

**Do Voters Learn Through Experience?
Testing Duverger's 'Wasted Votes' Thesis**

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ABSTRACT

Duverger proposed a theory about the role of voter expectations in single-member plurality (SMP) electoral systems. He argues that SMP rules favour a two-party system because of two factors: a “mechanical” factor, the near-systematic underrepresentation of parties that win relatively small proportion of the vote; and a “psychological” factor, the sense among voters, upon recognizing this distortion of outcomes, that a vote for one of these smaller parties is a 'wasted' vote. The impact of the system-level variable, the mechanical factor, is well documented, but empirical tests of the individual-level variable, the psychological factor, are few and far between. This paper presents a simple test of the effects of Duverger’s psychological factor using data from the 1997 to 2004 *Canadian Election Studies*. The argument is that direct, repeated experience with the electoral system is a crucial aspect of the psychological factor; experienced voters have a larger stock of knowledge about previous election outcomes, and how their own voting behaviour squared with those outcomes. Three hypotheses flowing from this line of reasoning are tested here. The first hypothesis is that younger, less experienced voters are more likely than their older, more experienced counterparts to enter an election without any preconceptions about the outcome; that is, the young think local elections are closer. The second hypothesis is that current political information is a weak determinant of whether or not experienced voters think the local election is a close race, but is a strong determinant of whether or not young, inexperienced voters think the local election is close. In turn, the third hypothesis is that expectations about smaller parties’ success or failure have a greater impact on the vote decisions of older, more experienced voters than those of younger, less experienced voters. The evidence suggests that smaller parties can survive in SMP systems in part because new cohorts of inexperienced voters continuously the electorate.

Introduction

Maurice Duverger's well-known law, which states that the Single-Member Plurality (SMP) electoral system “favours the two-party system,” is the product of two joint causal processes: one “mechanical” and the other “psychological.” The mechanical factor is the Single Member Plurality system’s under-representation of minor parties; smaller parties nearly always win a greater share of votes than seats in the SMP system. The psychological factor is voters’ reactions to this systematic under-representation. Voters in SMP systems anticipate that supporting minor parties is futile and, consequently, abandon those parties for one of the two top contenders. The combined effect of the mechanical and psychological processes is a reduction of the number of parties.

Duverger’s mechanical effect is well established in a variety of empirical studies (Rae, 1967; Taagepera & Shugart, 1993; Ordeshook & Shvetsova, 1994; Amorim Neto & Cox, 1997; Benoit, 2002), but the psychological effect has been more difficult to pin down. Certainly, there is ample evidence that voters have expectations about how the different parties and candidates will fare in electoral contests, and that these expectations influence vote decisions in ways that usually help contenders and hurt parties that trail (see Simon, 1957; Bartels, 1988; Johnston, Blais, Brady, & Crete, 1992; Mutz, 1997; Blais & Nadeau, 1996; Blais, Nadeau, Gidengil, & Neviite, 2001). What is less clear is how the process operates over the long haul.

This paper argues that a crucial time component is missing from most empirical investigations Duverger’s psychological effect. It demonstrates that expectations about which of the different parties and candidates will win an election are a more powerful determinant of the vote decision only when voters have long-term, firsthand experience with previous election outcomes. Only through direct experience can voters come to recognize the effects of the SMP system and reach the conclusion that a vote for a minor party is “wasted”. This temporal element in Duverger’s psychological factor has significant but non-obvious implications for the dynamics of party competition in SMP systems. The paper will proceed as follows: the first section examines how earlier investigations understand the process behind Duverger’s psychological effect, advances a different framework for understanding the effect, and then proposes three hypotheses; the second section explains the methodological choices made in the course of testing the hypotheses; the third section presents and discusses the findings; and the final section revisits the hypotheses in light of the empirical evidence.

Theory

Nearly four decades after Duverger’s law was introduced, Blais and Carty noted that while progress had been made in understanding the mechanical factor, the psychological factor “remains a rather fuzzy notion whose process or magnitude is not clearly understood” (1991, pp. 79-81). Fifteen years after their progress report, it seems clear that we have a better understanding of the magnitude of the psychological effect: it accounts for less than 10 percent of the vote in most SMP elections (Nagler & Alvarez, 2000).

The process of the psychological effect is still more or less taken for granted. Scholars of electoral behaviour usually draw on this passage from Duverger to understand the process:

In cases where there are three parties operating under the simple-majority single-ballot system the electors soon realize that their votes are wasted if they continue to give them to the third party: whence their natural tendency to transfer their votes to the less evil of its two adversaries in order to prevent the success of the greater evil. (1954, p. 226)

This behaviour is variously called tactical or strategic voting, and many studies offer theoretical and empirical demonstrations of how this practice works (Black, 1978; Cain, 1978; Johnston & Pattie, 1991; Blais & Nadeau, 1996; Fey, 1997; Cox, 1997; Alvarez & Nagler, 2000). Although strategic voting can be an important factor in any single election, the long-term process underpinning the psychological effect still is not understood. Is there a systematic explanation, for example, that can account for why minor parties in some SMP systems are successful over the long haul?¹

The crucial element that is rarely present in discussions of Duverger's "wasted vote" thesis is time. As others have noted (Taagepera & Shugart, 1989; Blais & Carty, 1991), Duverger was not entirely explicit about how the psychological effect works. However, he made it quite clear that the psychological factors is not a one-election phenomenon:

[The psychological factor] operates in fact in the same way as 'under-representation'. The reversal of the two effects does not always occur at the same moment, under-representation generally being the earlier, *for a certain lapse of time is required before the electors become aware of the decline of a party and transfer their votes to another*. The natural consequence is *a fairly long period of confusion* during which the hesitation of the electors combines with the transposition of the 'under-representation' effect to give an entirely false picture of the balance of power amongst the parties...*The impulse of the electoral system towards the creation of bipartism is therefore only a long-term effect*. (Duverger, 1954, p. 226, emphasis added)

No less than Duverger suggests that a decisive factor in understanding his own law at the individual level is long-term experience with the electoral system. Political experience brings more opportunities for political learning, and should be critical to Duverger's "wasted vote" thesis for several reasons.²

One reason the psychological effect should lag substantially behind the mechanical effect is that too few voters pay close enough attention to immediately recognize that a vote for a minor party is wasted. Inexperienced voters in particular are unlikely to have any real

¹ Cox (1997) has provided one potential solution to this puzzle: in some local constituencies, many voters who are disenchanted with the perceived frontrunner are unsure about which of the trailing parties have a better chance of defeating the top contender. The consequence is a "non-Duvergerian equilibrium," where minor parties continue to receive electoral support. Cox does not systematically identify which kinds of voters produce this equilibrium, or why it is stable in the long-term.

² By political learning, I am referring to citizens' abilities to integrate new information with their existing political knowledge, in ways that influence their political actions.

expectations about who will win the election in their local constituencies, because they have no prior knowledge about the behaviour of other voters in their constituency.

By now it is accepted wisdom that most citizens are unwilling or unable to expend much cognitive effort on the voting decision. A substantial body of theoretical and empirical work focuses on how voters use heuristics, or simplifying strategies, that reduce the complexity of electoral choices and help voters overcome information shortfalls. These simplifying strategies can take a variety of forms,³ but oftentimes the simplifying strategy whereby voters can best reduce the cognitive costs of the vote decision is to rely on information they have already acquired, rather than obtaining new information (see, for example, Fiorina, 1981). Citizens with repeated, firsthand experience with politics should have abundant stocks of prior knowledge about the behaviour of other voters in their constituency that they can rely on to develop meaningful expectations about how the race is shaping up in their local constituency; less experienced voters lack that prior knowledge. It follows that:

Citizens with less political experience are more likely than those with more experience to believe that several parties have a chance of winning the election in their local constituencies. (Hypothesis One)

An important distinction concerns the political experience and measures of "political knowledge," or "political information," conventionally used in voting research. Political knowledge and experience are not one and the same. We know that political knowledge substantially affects how citizens vote (Moon 1990, 1992; Zaller 1992; Bartels 1996), but measures of political knowledge used in voting research usually focus on familiarity with up-to-date events and issues, and rarely capture the effects of long-term political experience.⁴

The effects of experience are likely to be quite different from those of traditional measures of current political information. Not only are most citizens "cognitive misers" who are rarely willing to bear the costs of acquiring information when it comes to politics, but also citizens use only a small part of the information they do acquire. This is because information is only useful when it helps reduce costly errors in judgement (Lupia & McCubbins, 1998). Indeed, studies of political novices & experts show that as citizens

³ Voters can focus, for example, on the characteristics of party leaders and candidates - from basic demographic characteristics to personality traits - to assess how they will perform if elected (Brady & Sniderman 1985; Kinder et al 1980; Kinder 1986; Rahn et al 1990; Popkin 1991; Cutler, 2002), and some researchers argue that partisanship is a heuristic cue that represents retrospective assessments of party performance (Fiorina 1981; Shively 1979; Gerber & Green 1998; Achen 2002). Still others contend that core values and ideologies allow voters to develop positions on relatively complex issues (Downs 1957; Feldman 1988; Zaller 1991; Feldman & Zaller, 1992).

⁴ Jennings notes three types of political knowledge measures that are employed in political knowledge research: measures of "textbook" knowledge, that gauge understanding of how a political system functions; measures of "surveillance" knowledge, that gauge knowledge of current events and political issues; and measures of "historical" knowledge, that gauge people's recollection of historical events and personalities (Jennings 1996, 229). Studies of the effects of historical knowledge, however, are few and far between (see Jennings 1996; Brown 1990).

gain a larger stock of prior experience, they rely more on relevant prior experiences than on current information to make decisions (Fiske, Kinder, & Larter, 1983; Riggle & Johnson, 1996). A politically experienced citizen could be quite ignorant of current issues and events - which are commonly gauged in survey items that measure political knowledge - but nevertheless capable of making political decisions. Thus, if political experience is distinct from current political information:

Citizens with greater stocks of current political information are less likely than those with smaller stocks of current political information to believe that several parties have a chance of winning the election in their local constituencies; this relationship is strong among politically inexperienced citizens, but weak among politically experienced citizens (Hypothesis Two)

This brings us to the voting decision itself. The argument here is that inexperienced voters, who are more likely to believe the election in their local constituencies are competitive for multiple parties, are consequently less likely to consider expectations about the different parties' chances when they cast their ballots.

Citizens who believe a party has no chance of winning the local constituency election are less likely to vote for that party than those who believe the party has a good chance of winning. This relationship is strong among politically experienced citizens, but weak among politically inexperienced citizens (Hypothesis Three)

Hypothesis Three provides the fundamental test of Duverger's psychological factor, and its temporal element in particular.

Data and Method

This empirical investigation draws on data from the 1997, 2000, and 2004 *Canadian Election Studies* (CES).⁵ The CES data are ideal for a couple of reasons. First, Canada has both a SMP electoral system and a multiparty system at the federal level. Second, each of these cross-sectional, random sample surveys of the Canadian electorate contain items that measure respondents' expectations about how each of the parties will fare in their local constituency, as well as a core set of common sociodemographic and attitudinal questions that have been replicated across federal elections.

The focus of this analysis, the interaction between experience and expectations, poses a methodological challenge, because interactive variables in statistical analyses are often collinear with the original additive variables, which leads to imprecise estimations. The best solution to the collinearity problem is to increase the number of observations, and for

⁵ The Studies are funded by the Social Sciences and Humanities Research Council of Canada with additional funding provided by Elections Canada (2000-2004) and the Institute for Research on Public Policy (2000). Field work for the studies was conducted by the Institute for Social Research at York University (1997-2004) and Jolicoeur et Associés (2000). The Principal Investigators are André Blais (1997-2004), Joanna Everitt (2004), Patrick Fournier, (2004), Elisabeth Gidengil (1997-2004), Richard Nadeau (1997-2000), and Neil Nevitte (1997-2004).

this investigation the easiest way to do that is to pool the CES data. It turns out that despite the relatively large sample sizes in the CES, there are too few cases in any single CES dataset for a reliable analysis of the interactive relationship that is central to this study, so where it is possible the responses from all survey years are analyzed together. However, a number of respondents are also excluded from the analysis. Residents of Quebec are excluded because there is a distinctive federal party system in that province which must be analyzed separately.⁶ And, because the crucial explanatory variable is experience with *Canadian* politics, the second set of excluded respondents is foreign-born Canadians who arrived in Canada after reaching voting age (18 years old). Most students of political socialization agree that political orientations acquired earlier in life filter subsequent information, and that new knowledge is incorporated in ways that typically conform to existing orientations. Foreign-born Canadians with direct experience in other political systems might behave differently than respondents with experience exclusively in the Canadian system (Bilodeau, 2004). The resulting sample sizes are 2,606, 2,164, and 2,927 in 1997, 2000, and 2004, respectively.

The operationalization of each of the variables used in this study can be found in the appendix, but two indicators require some explanation. First, the pivotal independent variable of the study is political experience, and age is the easiest way to estimate a voter's level of experience. The central point of the concept of political experience presented here is that voters learn from the political events and experiences they have lived through. Older citizens have lived through more elections than younger citizens, and therefore have more of this prior knowledge on hand. The natural logs of the respondents' ages in years, minus 17, are used to estimate the effects of experience. The respondents' ages minus 17 represent the number of years the respondents have been of voting age. Although additional years of experience are certainly important in social and political learning, psychologists show that more social learning occurs in earlier years, and experience-based gains in social learning decrease with additional years of experience (see Baltes et al., 1999). Consequently, the natural log transformation assigns decreasing weight to additional years of experience.

The second operationalization that merits a discussion is the competitiveness index, which measures whether or not respondents believe multiple parties have a chance of winning the election in the local constituency. Respondents' perceptions of the different parties' chances of winning in their local constituencies are measured by items that ask respondents to score each party between zero, where the party has no chance at all, to 100, where the party is sure to win. These survey items contain an element of ambiguity when it comes to gauging how competitive respondents think the local constituency race is (Bilodeau, 2000). One possibility is to measure the magnitude of the differences between the parties' scores on these items: if a respondent believes one party has a far better chance than any others, then the race is not competitive. However, there is no easy way to capture perceived competitiveness in a single measure simply by examining differences between the parties' scores. The meaning of a 10-point difference in chances is altered, for instance, when the gap is between scores of 80 and 90, rather than scores of 40 and 50. The

⁶ The Bloc Quebecois, one of the two dominant parties at the federal level in Quebec, does not run candidates outside the province, and in 1997 the Reform Party ran only a handful of candidates in Quebec.

difference between the former set of scores, where both parties are thought to have an excellent chance of winning the race, is clearly less noteworthy than the difference between the latter set. The alternative measure of the overall competitiveness of the local election – the one this analysis will rely upon – is the average of the scores the respondents give for each party’s chance of winning the election in their local constituencies.

With these methodological considerations in mind, we can turn to the empirical analysis.

Findings

The appropriate starting point is the basic data on respondents’ perceptions of party competition within their local constituencies. Respondents are divided into three age categories: those who are 18 to 34 years old and have relatively modest levels of political experience, those who are 35 to 50 years old and have extensive political experience, and those who are 51 years of age or older, and have the largest stocks of political experience. The mean evaluations of each party’s chances of winning in their local constituency (from 0 to 100) are compared across the three age groups. According to the first hypothesis the expectation is that younger voters will, on average, report higher scores than older voters for each party competing in the local race.

The data reported in Table 1 support the hypothesis. Four parties competed in Canada outside Quebec in the 1997 and 2000 elections, and three competed in the 2004 election, thus there are 11 series of evaluations of party chances. While there is certainly substantial variation in respondents’ perceptions of party chances across parties and elections, a clear pattern also emerges across age categories: in eight instances, the 18 to 34 year olds estimate the party’s chances of winning their local constituency are higher than do their 35 to 50 year old counterparts, and the 35 to 50 year olds, in turn, provide higher estimates of the same party’s chances than do the eldest respondents. The magnitude of the age differences in these eight sets of mean estimates range from 3.7 points in the 2000 election, when 18 to 34 year olds and 51-plus year olds gave the Liberal party 57.1 and 53.4 points, respectively, to 11.6 points in the 2004 election, when 18 to 34 year olds gave the Liberal Party 45.8 points, and 51-plus year olds gave the party only 34.2 points.

INSERT TABLE 1 ABOUT HERE

There are two cases where the age-related differences in respondents’ perceptions of party chances are indistinct and a single instance where the observed relationship is contrary to our hypothesis. No clear age-related pattern materializes for perceptions of either the Reform Party or Canadian Alliance chances; the mean scores for the Reform Party in 1997 are 35.8, 33.8, and 33.9 points for 18 to 34 year olds, 35 to 50 year olds, and 51-plus year olds, respectively gave the Liberal party 57.1 and 53.4 points, respectively; and the mean scores for the Canadian Alliance in 2000 are 41.1, 38.8, and 42.3 points for 18 to 34 year olds, 35 to 50 year olds, and 51-plus year olds, respectively. However, in the 2004 election more experienced voters 35 evidently believed the Conservative Party had a

better chance of winning in the local contest than did the least experienced voters. This outlying case could reflect a slight adjustment in 2004 of the measurement of parties' chances mentioned earlier, or it could be a sign of wishful thinking on the part of voters both young and old; a partisan or ideological bias might have led younger voters to underestimate, and older voters to overestimate, the Conservative Party's chances. But it could simply reflect the reality of that campaign. For a good part of the 2004 campaign it did look as if the Conservatives might form a government.

These basic bivariate results provide some evidence that newer potential voters are more likely than their more experienced counterparts to believe that many or all the parties have a good chance of winning the election in their local constituencies. But is it repeated direct experience, or is it the other factors associated with experience, that influences perceptions of party competition? Older voters, for example, tend to pay more attention to, and know more about, election campaigns. On the other hand, younger citizens are generally as well educated as the middle-aged, and better educated than the oldest citizens. Then there is the matter of specifying the precise nature of the relationship between experience and perceptions of parties' chances: theories of learning over the life course and the evidence presented thus far suggest that the impact of experience is non-linear, with early gains in experience having greater weight than later increases. This possibility cannot be captured using the simple three-category measure of experience. For these reasons, a more rigorous test of hypothesis one is warranted.

A multivariate strategy is employed that simultaneously takes into account the potentially confounding effects of current political information, education, and political interest, as well as differences in perceptions of parties' chances across election years. In this multivariate model, the natural log transformation of age measures political experience, and the average of all the parties' chances of winning the local constituency serves as an index of the overall competitiveness of the local race. The results of the analysis are presented in Model 1 of Table 2. A clearer picture of the effect of experience on perceptions of party competition comes into view. After controlling for respondents' levels of current political information, political interest, and education, as well as the cross-election variation in perceptions of parties' chances, political experience has a significant negative effect on perceptions of the overall competitiveness of the local race. It is difficult to intuitively grasp the impact of experience directly from these regression results because of the natural log transformation, but the effect firsthand experience is clear when the results are re-converted into the more meaningful unit of years.⁷ According to these estimates, the average competitiveness index score is 45.7 among 18 year olds, when all other factors are held constant at zero. The estimated average index score declines to 41.7 points among 25 year olds, but after age 25 the estimated independent effect of experience is quite modest: the competitiveness index score shrinks only to 38.0 among 75 year olds.

INSERT TABLE 2 ABOUT HERE

⁷ When all other factors = 0, the competitiveness index = $45.66 + \text{Experience} \times (-1.895)$. At age 25, for example, the competitiveness index = $45.66 + \log_e(25-17) \times (-1.895)$, which is $45.66 + 2.079 \times (-1.895) = 41.72$.

Two of the three potentially confounding variables have statistically significant effects on perceptions of party competition, but their influence is dwarfed by the effect of experience. Respondents with greater stocks of up-to-date political information – that is, respondents who are familiar with contemporary politicians and who know more about the party platforms – are less likely than respondents with small stocks of information to believe the local race is highly competitive. The estimated total impact of individual differences in current political information on perceptions of party competition at the local level is 4.4 points. Political interest, by contrast, has a significant *positive* effect on perceptions of the overall competitiveness of the local race. Respondents who pay no attention to politics report scores that are about 3 points lower on the competitiveness index than do respondents who pay a great deal of attention to politics. Education has no statistically significant impact on chances.

The data in Model 1 of Table 2 offer more robust support for hypothesis one. The evidence from three general elections indicates that citizens with less experience are more likely than their more experienced counterparts to believe that local constituency races are highly competitive. This relationship is neither due to random error, nor is it an artefact of differences in levels of education or political interest, or in stocks of current political information.

However, according to the model of political experience presented earlier, experience should matter even more in the absence of current political information than it does when stocks of such information are great (hypothesis two). Unlike younger citizens who have far less firsthand knowledge of elections, older, politically experienced citizens should be more capable of drawing on lessons from the past in the absence of current political information. To test this hypothesis, a multiplicative term is added to the original model that captures the interactive effect of experience and knowledge. If experience does have a greater effect on perceptions of the overall competitiveness of the local race in the absence of knowledge, the interaction term should be positive and statistically significant, indicating that although citizens with more experience are less likely to believe the local race is competitive, the negative effect of experience diminishes as levels of current political information increase.

The results of the interactive model (Model 2 in Table 2) buttress the claim in hypothesis two. The coefficient for the interactive term (Experience \times Current Political Information) is positive and robust. The regression results for interactive model can pose an even greater interpretive challenge than those of Model 1, because the complexity of the natural log transformation is compounded by the multiplicative term. Consequently, the estimated effect of the interaction of experience and political information are calculated using the same approach as in Model 1.⁸ These effects are summarized in Figure 1. When citizens' stocks of up-to-date information are high, experience is largely irrelevant: 18 year olds, for example, score about three and a half points higher than 75 year olds on the riding competitiveness index. By contrast, when stocks of current political information are very

⁸ These estimates were obtained from the results in Model 2 of Table2, using the procedure in fn. 2.

low (at zero) the effect of experience is quite strong, as illustrated by the relatively steep slope among citizens aged 18 to 35 years in particular.

INSERT FIGURE 1 ABOUT HERE

There is clear evidence that experience affects citizens' expectations about how the election in their local constituency is shaping up. The next step is to determine the substantive significance of these differences in perceptions of party competition. Do these expectations affect the vote decision, and (as per hypothesis three) do they affect that decision differently depending on whether citizens have more or less experience with politics?

The first question has already been addressed in other research using the CES data (Blais & Nadeau, 1996; Blais, Nadeau, Gidengil, & Nevitte, 2001) and the short answer is yes, expectations about the local race do systematically influence the way Canadians vote: the better a party's perceived chances are, the more likely voters are to support that party. Answering the second question requires suitable measures of local-level expectations. The most effective operationalization is Blais, Nadeau, Gidengil, & Nevitte's (2001) series of "No chance" variables that gauge how much a respondent believes a party trails the frontrunner in a local constituency contest. The "No chance" variable equals 0 if respondents believe the party is the frontrunner, or is tied for the lead, in the local race; otherwise, it equals the difference between the party's chances and that of the frontrunner (to a maximum of 100). If, for example, the Liberal Party is perceived to be leading a local race and scores a 90 on the question "What are the Liberal Party's chances of winning the election in your local riding?" and the NDP scores a 50 on the question "What are the New Democratic Party's chances of winning the election in your local riding?" then No chance NDP equals 40.⁹

To test hypothesis three, a series of binary logit analyses are performed for each pair of parties to see whether expectations about the two parties' chances mattered more for voters with more political experience than for their less experienced counterparts. Operationalizing the dependent variable, the voting decision, poses a challenge because of the changes in the party system over the three elections from 1997 to 2004. Neither the Liberal nor NDP choices are problematic, as these two parties competed in all three elections. But the PC, Reform, Canadian Alliance, and Conservative parties do cause some difficulty: should they be analyzed separately, or should they be combined? And if so, how should they be combined? The easiest solution is to explore each of these possibilities. A total of 10 binary logit models were tested, including models with each party treated separately, and models with various combinations of the PC, Reform, Canadian Alliance, and Conservative parties.¹⁰ Multiplicative terms (for example, Experience \times No chance PC) are

⁹ This operationalization does not take into account how much a party is perceived to be ahead when it is the frontrunner. As Blais, Nadeau, Gidengil, & Nevitte note, there is no reason that the magnitude of the perceived frontrunner's lead should affect the vote decision (2001, p. 346).

¹⁰ Logit analyses were performed for the following pairs: 1) NDP vs. Liberal; 2) NDP vs. Reform / Alliance; 3) NDP vs. PC; 4) Liberal vs. PC; 5) Liberal vs. Reform / Alliance; 6) PC vs. Reform / Alliance; 7) PC /

entered in the model to capture the interactive effect of experience and expectations. Partisanship and feelings toward the two parties are controlled to eliminate the potential effects of wishful thinking among partisans and others with positive evaluations of the parties.

It turns out that in some circumstances expectations do affect the voting decisions of politically experienced voters more than the decisions of inexperienced voters. The first scenario where hypothesis three has unmistakable empirical support is the choice between voting NDP or Liberal in federal elections from 1997 to 2004. When the effects of partisanship, feelings toward the two parties, and the year of the election are controlled, the interaction between experience and expectations that the NDP has a poor chance of winning in the riding has a significant negative effect on voting NDP (Table 3). The estimated interactive effect of expectations and political experience on voting NDP rather than Liberal is illustrated in Figure 2.¹¹ The least experienced voters' perceptions of NDP chances have no discernable effect on whether they vote NDP or Liberal: Among 25 year olds, the probability of voting NDP when the party is perceived to be leading or tied in the local race is 49 percent; however, 25 year olds' probability of voting NDP when they believe the party might have any chance of winning the local race is just as high, at 46 percent. The effect of citizens' expectations grows dramatically within a decade of additional experience with politics. Voters aged 35 who believe the NDP has the best chance of winning the local race are 19 percent more likely to vote for the NDP over the Liberal party compared to those who believe the NDP has no chance of winning (57 percent to 38 percent, respectively). Moreover, the leverage of expectations over the voting decision increases throughout the life course, albeit at a much slower rate than in the period between 25 and 35 years of age.

INSERT TABLE 3 ABOUT HERE

INSERT FIGURE 2 ABOUT HERE

The second scenario where expectations influence the voting decisions of politically experienced voters more than those of inexperienced voters is the choice between voting for the PC party or the Reform Party / Canadian Alliance in federal elections of 1997 and 2000. Again, the results of the logit analysis, presented in Table 3, show that the interaction between experience and expectations that the PC party has a poor chance of

Conservative vs. NDP; 8) PC / Conservative vs. Liberal; 9) Reform / Alliance / Conservative vs. Liberal; 10) Reform / Alliance / Conservative vs. NDP.

¹¹ The probabilities of voting NDP rather than Liberal were estimated using the Logit parameters from Table 3 and the CLARIFY software program. These estimates, which take into account both sampling error and stochastic uncertainty, are derived from 1000 simulations, with NDP and Liberal partisanship, as well as the election year dummies held constant at .5, the NDP and Liberal thermometer scores held constant at 50, and the No chance Liberal and Experience \times No chance Liberal variables held constant at their mean values. The Experience and No chance NDP variables were alternatively set at the different values shown in Figure 2 to produce the final estimates. Additional information on this estimation approach is provided in King, Tomz, & Wittenberg (2000).

winning in the riding has a significant negative effect on voting PC when the influences of partisanship, feelings toward the two parties, and the year of the election are controlled. The estimated interactive effect of expectations and political experience on voting PC rather than Reform / Alliance is illustrated in Figure 3, and the pattern is a familiar one, where the bulk of experience-related gains occur before age 35.¹²

INSERT FIGURE 3 ABOUT HERE

Concluding Discussion

This investigation started out with the observation that hardly anything is known about the development of Duverger's psychological factor over the long term at the level of the individual voter. The argument was that experience throughout the life course is an important determinant of whether or not voters recognize that votes for minor parties are often wasted. The empirical evidence presented here supports that claim. The data indicate that younger citizens with low levels of firsthand political experience are more likely than older citizens to think the election in their local constituency is a wide-open race. Moreover, the impact of experience is distinctive from that of up-to-date political information: in fact, the perceptions of party competition among older voters do not vary according to their levels of current political information, though they generally have greater stocks of current political information than do younger, inexperienced voters.

The key finding is that politically experienced voters are substantially more likely than their young, inexperienced counterparts to abandon parties that they believe do not have a chance of winning the local constituency contest. That finding is consistent with not only with Duverger's basic wasted vote thesis but also with the specific implication that, at the micro level, this occurs over the long-term.

The results suggest something about the long-term aggregate dynamics of party competition in multiparty, SMP systems. One possible reason why so many aggregate 'wasted' votes are cast in every election is because a significant segment of citizens who have very little prior firsthand experience with elections, and have no prior expectations about the behaviour of other voters in their constituencies, vote in every election. This supply of naïve voters is replenished at every election through the natural process of age cohort replacement: in each electoral contest, significant numbers of older, experienced voters leave the electorate because of old age or death, and simultaneously a considerable population of young, politically inexperienced men and women reach voting age.

We cannot be entirely sure that age cohort replacement is the cause, but it appears to be the best available explanation. There is always the possibility that generational differences in political socialization, rather than political experience, accounts for the same phenomena. In other words, it could be that voters who were born and raised in earlier periods are more likely to take into account their expectations about parties' chances when

¹² The probabilities of voting PC rather than Reform or Canadian Alliance were estimated using procedure in fn. 6.

they vote because of their era-specific experiences. Distinguishing between the effects of political experience and socialization is a challenge: in cases where there is evidence that generational (socialization) and life course (experience) effects may be at play, there is no easy statistical way to distinguish between their effects in the absence of long-term panel surveys. This is because they are linearly dependent: a person's age is a function of their year of birth. It is important to assess the plausibility of these competing explanations in the face of empirical evidence precisely because there is no statistical way to isolate both effects.

In this respect, the balance of available evidence supports the age cohort replacement interpretation presented here. According to the alternative generational interpretation, older voters' expectations about party chances should be *less* salient than younger voter when it comes to voting decision, since older generations of voters are less sophisticated than their younger counterparts (Kanji & Archer, 2002).

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TABLES AND FIGURES

Table 1: Parties' Perceived Chances of Winning in the Local Constituency by Respondents' Age Category (Means)

	18-34 Years	35-50 Years	51+ Years
<i>1997 Election</i>			
Liberal Chances	56.7	54.0	51.4
PC Chances	43.3	37.8	37.2
NDP Chances	32.6	30.5	25.4
Reform Chances	35.8	33.8	33.9
(N)	(686)	(778)	(634)
<i>2000 Election</i>			
Liberal Chances	57.1	54.9	53.4
PC Chances	32.4	29.7	27.4
NDP Chances	29.4	23.2	20.4
Canadian Alliance Chances	41.1	38.8	42.3
(N)	(533)	(636)	(629)
<i>2004 Election</i>			
Liberal Chances	45.8	34.4	34.2
Conservative Chances	42.5	53.9	55.0
NDP Chances	17.9	13.7	12.8
(N)	(352)	(575)	(719)

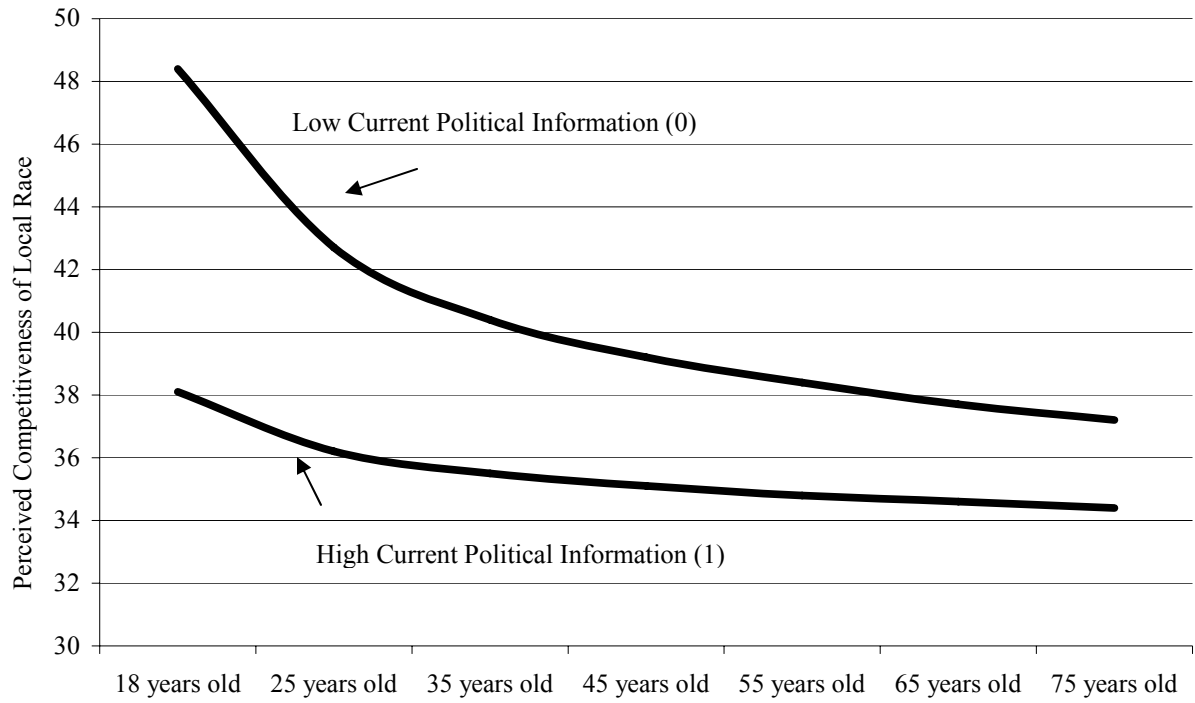
Source: 1997, 2000, & 2004 CES

Table 2: Predictors of Perceived Local Constituency Competitiveness (Robust Regression Estimates)

	Model 1		Model 2	
	β	SE	β	SE
Experience	-1.895	(0.1719)	-2.767	(0.2890)
Current Political Information	-4.426	(0.4833)	-10.36	(1.738)
Experience \times Current Political Information			1.871	(0.5290)
Interest	2.975	(0.6264)	3.091	(0.6266)
Education	-0.6692	(0.6318)	-0.6230	(0.6324)
2000 Election	-2.852	(0.3000)	-2.924	(0.3007)
2004 Election	-4.385	(0.3046)	-4.490	(0.3053)
Constant	45.66	(0.6575)	48.43	(0.9560)
F		84.45		77.17
Prob > F		0.0000		0.0000
N		5220		5220

Source: 1997, 2000, & 2004 CES

Figure 1: Perceived Local Constituency Competitiveness by Experience and Stock of Information



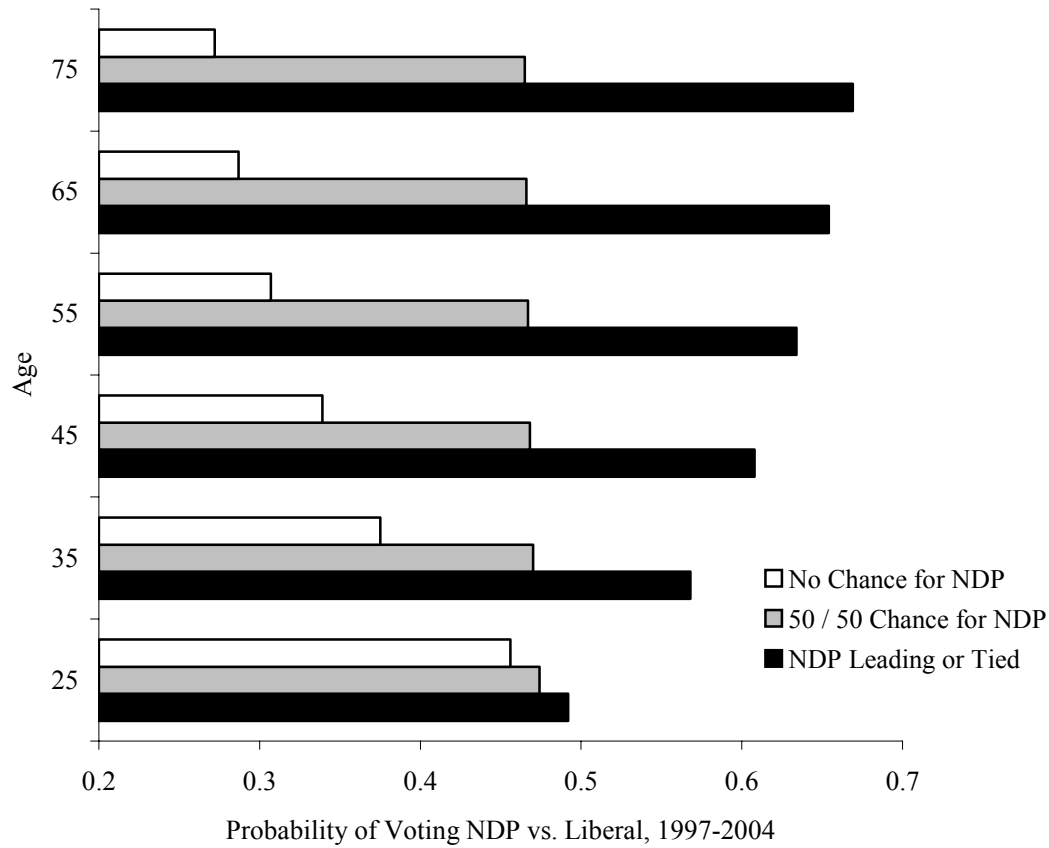
Source: 1997, 2000, & 2004 CES

Table 3: The Interactive Effect of Experience and Expectations on Vote Decision (Binary Logit Estimates)

	NDP (1) vs. Liberal (0) 1997-2004		PC (1) vs. Reform / Alliance (0) 1997-2000	
	β	<i>SE</i>	β	<i>SE</i>
Experience	0.3722	(0.1725)	0.5501	(0.2491)
Party Chances:				
No chance PC			0.02067	(0.01625)
No chance Reform / Alliance			0.03512	(0.01897)
No chance NDP	0.01431	(0.008760)		
No chance Liberal	0.03203	(0.009648)		
Interaction Terms:				
Experience \times No chance PC			-0.01078	(0.004979)
Experience \times No chance Ref / Alliance			-0.004037	(0.005873)
Experience \times No chance NDP	-0.007717	(0.002724)		
Experience \times No chance Liberal	0.002028	(0.002916)		
Partisanship:				
PC			0.3262	(0.2479)
Reform / Alliance			-1.0040	(0.3863)
NDP	1.606	(0.2603)		
Liberal	-0.8892	(0.1979)		
Thermometer Scores:				
PC			0.06784	(0.006504)
Reform / Alliance			-0.06822	(0.006154)
NDP	0.06279	(0.005129)		
Liberal	-0.06750	(0.005313)		
2000 Election	-0.3837	(0.1971)	0.7192	(0.2162)
2004 Election	-0.1224	(0.2674)		
Constant	-0.8723	(0.5960)	-2.843	(0.8677)
Pseudo R ²	.518		.552	
N	1686		1153	

Source: 1997, 2000, & 2004 CES

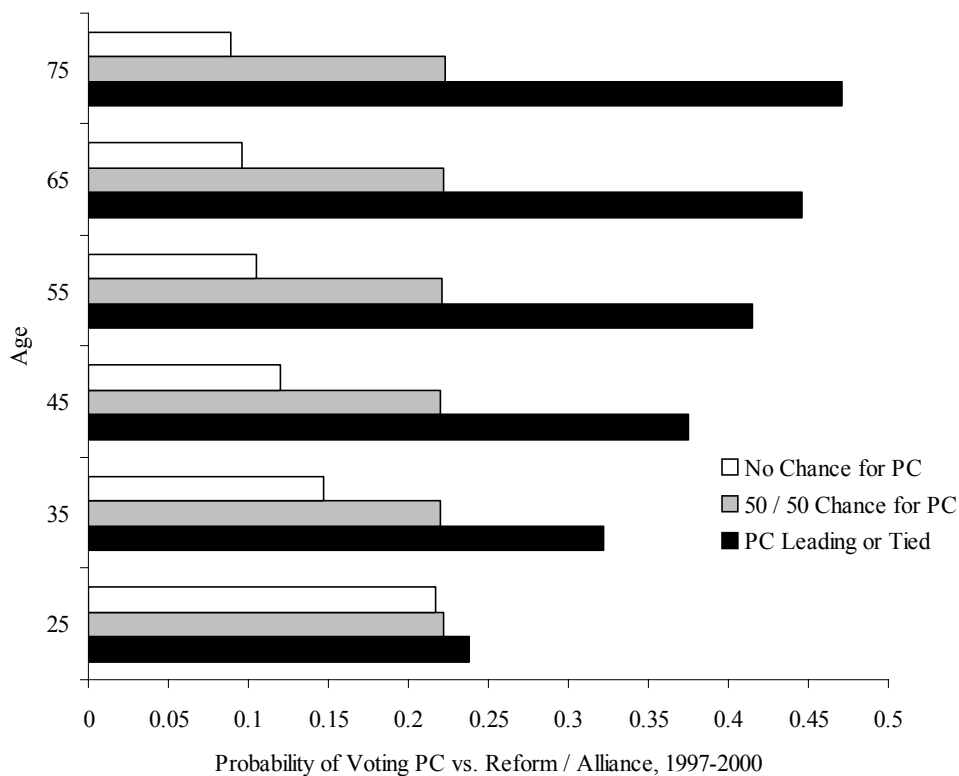
Figure 2: Probability of Voting NDP vs. Liberal, 1997-2004 (Simulated Estimates)



	NDP Leading or Tied	50 / 50 Chance for NDP	No Chance for NDP
25 years old	0.492 (0.0710)	0.474 (0.0549)	0.456 (0.0697)
35 years old	0.568 (0.0547)	0.470 (0.0422)	0.375 (0.0456)
45 years old	0.608 (0.0526)	0.468 (0.0405)	0.339 (0.0431)
55 years old	0.634 (0.0543)	0.467 (0.0419)	0.307 (0.0436)
65 years old	0.654 (0.0568)	0.466 (0.0444)	0.287 (0.0466)
75 years old	0.669 (0.0595)	0.465 (0.0471)	0.272 (0.0496)

Source: 1997, 2000, & 2004 CES

Figure 3: Probability of Voting PC vs. Reform / Alliance, 1997-2000 (Simulated Estimates)



	PC Leading or Tied	50 / 50 Chance for PC	No Chance for PC
25 years old	0.238 (0.0670)	0.222 (0.0592)	0.217 (0.0933)
35 years old	0.322 (0.0568)	0.220 (0.0401)	0.147 (0.0451)
45 years old	0.375 (0.0589)	0.220 (0.0387)	0.120 (0.0365)
55 years old	0.415 (0.0657)	0.221 (0.0424)	0.105 (0.0368)
65 years old	0.446 (0.0734)	0.222 (0.0473)	0.0956 (0.0389)
75 years old	0.471 (0.0806)	0.223 (0.0523)	0.0890 (0.0412)

Source: 1997 & 2000 CES

APPENDIX: VARIABLE CONSTRUCTION

Political Interest

A five-item index (Cronbach's Alpha = .80 in 1997, .79 in 2000, and .83 in 2004) ranging from 0 (politically disengaged) to 1 (engaged), constructed from the following survey questions:

1. *Using a scale from zero to ten, where zero means no attention and ten means a great deal of attention, how much attention have you paid to news about the federal election on TV over the last few days?*
2. *Using the same scale, how much attention have you paid to news about the federal election on the radio over the last few days?*
3. *Using the same scale, how much attention have you paid to news about the federal election in the newspaper over the last few days?*
4. *Using a scale from zero to ten, where zero means no interest at all and ten means very interested, how interested are you in the federal election?*
5. *Using the same scale, where zero means no interest at all and ten means very interested, how interested are you in politics in general?*

Local Constituency Competitiveness Index

The average of each party's chances, measured by the following questions:

Now let's talk about how the parties are doing in your riding. Use a scale from 0 to 100. 0 means a party has NO CHANCE AT ALL of winning, 50 means AN EVEN CHANCE, and 100 means the party is CERTAIN to win. You can use ANY number from 0 to 100.

In 1997:

The LIBERAL PARTY'S Chances of winning in your riding?

The NDP'S Chances of winning in your riding?

The REFORM PARTY'S Chances of winning in your riding?

The PC PARTY'S Chances of winning in your riding?

In 2000:

The LIBERAL PARTY'S Chances of winning in your riding?

The NDP'S Chances of winning in your riding?

The CANADIAN ALLIANCE PARTY'S Chances of winning in your riding?

The PC PARTY'S Chances of winning in your riding?

In 2004, respondents were asked two questions. The first is:

1. *Do you think [party] has a chance of winning the election in your own local riding?*

Then, respondents were asked:

2. Use a scale from 0 to 100. 0 means a party has *NO CHANCE AT ALL* of winning, 50 means *AN EVEN CHANCE*, and 100 means the party is *CERTAIN* to win. You can use *ANY* number from 0 to 100.

-The LIBERAL PARTY'S Chances of winning in your riding?

-The NDP'S Chances of winning in your riding?

-The Conservative PARTY'S Chances of winning in your riding?

Respondents who stated that a party had no chance in response to question 1 scored 0 on question 2.

Respondents who stated that the party was the only one that had a chance in response to question 1 scored 100 on question 2.

Current Political Information

In 1997, a 5-item index (Cronbach's Alpha = .68) ranging from 0 (low) to 1 (high), constructed from the following survey questions:

Do you recall the name of the Minister of Finance of Canada?

Do you recall the name of the Premier of PROVINCE?

Do you happen to remember which party is promising to lower personal income taxes by TEN percent?

Do you happen to remember which party is promising to cut unemployment in half by year 2001?

And do you happen to remember which party is against recognizing Quebec as a distinct society?

In 2000, a 6-item index (Cronbach's Alpha = .67) ranging from 0 (low) to 1 (high), constructed from the following survey questions:

Do you recall the name of the Minister of Finance of Canada?

Do you recall the name of the Premier of PROVINCE?

Do you happen to remember which party is promising a single tax rate for people earning less than one hundred thousand dollars a year?

Do you remember which party is proposing a national prescription drug plan?

Which party is promising a law to fight criminal biker gangs?

Do you happen to recall which party is proposing a law to pay back the debt in 25 years?

In 2004, a 9-item index (Cronbach's Alpha = .78) ranging from 0 (low) to 1 (high), constructed from the following survey questions:

Do you happen to recall which party is promising to get rid of the gun registry?

And which party is promising to do away with the Federal Sales Tax on family essentials?

Which party is promising to increase military spending by 2 billion dollars each year?

Which party is promising to spend 250 million for fighting AIDS in poor countries?

Do you happen to recall which party is promising to spend 4 billion dollars to reduce waiting times for surgeries?

Which party is promising an inheritance tax on estates over 1 million dollars?

Do you happen to recall the name of the Premier of your Province?

Do you happen to recall the name of the Minister of Finance of Canada?

And the name of the British Prime Minister?

The name of the female cabinet minister who ran against Paul Martin for the leadership of the Liberal Party?

Partisanship

Respondents who identify with a federal party "very strongly" or "fairly strongly" are coded 1, all others are coded 0.

Party Thermometers

The scales runs from 0 to 100, 0 means respondents dislike the party and 100 means they really like the party

Education

Coded from 0 for low education and 1 for high education:

- 0 no schooling
 - some elementary school
 - completed elementary school
 - some secondary / high school
 - completed secondary / high school
- .5 some technical, community college, CEGEP, College Classique
 - completed technical, community college, CEGEP, College Classique
 - some university
 - Bachelor's Degree
 - Master's degree
- 1 Professional degree or doctorate