have changed their minds twice (or more) between the two sets of interviews, eventually returning to their initial preference (thus making their TOVD recall valid). Consequently, even if a vote preference is coded as stable, there is no way to know if these preferences change between interviews. The only way to avoid this problem would be to interview respondents more frequently during the course of the campaign to monitor the stability of vote preferences more closely during the campaign, and even then, there may be unobserved attitude changes between interview points. Accordingly, there may be some S1 respondents coded as valid that should not be, and some S5 respondents coded as invalid who should not be.

(before the campaign, during the campaign, and on election-day).[167] Since all pre-election questionnaires are administered during the campaign, all individuals with a reported TOVD during that period would be classified as either S3 or S4 and removed under the fully restrictive approach. Accordingly, the exclusion criteria employed by the fully restrictive approach must be re-evaluated.

I propose two modifications to the fully restrictive approach. First, S3 and S4 respondents should not be discarded. This change deals with the issue of collapsing the campaign-period TOVD alternatives into a single option, and serves to increase the sample size for analyses where TOVD is included as a variable. Whereas Fournier *et al*.'s approach is conservative in that it removes S3 and S4 cases because TOVD validity is unknown, the method introduced here takes the opposite approach. The format of CES data since 2006 dictates that these cases must be retained, despite their uncertain validity. However, if the 80% validity rate observed by Fournier *et al*. holds for these voters, the noise introduced by the inclusion of such individuals is likely to be less harmful than the loss in sample size caused by their removal. Indeed, in elections where only three TOVD options are provided to respondents, if S3 and S4 cases are removed, the only TOVD groups that can be compared are pre-campaign and election-day deciders. This omits a sizable portion of the electorate, including an entire TOVD group, and clearly is unacceptable.

Second, to allow for comparison between elections, TOVD recall responses are reduced to three options (pre-campaign, during the campaign, and election-day), even when more options are available in the data. While a higher number of options allows

[167] This change no doubt reflects the fact that this campaign was unusually long (55 days versus the usual 36), and included four debates instead of the usual two.

for more variation on this variable, the fact that the CES question was changed in 2006 means that focusing only upon three TOVD options is necessary when evaluating TOVD trends over time. Furthermore, even when five options are available, the length of the TOVD periods may differ dramatically from one election to the next. For instance, the 'before debates' period is 22 days long for the 2000 election, but only 15 days in 1997. TOVD validity can still be evaluated for campaign deciders (with three TOVD options instead of five). Since all campaign period respondents will now be grouped together, this modification means that fewer S2 and S5 respondents will be coded as invalid. This new method of sorting individuals on the basis of TOVD validity is termed here the "partially restrictive" approach.

To summarize, the partially restrictive approach does not exclude S3 and S4 respondents, and considers only one campaign period TOVD option (as well as election-day). Table 6-2 shows TOVD patterns for raw CES data, and the cases remaining after the fully and partially restrictive approaches are applied for four recent Canadian Federal Elections.[168] For the partially restrictive results from 2000 and 2004, campaign-period deciders are grouped together as 'campaign deciders' when evaluating TOVD validity. For illustrative purposes, however, all five TOVD periods are shown for these elections. In other words, cases are sorted as though these individuals fall into the 'campaign period' TOVD category, but the valid cases are then disaggregated to allow for a comparison of the fully and partially restrictive approaches in the table.

[168] All analyses here exclude non-voters, those who do not know when the decision was made and those who refuse to provide survey responses.

TABLE 6-2: CLASSIFICATION OF TOVD VALIDITY BY LEVEL OF RESTRICTION

			2000	2004	2006	2008
Raw Data	Total N		1881	2206	2518	1735
	TOVD	Before Campaign	52.0%	49.2%	57.2%	52.4%
		First two weeks of campaign	10.2%	12.5%		
		Around debates	8.7%	6.5%	29.2%	32.8%
		Last two weeks of campaign	16.5%	18.4%		
		Election-day	12.6%	13.4%	13.6%	14.8%
Fully Restrictive	% cases removed	Scenario 2	9.4%	7.7%	7.3%	7.8%
		Scenarios 3 and 4	21.1%	20.8%	29.2%	32.8%
		Scenario 5	2.1%	2.6%	2.9%	3.5%
	Retained (%)		67.4%	68.9%	60.6%	55.9%
	Retained (N)		1268	1521	1525	970
	TOVD of retained cases	Before Campaign	63.2%	60.3%	82.4%	79.9%
		First two weeks of campaign	7.2%	6.2%		
		Around debates	7.0%	5.3%	0.0%	0.0%
		Last two weeks of campaign	7.1%	12.4%		
		Election-day	15.5%	15.7%	17.6%	20.1%
Partially Restrictive	% cases removed	Scenario 2	9.4%	7.7%	7.3%	7.8%
		Scenarios 3 and 4	6.4%	7.2%	0.0%	0.0%
		Scenario 5	2.1%	2.6%	2.9%	3.5%
	Retained (%)		82.1%	82.6%	89.8%	88.7%
	Retained N		1544	1821	2260	1539
	TOVD of retained cases	Before Campaign	51.9%	50.4%	55.6%	50.4%
		First two weeks of campaign	10.9%	14.1%		
		Around debates	6.6%	4.9%	32.5%	37.0%
		Last two weeks of campaign	17.8%	17.6%		
		Election-day	12.8%	13.1%	11.9%	12.7%

Not surprisingly, the partially restrictive approach has a significantly higher rate of case retention than does the fully restrictive approach (over 80% vs. less than 70%

for all four elections). While the numbers of S2 and S5 cases removed are the same in both approaches, the retention of S3 and S4 cases in the partially restrictive method accounts for this difference. In 2006 and 2008, all campaign-period deciders are removed through the fully restrictive approach, which, as described above, is highly problematic. Not only does this significantly decrease the size of the data sample for these elections, but it eliminates all cases with a campaign-period TOVD.

With both the fully and partially restrictive approaches, the share of the population in each TOVD group differs from the raw data. This difference is particularly acute, however, in the case of the fully restrictive approach. If this sorting method is applied the share of cases that fall into the pre-campaign and election-day categories increases significantly for all four elections, while the share of campaign deciders decreases. In other words, a disproportionately high number of the cases removed are those listed as campaign-period deciders in the raw data. If it were the case that campaign-period deciders are the most likely to provide invalid TOVD responses, such a finding might be acceptable. However, there is no way to know whether this is true using these data, nor is there any obvious theoretical reason to expect this to be the case. The differences between the partially restrictive results and the raw data are much smaller in comparison. The share of respondents removed from each TOVD group corresponds more closely with the share of respondents that fall into each TOVD category in the raw data.

Regardless of this difference, the fact that so many cases are thrown out due to response invalidity means that it is difficult to estimate the actual breakdown of TOVD in the electorate. If many raw data are known to be invalid, and the validity of many

retained cases is uncertain, it is difficult to draw conclusions about the TOVD patterns of the population using either raw or filtered data. However, even if the exact breakdown of TOVD patterns is unknown, it is possible to explore the relationship between TOVD and other factors. Data need not be representative of the population if the goal is simply to explore a relationship between variables.

In order to properly study such relationships, it is important to validate the partially restrictive approach. This can be done by testing whether the retention of cases of uncertain TOVD validity introduces bias into the sample. S3 and S4 cases are retained in the partially restrictive approach, and if their inclusion biases results in some manner it would be better to remove such cases. It is possible to explore such bias by comparing S3 and S4 cases to those which are otherwise considered valid (S1 and S6), with respect to factors known to have a relationship with TOVD. If differences between these groups are observed, it would suggest that these cases are, in fact, introducing bias. As pre-campaign and election-day deciders cannot fall into S3 or S4, this analysis is limited to campaign-period deciders, and since all campaign deciders are categorized as either S3 or S4 in 2006 and 2008, this analysis must be limited to the 2000 and 2004 elections.

A similar test can be conducted to explore the extent to which the retention of cases known to be invalid introduces bias, thus potentially providing support for the removal of invalid cases. S1 and S2 respondents can be compared among pre-campaign deciders, as can S6 and S5 cases for election-day deciders (there must be no TOVD variation for these comparisons to be meaningful). If significant differences exist between these groups with respect to factors known to be related to TOVD, it would

indicate that the retention of invalid cases introduces bias. Together then, these comparisons explore the appropriateness of the partially restrictive approach, and, more generally, the need to explore TOVD validity and exclude invalid cases.

Table 6-3 shows the results of these comparisons. Values in the first two columns indicate the difference in average values of S3 and S4 (combined), and those cases otherwise considered valid (S1 and S6) for campaign period deciders. Values in the remaining columns indicate the difference between the average values for retained cases and the average values for cases removed under the partially restrictive approach. The approach receives validation if results in the first two results columns are statistically insignificant (meaning that S3 and S4 cases are not biasing results in the dimensions considered here) and if the differences in the remaining columns are statistically significant (proving that cases where TOVD is known to be invalid would indeed introduce bias if retained). The correlates considered here include several socio-demographic and attitudinal factors expected to be related to TOVD (Fournier *et al*., 2004; Kenski, 2007; Lucas and Adams, 1978). With the exception of age, all variables are coded on a scale from 0 to 1.[169]

[169] Information on the election study questions used to operationalize these variables is found in Appendix 6-1.

TABLE 6-3: VALIDATION OF PARTIALLY RESTRICTIVE APPROACH

	S3 and S4 vs. otherwise retained (campaign only)		**S1 vs. S2** (pre-campaign only)				**S6 vs. S5** (election-day only)			
	2000	2004	2000	2004	2006	2008	2000	2004	2006	2008
Age	-0.08	0.7	-1.15	-0.46	0.73	0.85	1.13	0.37	1.85	1.64
Gender (1=female)	-0.01	.07[a]	-.18[c]	-.09[b]	0.02	-.10[b]	.14[a]	0.09	-0.03	.24[c]
Education	0.02	-0.001	0.06[c]	.06[c]	.08[c]	.05[b]	-0.04	0.001	0.03	-0.001
Income	-0.01	-0.01	.06[b]	.07[b]	.06[a]	.11[c]	0.02	0.04	0.04	-0.001
Interest in election	-0.01	0.02	.06[c]	.13[c]	.09[c]	.12[c]	0.01	-.09[b]	-0.05	-0.01
General political interest	-0.02	0.002	.06[c]	.09[c]	0.01	.15[c]	-0.02	-0.04	-0.01	-0.03
Media Attention	-0.01	0.01	0.02	.10[c]	.09[c]	.07[c]	-0.01	-0.02	-0.03	-0.02
Campaign knowledge*	0.02	-0.02	.11[c]	.20[c]			-0.001	-.07[a]		
General knowledge	0.02	-0.02	.11[c]	.11[c]	.08[c]	.12[c]	-0.02	0.02	-0.01	0.01
Strength of Partisanship	0.01	-0.03	.27[c]	.25[c]	.25[c]	.27[c]	-.09[a]	-.10[b]	-.16[c]	-.08[a]
N (retained)	276	365	801	917	1256	775	197	239	269	195
N (removed)	270	300	177	169	184	135	40	57	74	61

a: significant at the 90% level, b: significant at 95%, c: significant at 99%
*: Campaign specific knowledge questions were not asked in 2006 and 2008.

Table 6-3 provides no evidence that the retention of S3 and S4 cases introduces bias, and demonstrates the necessity of removing cases known to be invalid.[170] The comparisons of S3 and S4 cases to other campaign period deciders show no statistically significant differences, with the exception of gender in 2004, and even then, this difference is only significant at the 90% level. These findings suggest that S3 and S4 cases are not introducing bias into the campaign deciding TOVD group. To be safe, however, when variables other than those explored in Table 6-3 are being considered, a similar analysis should be conducted to ensure that S3 and S4 cases are not introducing bias.

[170] The patterns observed here hold when the 1988, 1993 and 1997 elections are considered (results not shown)

The remaining results demonstrate that invalid S2 and S5 cases should be removed before TOVD can be employed as a variable. The comparison of S1 and S2 pre-campaign deciders shows statistically significant differences for all variables except for age. Excluding this factor, 30 of 34 comparisons show differences significant at the 95% level or higher. The cases thrown out are more likely to be female, less educated, have a lower income, and be less politically interested, knowledgeable and partisan. The findings among election-day deciders (S5 and S6) are less strong, although they too suggest that the retention of invalid cases can introduce bias. Statistically significant differences were observed for gender, election interest, campaign knowledge and strength of partisanship. The weaker results for this set of comparisons may be due to the fact that there are far fewer election-day deciders than there are pre-campaign deciders (meaning that statistical estimates for the former group are made with less certainty). Altogether, the above results do suggest strongly that the removal of S2 and S5 cases is warranted. In 2008, for example, the cases removed from the pre-campaign period are more likely to be female than male, but those removed from the election-day group are more likely to be male. Women tend to be later deciders than men (Fournier *et al*. 2004, Kenski 2007), and the inclusion of cases with invalid TOVD responses would significantly dampen the observed relationship between TOVD and gender.

Survey data are unavoidably imperfect, and while TOVD recall data have been found to be particularly flawed, it is possible to minimize the impact of invalid TOVD responses. Doing so allows us to employ this variable with greater confidence. This note has suggested a new method of sorting election study respondents on the basis of TOVD validity, provided logical and empirical justification for the new method, and

shown the importance of the removal of invalid cases. While the data considered here are exclusively Canadian, the principles discussed are applicable to other settings. Provided that pre- and post-election survey data are available, TOVD validity can, and should, be examined using the partially restrictive approach.

6.1 - BIBLIOGRAPHY

Bradburn, N. H., Sudman, S., & Blair, E. (1979). *Improving interview method and questionnaire design.* San Francisco: Jossey-Bass.

Campbell, A, Converse, P., Miller, W. & Stokes, D. (1960). *The American Voter*: Chicago: University of Chicago Press.

Chaffee, S.H. & Rimal, R.N. (1996). Time of vote decision and openness to persuasion, in Mutz, D.C., Sniderman, R.A. and Brody, R.A. (Eds.) *Political persuasion and attitude change* (Pgs 267-291). Ann Arbor: University of Michigan Press.

Fournier, P., Nadeau, R., Blais, A., Gidengil, E. & Nevitte, N. (2001) Validation of time-of-voting-decision recall. *Public Opinion Quarterly*. *65*, 95-107.

Fournier, P. (2005). Ambivalence and attitude change in vote choice: Do campaign switchers experience internal conflict? In S. C. Craig & M. D. Martinez (Eds). *Ambivalence, politics, and public policy.* New York: Palgrave Macmillan.

Kenski, K.M. (2007). Gender and time of voting decision: Decision certainty during the 2000 presidential campaign." *Journal of Political Marketing, 6*, 1-22.

Lucas, W. and Adams, W.C. (1978). Talking, Television and Voter Indecision. J*ournal of Communication*, *28*, 120-131.

Plumb, E. (1986). Validation of Voter Recall: Time of Electoral Decision Making. *Political Behavior,* 8, 301–12.

7 - CONCLUSION

The preceding sections of this dissertation have covered a number of seemingly disparate issues. Nevertheless, they are held together by a common variable: TOVD. By employing this variable in new ways, academic contributions have been made here to the study of political attitudes, voter sincerity, campaign effects, cognitive dissonance theory, correct voting, and the validation of survey data.

The usefulness and versatility of this variable have been clearly demonstrated. TOVD was employed as a dependent variable in the dissertation's first article, an independent variable in the second, an indicator of campaign effects in the third, and a moderating variable in the fourth article. While concerns over the validity of TOVD recall data may have hampered the usefulness of this variable in the past, the introduction here, in a research note, of a new method of identifying invalid TOVD responses means that this variable can now be employed with greater confidence by researchers. This variable's potential, therefore, can now be more fully realized.

This final portion of the dissertation summarizes and synthesizes this dissertation's primary findings. The contributions of this work are reiterated, and discussed in relation to one another. The section concludes by commenting on the potential for future research on the topic of TOVD.

7.1 – SIGNIFICANT FINDINGS

Through they all in some way involve TOVD as a variable, the articles above deal with a variety of subjects. The first and second articles explore the relationship

between political attitudes and TOVD, and more specifically, they cover topics including the impact of summary attitudinal evaluations upon behaviour, and cognitive dissonance theory. The third and fourth articles consider the important topic of campaign effects, but also shed light upon the study of voter sincerity and correct voting. TOVD thus has been employed to advance our knowledge of many topics of study.

Although placed near the end of this dissertation, the research note on the validation of TOVD data arguably is the most critical part of this work. If TOVD responses are invalid, as some authors have found to be the case with American National Election Study Data (Plumb, 1986; Chaffee and Rimal, 1996), data on this variable are of little use. If invalid responses introduce noise, the study of relationships between TOVD and any other variable will produce results of diminished certainty. Building upon Fournier *et al*.'s (2001) work on the validation of Canadian TOVD data, the research note shows that invalid responses in fact introduce bias, which is much more worrisome than simple noise. Cases with invalid TOVD responses have been found to differ from valid cases with respect to several factors known to be related to TOVD. As a result, it has been shown here that the retention of invalid cases serves to dampen the strength of any observed relationships between TOVD and other variables. In other words, studies that do not remove cases with invalid TOVD responses may fail to find relationships that exist between TOVD and other factors. Accordingly, only after TOVD validity is evaluated, and invalid cases are removed, should this variable be employed. Fortunately, the format of Canadian TOVD data is such that invalid cases can be easily identified.

Considering only those cases with valid TOVD responses, this dissertation's first two articles explore the relationship between attitudes and TOVD. These articles, which borrow heavily from the psychology literature, consider the impact that pre-election attitudes have upon TOVD, and in turn, the impact that TOVD has upon post-election attitudes. The results of the first article are consistent with expectations that an early TOVD is associated with low levels of attitudinal inconsistency (Berelson *et al.*, 1954; Lavine, 2001), high levels of intensity (Fournier, 2005; Petty and Krosnick, 1995), and summary evaluations in the direction of the party voted for (Lewis-Beck *et al*. 2008). A new measure of ambivalence was introduced in order to tap into all three of these attitudinal dimensions simultaneously. Results reveal that this measure is better able to explain TOVD patterns than measures which tap into fewer dimensions.

The article also argues that measures of attitudinal consistency, intensity and direction should take into account the strength of the relationship between political attitudes and vote choice. Existing measures of ambivalence (see Lavine, 2001; Fournier, 2005; Lewis-Beck, 2009) fail to acknowledge that some attitudes can be more important to summary evaluations than others. The article introduces a new method of assigning weights to the various factors included in summary evaluations, and finds that attitudinal measures based upon these weights are better able to explain TOVD than are those which consider all separate attitudes to be of equal importance.

The second article reverses the role of TOVD and attitudes, exploring the impact that the former has upon the latter. Festinger's (1957) cognitive dissonance theory posits that when pertinent cognitions are inconsistent with one another, a sense of psychological discomfort arises. It has been shown here that the act of voting, a

behaviour which cannot be undone and thus which becomes a cognition after the fact, triggers attitude change as individuals attempt to minimize any discomfort they may be experiencing. The article finds that voters experience a spreading of alternatives (Festinger, 1964), relative to non-voters, and shows that political scientists should be aware that attitudes are not always independent variables.

The article goes on to consider the impact of a number of behavioural, affective, and cognitive factors upon changes in attitudes between pre- and post-election waves of the CES, thus adding to our understanding of the political implications of cognitive dissonance. In essence, the act of voting is found to act as a catalyst for attitude change, and several factors are found to moderate the extent of this attitude change after one votes. One of the cognitive variables considered was TOVD. Individuals who have long known for whom they will vote need to justify their early decisions by shifting their post-election attitudes, as the act of voting commits them fully to this decision. Not only do they need to justify their behaviour, but also how long they held the intention to vote for the candidate they did. The article concludes by noting that, because voting can have such a strong impact upon attitudes, survey questions used to measure attitudes should, if possible, be asked prior to an election.

Clearly, however, attitudes can be influenced by factors other than the act of voting. While it was once widely believed that campaign periods had only minimal impacts upon voters (Lazarsfeld *et al.,* 1948; Berelson *et al*., 1954), it is now generally accepted that they can influence the attitudes and vote intentions of certain types of individuals (Jacobson, 1983; Bartels, 1987; Johnston *et al*., 1992; Blais et al., 2003). This dissertation's third and fourth articles add to the literature on campaign effects, and

employ a TOVD variable to explore the impact of the campaign period upon insincere voting and rates of correct voting.

The third article explores the relationships between vote sincerity and TOVD. While the literature on strategic (or tactical) voters is well established (Black, 1978; Blais and Nadeau 1996; Blais *et al*. 2001), protest voters (who are also classified here as insincere in that they vote for a party that is not their first preference) are largely overlooked. The article introduces a new method of operationalizing protest voters, defining them as politically dissatisfied individuals who vote for an uncompetitive non-traditional party that is not a genuine first preference, and evaluates the relationship between sincerity and TOVD.

Insincere voters are found to be relatively late deciders, as they use the campaign period to gather information about the competitive prospects of parties. Strategic voters abandon their first preference in the hope of preventing a disliked party from winning, and protest voters, as operationalized here, vote for a party which they believe to have no chance of victory. In both cases, information on how much of a chance each party has of winning is necessary. Polls are released on nearly a daily basis during the course of a campaign, so campaigns provide voters with an excellent opportunity to update competitive expectations (Blais *et al*., 2006, Johnston and Vowles, 2006). The article argues that insincere voters postpone their decisions in order to gather such information. For these voters, therefore, the campaign period has an important impact upon their vote decisions.

The dissertation's fourth and final article similarly contributes to the literature on campaign effects, but adds also to the burgeoning literature on the subject of correct

voting. Introduced only 15 years ago (Lau and Redlawsk, 1997), the notion of a "correct" vote represents the voting decision individuals would make under conditions of perfect information. This definition assumes that individuals do not have perfect information and that they wish to vote correctly. The chapter introduces a new method of measuring correct voting rates, combining election study data with Comparative Manifestos Project data. It differs from the existing literature in two important ways. First, it argues that correct voting should focus upon policy promises and preferences only, as opposed to factors considered in existing work, such as partisan identification, leadership evaluations, evaluations of government performance and social group linkages (Lau and Redlawsk 2006, Lau *et al*. 2008). Second, it argues that estimates of party policy positions should be based upon objective indicators, as opposed to the more subjective approaches taken in existing work, where party positions are generally based upon the opinions of 'experts.' Comparative Manifestos Project data are based upon analysis of the content of official party platforms, and provide such an indicator. Estimates of party positions are based upon information that comes directly from parties themselves, as opposed to being filtered through the media and personal biases. This article thus represents at least two advances in the field of correct voting.

After estimating the rate of correct voting for the 2004 Canadian federal election, and finding that the results of that election could have been very different had the entire population voted "correctly," the article turns to evaluate the impact of the campaign period upon the likelihood of voting correctly. TOVD is employed as a moderating variable between campaign period attentiveness and correct voting. Contrary to what one might expect, individuals who make their minds up before the

campaign begins are found to have higher correct voting rates than those who decide during the campaign. While early deciders, by definition, do not factor campaign period information into their vote decisions, they nevertheless are relatively successful when it comes to voting correctly. Among campaign period deciders, however, attention to the campaign does have a statistically significant and positive impact upon correct voting rates. For highly attentive campaign period deciders, the campaign does seem to have a positive impact (provided that one accepts the assumption that voting correctly is desirable). As with the article on voter sincerity, therefore, this article contributes to the literature on campaign effects.

This dissertation has illustrated the versatility and value of TOVD as a variable. Concerns over the validity of TOVD have been dealt with, which has allowed the articles above to make contributions to a variety of fields of study. Political attitudes have been found to have an impact upon TOVD, but it is now known that they, in turn, can be influenced by this variable. The consistency, intensity and direction of summary evaluations of an attitude object have been shown to have a noteworthy effect upon TOVD patterns. In return, psychological tension caused by the knowledge that one has long known for whom one would vote has been found to influence changes in attitudes towards parties between CES questionnaire waves. The dissertation also contributes to the study of insincere voters and correct voting, along the way adding to the literature on campaign effects. Accordingly, though all of the articles contained here share TOVD as a common variable, a broad array of subjects and literatures has been considered. This dissertation now concludes with a discussion of the ways in which this variable can be considered in future work.

7.2 – Directions for Future Research

As mentioned several times throughout this dissertation, the topic of TOVD has received relatively little scholarly attention. Given the importance of voting and elections to the field of political science, and the immense effort and money invested by political actors in campaigns, the dearth of literature is somewhat surprising. In particular, understanding why voters make their minds up when they do, or studying TOVD as a dependent variable, seems an especially worthwhile pursuit. Knowing what types of individuals are susceptible to persuasive attempts, and why, can increase our understanding of election outcomes and political marketing.

While there has been some research conducted which uses TOVD as an indicator of campaign effects, or persuasion (see Fournier *et al*., 2004), there is room for research into factors which make individuals susceptible to persuasive attempts during the course of a campaign. Compatible with the findings of this dissertation, Fournier *et al*. (2012) have shown that campaigns influence ambivalent and attentive individuals. Future work can be conducted, however, to explore the types or sources of messages that are most likely to influence voters, individual-level factors that make one more or less susceptible to political persuasion, and how voters can most easily be persuaded to abandon their most preferred party. The question of how best to identify potential late deciders, and then to convince these individuals to vote in a particular way, undoubtedly receives ample attention from political actors. Since these actors are likely less than anxious to share this type of knowledge with the general public, however, there is a market for this type of research in the academic realm.

Also worth studying is the distinction between individuals who go from indecision to decision during the course of a campaign, and those who start off supporting one party, and change their minds and eventually vote for another. In the 2008 CES, for example, just under 65% of respondents who made their vote decisions either during the campaign or on election-day had no pre-election vote preference (meaning that they went from indecision to decision). The remaining 35% changed their vote intentions during the campaign (meaning that their pre-election vote intentions do not match post-election vote recall responses).[171] Differentiating between these two groups of campaign period deciders could conceivably reveal that these voters differ from one another in interesting ways, including the manner in which they respond to political stimuli. Thus, in addition to comparing early to late deciders, differences between voters *within* TOVD categories are worthy of academic attention.

Furthermore, while the articles above deal only with individual level data, it may also be worth considering the impact that system-level factors have upon TOVD patterns. The number of parties contesting an election, the electoral system, the number of positions being contested in an election and the length of campaigns all could influence the point in time at which voters make their decisions. These factors, which apply to all voters within a particular political realm, could have an impact upon population level TOVD patterns. This type of system-level information could improve our understanding of the impact of political institutions, and even national political cultures upon this aspect of voting behaviour.

Accordingly, while this dissertation has focused exclusively upon Canadian data, future work should include data from other settings as well. Provided that TOVD

[171] Values based upon data validated using the partially restrictive approach.

data can be validated, research on this subject can be expanded to other countries where similar election study data are available. For instance, despite being a former British colony, New Zealand has a different electoral system from Canada and Britain, meaning that the impact of this variable upon TOVD can be examined in a most similar systems study. Similarly, Australia's elected Senate allows for the impact of bicameralism upon TOVD to be evaluated, and British data can be used to explore the consequences of that country's complex regional party system. An examination of Canadian provincial election data, where available, may also yield noteworthy results, and could provide insight into any influence that provincial peculiarities may have upon TOVD patterns. There thus is ample room for both cross-national and sub-national studies on the correlates of TOVD.

In conclusion, while this dissertation has added significantly to the academic literature on the subject of TOVD, much remains to be done on the subject. This dissertation has helped us to better understand why individuals make their vote decisions when they do, the impact that TOVD has upon their attitudes, the relationship between the sincerity of one's vote decision and TOVD, and whether or not late deciding individuals make "better" choices that do early deciders. Future work on the causes and correlates of TOVD can build upon these findings, and continue to expand our knowledge of this fascinating and important variable.

7.3 - BIBLIOGRAPHY

Bartels, L. M. (1987). Candidate choice and the dynamics of the presidential nominating process. American Journal of Political Science, 31, 1–30.

Berelson, B., Lazarsfeld, P.F. & M^{c}Phee, W.N. (1954). *Voting*. Chicago: University of Chicago Press.

Black, J.H. (1978). The multicandidate calculus of voting: applications to Canadian federal elections. *American Journal of Political Science, 22*, 609-638.

Blais, A., Nadeau, R., Gidengil, E. & Nevitte, N. (2001). Measuring strategic voting in multiparty plurality elections. *Electoral Studies*, *20*, 343-352.

Blais, A., Gidengil, E., Nadeau, R., & Nevitte, N. (2003). Campaign dynamics in the 2000 Canadian election: How the leader debates salvaged the Conservative party. *Political Science and Politics*, *36*, 45-50.

Blais, A. & Nadeau, R. (1996) Measuring strategic voting: A two-step procedure. *Electoral Studies, 15*, 39-52.

Blais, A., Gidengil, E. & Nevitte, N. (2006). Do polls influence the vote? In H.E. Brady & R. Johnston (Eds.), *Capturing Campaign Effects* (pp. 263-279). Ann Arbor: University of Michigan Press.

Chaffee, S.H. & Rimal, R.N. (1996). Time of vote decision and openness to persuasion, in Mutz, D.C., Sniderman, R.A. and Brody, R.A. (eds.) *Political persuasion and attitude change,* Pgs 267-291. Ann Arbor: University of Michigan Press.

Festinger, L. (1957). *A theory of cognitive dissonance*. Evanstan: Row, Peterson.

Festinger, L. (1964). *Conflict, Decision, and Dissonance*. Standord: Stanford University Press.

Fournier, P., Nadeau, R., Blais, A., Gidengil, E. & Nevitte, N. (2001) Validation of time-of-voting-decision recall. *Public Opinion Quarterly*. *65*, 95-107.

Fournier, P. (2005). Ambivalence and attitude change in vote choice: Do campaign switchers experience internal conflict? In S.C. Craig and M.D. Martinez (Eds.), *Ambivalence, politics, and public policy* (Pp. 27-46). New York: Palgrave Macmillan.

Fournier, P., Cutler, F., Soroka, S. (2012). Who responds to election campaigns? The two-moderator model revisited. Paper presented at the *Duty and Choice: Participation and Preferences in Democratic Elections* conference, January 20-10, Montreal.

Jacobson, G. (1983). *The Politics of Congressional Elections*. Boston: Little, Brown.

Johnston, R., Blais, A., Brady, H.E. & Crete, J. (1992). *Letting the people decide: dynamics of a Canadian election*. Montreal: M^{c}Gill-Queen's University Press.

Johnston, R., & Vowles, J. (2006). Strategic learning in campaigns with proportional representation: evidence from New Zealand, in H. E. Brady and R. Johnston, (Eds.) *Capturing Campaign Effects*. (pp. 280-306). Ann Arbor: University of Michigan Press

Lau, R.R., Redlawsk, D.P. (1997). Voting correctly. *The American Political Science Review, 91*, 585-98.

Lau, R.R., & Redlawsk, D.P. (2006). *How voters decide: Information processing during election campaigns*. New York: Cambridge University Press.

Lau, R.R., Andersen, D.J., & Redlawsk, D.P. (2008). An exploration of correct voting in recent U.S. presidential elections. *American Journal of Political Science, 52*, 395-411.

Lavine, H. (2001). The electoral consequences of ambivalence towards presidential candidates. *American Journal of Political Science*, *4*, 915-929.

Lazarsfeld, P.F., Berelson, B. & Gaudet. (1948). *The people's choice: how the voter makes up his mind in a presidential campaign.*. New York: Columbia University Press.

Lewis-Beck, M., W.G. Jacoby, H. Norpoth & H.F. Weisberg. (2008). *The American voter revisited*. Ann Arbor: The University of Michigan Press.

Plumb, E. (1986). Validation of voter recall: time of electoral decision making. *Political Behavior, 8,* 301–12.

APPENDICES

APPENDIX 2-I: ASSIGNING WEIGHT VALUES

If some variables influence vote choice more than do others, some factors should be weighted more heavily in the calculation of summary attitudinal measures. Accordingly, the relative importance of each factor in the multi-stage recursive model is considered here by assigning a weight to each variable for each party.[172] Basically, weight values are determined by comparing the likelihood that an individual who holds a particular attitude will vote for a particular party, to the likelihood that an individual who has a *negative* value for that attitude will vote for that same party. For instance, an individual who has a positive attitude towards Stephen Harper is much more likely to vote Conservative than is an individual who has a negative impression of the Prime Minister. If the difference between these likelihood values is high, a variable can be said to be important to vote choice.

The strength of the relationship between each factor included in the multi-stage recursive model and vote choice is used to determine how influential a variable is in the calculation of summary evaluations. Some of the seven stages of the multi-stage recursive model consist of multiple variables (Blais *et al*. 2002, Gidengil *et al*. 2009), and weights must be calculated for each variable, as well as each stage of the model. Variable and stage weights (which range from 0 to roughly 1) are multiplied by respondents' attitudinal scores (which range from 0 to 1) when weighted summary attitudinal measures are calculated. In the unweighted measures considered in Table 2-

[172] Weights are based upon population wide trends, rather than individual specific data. While it would be ideal to have knowledge of how important various factors are for specific individuals, this information is not available in the CES.

2, all stages of the model, and variables within the stages of the model, are considered equally important (i.e. their weight values are all equal to 1). Applying variable and stage weights when calculating summary attitudinal measures means that the measures of consistency, intensity and direction can be examined in a more nuanced fashion than if all variables and stages were simply weighted equally.

All weights are based upon the log of the relative risk of a vote for a particular party for each variable and stage of the model. Relative risk is the ratio of the probability (p) of an individual exhibiting a characteristic voting for a particular party to the probability (q) of a person who does not exhibit that characteristic voting for that same party.[173] p is calculated by determining the percentage of the population that exhibits the characteristic or attitude of interest that votes for a particular party, while q reflects the percentage of the population not exhibiting that characteristic or attitude voting for the party. If, for example, 50% of women were to vote for Party *X*, while only 25% of men vote for *X*, the relative risk of women voting for *X*, relative to men, is 2 (or 0.5/0.25). Women would be considered twice as likely as men to vote for Party *X*. Conversely, men would be 0.5 (or 0.25/0.5) times as likely as women to vote for *X*.

Ratios like relative risk, however, are skewed measures (deviations of less than 1 are compressed, compared with those greater than 1). A ratio of 0.5 on the low end

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[173] An alternative approach would simply be to consider the absolute dissimilarity between vote shares for individuals with a characteristic and those without. However, this approach does not take into account the difference in vote shares received by each party. A dissimilarity of value *Y* for characteristic *X* for a relatively successful party should not be treated the same as if the same value were observed for a smaller party. This characteristic is clearly more of a factor for the weaker party than it is for the stronger one. Ratios reflect this important distinction.
Another alternative would have been to base weights upon bivariate regression coefficients. That is, vote choice could be regressed onto each variable, for each party, and coefficients (which are already centered around 0) could be used as weights. This approach produces weight values which are comparable to those calculated here. Nevertheless, weights are based here upon the log of relative risk, as this method is mathematically parsimonious and produces results which are simpler to interpret than are logistic regression coefficients.

represents the same amount of dissimilarity as does a ratio of 2 on the high end (as the above example illustrates). Taking the log (base 10) of relative risk values eliminates this skewness (for the example above it produces values of +0.301 for women and -0.301 for men). Positive and negative deviations thus are assigned the same magnitude (and they are shifted to be centered around 0 rather than 1). Taking the log of the relative risk is necessary when positive and negative scores from multiple variables are to be combined to calculate respondents' ambivalence and indifference scores.[174]

In the calculation of both variable (**λ**) and stage (**Λ**) weights, voters must be categorized as either having a high or low value. Vote shares for the party under examination are then calculated for these two groups, and weights are based upon the log of the relative risk of the high value group compared to the low value group. Individuals with a neutral value (0 on a scale from -1 to 1) are excluded from the calculation of weights (although they are considered in the analysis in the body of this article), as the goal here is to compare individuals who have positive attitudes to those who have negative attitudes. The exclusion of these neutral[175] individuals accounts for

[174] Since log scales are non-linear, the impact of dissimilarity upon the log of the relative risk decreases as dissimilarity increases. The derivative of the log of the relative risk is not a constant, ($\frac{d}{dx} log_{10}(x) = \frac{1}{x \ln(10)}$), so when dissimilarity between high and low values increases, the magnitude of the calculated weight does not increase by that same factor, or by some constant multiple of that factor. Put another way, the impact of the log of the relative risk diminishes as the dissimilarity between the high and low values increases. This does not pose a problem here, however, as it expected that increases in dissimilarity near zero will have a greater impact upon a vote decision than that same dissimilarity when the dissimilarity is large. For example, if a dissimilarity of 0.1 increases to 0.2, weight calculated for this variable would increase by more than if a dissimilarity of 0.4 was increased to 0.5. While the change in dissimilarity is the same (0.1), this latter change is assumed here to less important to vote choice than when the initial dissimilarity is small. The log scale is compatible with this logic.

[175] For example, when calculating the Liberal issue variable weights, individuals who believe that the Liberals are the best able to deal with an issue are compared to those who believe another party is best suited. Individuals who have a neutral opinion are excluded in the calculation of this weight.

the variation in sample size between the stages of the model in Tables 2-I-1 (which considers variable weights) and 2-I-2 (which considers stage weights) below. [176]

Variable weights are calculated separately for each party to reflect the fact that factors may be of greater importance to voters of one party than they may be to supporters of other parties. For example, a university education is positively associated with a Liberal vote, negatively associated with a Conservative vote, and has no statistically significant association with either an NDP or Bloc vote (as Table 2-I-1, below, shows). The association between this variable and a Liberal vote is stronger than it is with a Conservative vote, a fact reflected in the different magnitudes of the weights: +0.169 for the Liberal and -0.091 for the Conservatives.[177] This variable is thus assumed to be a more important factor to Liberal voters than it is for Conservative voters. Variables are only included if they are found to have a statistically significant relationship with a vote for a particular party, so this factor is not included in the calculation of attitudinal measures for NDP and Bloc voters. Variable weights are displayed in Table 2-I-1.

Stage weights are also calculated for each party for each stage of the multi-stage recursive model. For blocs based upon only one variable, the variable and stage weights are the same. When this is not the case, data from variables which have been shown here to have a statistically significant relationship with a vote for the party under consideration are combined to determine, based upon that stage alone, whether individuals have a high or low value for the party that they voted for (i.e. whether

[176] While variable and stage data are forced to values of either 1(high), 0(neutral) or -1(low) when weights are being calculated, their original values are used in the calculation of $\sum P$ and $\sum N$ from Table 2-1.

[177] The magnitude of variable weights ranges from 0 to approximately 1; there are few instances where the magnitude is slightly greater than 1.

individuals have more pressures which should predispose them to voting for the party that they do than those which should lead one to vote against that party). These two types of individuals are compared to calculate the log of the relative risk of voting for each party, for each stage. As with the variable weights, individuals with neutral values for the stage under examination are excluded from the calculation of stage weights. Stage weights are displayed in Table 2-I-2.

High and low values are determined for the variables and stages of the multi-stage recursive model in the following manner:

- *Sociodemographic characteristics*: Individuals with a characteristic associated with the party voted for are coded as high, and those without are coded as low.
- *Underlying Values and Beliefs:* Indices are created for several types of underlying values and beliefs, and values for each variable and are coded to range from -1 to 1. Respondents are coded as 'high' if they have a positive value, and negative if they have a negative value. The survey questions used to create these indices, as well as all other CES questions used in this article are contained in Appendix 2-III.
- *Partisanship*: Partisans of the party voted for (regardless of the strength of partisanship) are coded as high, and partisans of other parties are coded as low. Non-partisans are not considered in these calculations.
- *Economic evaluations*: For Conservative (the incumbent party) voters, individuals who believe that the government has had a positive impact are coded as high, and those who believe that it has had a negative impact are low. This is reversed for all other parties.

- *Issues*: Individuals who believe that the party under consideration is best at dealing with a particular issue are coded as high, and those who believe another party is best are coded as low.
- *Leadership Evaluations*: Those who give a higher rating to the leader of the party voted for than for the other three major parties are coded as high, and those who give a higher rating to any other leader are coded as low.
- *Evaluations of Government Performance*: For Conservative voters, Individuals who are satisfied with the performance of the government are coded as high and those who are dissatisfied are coded as low. This is reversed for all other parties.

$\sum P$ and $\sum N$ from Table 2-1 are calculated on the basis of the presence and strength of positive and negative, party specific attitudes, as well as variable and stage weights. If an individual has an attitude or characteristic positively associated with a party, or a negative attitude or a lack of a characteristic negatively associated with a party, this factor is included in the calculation of $\sum P$. Positive attitudes or characteristics negatively associated with a party or negative attitudes or a lack of characteristics positively associated with a party are factored into $\sum N$. $\sum P$ represents the summation of the product of positive attributes, normalized variable weights and normalized stage weights, and $\sum N$ expresses the summation of the product of negative attributes, normalized variable weights and normalized stage weights.

TABLE 2-I-1: VARIABLE WEIGHTS

		Liberals				Conservatives			
		Low	High	λ	N	Low	High	λ	N
Socio-demographic Factors	Visible Minority	0.26	0.38	**0.17**[c]	1306	0.41	0.27	**-0.19**[c]	1306
	Native French Speaker	0.28	0.23	**-0.09**[b]		0.47	0.22	**-0.34**[c]	
	Public Employee	0.27	0.27	**-0.01**		0.42	0.32	**-0.12**[c]	
	Union member	0.28	0.22	**-0.10**[b]		0.42	0.32	**-0.12**[c]	
	University Education	0.23	0.34	**0.17**[c]		0.43	0.35	**-0.09**[c]	
	Gender (female = 1)	0.28	0.28	**-0.003**		0.42	0.38	**-0.04**	
	Rural/urban (rural = 1)	0.29	0.23	**-0.09**[c]		0.38	0.47	**0.10**[c]	
	Catholic	0.26	0.27	**0.007**		0.46	0.31	**-0.17**[c]	
	Protestant	0.29	0.23	**-0.10** [b]		0.30	0.56	**0.26**[c]	
	Non-Christian	0.25	0.32	**0.12**[b]		0.43	0.29	**-0.17**[c]	
	Under 35	0.29	0.21	**-0.14**[c]		0.42	0.32	**-0.11**[c]	
	35-54	0.28	0.28	**0.01**		0.41	0.38	**-0.04**	
	Over 54	0.26	0.3	**0.05**		0.36	0.45	**0.10**[c]	
	Low income Quartile	0.27	0.25	**-0.04**		0.4	0.4	**0.01**	
	Middle income	0.28	0.25	**-0.05**		0.42	0.37	**-0.05**	
	High income Quartile	0.25	0.31	**0.09**[b]		0.38	0.45	**0.07**[b]	
	Atlantic Resident	0.24	0.39	**0.21**[c]		0.4	0.37	**-0.04**	
	Western Resident	0.3	0.17	**-0.25**[c]		0.35	0.53	**0.19**[c]	
	Quebec Resident	0.28	0.23	**-0.09**[b]		0.48	0.2	**-0.37**[c]	
	Ontario Resident	0.24	0.35	**0.16**[c]		0.37	0.47	**0.11**[c]	
Underlying Values and Beliefs	Free Enterprise	0.3	0.24	**-0.10**[c]	2078	0.29	0.68	**0.38**[c]	2078
	Social Conservatism	0.3	0.21	**-0.17**[c]	2036	0.27	0.63	**0.38**[c]	2036
	Anti-Quebec Sentiment	0.32	0.19	**-0.22**[c]	1748	0.3	0.63	**0.32**[c]	1748
	Regional Alienation	0.31	0.29	**-0.03**	906	0.46	0.33	**-0.15**[c]	906
	Political Dissatisfaction	0.26	0.3	**0.05**	1994	0.51	0.3	**-0.23**[c]	1994
Partisanship		0.06	0.7	**1.06**[c]	1196	0.12	0.89	**0.89**[c]	1196
Economic Evaluations	Sociotropic	0.44	0.11	**0.60**[c]	331	0.11	0.73	**0.81**[c]	331
	Egocentric	0.46	0.08	**0.76**[c]	188	0.16	0.8	**0.70**[c]	188
Issues	Fighting Crime	0.16	0.64	**0.60**[c]	1276	0.09	0.65	**0.86**[c]	1276
	Healthcare/social programs	0.17	0.58	**0.52**[c]	1355	0.26	0.84	**0.51**[c]	1355
	Jobs/the economy	0.11	0.61	**0.75**[c]	1327	0.12	0.78	**0.82**[c]	1327
	Protecting environment	0.2	0.55	**0.44**[c]	1386	0.31	0.92	**0.47**[c]	1386
Leader Evaluations		0.15	0.8	**0.72**[c]	1309	0.07	0.87	**1.08**[c]	1309
Evaluations of Government Performance		0.15	0.42	**0.44**[c]	1511	0.07	0.67	**0.99**[c]	1511

b: Coefficient significant at the 95% level, c: Coefficient significant at the 99% level.

Continued on next…

TABLE 2-I-1: CONTINUED

		NDP				Bloc			
		Low	High	λ	N	Low	High	λ	N
Socio-demographic Factors	Visible Minority	0.20	0.32	**0.21**[b]	1306	0.48	0.25	**-0.28**[c]	368
	Native French Speaker	0.24	0.11	**-0.33**[c]		0.13	0.51	**0.59**[c]	
	Public Employee	0.20	0.24	**0.08**		0.43	0.57	**0.13**[b]	
	Union member	0.19	0.29	**0.19**[c]		0.44	0.57	**0.11**[b]	
	University Education	0.22	0.19	**-0.06**[c]		0.47	0.46	**-0.01**	
	Gender (female = 1)	0.17	0.24	**0.13**[c]		0.46	0.48	**0.02**	
	Rural/urban (rural = 1)	0.22	0.17	**-0.12**		0.47	0.46	**-0.01**	
	Catholic	0.24	0.16	**-0.18**[c]		0.41	0.48	**0.06**	
	Protestant	0.20	0.21	**0.01**		0.75	0.22	**-0.54**[b]	
	Non-Christian	0.18	0.30	**0.23**[c]		0.46	0.51	**0.04**	
	Under 35	0.19	0.29	**0.19**[c]		0.45	0.52	**0.07**	
	35-54	0.21	0.20	**-0.01**		0.46	0.48	**0.02**	
	Over 54	0.23	0.17	**-0.13**[c]		0.50	0.42	**-0.07**	
	Low income Quartile	0.20	0.23	**0.07**		0.49	0.42	**-0.07**	
	Middle income	0.20	0.21	**0.02**		0.42	0.50	**0.08**	
	High income Quartile	0.22	0.18	**-0.09**		0.48	0.42	**-0.05**	
	Atlantic Resident	0.20	0.24	**0.07**					
	Western Resident	0.17	0.30	**0.26**[c]					
	Quebec Resident	0.25	0.11	**-0.36**[c]					
	Ontario Resident	0.21	0.19	**-0.04**					
Underlying Values and Beliefs	Free Enterprise	0.26	0.10	**-0.42**[c]	2078	0.52	0.12	**-0.63**[c]	415
	Social Conservatism	0.26	0.13	**-0.31**[c]	2036	0.54	0.18	**-0.47**[c]	338
	Anti-Quebec Sentiment	0.20	0.19	**-0.03**	1748	0.44	0.00	**-1.00**[c]†	523
	Regional Alienation	0.20	0.25	**0.09**	906	0.10	0.74	**0.89**[c]	194
	Political Dissatisfaction	0.15	0.31	**0.31**[c]	1994	0.33	0.45	**0.13**[b]	332
Partisanship		0.07	0.80	**1.04**[c]	1196	0.09	0.91	**1.03**[c]	323
Economic Evaluations	Sociotropic	0.30	0.11	**0.44**[c]	331	0.57	0.24	**0.38**[c]	83
	Egocentric	0.27	0.05	**0.70**[c]	188	0.72	0.50	**0.16**	28
Issues	Fighting Crime	0.14	0.59	**0.63**[c]	1276	0.34	0.91	**0.44**[c]	323
	Healthcare/social programs	0.08	0.37	**0.64**[c]	1355	0.34	0.88	**0.42**[c]	338
	Jobs/the economy	0.12	0.56	**0.66**[c]	1327	0.35	0.92	**0.42**[c]	324
	Protecting environment	0.17	0.48	**0.44**[c]	1386	0.43	0.88	**0.31**[c]	352
Leader Evaluations		0.06	0.56	**1.01**[c]	1303	0.13	0.85	**0.83**[c]	307
Evaluations of Government Performance		0.13	0.30	**0.36**[c]	1511	0.24	0.64	**0.42**[c]	393

† There are no cases where Bloc voters hold anti-Quebec sentiment (meaning that a ratio cannot be calculated), so this cell is assigned a value of -1.

b: Coefficient significant at the 95% level, c: Coefficient significant at the 99% level.

TABLE 2-I-2: STAGE WEIGHTS

		Socio-demographic Factors	Underlying Values and Beliefs	Partisan-ship	Economic Evals	Issues	Leader Evals	Evals of Gov. Perf.
Liberals	Low	0.20	0.19	0.07	0.24	0.11	0.15	0.15
	High	0.34	0.32	0.70	0.43	0.80	0.80	0.42
	Λ	**0.23**	**0.23**	**1.06**	**0.26**	**0.87**	**0.72**	**0.44**
	N	1306	906	1196	331	1276	1309	1511
Conservatives	Low	0.22	0.30	0.12	0.37	0.10	0.07	0.07
	High	0.51	0.71	0.89	0.73	0.94	0.87	0.67
	Λ	**0.36**	**0.38**	**0.89**	**0.30**	**0.98**	**1.08**	**0.99**
	N	1306	906	1196	331	1276	1309	1511
NDP	Low	0.14	0.10	0.07	0.19	0.09	0.06	0.13
	High	0.30	0.25	0.80	0.28	0.74	0.57	0.30
	Λ	**0.33**	**0.41**	**1.04**	**0.18**	**0.92**	**1.01**	**0.36**
	N	1306	906	1196	331	1276	1309	1511
Bloc	Low	0.14	0.31	0.09	0.44	0.31	0.13	0.24
	High	0.51	0.61	0.91	0.61	0.94	0.85	0.64
	Λ	**0.56**	**0.30**	**1.03**	**0.14**	**0.48**	**0.83**	**0.42**
	N	368	194	323	83	323	307	393

Note: All differences between high and low values are statistically significant at the 99% level.

APPENDIX 2-II: DESCRIPTIVE STATISTICS – ATTITUDINAL VARIABLES

TABLE 2-II-1: DESCRIPTIVE STATISTICS – ATTITUDINAL VARIABLES

		Mean	Std. Dev.	Minimum	Maximum	N
Subjective Ambivalence		0.36	0.61	-1	1	965
Intensity	Unweighted	0.56	0.12	0	0.9	939
	Weighted	0.4	0.15	0	0.89	939
Direction	Unweighted	0.61	0.79	-1	1	939
	Weighted	0.6	0.8	-1	1	939
Griffin's Ambivalence	Unweighted	-0.08	0.19	-0.45	0.36	939
	Weighted	-0.12	0.13	-0.45	0.25	939
Actual Ambivalence	Unweighted	0.53	0.54	0	2	939
	Weighted	0.44	0.57	0	2	939
Revised Griffin's Ambivalence	Unweighted	0.01	0.3	-0.45	1.1	939
	Weighted	-0.06	0.22	-0.45	0.94	939

APPENDIX 2-III: CES QUESTIONS

Sociodemographic characteristics: Visible minority; religion (Catholic, non-Christian, non-religious); region (West, Atlantic, Ontario, Quebec); urban/rural; french native speaker; age; public sector worker; union member; university educated; income; gender.

Underlying values and beliefs: Free enterprise (government should narrow the gap between rich and poor, leaving the economy to the private sector, labour mobility, the profit system, and individual responsibility); social conservativism (feelings about gays and lesbians, same sex marriage, feminists, conceptions of gender roles); anti-Quebec sentiment (feelings towards Quebec, more/less done for the province); regional alienation (is your province treated worse than others); political disaffection (does the government care what you think, ratings of political parties in general, ratings of politicians in general, do the parties differ, do politicians lie to get elected, do politicians keep their promises, satisfaction with Canadian democracy); anti-racial minority sentiment (feelings towards minorities, should more/less be done for minorities)

Partisanship: Do you usually think of yourself as a ____? How strongly?

Economic perspectives: Sociotropic (has national economy gotten better or worse, has government made it better or worse); egocentric (have personal finances gotten better or worse, has government made them better or worse)

Issue opinions: Which party is best with dealing with: fighting crime, improving healthcare/social programs, creating jobs/dealing with the economy, the environment?

Leadership evaluations: On a scale of 1-100, how do you feel about leader X?

Government performance: How satisfied are you with the performance of the government under Stephen Harper?

Other questions: Post-election vote choice recall; pre-election vote intention; time of vote decision recall; are your feelings about party vote for all positive, mostly positive, or mixed; how much attention did you pay to the election on TV/radio/newspapers/the internet; how interested are you in the federal election; how interested are you in politics in general; knowledge of Republican nominee for American Presidential election; the name of one's Provincial Premier; the name of any Cabinet Minister and the name of the Governor General.

APPENDIX 3-I: CES QUESTIONS

Vote intentions: Which party do you think you will vote for? Is there a party you are leaning towards (if stated that they are undecided)? If you decided to vote, which party do you think you will vote for (if stated that they would not vote)?

Difficulty of decision/initial ED: How do you feel about the ___ Party? (pre and post election questionnaires)

Importance of vote: 1988: What is the most important campaign issue to you? How strongly do you support/oppose free trade? 2004, 2006: Do you agree or disagree with the following statement: All political parties are the same, there really isn't a difference?

Partisanship: In federal politics, do you usually think of yourself as a:____?

Unpleasant effort: 2004: How difficult is it for you to get to a polling station? 2006: Have you ever donated to a political party? When was this?

TOVD: When did you decide that you were going to vote ___?

Vote choice: Which party did you vote for?

APPENDIX 3-II: DESCRIPTIVE STATISTICS – DISSONANCE VARIABLES

TABLE 3-II1-1: DESCRIPTIVE STATISTICS – DISSONANCE VARIABLES

		Mean	Std. Dev.	Min	Max
1988 (N=1028)	Change in ED	-1.72	20.11	-79.5	95
	Importance of Vote	0.69	0.31	0	1
	Partisan	0.71	0.46	0	1
	Unpleasant Effort		*n/a*		
	Pre-campaign TOVD	0.59	0.49	0	1
	Supported Losing Local Candidate	0.49	0.50	0	1
	Liberal Voter	0.29	0.45	0	1
	Conservative Voter	0.52	0.50	0	1
	NDP Voter	0.20	0.40	0	1
	Interviewed After Debate	0.64	0.48	0	1
	Initial ED	30.51	22.03	-65	100
2004 (N=702)	Change in ED	3.95	18.86	-72.5	91
	Importance of Vote	0.71	0.31	0	1
	Partisan	0.74	0.44	0	1
	Unpleasant Effort	0.09	0.18	0	1
	Pre-campaign TOVD	0.64	0.48	0	1
	Supported Losing Local Candidate	0.48	0.50	0	1
	Liberal Voter	0.37	0.48	0	1
	Conservative Voter	0.43	0.50	0	1
	NDP Voter	0.19	0.39	0	1
	Interviewed After Debate	0.29	0.46	0	1
	Initial ED	33.26	22.29	-45	100
2006 (N=1311)	Change in ED	-3.44	19.33	-105	82.5
	Importance of Vote	0.64	0.32	0	1
	Partisan	0.75	0.43	0	1
	Unpleasant Effort	0.12	0.32	0	1
	Pre-campaign TOVD	0.73	0.44	0	1
	Supported Losing Local Candidate	0.44	0.50	0	1
	Liberal Voter	0.32	0.47	0	1
	Conservative Voter	0.49	0.50	0	1
	NDP Voter	0.19	0.39	0	1
	Interviewed After Debate	0.70	0.46	0	1
	Initial ED	38.43	21.93	-33	100

Note: Results include only those cases included in the Models in Table 3-2.

APPENDIX 4-1: CES QUESTIONS

Time of vote decision: Which party did you vote for? When did you decide that you were going to vote for ___? Which party do you think you will vote for?

Strategic Voting: Was the party voted for your favourite? Party thermometer scores. Leader thermometer scores. Was there a local candidate you particularly liked? In your local riding, which party has the best chance of winning? After ___ (response to previous question), does any other party have a chance of winning? 2006 only: Does any other party have a chance of winning?

Protest Voting: Dissatisfaction: How satisfied are you with the way democracy works in Canada? Do you agree or disagree with the following statements: All federal parties are basically the same, there really isn't a choice, and Politicians are ready to lie to get elected.
Party thermometer scores. Leader thermometer scores. Was there a local candidate you particularly liked?

Control Variables: Gender, age (greater than or less than 50), partisanship, How much attention do you pay to TV, newspaper, radio, the internet? (the highest score from these media is used), How interested are you in this federal election? Are your feelings about (the party the person voted for): all positive, mostly positive or mixed?

APPENDIX 5-I: CMP VARIABLES USED TO CALCULATE PARTY POLICY POSITIONS

TABLE 5-I-1: POLICY DIMENSIONS AND CMP VARIABLES

Policy Dimension	"Left" Position (-1)	"Right" Position (+1)
Foreign Special Relationship/Protectionism	Foreign special relationships: negative	Foreign Special relationships: positive
	Protectionism: positive	Protectionism: negative
Militarism	Military: negative	Military: positive
	Peace: positive	
Social Conservatism	Traditional morality: negative	Traditional morality: positive
	Non-economic demographic groups: positive	Law and order: positive
	Multiculturalism: positive	Multiculturalism: negative
	Underprivileged minority groups: positive	
Planned vs. Market Economy	Market Regulation: positive	Free Enterprise: positive
	Economic planning: positive	Economic Orthodoxy: positive
Environmental Protection	Environmental Protection: positive	Productivity: positive
	Anti-Growth Economy: positive	
State-provided services and Social Justice	Welfare state expansion	Welfare state limitation
	Education expansion: positive	Education expansion: negative
	Social Justice: positive	
Sovereignty (Quebec only)	Coded as anti-sovereignty	Coded as pro-sovereignty

APPENDIX 5-II: CES VARIABLES USED TO CALCULATE INDIVIDUALS' POLICY POSITIONS

TABLE 5-II-1: POLICY DIMENSIONS AND CES VARIABLES

Policy Dimension	CES Question	"Left" Position (-1)	"Right" Position (+1)
Foreign Special Relationship/Protectionism	Do you think Canada's ties with the United States should be [closer or more distant]?	More distant	Closer
	How do you feel about the United States?	Negative	Positive
	Overall, free trade with the U.S. has been good for the Canadian economy?	Disagree	Agree
	Agree or disagree: International trade creates more jobs in Canada than it destroys.	Disagree	Agree
Militarism	Should the government spend more, less, or about the same on defense/military spending?	Less	More
	Canada decided not to participate in the war against Iraq. Was this a good or bad decision?	Good	Bad
Social Conservatism	Do you favour or oppose same-sex marriage, or have no opinion on this?	Favour	Oppose
	Agree or disagree: Society would be better off if more women stayed home with their children.	Disagree	Agree
	Agree or disagree: We must crack down on crime, even if that means that criminals lose their rights.	Disagree	Agree
	Agree or disagree: Immigrants make an important contribution to this country.	Agree	Disagree
	How much do you think should be done for racial minorities? (more/less)	More	Less
	How do you feel about aboriginal peoples?	Positively	Negatively
	How much do you think should be done for women? (more/less)	More	Less
Planned vs. Market Economy	Agree or disagree: The government should leave it entirely to the private sector to create jobs.	Disagree	Agree
	Agree or disagree: If people can't find work in the region where they live, they should move to where the jobs are.	Disagree	Agree
	Should personal taxes be increased, decreased or kept about the same as now?	Increased	Decreased
	Should corporate taxes be increased, decreased or kept about the same as now?	Increased	Decreased

CONTINUED ON NEXT…

TABLE 5-II-1 CONTINUED:

Policy Dimension	CES Question	"Left" Position (-1)	"Right" Position (+1)
Environmental Protection	Should the government spend more, less, or about the same on the environment?	More	Less
	Agree or disagree: Protecting the environment is more important than creating jobs.	Agree	Disagree
State-provided services and Social Justice	Should the government spend more, less, or about the same on welfare?	More	Less
	Should the government spend more, less, or about the same on healthcare?	More	Less
	Should the government spend more, less, or about the same on education?	More	Less
	How much should be done to reduce the gap between the rich and poor in Canada?	More	Less
Sovereignty (Quebec only)	Are you very favourable, somewhat favourable, somewhat opposed, or very opposed to Quebec sovereignty?	Opposed	Favourable

APPENDIX 5-III: DETERMINING POLICY POSITIONS

5.III.1 - CMP DATA

The conversion of observed category counts (the units of CMP data) into points on a continuous policy dimension requires some scaling procedure. Budge (1999) suggests that a party's position be based upon the difference between positive (or R) and negative (or L) scores for a policy dimension, divided by 100 (the salience score for the entire manifesto), or:

$$Position_{Party\,(Budge)} = \frac{\sum R - \sum L}{100} \qquad \text{(5-III-1)}$$

However, equation (5-III-1) has the effect of pushing a party's position towards the centre (or 0) as the salience of an issue decreases, meaning that party positions can be grossly misestimated. For instance, a party may be staunchly pro-military, giving only positive mentions to this issue, yet for some reason may devote relatively little of its manifesto to the topic. According to (III-1) this party may actually be classified as centrist when compared to a party that devotes more of its manifesto to the topic, but has more balanced positive and negative mentions with respect to this dimension.[178]

To deal with this problem, Kim and Fording (2002) have proposed a measure which controls for the relative salience of the issue – termed a "relative proportional difference" estimate. By dividing by the sum of R and L, rather than by 100, a party's position is decoupled from the relative importance placed upon a dimension. In other

[178] For instance, Party A may have a value of 11 for R and 1 for L, and Party B may have a value of 30 for R and 15 for L. Equation 5 would assign a value of 0.10 for Party A, and 0.15 for Party B, suggesting that B is to the right of A. While B may consider this issue to be of greater importance than A, it is difficult to justify them being placed to the right of A, which had only 1 L mention for this dimension.

words, unrelated quasi-sentences do not affect position estimates.[179] This logic is expressed mathematically as follows:

$$Position_{Party\ (relative\ proportional\ difference)} = \frac{\sum R - \sum L}{\sum R + \sum L} \qquad (5\text{-III-2})$$

To obtain scores on both the right (→1) and left (→-1) of centre (0) it is necessary to include both "positive" and "negative" CMP variables. If only positive (or only negative) variables are considered, all parties would be located on the same side of zero. While this may actually be the true in some instances, the inclusion of both types of variables leaves open the possibility that this is not the case. A similar problem arises when a party makes only positive mention of an issue. According to (5-III-2), this would push that party's position to an extreme value of 1, or -1, regardless of salience. To minimize the number of instances in which this happens the number of variables included in each index has been increased as much as is reasonably possible. Nevertheless, this problem occurs twice with the data here – both times with the Conservative Party. That party is a perfect +1 for militarism since it has a score of 0 for both the "military negative" and "peace positive" CMP variables. It also has a score of +1 for planned vs. market economy as its manifesto has scores of 0 for both "market regulation positive" and "economic planning positive."

Whenever possible, calculations of party positions are based upon equation (III-2). However, the format of the data dictates that positions for two of the seven dimensions considered here must be calculated using a slightly different approach. The

[179] According to this method Party A would receive a value of 0.92, and Party B would have a score of 0.33 – values that intuitively seem much more accurate.

first uniquely scaled variable is "state-provided services and social justice." Party positions are calculated using five CMP variables, and while two of these variables have the potential to pull party positions towards the negative side of 0 (welfare state limitation and education limitation), no party gives any mention of welfare state limitation in its manifesto, and the only party to mention education limitation is the NDP (and only a value of 0.17). Using formula (5-III-2), this would mean that all of the parties would be pulled to the extreme negative side of the party position scale (-1 for all parties but the NDP, and the NDP would have a value of -.98), thus they would all seemingly have the same position (making the distance between the positions of individuals and parties the same for each party). To get around this problem party scores for this dimension are coded by dividing their respective salience scores by the salience score of the party which gives this topic the greatest attention in its manifesto (in this case that party is the Liberals, who devote 30.35% of their overall manifesto to this dimension).[180] With the Liberals coded as a -1, for instance, a party that devotes half as much of its manifesto to this dimension would receive a score of -0.5. While this methodological deviation is undesirable, this augmented approach is preferable to relying upon (5-III-2) to calculate positions and giving all parties virtually the same score. Without this change almost all voters would be closest to the NDP in this dimension (as almost all voters are to the right of -0.98), which is clearly unreasonable.

[180] This method is compatible with the directional theory of party competition, whereby individuals are assumed to support the party that has the most extreme positions on issues that they care about, within a "region of acceptability" (Rabinowitz and Macdonald, 1989) For instance, according to this theory, an individual who is supportive of environmental protection will vote for the party that has the strongest stance on this issue (i.e. is willing to go the furthest to protect the environment). This data remains, however, compatible with the spatial theory of vote choice. All parties are simply coded on the same side of the scale.

The second variable for which party positions are scaled in a unique manner, sovereignty, applies only to Quebec. The CMP contains no category explicitly related to the topic, but since the issue is of such obvious importance in Quebec this variable cannot be ignored. As such, party positions are assigned here simply as +1 for the Bloc, and -1 for all other parties (coding the Bloc as -1 and all other parties as +1 would have no effect on the results above).[181] These values are then compared to the results of a single CES question on the topic of sovereignty. As above, this variable suffers from the problem of little variation in party position (only the Bloc has a value other than -1). An individual opposed to sovereignty can cast a correct vote for any of the parties other than the Bloc. This does not pose a problem for "overall" correct vote calculations - it simply means that the results of this variable are displayed slightly differently in the results section when policy dimensions are examined independently in Table 5-III-1. Party position and salience scores are as follows:[182]

[181] It would be theoretically possible to apply positions to parties with respect to Quebec nationalism, rather than sovereignty (by focusing on CMP variables like centralisation vs. decentralisation and national way of life positive and national way of life negative), but the 2004 version of the CES does not contain the questions necessary to make such a comparison. These four CMP variables are used, however, to determine the relative salience of this issue for each party. Not surprisingly, this issue is of greater importance to the Bloc than it is for any other party.

[182] The issue of corruption was of significant importance in the 2004 campaign. The CMP does have a variable for negative mentions of political corruption (the scores for the parties are as follows: Liberals 1.08, Conservatives: 7.85, NDP: 1.51 and Bloc: 2.81). Unfortunately, the 2004 CES does not have a question that is comparable to these scores. Such a question would be of a form similar to: "What is your opinion of government corruption? Strongly opposed, opposed, supportive, strongly supportive." Such a question is clearly worthless since there would almost certainly be no variation in the responses (presumably people would be strongly opposed to corruption). As such, this issue is not considered here.

TABLE 5-III-1: PARTY POSITIONS AND SALIENCE

Policy Dimension	Liberals		Conservatives		NDP		Bloc	
	Position	Salience	Position	Salience	Position	Salience	Position	Salience
Foreign Special Relationship/ Protectionism	0.86	2.04	0.67	4.48	-0.63	6.35	0.22	5.04
Militarism	0.87	4.06	1	3.55	-0.2	2.5	-0.16	2.66
Social Conservatism	-0.42	3.26	0.58	12.33	-0.44	5.35	-0.17	8.09
Planned vs. Market Economy	0.44	9.76	1	2.99	-0.49	7.19	-0.72	5.61
Environmental Protection	-0.33	4.5	-0.64	4.11	-0.8	14.89	-0.5	9.59
State-Provided Services and Social Justice	-1	30.35	-0.52	15.69	-0.66	20.08	-0.38	11.51
Sovereignty	-1	17.75	-1	10.66	-1	17.56	1	19.7

5.III.2 - CES DATA

As with CMP data, all answers are coded to correspond with either a "right" or "left" position (coding choices are shown in Appendix II). Depending upon the number of options given to respondents (scales range anywhere from 3 options to a 100 point scale), values from -1 to 1 are assigned. Responses from multiple questions are combined, weighting each question equally, to determine an overall position for individuals with respect to each dimension.

Most CES questions have a "don't know" response option. Since respondent policy positions are based upon multiple questions, there are two ways in which these responses can be dealt with. The first option is to consider only those individuals who give responses to all questions. Following this method the study's sample size would be significantly diminished (as failing to respond to a single question would mean that an individual is removed from the pool of data). In cases where a high number of questions are combined to calculate respondent scores for a single dimension, attrition from the removal of such cases would be significant. This approach also means that the

sample would become less representative of the population (as only those individuals who have opinions on each and every question would be included).

A second approach to dealing with this issue is to code "don't know" responses as a 0 (i.e. the centre position on the left-right scale). This approach has the effect of moderating the overall dimension scores (towards 0) of individuals who give such responses. While individuals are not explicitly stating a centrist position, the fact that they fail to provide an answer corresponding with the extremes of the scale suggests that they should not be positioned at the exterior of the scale (i.e. near -1 or 1). Individuals who truly belong on the extreme edges of the scale should be expected to provide responses corresponding to those positions. On the other hand, those individuals who have extreme positions on some components of a policy dimension (i.e. punishment of young offenders), and no positions on others (i.e. should more or fewer immigrants be admitted to Canada) should not be considered extreme with respect to that *overall* dimension (in this case, social conservatism). As such, "don't know" responses are dealt here by assigning a value of 0 to the respondent's position for the appropriate CES question. Table 5-III-2 shows descriptive statistics for individual policy positions.

TABLE 5-III-2: INDIVIDUAL POLICY POSITIONS – DESCRIPTIVE STATISTICS

Dimension	Mean	Std. Dev.	Min.	Max.	N
Foreign special Relationship/Protectionism	0.13	0.39	-1	1	1286
Militarism	-0.17	0.59	-1	1	2250
Social Conservatism	-0.11	0.34	-1	0.85	1271
Planned vs. Market Economy	0.03	0.39	-1	1	2198
Environmental Protection	-0.22	0.46	-1	1	1294
State provided services and Social Justice	-0.51	0.34	-1	1	2250
Sovereignty (Quebec only)	-0.11	0.82	-1	1	480

APPENDIX 5-IV: ADDITIONAL RESULTS

TABLE 5-IV-1: CORRECT VOTING AND ATTENTIVENESS BY TOVD

High attention	0.38 (.21)[a]
Before debates	-0.49 (.30)
Before debates *X* high attention	-0.21 (.41)
During/just after debate	-0.56 (.40)
During/just after debate *X* high attention	0.30 (.55)
After Debates	-0.43 (.26)
After Debates *X* high attention	0.12 (.38)
Election-day	-0.97 (.34)[c]
Election-day *X* high attention	0.53 (.47)
Age	-0.01 (.01)
Partisanship	0.17 (.15)
Motivation	0.41 (.22)[a]
Conservative voter	1.37 (.17)[c]
Bloc voter	2.93 (.34)[c]
NDP voter	1.90 (.21)[c]
Canada outside Quebec	0.24 (.25)
Constant	-1.78 (.41)[c]
N	1055
Psuedo-R^2	0.1434

Entries report coefficients (and standard errors in parentheses)
a: coefficient significant at 90%, b: coefficient significant at 95%, c: coefficient significant at 99%

APPENDIX 6-I: CES VARIABLE NOTES

Variables included in Table 6-3: Age (in years), gender (male = 0, female == 1), education (Highest level completed: no schooling (0),…professional/PhD (1)), income (<$20,000/yr (0),… <100,000/yr(1)), interest in election (no interest at all (0),… a great deal of interest (1)), general political interest ((no interest at all (0),… a great deal of interest (1)), media attention (based upon highest score to questions about attention to various types of media: no attention (0),… a great deal of attention (1))., campaign knowledge (an index of questions on campaign promises: all responses incorrect (0)…all responses correct(1)), general knowledge (an index of questions on general political knowledge: all responses incorrect (0)…all responses correct(1)) and strength of partisanship (non-partisan(0),…strong partisan(1)).

VITA

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- **Ph.D. in Political Science,** 2012, The University of Western Ontario. Completed comprehensive examinations in Canadian and Comparative Politics. Dissertation title: *When Voters Decide: Causes, Correlates and Effects of the Time-of-Voting-Decision.*
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REFEREED PUBLICATION

- R. Michael M^{c}Gregor. (Forthcoming). Measuring Correct Voting using Comparative Manifestos Project data. *Journal of Elections, Public Opinion and Parties.*

ACADEMIC PRESENTATIONS

- *Cause and Affect: The Institutional Sources of Negative Affective Orientations Toward Parties*, with Laura Stephenson and Cameron Anderson. To be presented at the annual meeting of the Canadian Political Science Association, Edmonton, AB, June, 2012.

- *Cognitive Dissonance and Political Attitudes: The Case of Canada*. Presented at the annual meeting of the Canadian Political Science Association, Waterloo, ON, May, 2011.
- *Negative Partisanship in Canada*, with Nicholas Caruana and Laura Stephenson. Presented at the annual meeting of the Canadian Political Science Association, Waterloo, ON, May, 2011.
- *Correct Voting in Canada.* Presented at the Political Science Graduate Student Conference on Canadian Democracy, Ottawa, ON, Feb., 2011.
- *Exploring Negative Partisanship in Canada*, with Nicholas Caruana. Presented at the Midwest Association for Canadian Studies Biennial Conference, Windsor, ON, Oct., 2010.
- *Ambivalence and the Time-of-Voting-Decision*. Presented at the annual meeting of the Canadian Political Science Association, Montreal, QU., June, 2010.
- *Understanding Time-of-Vote-Decision Using Zaller's Receive-Accept-Sample Model of Political Decision Making*. Presented at the Centre for the Study of Democratic Citizenship Graduate Student Conference, Quebec, QU, March 2010.
- *Exploring Riding-level Volatility in Canadian Federal Elections*, with Jeffrey Parker. Presented at the Annual Conference of the Canadian Political Science Association, Ottawa, ON, May 2009.

ACADEMIC HONOURS AND AWARDS

- **Social Sciences and Humanities Research Council (SSHRC) Doctoral Fellowship**, 2010.
- **Faculty of Social Science Dean's Scholarship**, 2007, The University of Western Ontario.
- **Graduate Research Assistantship,** 2007, The University of Western Ontario.
- **Western Graduate Research Scholarship**, 2007, The University of Western Ontario.
- **MA Entrance Scholarship**, 2005, The University of Waterloo.
- **University of Guelph Engineering Entrance Scholarship**, 1999, The University of Guelph.
- **Optimist Club of Guelph Scholarship**, 1999.