(In)Significant Elections? Federal By-elections in Canada, 1963–2008

PETER JOHN LOEWEN   *University of Toronto*
FRÉDÉRICK BASTIEN   *Université Laval*

Introduction

From time to time, by-elections punctuate Canadian political life. Some by-elections go unnoticed whereas others attract national attention, sometimes fueling a party crisis. For example, a weak performance can be taken as a signal of weakness in party leadership, such as the loss of the traditionally liberal riding of Outremont in Quebec in September 2007 (Simpson, 2007). By contrast, a surprisingly strong performance can signal effective organization and provoke a reassessment of a party's popularity, as with the Conservatives' near win in the urban Vancouver Quadra in March 2008 (Chase and Bailey, 2008). Parties who improve their standing in by-elections usually interpret them as demonstrations of genuine trends. Those who lose points or seats often prefer to consider by-elections as idiosyncratic, election-specific events. Journalists and other pundits regularly add their own analyses and try to make allowances between these competing interpretations. Unfortunately, by-elections rarely reach the radar screen of Canadian scholars and the existing literature only provides some help to those who want to understand the actual meaning of these events. As a consequence, a basic question remains unanswered: how reflective are by-elections of more general trends in the electorate? Are they driven by the same factors that we generally understand to structure regular elections or are they singular and idiosyncratic events?

Peter John Loewen, Department of Political Science, University of Toronto at Mississauga, Mississauga ON, L6L 1C6, peter.loewen@utoronto.ca
Frédérick Bastien, Département d'information et de communication, Université Laval, 1055 avenue du Séminaire, Québec QC, G1V 0A6, frederick.bastien@com.ulaval.ca.

We have some reasons to believe that by-elections may differ from local races during general elections and should be considered as isolated, particular events. For example, these races are likely to be framed in different terms than during a general election, with parties and candidates making more localized and less nationalized appeals. By-election races are usually subject to lower levels of participation. And they may provide a unique opportunity for small parties to concentrate their resources, to highlight their platforms and appeal for votes. On the other side, evidence from other countries (especially the United Kingdom) leads us to think that Canadian by-elections may be more significant than what the election-specific thesis suggests. Though some local considerations may occasionally bear heavily on the results, by-elections could act as referenda on the government, with voters reflecting the opinion of the whole country and giving the government a midpoint signal of their (dis)approval of its performance. They could be "barometer elections" (Anderson and Ward, 1996) and their outcomes may be explained, to a significant extent, by normal partisan forces (Studlar and Sigelman, 1987). The objective of this research note is to present evidence that can be brought to bear on these questions.

We set out to answer four specific sets of questions:

(1) What causes the turnout in by-elections to converge or diverge from that witnessed in general elections? When is turnout higher or lower in a by-election? And what is the trend in by-election turnout?
(2) Are by-elections really referendums on the government, that is, are by-election results significantly affected by the current popularity of the governing party?
(3) Do minor parties and independent candidates perform better in by-elections than in regular elections?
(4) Do by-election victors face a different re-election rate than those incumbents who won in the previous general election?

To answer these questions, we consider all federal by-elections held in Canada from 1963 until 2008. Where necessary, we have married these data with general election results from the same constituencies. We have also added in historical public opinion data necessary to test questions about the effects of the popularity of federal parties. Before we present our results, we briefly review extant knowledge on by-elections and then describe our data.

What Do We Know about By-Elections?

Despite the great attention given to federal elections by political scientists in Canada (such as Blais et al., 2002; Pammett and Dornan, 2004),

Abstract. Despite the development of electoral studies in Canada, by-elections have received little attention from researchers. We believe that these are important political events. This research note examines the 121 federal by-elections held between general elections from 1963 to 2008. Our analysis indicates that turnout in by-elections is driven by the larger societal determinants of turnout and not the characteristics of each race. We also find that the support of the government party in a by-election is affected by changes in national opinion towards the government, but only in the third-party system. We find that minor parties and independent candidates perform better in by-elections than in general elections. And we find no difference in the re-election rates of by-election winners and those who enter parliament through general elections.

Résumé. Malgré le développement des études électorales au Canada, les élections partielles ont reçu très peu d'attention de la part des chercheurs. Nous croyons qu'il s'agit pourtant d'événements importants dans la vie politique canadienne. Cette note de recherche examine les 121 élections partielles fédérales survenues entre les élections générales de 1963 à 2008. Notre analyse indique que le taux de participation aux élections partielles est davantage influencé par des déterminants sociétaux que par des caractéristiques propres à chacune. Nous constatons aussi que les fluctuations de l'opinion publique canadienne à l'égard du gouvernement influençaient la performance du parti gouvernemental lors des élections partielles avant le réalignement partisan de 1993, mais que ce n'est plus le cas dans le système partisan actuel. Nous observons également que les petits partis et les candidats indépendants enregistrent de meilleures performances lors des élections partielles et qu'il n'y a pas, aux élections générales qui suivent, de différence notable entre le taux de réélection des gagnants aux élections partielles et celui des autres députés sortants.

by-elections are rarely investigated by scholars. One obvious reason for this is that by-elections may be perceived as isolated, locally focused events that are not meaningful for national political life. In contrast to this view, the most substantial pieces of research devoted to by-elections in Canada set out to establish how well they act as indicators of the state of public opinion in the whole country and how well they can be used to forecast the outcome of the next general election. Methodological limitations have led to mixed evidence. Scarrow undertook the first study on federal by-elections held from 1921 to 1958. He states that "while no particular significance can be placed on the result of a single by-election, a series of by-elections can be relied upon to reflect national opinion trends" (1961: 86). In doing this, Scarrow focused only on the performance of government party. He distinguished "favorable" and "unfavorable" by-elections on the basis of shifts in party vote. He found that the government party increased its vote share at the next general election when the number of "favorable" by-elections was about twice the number of "unfavorable," and the reverse when the number of "unfavorable" by-elections was about twice the number of "favorable" ones. It must be underlined that Scarrow's definition of a favorable by-election is not limited to those where government party has increased or maintained its support, but also includes those where it held its loss to below five percentage points. At best, such an *ex post* threshold appears to be arbitrary.

A second study considered a more comprehensive number of parties. It also provided a different conclusion. Following an analysis of

the performance of all federal parties in by-elections held between 1940 and 1980, Kay (1981) concluded that by-election returns are a better predictor of the constituency-level outcome in the subsequent general election than the result in the previous general election. However, he also concluded that they are not good predictors of a party's performance in the whole country or even the whole region. On the basis of various bivariate analyses, Kay observed that shifts of parties' support are greater: in competitive multi-party systems (Ontario and British Columbia) than in traditional areas (Atlantic); where the absolute change in turnout is large rather than small and where by-elections and general elections are separated by a longer time interval. Along the same lines, studying provincial by-elections in Quebec from 1867 to 1981, Massicotte (1981) concluded that by-elections are poor barometers of the outcomes of the next general election. For most of the twentieth century, the government party won by-elections. However, the Parti québécois lost all by-elections during its first mandate (1976–1981). Just as by-elections did not predict changes in provincial legislatures during the first three-quarters of the century, neither did they predict the PQ victory in the general election of 1981. Massicotte thus settled on the hypothesis that by-elections are more relevant predictors of the outcome of the next election when seats switch from one party to another. However, his study does not provide a clear test of this hypothesis; rather, it only features a description of cases that fit and those that do not.

To know how well by-elections outcomes in constituencies reflect national public opinion trends, scholars who study these events in other countries have relied on a different methodology using national polls. Mughan (1986, 1988), for instance, tested this referendum hypothesis within the British case. He found that "the most potent predictor of government performance is precisely the proportion of the electorate satisfied with this record in the month of the by-election" (1986: 772). Anderson and Ward (1996) got similar results from their analysis of British by-elections and German Land elections. They use two measures of political support: executive approval ("Are you satisfied or dissatisfied with (X) as prime minister?") and governing party support ("If there were a general election today, which party would you support?") in the whole country. Though only national governing party support displayed a significant impact on German Land elections, both measures influenced governing party performance in British by-elections. Does a similar relationship exist in Canada? In a comparative study, Feigert and Norris (1990) tested the impact of national government popularity on the performance of government parties in by-elections. With data covering by-elections from 1945 to 1987, their results supported the referendum thesis in Britain and in Canada.

Despite the robustness of their findings, it is not obvious that Feigert and Norris's conclusion holds in Canada following the rise of regional parties in the 1990s. Most scholars agree that the Canadian party system has featured four alignments since its origin, though the specific phases may differ from one author to another (Carty et al., 2000; Johnston et al., 1992; Martin, 2005; Patten, 2007). A new alignment occurred with the 1993 general election. Prior to this, a stable two-and-a-half party system made of the Liberals, Conservatives and NDP, was in force since the Liberals' victory in 1963. According to Smith (1985) and Carty (1988), that phase was characterized by a more centralized and leader-centred party system. The brokerage role of major political parties between Canadian regions became less important with the rise of new institutions connecting federal and provincial government. In contrast, the current party system has featured up to two regional parties (Bloc québécois and Reform Party/Canadian Alliance) along with highly regionalized party competition. This leads to highly variable trends in support for the various political parties across the country. For instance, between the general elections of 2006 and 2008, the Conservatives' vote share decreased in Atlantic Canada (−4.9 percentage points) and Quebec (−2.9), but increased in Ontario (+4.1) and the West (+3.8) whereas the Liberals faced losses in all regions but in Quebec (+3.0). Thanks to new communication technologies, parties can easily conduct regionally targeted campaigns (Carty et al., 2000). In short, this new party system may affect the ability of by-elections to act as signals of government popularity nationally. Within this new Canadian context, the referendum thesis must be tested once again.

Given that previous studies have focused on how well these constituency-level events reflect national trends in public opinion, other questions about by-elections remain unanswered. Determinants of by-election turnout, for instance, have not been systematically investigated, nor has the re-election rate of by-election victors. Though some local, election-specific dynamics are obviously at work in by-elections, our statistical investigation will show that these events are rooted in larger, national trends and are not insignificant, local and idiosyncratic events. Rather, they are largely reflective of the dynamics of national politics.

Data

Our data consist of all federal by-elections held between the 1963 and 2008 general elections. As we discussed in the previous section, this period includes two-party systems with low and high levels of regionalization, allowing us to compare the significance of by-elections within different contexts, particularly as signals of governing party support. The inclu-

sion of previous by-elections would have distracting implications since their functions and features were not exactly the same as in the modern era: until 1931, ministers newly appointed to the cabinet had to resign from the House of Commons and run again as ministers of the Crown; general election outcomes in given ridings were often questioned and cancelled; and by-elections were often uncontested events (Massicotte, 1981; Scarrow, 1961). With all federal by-elections called from 1963 to 2008, we get 121 cases. We marry to these data measures of party performance in the previous and subsequent general elections, as well as variables related to the government status of the party, the timing of the by-election, the number of by-elections held concurrently, and so forth. All these data are drawn from statutory reports of the Chief Electoral Officer on federal by-elections and general elections. We describe variables in more detail when they are relevant in the analysis.

In addition to information about each by-election and its contestants, we have also merged data on the popularity of governments during by-elections. These data take the form of voting intention for the governing party among decided voters in the whole country. They allow us to test the referendum hypothesis by assessing how national public opinion trends affect by-election outcomes. For the period from 1963 to 2000, data are from the Gallup Report. It is the most comprehensive source of data about public opinion in Canada for the period studied here. As these surveys were eventually suspended, we use similar data from Environics for by-elections between 2001 and 2008. More precisely, we include the government's share of decided voters according to the most recent poll prior to a by-election, including those polls whose field dates overlapped a by-election. From 1963 to 1974, Gallup surveyed voting intention from four to six times per year, then on a monthly basis. For older surveys, field dates are not provided so we have approximated them by publication date. Since 1974, however, this information has consistently appeared.

Basic Facts about By-Elections in Canada

Before turning to the analysis of our key questions, we present descriptive data for these political events in Canada (Table 1). By-elections were previously much more frequent in Canada than they are in the modern era. For instance, 225 federal by-elections occurred between 1921 and 1958. This is 5.9 per year, on average. Among these, 37 per cent were uncontested by-elections. As noted above, until 1931, ministers newly appointed to the cabinet had to resign from the House of Commons and run again as ministers of the Crown, often without opposition candidates (Scarrow, 1961). The falling away of this custom almost certainly explains the reduced number of by-elections in the modern era. Since the 1960s,

TABLE 1

Descriptive Statistics for By-Elections in Canada

Decade	Number of By-Elections	Annual Average Number of By-Elections	Average Number of By-Elections per Day	Average Number of Candidates	Average By-Election Turnout (%)	Turnout Ratio to By-Election Turnout
1963–1969	19	2.7	2.4	3.7	54.5	1.44
1970–1979	36	3.6	3.6	4.4	58.5	1.26
1980–1989	19	1.9	1.7	5.4	59.7	1.24
1990–1999	22	2.2	2.2	7.1	43.8	1.70
2000–2008	25	2.8	2.5	5.9	35.0	1.87
All	121	2.6	2.5	5.3	50.5	1.49

the frequency of by-elections has been reduced to just 2.6 by-elections per year, on average, and uncontested by-elections have disappeared.

Most often, the prime minister calls by-elections in one, two, or three constituencies at a time. Thus, prime ministers on average call 2.5 by-elections per day. Since 1963, by-elections occurred simultaneously in more than four districts only five times, with five ridings in May 1967, six in May 1977 and March 1996, seven in May 2002, and 15 on October 16, 1978.

Despite declining turnout, which we analyze in the next section, by-elections have become more contested events. The average number of candidates has steadily grown from the 1960s to the 1990s, followed by a slight reduction in the 2000s. Only one by-election, in the riding of Burin-Burgeo (Newfoundland) in 1966, was contested by two candidates. At the opposite end, the highest number of candidates running a by-election is observed for the riding of Hamilton-East (Ontario) in 1996. Following her resignation from Parliament over the failure of the Liberal government to abolish the GST, Sheila Copps retook her seat against some 12 other candidates.

Before turning to explaining differences in by-elections, we also consider why by-elections occur. The Library of Parliament's biographical information on candidates includes a one-line description from which we can determine why a member resigned, though we occasionally rely on additional information. We identify six different types of reasons. Those who resign on account of patronage are those whose parliamentary biography indicates they resigned to take a government appointment. By-elections for reasons of death (perhaps obviously) occur when a member passes away while in office. Those counted under "other office" are those who are identified as resigning to contest office at another level. Those who resign for private reasons either give no reason or give the reason of taking up a position in the private sector. Those who resign for party reasons are principally those who step aside for a leader or a prominent member who needs to enter Parliament. It also includes cases like Sheila Copps who resigned for expressly political reasons and then ran again. Three cases fall in the "other" category. Two of these were because elections were voided and a third occurred because of a criminal conviction of a sitting member.

Overall, resignations for reasons of patronage are most common, followed equally by death and the pursuit of other office. Resignation for private reasons is next, followed by party reasons and then other reasons. As Table 2 demonstrates, there are no clear trends which appear to emerge, except that death appears much less common and leaving for private reasons appears much more common in the current decade than in previous decades. The frequency of resignations due to party reasons appears to have increased, though this can likely be attributed

TABLE 2
Reasons for By-Elections

Reason	1960s	1970s	1980s	1990s	2000s	N
Patronage	31.6	41.7	31.6	45.5	20.0	42
Death	36.8	22.2	26.3	13.6	8.0	25
Other office	15.8	22.2	21.1	18.2	24.0	25
Private reasons	10.5	13.9	10.5	4.6	36.0	19
Party reasons	0.0	0.0	10.5	9.1	12.0	7
Other	5.3	0.0	0.0	9.1	0.0	3
N	19	36	19	22	25	121

Note: Column percentages are reported for each decade.

to the lack of new party leaders emerging from outside caucus in the 1960s and 1970s.

What Increases or Decreases Turnout in By-Elections?

Low levels of voter participation typically characterize by-elections. For example, despite the national media attention paid to the by-elections in March 2008—those which elected Bob Rae and Martha Hall Findlay to Parliament, overturned a very slim Liberal general election win in northern Saskatchewan, and almost saw a Conservative victory in a previous Liberal stronghold in urban Vancouver—turnout levels did not exceed 34 per cent. Generally speaking, we know that turnout in by-elections is lower than it is in general elections. But that statement alone masks some important facts. First, what is the trend in by-election turnout compared to general election turnout? Second, what determines how much lower it will be, that is, when is the ratio between general election turnout and by-election turnout larger and when is it smaller?

We begin with the question of trends. Two facts are to be noted from Table 1. First, by-election turnout is in decline since the 1980s, just as general election turnout is declining.[1] During the 1960s, by-election and general election turnout were, on average, 54 per cent and 72 per cent. Both increased through the 1970s and reached their high points in the 1980s. Since then, they have declined dramatically. By-election turnout fell to 44 per cent in the 1990s and just 35 per cent in the current decade. With just two exceptions since 1963,[2] turnout is always lower in by-elections, varying from −51.2 to −0.7 percentage points, with an average at −19.3 percentage points. Second, by-election turnout is declining at a faster rate than general election turnout. To demonstrate the differences in decline, we calculate the ratio of general election to by-election turnout. If by-election turnout is decreasing more

quickly, then the turnout ratio should be growing. These ratios are shown in the last column of Table 1. General election turnout was about 44 per cent (not percentage points) higher than by-election turnout in the 1960s. In other words, for every one voter in a constituency who would vote in a by-election, 1.44 voters would cast a general election ballot. This difference declined to just 24 per cent in the 1980s. But since 2000, it has averaged 87 per cent, meaning that by-election voting is just a little more than half as frequent as general election voting.

Are these trends a function of the larger societal changes affecting participation generally, such as generational changes and life-cycle effects (see Blais et al., 2004)? Or are they the result of a changing nature of competition in by-elections; for example, with by-elections becoming less competitive or contested by fewer candidates? To answer this question, we present two sets of regression results. In the first (model 1, Table 3), we model by-election turnout. In the second (model 2), we model the turnout ratio. Results from the first thus tell us what causes by-election turnout generally to rise and fall, while those from the second tell us what causes it to rise and fall in comparison to turnout in the previous general election.

In each case, we consider two sets of independent variables designed to tap the impact of general and by-election-specific factors. Among the former, we control for the turnout in the previous general election. We obviously expect by-election turnout to be higher in those constituencies where general election turnout is higher. Since turnout is affected by individual characteristics such as education, age, employment, and marital status (Wolfinger and Rosenstone, 1980), we expect this variable to stand in for the variations in turnout attributable to sociodemographic differences between constituencies. To capture generational changes, we add dummy variables or fixed effects for each decade, with the 1960s acting as a reference category.

The set of independent variables included to measure the impact of specific factors begins with the number of by-elections held concurrently. It can be reasonably hypothesized that a larger number of by-elections increases the interest of media (especially national media) and thus increases the awareness of the by-elections and the amount of relevant and helpful information which citizens hold. We also control for the number of candidates. In a study of British by-elections between 1919 and 1972, Taylor and Payne (1973) found that turnout was higher in by-elections where third parties intervene, thus widening the set of choices on offer to citizens. We expect that as the number of candidates increases, so does turnout. We also control for whether the incumbent party in the by-election is currently in government. This represents 64 cases, or 52.9 per cent. If by-elections act as a referendum on the government, then races in which the governing party previously held the

seat may act as a particularly good chance for voters to express their pleasure or displeasure with the government, thus encouraging higher turnout.[3] Finally, we include a variable which measures if the by-election included a prominent politician, namely a party leader seeking entrance into the Parliament[4] (such as Brian Mulroney in 1983) or a cabinet minister appointed to the ministry prior to election to Parliament (such as Lucien Bouchard in 1987).[5] This represents 12 cases, or 9.9 per cent. We likewise include the margin of victory in the by-election to capture the competitiveness of the race. Finally, following Rallings and colleagues (2003) whose study of 4230 British local government by-elections in the 1980s and 1990s found higher turnout from March to June and lower turnout from November through January, we include a variable, Winter, which reads 1 when an election occurs between December and March inclusive and 0 otherwise.

We present two sets of results in Table 3. The first set of columns considers overall turnout, while the second considers the ratio between by-election turnout and turnout in the previous general election in the same constituency. The overall turnout results suggest that participation in by-elections is driven principally by general rather than specific factors. First, turnout in general elections appears to drive turnout in by-elections. By extension, we argue that the sociodemographic differ-

TABLE 3

Determinants of By-Election Turnout and Ratios, 1963 to 2008 (OLS)

Variable	Model 1—Turnout			Model 2—Ratio		
	Coef.	R.S.E.	p	Coef.	R.S.E.	p
Previous turnout	0.42	0.17	0.02	0.02	0.00	0.02
1970s	4.39	4.19	0.30	−0.21	0.15	0.16
1980s	4.12	4.50	0.37	−0.17	0.15	0.24
1990s	−8.10	5.95	0.18	0.27	0.26	0.30
2000s	−14.41	4.52	0.00	0.54	0.17	0.00
Number of by-elections on same day	−0.11	0.19	0.57	0.01	0.01	0.47
Number of candidates	−0.13	0.58	0.82	0.00	0.02	0.93
Government incumbent	1.35	1.74	0.44	−0.04	0.06	0.55
Prominent candidate	1.76	3.61	0.63	−0.10	0.15	0.51
Margin of victory	−0.10	0.05	0.05	0.003	0.002	0.08
Winter	−1.20	4.00	0.77	0.02	0.19	0.93
Intercept	27.40	12.14	0.03	0.51	0.33	0.14
N	121			121		
R^2	0.49			0.37		
F (11,48)	11.64			4.16		

Note: Observations are clustered on the date of the by-election. Robust standard errors are presented. R^2 is presented unadjusted.

ences across ridings that drive a variation in turnout also appear to drive turnout in by-elections. Second, fixed effects for decades appear to be significant for the current decade and (weakly) for the 1990s. Our estimates suggest that by-elections in the current decade are, on average, 14 percentage points lower than those held in the 1960s. Those held in the 1990s are approximately eight points lower than those held in the 1960s. On the contest-specific factors, we do find a weak effect for by-election margin, which suggests that less competitive by-elections lead to lower turnout. However, the coefficient on this variable is substantively small. For example, if we compare by-election turnout in the 1980s (when it was highest) and the 2000s (when it was lowest), the difference in average competitiveness was 15 versus 23 percentage points respectively. According to the coefficient, this would lead to a difference in turnout of less than one percentage point. In short, turnout decline in by-elections does not appear principally due to the differences in competitiveness. It also appears unrelated to other contest-specific effects. According to our estimates, by-election turnout is not increased when several by-elections are held at the same time, when they are contested by a larger number of candidates, or when the incumbent party in the constituency is also in government. By-elections do not exhibit greater turnout when a prominent candidate is in the contest. Finally, turnout in by-elections does not appear affected by the time of year in which the election is held.

A second set of columns presents our results when we consider the turnout ratio between a by-election and the prior general election in the same constituency. As with our more general effects, these results suggest that increased differences between general election turnout and by-election turnout are not the result of the changing characteristics of by-elections but of larger societal changes driving lower political participation. The significant predictors of an increased ratio between by-election turnout and general election turnout are whether by-elections occurred in this decade or (very weakly) in the 1990s. The ratio is also slightly affected by the turnout in the previous election. Those constituencies that had greater general election turnout are likely to witness a greater discrepancy in their by-election turnout.[6] The ratio is unaffected by the number of by-elections held concurrently, the number of candidates contesting the election, the government status of the incumbent or the presence of a prominent candidate. It is weakly affected by the margin of victory and is unaffected by the season of the by-election.

Taken together, these results suggest that changes in by-election turnout and its relation to general election turnout are driven by the general decline in political participation witnessed in Canada (Blais et al., 2004), and indeed around the world (see Franklin, 2001). What is of particular note, however, is that these effects appear to be particularly acute for

by-elections, suggesting that by-elections may experience even more pronounced declines in participation going forward.

Are By-Elections a Referendum on the Government?

News reports often frame by-elections as referenda on the recent performance of the governing party. Thus, many people believe that results from a given constituency may reflect public opinion of citizens from the whole country. Is the referendum hypothesis sustainable in Canada, where regional concerns are exercising greater influence on the party system? In other words, how closely do by-election results reflect government popularity at the time of the vote?

Our test largely follows from Mughan's study (1986) and takes as its dependent variable the share of votes for the government party in the by-election less their vote share in the preceding general election. Negative values thus indicate that the governing party is performing worse in the by-election than in the previous general election. We use as our main predictor changes in the aggregate national vote intentions for the government since the last election.[7] This variable should be positive, indicating that when government popularity is running higher nationally than in the previous election, then the performance of the by-election candidate should be increasing in comparison to the government candidate in the previous general election. In short, if by-elections are a reflection of the national will, then government candidates should do better when the national government is more popular. In addition to this measure of government popularity, we also control for the previous vote of the government candidate. This helps us avoid ceiling or floor effects.

Our first set of results is presented in model 1, Table 4. These results suggest that change in by-election vote share is significantly related to changes in the government's popularity since the election. For every one-point increase (decrease) in the government's poll popularity, by-election vote share increases (decreases) by 0.66 percentage points in comparison to vote share in the previous general election, *ceteris paribus*. This result is in line with previous analyses of the relationship between national vote intentions and support for government candidates in by-elections.

However, there is an important condition to this relationship. In model 2, we test whether this relationship holds in the fourth-party system as it did in the third-party system. We undertake this by interacting an indicator for the third-party system with the government popularity measure. If this relationship holds only in the third-party system, then the interaction should be positive and significant, while the main effect should be indistinguishable from 0. This is exactly the effect we find. In the current party system, the performance of government party candi-

TABLE 4

Change in Performance of Government Party in By-Elections (OLS)

Variable	Model 1			Model 2		
	Coef.	R.S.E.	p	Coef.	R.S.E.	p
Change in government popularity	0.66	0.15	0.00	0.20	0.42	0.64
Change * third-party system				0.87	0.42	0.05
Third-party system				2.71	3.54	0.45
Previous vote share	−0.10	0.04	0.01	−0.08	0.07	0.27
N	121			121		
R^2	0.31			0.36		
F ((2,48)(4,48))	25.43			74.70		

Note: Observations are clustered on the date of the by-election. Robust standard errors are presented. R^2 is presented unadjusted. The model is estimated with no constant.

dates in a by-election appears unrelated to the popularity of the government, suggesting that by-elections play less of a referendum role today than in the last party system.[8] These results suggest that the referendum hypothesis is relevant in a country where there is one unique party system, as in Canada under the third system. In such cases, by-elections are a relevant indicator of public opinion in the whole country. In a more regionalized party system, by-elections may not be a reliable signal about the health of a given party in the whole country. However, we could suppose that in a regionalized party system, by-elections are a relevant indicator of public opinion in the whole region. Testing this hypothesis is beyond the scope of this note, but we do underline that it could be tested in Canada as well as in other countries that feature strong regional parties, and thus lead to a revision of the referendum thesis.

Minor Parties, Independent Candidates, and By-Elections

Do minor parties and independent candidates perform better in by-elections than in general elections, that is, do the candidates of parties that are not represented in Parliament garner a greater share of votes in by-elections than in general elections? To test this, we compare the share of votes for minor parties and independent candidates with the share of votes for the equivalent candidates in the same constituency in the general elections before and after by-elections.[9] We consider as minor all parties but the Liberals, (Progressive) Conservatives, New Democrats, Social Credit, Reform, the Bloc Quebecois, and the Canadian Alliance.[10]

    Figure 1 presents our results. It appears that minor parties and independent candidates perform about twice as well in by-elections as they

Minor Party Vote Share in By-Elections and General Elections

Minor party vote share in by-elections and general elections
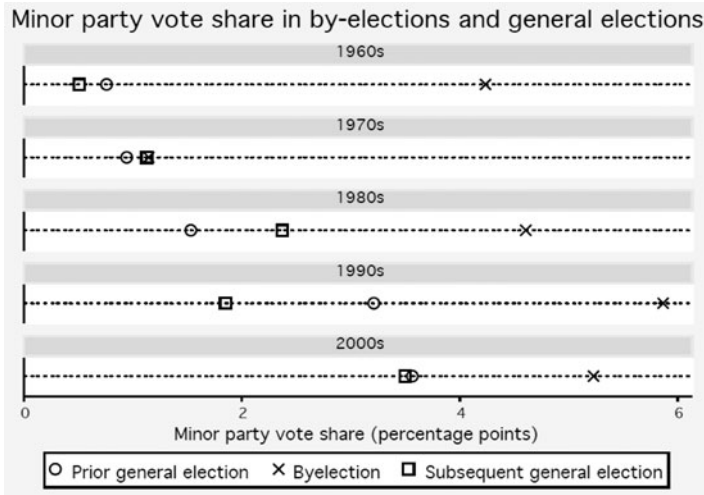
do in normal elections. The average vote share of these candidates in a by-election is 3.9 per cent. The average in the elections before and after is 1.9 per cent and 1.7 per cent. The by-election vote share is significantly higher than either the before ($t = 2.35$, $p < .01$, one-tailed) or after vote shares ($t = 2.36$, $p < .01$, one-tailed). Before and after totals are statistically indistinguishable ($t = 0.71$, $p = .48$, two-tailed). Note too that there is no clear pattern denoting whether minor parties and independent candidates do better in the election after versus before a by-election, nor does there appear to be a clear pattern of growth over time, though the 1970s did seem to be a particularly hard time for such candidates. Minor party and independent candidate performance here is significantly lower than in all other decades. On balance, there appears to be clear evidence that minor parties and independent candidates do better in by-elections than in general elections, though there appears to be no clear pattern of increase or decrease in this by-election advantage.

We should note that if we specify as minor every party that has never been in government, then the difference between by-election performance and general election performance is much smaller. While the difference between by-election performance and prior general election performance appears significant ($t = 1.57$, $p < .06$, one-tailed), there is no significant difference between by-election performance and subsequent general election performance ($t = 0.59$, $p = .28$, one-tailed). This suggests to us that the advantage enjoyed by minor parties and

independent candidates in by-elections is limited to truly marginal parties, in particular those who have never held a seat in Parliament. It also suggests that candidates for parliamentary parties that have never been in government but who perform well in a by-election may perform better in the next election in the same constituency. Consider, for example, the 2007 by-election in the Montreal-area riding of Outremont. This election brought an NDP member from Quebec to Parliament for only the second time and was followed by a general election victory for the party in the same constituency.

By-Election Victors and Re-Election Rates

Our final question is whether incumbents who won their seat in a recent by-election receive the same benefits of incumbency as those who won in a general election. In other words, are by-election incumbents more or less likely to be re-elected than incumbents who won in a general election? On one hand, we could expect them to do worse, as they clearly have spent less time as incumbents and have arguably accumulated less of a personal vote. But, on the other hand, they may be less easily tarred with the long-term actions of their party, so their chances may be better. Moreover, the particular attention that parties pay to the selection of candidates for by-elections may lead to higher quality candidates, on average. In sum, the expectations are not clear.

Our test of this is the simple observed re-election rates of all incumbents and by-election incumbents in the election following a by-election. We capture these in Figure 2. There does not appear to be a systematic difference between the re-election rates of non-by-election incumbents and by-election incumbents ($t = 0.61$, $p = 0.54$, two-tailed). Though by-election incumbents have, on average, a re-election rate that is 3.9 percentage points higher, their observed re-election rate is lower in five of thirteen general elections.[11] In short, we can find no systematic re-election advantage or disadvantage for by-election winners. Rather, winning a place in Parliament via a by-election appears to confer no advantage or disadvantage at the time of the next election.

Discussion and Conclusion

This note leads us to argue that federal by-elections are significant events in Canadian politics. First, the level of turnout in by-elections follows the same trend as in general elections, causing us to conclude that both are driven by similar factors related to a general decline in political participation. Indeed, the faster rate of decline in by-election turnout rings a warning bell of sorts for future general elections. Second, the perfor-

Re-Election Rate of All Incumbents and By-Election Winners
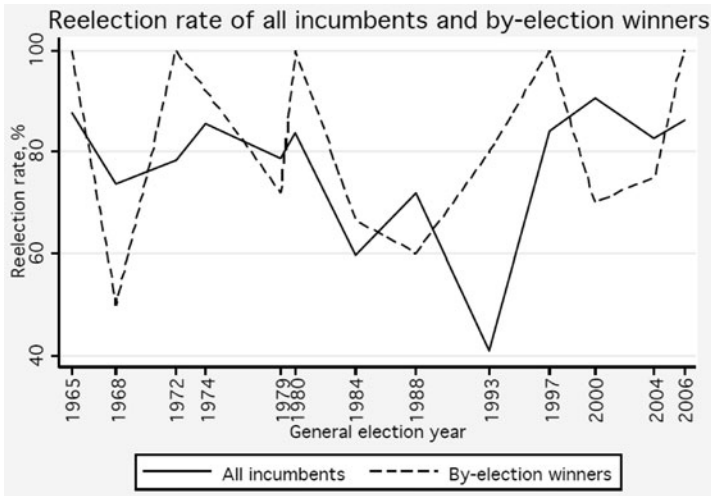
mance of parties in by-elections is driven by factors that are not idio-syncratic or unique to a given constituency. Prior to the regionalization of the party system, voters in by-elections responded to trends in national public opinion. Whether this has been replaced by regional opinion remains an open question. What is clear, however, is that for the major-ity of the period under study, by-election performance has not been a wholly local matter. Third, by-elections allow voters to signal their dis-pleasure with existing parties by casting their ballots for minor parties and independent candidates. Finally, we find that by-elections elect rep-resentatives who are no different in terms of re-election from their coun-terparts who enter Parliament through regular elections. On this score, by-elections can be seen as electing candidates who do not differ sig-nificantly in their future electoral prospects from most other MPs

By-elections have largely escaped systematic study in Canada. This may be explained by a belief that by-elections are isolated, locally focused events which are not meaningful for national political life. Though some of our analyses failed to demonstrate the impact of many campaign-specific variables, we cannot rule out any influence of local factors on a given by-election turnout or result. It is clear, however, that several by-elections taken together reflect genuine trends related to citizens' par-ticipation and voters' behaviour. As Norris (1990) has argued, neither of these theses is entirely satisfactory. There remains a blind spot in Cana-dian politics with regard to by-elections. While this rarely stops journal-

ists and political scientists alike from speaking about these events without systematic knowledge, this remains true. The goal of this note has been to bring some sight to this blind spot and to reveal the importance of by-elections for our understanding of Canadian elections and politics.

Notes

1   We calculate general election turnout here only in the ridings in which by-elections were contested. We use as our measure turnout in the general election prior to the by-election.
2   By-election turnout was higher than in previous general election in Bonavista-Twillingate in November 1967 (+4.3 percentage points) and in Labrador in May 2005 (+8.6 percentage points).
3   We have also run regressions including a measure of government popularity as a predictor of turnout. The result is not significant though it is negative signed, as should be expected.
4   We also include Tommy Douglas' successful attempt to re-enter Parliament after losing his local race in the 1968 general election.
5   We include among these individuals Sheila Copps who briefly resigned her position in cabinet to run in a by-election in 1996. It was well understood that her return would also include a return to government.
6   This is likely a floor effect, where constituencies with low general election turnout cannot realize as high a ratio as those who begin with a high turnout.
7   More precisely, we subtract the government's national vote share in the last election from the government party's share of decided voters in the most recent public opinion poll.
8   We have also conducted tests with re-election as the dependent variable and an indicator for government incumbents on the right-hand side. We cannot uncover evidence of systematic punishment of government incumbents in terms of re-election. Results are available upon request.
9   We exclude all constituencies in which redistricting occurred following a by-election.
10 We lump together minor parties and independent candidates because a single individual rarely presents as an independent candidate in the general election before and after a by-election. Accordingly, it is difficult to identify a general election comparison for a single independent candidate. As such, we consider independent candidates and minor parties in aggregate.
11 We have completed a further analysis in which we regress re-election rate by election on election-level observations for normal incumbents and by-election winners. We include a dummy variable for by-election winners and a fixed effect for each election. We fail to find a significant effect for by-election winners.

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