

You're Leaving? Great!

Exit Polling in the 2003 Ontario General Election

Steven D. Brown¹
David Docherty
Kimberly Ellis-Hale
Ailsa Henderson
Barry Kay

Laurier Institute for the Study of
Public Opinion and Policy (LISPOP)
Wilfrid Laurier University
Waterloo, Ontario

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Please note: Paper is a draft only. The authors welcome comments and feedback, but ask that it not be quoted without prior consent. Contact any of the authors at the e-mail addresses below:

sdbrown@wlu.ca
ddochert@wlu.ca
kellisha@wlu.ca
ahenders@wlu.ca
bkay@wlu.ca

A. Introduction

On October 2nd, 2003, the people of Ontario went to the polls to vote in the 38th General Election. In many ways it was an election day like most others in modern campaigns. Parties tried to pull their loyal supporters to the ballot boxes, the leaders all had their pictures taken while voting for themselves, and the media all stated that it would be eight o'clock before Ontarians would know who would form the next government.

But in one of the one hundred and three ridings, something very different was occurring that day. Deep in the bowels of an un-named University building, a team of political scientists were receiving wireless transmissions from operatives in the field. These field agents were accessing confidential information mere yards away from state officials who opposed their actions. Yes, despite threats from legal authorities, these plain clothes men and women, otherwise known as graduate and undergraduate students, were conducting social science research.

The Laurier Institute for the Study of Public Opinion and Policy (LISPOP) conducted the first exit poll of its kind in Canada, in the provincial riding of Kitchener Centre. This paper provides a broad over view of the purposes and results of this exit poll experiment.

The purpose of the poll was two fold. First, it was undertaken to explore the feasibility of mounting an exit poll in a Canadian election context. To our knowledge, it has not been attempted before in Canada. We wished to determine what challenges it posed relative to conventional telephone polling, what unique challenges faced us in a Canadian setting, and whether wireless handheld devices could be effectively deployed in the field to facilitate questionnaire administration, data transmission and analysis.

The second purpose of the poll was simply to allow us to better understand the results of the election. Who was more likely to vote Liberal? What were the main issues among those Ontarians' who actually cast a ballot? Was there a gender gap? Was there an age gap?

The remainder of the paper is organized into a number of sections. The first sections discuss the history and use of exit polls in other jurisdictions and the basic design adopted for our experiment in Kitchener Centre. We then describe our experience in organizing the poll and discuss some of the problems encountered. We next turn our attention to the findings, focussing first on issues of methodological significance and then on factors that shed light on the outcome of this election. The paper concludes with a brief discussion on the possible future of exit polling in Canada.

B. Exit Polling in a Comparative Context

Exit polling has been a fixture of election night coverage in other political systems for many years. However the approach is of varying value in different systems, a factor which determines whether the organizational and financial cost required to mount it can be justified. For example, in nations employing pure proportional representation electoral systems like Israel,

a massive nationwide exit poll is an effective and immediately-available alternative to the official vote counts taking place around the country. In more complex systems, the translation of votes into seats is usually much less direct.

In the United States, exit polls play a more corroborative and explanatory role, as they are utilized alongside the hard official counts to provide context and highlight trends that portend the formal vote count. Exit polls have always been media driven. In the US, the first exit poll was conducted in Kentucky by CBS in 1967. This poll was not conducted to predict the results so much as it was for analytical. Since then, the use of exit polls in the United States has exploded to the extent that they are now used in most state and national contests (for descriptions and assessments of the U.S. experience with exit polls, see Levy [1983], Mitofsky [1991], Frankovic [1992] and Hofrichter, [1999]).

It is not exit polls' explanatory capacity but their role as predictive tools that has excited political controversy in the U.S. For example, shortly after the polls closed in most Eastern states in 1980, NBC announced that Ronald Reagan would be the next President of the United States (and Hofrichter, 1999). Critics complained that this had the effect of decreasing voter turnout in the Western states, and may have caused some representatives to lose their Congressional seats. There is no way to prove or disprove these contentions. This is less of a problem in jurisdictions with single time zones (most European state) or in states where the transmission of results is not permitted until all polls have closed. In Canada, a uniform real time for the closing of polls has minimized this problem. In addition, federal laws prohibiting the publication of polls within 48 hours before election day makes the early transmission of any exit poll illegal.

The problem with exit polls resurfaced in the 2000 U.S. presidential election. By the 1990's the large US media outlets decided to pool resources and conduct one omnibus exit poll. Without competing polls, there could be no immediate check on accuracy. The American example, particularly in 2000, illustrates that, as with any poll, election day exit polls can generate faulty results, and can be abused if their users are more concerned with getting questions answered quickly rather than accurately.

C. The Kitchener-Centre Design

In proposing to adopt this methodology to study the 2003 Ontario provincial election, the authors were unaware of any previous academic research utilizing this approach in Canada. Some months prior to the election, we approached a number of possible partners in the media, who we thought might have a commercial interest in the project. We originally proposed that five or six representative provincial constituencies be selected for study, which could serve as an experiment for the impending national election when a more ambitious project might be undertaken. Costs escalated with ambitions, and the idea became too expensive to be viable.

However we decided that the idea had merit, and should be pursued on a scale that required only a minimal budget. The riding of Kitchener Center was selected as the site for the exercise. In part, it was selected because it was geographically compact and proximal to Wilfrid

Laurier University campus. However, it was selected as well because it was a very good bellwether constituency for both federal and provincial elections – indeed, as a bellwether, it ranked second in accuracy among all of Ontario's 103 constituencies. (2)

We adopted a two-stage sampling design. First a sample of poll clusters would be selected, then respondents would be selected using systematic random sampling within each cluster. Rather than randomly selecting poll clusters within Kitchener Center, the selection was purposive (3) Sixteen polling clusters were identified where each party's vote in the previous provincial election had not varied by more than 5% from the overall constituency average. The number of registered voters at these sixteen locations ranged from 1100 to 2520 in the previous 1999 election. It was our intention to use ten of the sixteen locations, giving priority to polling stations with larger numbers of voters, stations that promised ease of voter access for interviewers, and stations with proximity to other selected polling stations. With these considerations in mind, ten locations were primary selections, with the others serving as alternates if necessary.

Each location was assigned a polling captain, and two teams of two interviewers who would split the 11 hour polling period into two shifts. This meant that 50 students would be employed (5 per location) in addition to the supervisory role of academic researchers. Nobody was financially compensated, but many of the students received some course credit and access to the data generated by the study.

The questionnaire was intentionally brief (one side of one page), and timed to be completed within a two minute period. The interview cycle was every seventh voter emerging from the voting location, or every fourth voter following an interview refusal. Blackberry handheld devices were provided to each of the ten teams, so that results could be transmitted to a central data base housed on campus (4) After the polls closed at 8 pm., the results were made available online and to the media.

D. The Practicalities of Exit Polling

By the time Ernie Eves called the election in September, much of the exit poll leg work had already taken place. As indicated above, the riding had been selected, and the appropriate polling stations chosen. However, there were some obstacles the research team faced in the weeks leading up to voting day.

Among the biggest obstacles were the selection and training of the poll teams. LISPOP was primarily relying upon fourth year and graduate students to staff the teams. The September call, so soon in the academic year, meant that there was a very small window to have teams fully prepared. Once the teams were selected and trained, a draft questionnaire was pre-tested. The test allowed fine-tuning not just of the survey instrument, but also of the method to be used by the poll teams.

Training on the Blackberrys was more hurried than the research team would have

preferred. Initially it had been the intention of the research team to only use the Blackberrys directly in the interview process. That is, the interviewer would read the questions from the Blackberry screen and key in the response. However, there were concerns over accuracy and voter trust in this methodology that caused the team to rethink this approach. The alternative we settled on had interviewers administer the one-page questionnaire in hard copy format, then pass the completed form to another team member who keyed in the responses on the Blackberry and transmitted them back to LISPOP's campus computer.

Did this underutilize the high tech potential of the Blackberry? Perhaps, though only minimally. It meant that data transfer was a two-step rather than a one-step process. It also entailed a second field operative for data transmission (5) However, the use of the Blackberry for the transmission of data allowed for instantaneous analysis of the exit poll because the data could be sent directly into an SPSS file. As a consequence, the analysis team on campus had continual up to date results, and could track the vote as the day progressed. Second, the use of hard copy responses certainly improved accuracy. After election day, the research team could double check the SPSS data with each hard copy response. This would not have been possible if all questions were answered directly on hand held devices.

Apart from unseasonably cool weather and some morning precipitation, the biggest obstacle to the project was the resistance of Ontario's agency responsible for the administration of elections, Elections Ontario, which had been contacted by the research team almost 3 months before the election was held. Their response on election day was to maximize the obstacles our field teams faced in attempting to contact exiting voters. We had instructed our interviewers to stay outside the building, and to approach voters as they left the building heading for the adjoining parking lot or street. As a consequence of routine harassment by Returning Officers and, in some cases, threats of legal action, many teams were forced to take up positions on the sidewalk well away from building exits and well away from parking lots. The tenacity of Elections Ontario officials in enforcing this regimen varied from poll to poll, and the geographic layout of some polling stations gave our teams more reliable access than at others. In two cases, we were obliged to substitute alternate polling locations for the sites originally intended, because of the degree of resistance exhibited by election officials. (6) Clearly, these obstacles undermined our sampling procedure as interviewers were frequently denied systematic access to the potential population, leading to many missed selections. Our design called for a sampling interval of every 7th voter or about 14% of the voting population at these polling stations. In fact, our actual sampling interval averaged about every 10th voter or 10% of the voting population at these stations.

Elections Ontario based their concern with the exit poll on the provisions of the Elections Act, specifically Section 42 concerning voter privacy. Subsection (3) of this section indicates that "No person shall attempt to obtain at a polling place information as to the candidate for whom an elector is about to vote or interfere or attempt to interfere with an elector in a polling place."(R.S.O. 1990, c. E.6, s. 42 (3)). Elections Ontario indicated that potential illegal interference included not only entrance to the polling station but also exiting the polling station, which would impact our experiment. The legal dispute really turned on the definition of "voting place". Was it to be interpreted as the room where voting took place, the building in which it occurred, or the entire property adjoining the building where it took place. Only if this latter definition were applied would our interviewers be acting in an improper way.

The broader interpretation of polling place is used to prohibit political parties from encouraging voters to cast their ballots for a particular party. In addition, it is used to eliminate unnecessary political party signage in polling locations such as schools or churches, where grass boulevards and parking lots provide ideal spots for politicking. This created the problems faced by our exit poll interviewers. On a cool day most voters drove to the polls, particularly the polls we selected as they tended to group a number of polls in one location.

It is interesting to note that there is no set definition of what constitutes a polling station. In the United States, several state governments tried to make exit polling illegal “within three hundred feet of a polling station” (Mitofsky, 1991, 91). When the Washington state law was struck down, both at the lower court and appeals level, the state decided not to pursue the issue. Similar laws in Florida, Minnesota and five other states were also struck down (ibid, 93). Ontario (and the federal government) do not have explicit legislation banning exit polls. As a result there is no law to challenge, only a very loose definition of what constitutes a polling place. The cold reception of election officials was not matched by others on the sites. Teams assigned to polls located at schools tended to have a warm response from teachers and other education workers. While they were often invited in for breaks and warmth, they politely declined.

After the election there was little dialogue between LISPOP and Elections Ontario. At one point, an official at Elections Ontario orally indicated that there was concern that some voters were being harassed by the research team. However we were given no evidence of such occurrences. Members of polling teams did have Laurier political science baseball hats and other clothing identifying them as University students, as well as a letter from LISPOP.

It is worth noting the paradox faced by Elections Ontario. On one hand, they spent considerable time and money encouraging young Ontarians to participate in the democratic process. At the same time, they seemed intent on preventing a small group of University students from participating in a non-partisan, educational activity centred on the democratic process. The mixed signals were not missed by the student research cohort.

E. The Results

E1. Participation in the Survey:

For those seeking to understand an election result, exit polls have three advantages over pre- and post-election research designs: they effectively screen nonvoters out of the sample, they ensure access to traditionally hard-to-contact populations, and they tap the decision calculus of voters virtually at the time of the decision itself. But these design strengths are of little value if voters refuse to co-operate. As they left their respective polling stations, how did voters in this Ontario constituency respond to our interviewers' requests?

On the surface, the response was largely positive. About two in three of those selected (64.8%) agreed to complete the survey. This compares very favourably to telephone surveys that do not follow-up on refusals (Groves, 2002). It is also comparable to rates of participation

reported in most U.S. exit polls (Mitofsky, 1991; Mitofsky and Edelman, 1993), but not all (see for example, Bishop and Fisher, 1995; Busch and Lieske, 1985). For practical purposes, however, the effective participation rate was somewhat lower at 57.2% because about 7% of the respondents agreed to the interview but declined to reveal their vote direction to the interviewer. In their review of recent exit polls in the U.S., Merkle and Edelman (2002) suggest that response rates in U.S. precincts tend to be normally distributed with most falling between 45% and 75%. Hence, our effective rate of 57% suggests that Canadians – or at least residents of Kitchener Centre – are not generally more or less receptive to this approach than their American cousins.

What do we know about those who refused? To assist in analysing participation rates, we asked our interviewers to code three visible attributes of all refusals: their apparent age group (under 30, 30-64, over 65), their gender, and whether they were a member of a visible minority (7). From the interviewer cover sheets, we were also able to determine the gender of the interviewer and the time of vote.

Table 1 compares the refusal rates for different demographic groupings and for different interview situations. The table shows that age and time of vote are both significantly related to participation, but that gender of respondent and gender of interviewer are not. The age differences are the most dramatic of these with co-operation rates falling steadily from about 80% for the youngest cohort to 40% among those over 65 years. An age-refusal relationship has been observed by others in exit poll situations (Merkle & Edelman, 2002, p.246), but the strength of the relationship here is quite striking. Closer examination of the differences suggests that the relationship was stronger because the youngest age group in our constituency was considerably more co-operative than U.S. respondents of the same age. Was this because of cultural differences, or simply a function of the greater rapport that young interviewers can establish with those closer to their age. Merkle and Edelman (2002) tested the latter of these two hypotheses, but found no support for it (for young voters). Interestingly, they did find support for age-of-interviewer effects for the oldest age cohorts – older voters were significantly more co-operative when approached by a middle-aged interviewer. Given the lack of age variation among interviewers in our experiment, we are not in a position to test this further.

Table 1 about here

There is also a significant increase in co-operation after 4:00 p.m. While there is reason to suspect that this “time of vote” relationship is spurious -- after all, most senior citizens voted before 4:00 p.m. and seniors were generally less co-operative with our interviewees -- Table 1 suggests that even when age of respondent is controlled, the time differences persist – at least for the mid-age group. What, then, accounts for this relationship. One possibility is that our student interviewers simply gained experience and technique as the day wore on. As Figure 1 shows, there is some *prima facie* evidence to support this, but it is not compelling. After all, there was at least one complete shift change over the day and besides, the pattern across time is not monotonic. Rather a step function breaking at the 3:00-4:00 p.m. mark seems to describe the data more effectively

Figure 1 about here

Another possibility is that interviewers encountered a somewhat different type of voter in the post-4:00 p.m. period. For example, researchers in U.S. exit polls have found that employment status distinguishes voters in different time periods over the day (Bush and Lieske, 1985; Fuchs and Becker, 1968; Klorman, 1976). Perhaps not surprisingly, those who are most time-constrained – that is, those who have regular employment outside the home – tend to vote after work. Might it be the case, then, that those who tend to be more involved outside the home, might also feel more comfortable interacting with the likes of our young student interviewers? Such a “comfort factor” – what others have called the “social isolation” hypothesis (Groves and Couper (1998; Merkle and Edelman, 2002) -- might help to explain both the greater reticence of older voters to participate in our survey as well as this higher participation rate among late afternoon and early evening voters.

E2. Accuracy of the Poll

One of the strongest selling points for conducting an exit poll lies with its capacity to generate an accurate profile of the behaviour and perspective of those determining the election outcome. Compared to pre- and post-election surveys, there are many fewer factors that can intervene to distort our picture of the electorate’s decision and decision-making rationale. Because the accuracy of such polls is a central justification for their considerable cost, it is important to assess the success of our experiment by this measure.

Needless to say, we do not have population values for the voting public for most variables in the constituency of Kitchener-Centre, but we do have such parameters for party support levels in both the 2003 and the previous 1999 provincial elections. How well did our sample estimate these support levels?

Table 2 compares the sample and population distributions for the two elections. The table shows that our sample performs quite well at estimating the 1999 election, but not as well for the 2003 election. Specifically, our sample overestimates the 2003 Liberal vote by about 5 per cent, and underestimates the Progressive Conservative and “other” party votes each by about 2 per cent. Because departures this large cannot be explained simply as chance variation, we must consider other possible explanatory factors. There are several candidates here.

Table 2 about here

The first two of these concern possible sampling problems: one, that the polling stations we selected may not adequately represent the constituency; or two, that differential completion rates across the ten polling stations created an unrepresentative sample of our polling station population. We examined our sample with a view to assessing the importance of these factors. First, we established that our ten polling stations are a very representative subsample of the constituency as a whole. Indeed, estimates based on this subsample do not deviate from the constituency results by more than a percentage point for any of the four party groups. And what small deviations there are here are in the wrong direction to account for our overreport. If our sample of polling stations accurately reflects the larger constituency, could it be that our sample of that population overweights some polling stations and underweights others. That is, were distortions introduced because some interview teams in Liberal strongholds were more

successful than others? To examine this possibility, we compared the proportion of respondents that we should have drawn from each polling station with the proportion that we did in fact draw. As we might anticipate, there are modest deviations here, some as large as .04 or 4%. However, reweighting our sample to correct for these disproportions does not correct for the distortions in our original sample – indeed, it actually accentuates them by about 1 per cent for most parties.

If our sample of polling stations is representative, and our sample of respondents is not disproportionately drawn from those stations, then we must suspect that the problem lies with the selection process in the field. An obvious candidate here is the age differential in refusal rates noted above. One possibility is that older voters have been more likely to be Progressive Conservative voters in the first place, and also more resistant to switching in this “change” election. If so, then, the under-representation of older voters in our sample might explain the under-representation of PC votes and the over-representation of Liberal ones. However our test of the underlying assumptions here yielded only a modest age-vote relationship, and one due largely to the decidedly pro-Liberal leaning of the youngest cohort. There were no substantial differences in the voting direction or in the propensity to shift between the “over 30” and “over 65” cohorts. Not surprisingly, then, reweighting the sample to correct for the age maldistribution had almost no impact on the vote distribution of our sample. Similarly, reweighting to make our sample representative on the “time of vote” variable had no impact on our estimates.

Given our lack of success at reweighting, and given our data limitations, we are left only with conjectures about the source of the distortion in our sample. Two possibilities suggest themselves. Either voters misreported their vote to our interviewers or Liberal voters were simply more willing to reveal their preference to us. Although hard evidence is hard to come by, both have been suspected in cases of U.S. exit poll distortions. In the 1989 Virginia gubernatorial election, for example, Bishop and Fisher (1995) ascribed the overreport of support for a black candidate for governor to misrepresentation by voters arising from a social desirability bias. Elsewhere, there has been speculation that differential willingness to co-operate by partisan cohorts accounted for the underreport of Ross Perot support in 1992 exit polls and the overreport of Pat Buchanan votes in 1992 and 1996 primary elections.

Since it is not very plausible that a Liberal vote in Kitchener-Centre was seen as a more socially desirable choice to profess, it may be that Liberal voters were simply more willing to reveal their preference to interviewers. The 2003 Ontario provincial election campaign was not a very close election in that both polls and pundits were predicting from the outset the defeat of the incumbent PC government by the Liberals. Could this prevailing climate of opinion have put some voters in less co-operative mood, knowing that they likely just backed a losing candidate. Clearly, there is a need for more investigation of the impact of “political” factors on the willingness of voters to participate in exit polls.

E3. Time of Day and the Vote

Although the exit poll provided us with a unique opportunity to forecast the results of the 2003 election in Kitchener Centre, this task was of short term benefit. The long term benefits of the survey lie in our ability to analyze the behaviour of Ontario voters in a provincial election. One of the questions that exit polls are uniquely suited to answer concerns the time of day that

different groups of people vote. Information about the time pattern of voting has both methodological and substantive significance. Methodologically, it is useful to know whether exit poll designs need to have the field work spread over the entire voting day or whether a sampling of the day would produce basically the same level of representativeness (and save money). From a substantive perspective, as the Canadian government considers various forms of electoral reform, it is important that new models be congruent with the voting patterns of the electorate to ensure that all have equal access to the ballot box.

What little comparative research there is on this question suggests that there are indeed systematic differences in the electorates that vote at different times of the day (Busch and Lieske, 1985; Fuchs & Becker, 1968; Mendelsohn & Crespi, 1970; but see also Klorman, 1976). For the most part, the differences center on employment status and variables correlated with it. Table 3 tests this idea by partitioning the sample into three time frames: 9-12 noon, 12-4 p.m. and 4-8 p.m., and examining their socio-political profiles.

Table 3 about here

Table 3 suggests that the three time periods are associated with distinct voter profiles, but that the greatest contrast is between the “evening” cohort and the two “daytime” cohorts. The distinctions are drawn most sharply on the variables of occupation and age, but to a lesser extent, the vote itself. As we have been led to expect from the literature, the daytime cohorts are much over-represented by those whose time commitments tend to be most flexible – the retired, homemakers, and those who are unemployed. Probably as a consequence, the daytime profiles are also over-represented by those over 65, and, to a less extent, women. Conversely, the evening cohort is over-represented by those who are likely to have daytime job commitments. Interestingly, the differences in cohorts extends to their voting profiles – the evening cohort tends to be over-represented with Liberal voters and under-represented with PC voters.

E4. Analysing the Vote in Kitchener Centre

The exit poll asked questions about the time of voting decision, the most important factor in deciding how to vote and the most important campaign issue. These results show that almost half of the electorate had decided how to vote before the campaign began, while fully 63% of the electorate had decided before the leaders’ debate. Of those still undecided as the election approached, voters were evenly split between deciding during the last week and deciding on election day itself. These results also show that 13% of the electorate in Kitchener Centre are what might be considered durable partisans, self-reporting that they always vote the same way in each election.

The political parties gained differentially from voters throughout the campaign. Liberal and Conservative voters were much more likely to decide before the campaign how they were going to vote. The NDP, however, gained more than half its vote from late deciders. This suggests that if the campaign had been longer the NDP might have had an easier time achieving party status than it did.

The survey also asked about the factor propelling people to vote. By far more voters picked campaign issues as the most important factor, with almost half of all voters selecting this option. One fifth picked party leaders as the most important factor and a similar proportion picked the political parties themselves. Only eleven percent of voters based their vote choice on the local candidate. This confirms what we know of existing research about the impact of local candidates on vote choice. If the campaign issues were seen as the most important factor, then, which issues were seen as important?

The most important campaign issue allowed voters to select from a closed-ended list with an open-ended 'other' option. Both education and health were the most commonly cited, with almost half of all respondents picking one of these two items. Taxes were the next most popular issue, cited by 15% while just under ten percent said they voted according to the previous government's record. Fewer than five percent of respondents suggested that leadership was the most important factor. If one of the goals of the Conservative campaign was to prime voters to base their vote choice on leadership, this tactic does not appear to have worked. And yet these results seem to contradict the results of the previous results: one fifth of voters said party leaders were the most important factor but only five percent indicated that leadership was the most important issue. If we examine issue choices by factor choices we see that among those who said leadership was the most important issue, the vast majority (62%) cited party leaders as the determining factor in their vote. The bulk of the remainder cited issues as the most important factor. Among those who cited party leaders as the most important factor, there was a larger than average proportion citing leadership as the most important issue. For the most part, however, this group was virtually indistinguishable from other voters, citing health and education as the most pressing topics. By examining these differences across parties we can begin to see how campaign dynamics affected vote choice.

Table 4 about here.

Partisans of each party mentioned campaign issues as the most important factor in vote choice. Similarly, across all parties voters viewed local candidates as the least important factor. There is, thus, some consistency of factors driving vote choice regardless of political party. And yet there is a slight variation in the proportion of voters preferring issues over local candidates, as there is variation across parties for both leaders and political parties as key factors. Table 4 shows that NDP voters were most likely to cite issues as the most important factor. The remainder of NDP voters were spread evenly among the other options. A majority of Liberal voters also voted according to the issues. Only seven percent, however, voted according to local candidates, with support for the other two options distributed relatively equally. Conservative voters were more likely than other partisans to cite leaders as the most important factor, suggesting that if the Conservative campaign did have an impact on leadership attention this impact was most profound on its own supporters than on the intended target of Liberal sympathizers. NDP voters were the more likely than any party to base vote choice on local candidates but even still fewer than 15% of their partisans selected this option. There is greater variation among the political parties according to most important issue.

Table 5 about here

Table 5 reports the most important issue by political party. The results show that Liberal and NDP supporters were more likely to pick health and education as the most important issue, while for Conservative voters taxes appeared a more pressing concern. For all parties, leadership was of minimal importance as a key issue. We can begin to see then, how issues and factors affected vote choice for Ontarians in the 2003 election. If we complement these with demographic factors we begin to get a clearer picture of voting behaviour in the provincial election.

Existing research on the psephology of Canadian voters argues that in federal elections political parties may expect to draw on specific demographic groups for a certain degree of support (Nevitte et al 1999, Blais et al 2002). The Liberal party, for example, is more successful at drawing visible minority and Catholic voters. Men are more likely to back the Alliance party. To determine whether demographic factors have an impact on vote choice it is first worth comparing the sample for Kitchener-Centre to 2001 Statistics Canada census data for the constituency. Our sample does not use as its sampling frame all adults in Kitchener-Centre but rather all voters in Kitchener-Centre. Assuming that the random, systematic sample drew without bias from the sampling frame this comparison could point to the differing impact of certain demographic variables on vote. Table 6 compares the distribution of certain demographic characteristics for the sample and for the total population. The results show that the exit poll over-represented those over 35 and under-represented young people. It also over-represented those with high school diplomas and university or college degrees. This is consistent with existing research that shows education and age are both positively correlated with turnout. It is worth noting that the exit poll and the census results are much closer on religion, perhaps suggesting that here religion is less of a factor in voter turnout. While this comparison speaks to the potential impact of demographic factors on turnout it does little to explain the choices voters make when they enter the ballot box.

Table 6 about here

Turning from voter turnout, however, we find that the demographic data produces some interesting findings. First of all, the gender gap has essentially been eliminated. Men are as likely to back the winning party as are women. This is accompanied by a number of other non-findings that are in themselves interesting. Age, education and marital status were not significantly correlated with vote choice. The Conservative vote, for example, is stronger among those over 35 than it is among younger voters but in no age category was there a majority of Conservative voters.

Second, union membership, long seen as a predictor of support for the NDP, is indeed significantly correlated with vote choice. Interesting here, though, is that union members were most likely to back the Liberals. Over two thirds of those living in union households backed the winning party. In fact these individuals were more likely to back the Conservative party than they were the NDP. In what must be a depressing finding for the third party, only 15% of voters living in union households backed the NDP.

Third, home-ownership is also significantly associated with vote choice. While here too a majority of home-owners preferred the Liberals over the Conservatives, the gap is smallest among home-owners than for any other demographic group. Forty one percent of homeowners backed the Conservatives in the 2003 election, while 46% backed the Liberals.

These findings, of gender, union and home-ownership, are particularly interesting when compared to vote choice in 1999. For the previous provincial election gender was significantly correlated with vote choice. While women were relatively equal in their assessments of the Conservative and Liberal parties, men were far more likely to back the Tories. In 1999 almost 60% of the men in our sample indicated that they voted for the Conservative party. By 2003, however, 49% of men were voting for the Liberal party. Thus the elimination of the gender gap is not because women have changed their voting behaviour but rather because men overwhelmingly switched from backing one government winner to another government winner. Comparing union and marriage for 1999 and 2003 produces other interesting results.

Living in a union household was significantly correlated with vote choice in 1999 although here too it was not that those living in a union household far preferred the NDP. Indeed those living in union household were spread relatively evenly between the Liberal and Conservative parties, with 46% and 42% support respectively. Instead it was those not living in union households who were over-whelmingly in support of the Conservative party. By 2003, however, those not living in union households were spread evenly between the two largest parties while those living in union households were voting for the Liberal party. Two other examples prove useful.

In 2003 over half of those who did not own their own homes backed the Liberal party while far fewer backed either the Conservative party or NDP. The gap in behaviour for home-owners was much smaller. In 1999, however, homeowners demonstrated a clear preference for the Conservatives, backing them by almost 60%. In addition, married individuals were significantly more likely to back the Conservative party in 1999. By 2003, however, the marriage gap had been eliminated.

These results demonstrate that the Conservative party has been abandoned by those it might have considered its natural constituents, men, non-union members, homeowners and married couples. The gender and marriage gaps have disappeared so that now men and women, married couples and other individuals are as likely to back the Liberals as they are the Conservative party. While the gap between union members and non-members, and home-owners and renters still exists, the gap now works in favour of the Liberal party, rather than the Conservative party. It is not clear, however, how these issues work in concert with each other, nor how they interact with campaign issues. The following section turns to multivariate analyses that can help to tease out the competing influences of demographic factors and campaign dynamics on vote choice.

Table 7 about here.

Table 7 reports the logistic regression results for vote choice for the three main parties in the election. Model 1 tests the impact of demographic variables on vote choice while model 2, the fully-specified model, includes the impact of key issues and factors on preference. As table 7 shows, demographic factors were clearly less important than campaign issues. The gender gap can be confirmed as dead as in no case was gender a significant predictor of partisan preference. Neither age nor marital status were seen as significant predictors. These results are more surprising as marriage has been positively correlated with support for small-c conservative parties in federal elections. And yet at times demographic factors affect choice. Visible minority voters were significantly less likely to back the Conservatives. They were more likely

to back the winning party although the coefficient is not significant. We would expect these results to be stronger given the consistent preference of visible minority voters for the federal Liberal party. Home owners were more likely to back the Conservatives and less likely to back the NDP, something that certainly supports assumptions about the Conservative support base in previous provincial elections. Last, living in a union household was seen as a significant predictor of vote choice but not as one might expect. Union membership was a positive predictor of Liberal support and a negative predictor of Conservative support; it was, however, an insignificant predictor of NDP support. It is possible that these union members were NDP partisans voting strategically, something that only an analysis of vote switchers would take into account. In short, though, the results of model 1 confirm that demographic predictors on their own do not account for voter behaviour in the Ontario election.

As table 7 demonstrates, campaign dynamics play a much larger role in voter's minds than their own demographic characteristics. The Cox and Snell and Nagelkerke R^2 for the fully-specified model are respectable, at just below .200, and show a marked improvement in fit over the first model. Support for health and education as the most important issue translated into positive support for the Liberals and negative support for the Conservative party. In addition, voters who believed that the political party itself and campaign issues were important were also more likely to back the Liberals. Two results are worth highlighting. First, voting according to the party leader was not a significant predictor of voting behaviour, regardless of how one cast a ballot. Second, taxes were a positive predictor of the Conservative vote, the only positive predictor of Tory voting behaviour in the model. These results clearly help us to understand why voters act the way they do. By asking for previous vote, however, the exit poll allowed us to examine not just why people are backing a particular party, but why they may have switched from one party to another. The next section examines the characteristics of vote switchers in the 2003 election.

Table 8 about here.

Just under 30% of voters in our sample indicated that they switched party loyalties, backing a party in the 2003 election that they had not previously supported in 1999. As table 8 shows, the Liberal party possessed the most loyal partisans of the election. The winners managed to retain most of their voters from the previous election, losing just over 10% to the NDP and just over five percent to the Conservative party. The other two parties managed to retain two thirds or fewer of their partisans. One third of NDP voters in 1999 backed the Liberals in the most recent provincial election, while one quarter of previous Conservative voters also backed the eventual winners. But who are these switchers and when did they decide to jump?

One fifth of switchers decided before the campaign how they were going to vote. The bulk of switchers, however, decided to jump from their previous party after the campaign began. Indeed just under one half of all switchers decided how they were going to vote in the last week of the campaign or on election day itself. Non-switchers, by comparison, decided much earlier in the campaign how they were going to vote. This is more interesting than it sounds. While it is reasonable to assume that faithful voters are durable partisans, always voting the same way in elections, evidence from federal election studies suggest that this is not the case. Voters may consistently back one party over another but there is nothing automatic about this choice; at the beginning of each election voters decide anew how they will vote. That switchers decided late in the election provides some evidence of a bandwagon effect among voters. If we examine those

who left the Liberals for the NDP, however, we find that here too most of the voters decided late in the campaign that they were going to switch to a losing party. This group could include previous strategic voters who backed the Liberals but consider themselves NDP partisans, or didn't want to provide the likely winner with a majority. In general, however, among those who switched parties there is evidence of a bandwagon effect of individuals. This is because voters switched a) to the winning party and b) later in the campaign, when the elections results could have been predicted. This suggests that the campaign itself, rather than the demographic characteristics of particular voters, can best account for switching behaviour, although determining whether demographic factors account for switching warrants further analysis.

A brief investigation of cross tabulations for vote switchers suggests that although a majority of each demographic group remained loyal to their 1999 vote choice, women were more likely to switch than men, as were union members. Education appears to have had no impact on switching, while married voters and homeowners were the least likely to switch. These results are not surprising as we know that homeowners have been consistent supporters of the Conservative party since 1995. When examining vote switching in light of campaign dynamics we find those who were concerned about education were more likely to switch, as were those who voted according to the party rather than the leader or the issues. This suggests that voters truly were convinced that it was time to switch the party in government. Perhaps, then Liberal priming on 'time for change' was effective at gathering voters. And yet attitudes about health care or taxes were not relevant in driving voters towards the Liberal party. It was the party, almost regardless of its policies, that attracted voters in 2003. On the one hand this is not an interesting finding; one can assume that Liberal priming on campaign issues was most effective, if only because it managed to win the election. These results indicate, however, that voters bought the Liberal argument that a change in government was needed. There is less proof that voters were more convinced by Liberal policies than by the policies of any other party.

Table 9 about here.

Table 9 reports the binary logistic results for party switchers both in total and for the two largest groups of switchers, Conservative to Liberal and NDP to Liberal. The table runs identical models to those previously used to explain vote choice, including only demographic variables in model 1 and adding campaign dynamics in model 2, the fully-specified model. For the model of general switching, those who voted according to party were less likely to switch, as were those who saw education as the most important issue. Demographic factors did not have a significant impact on vote switching. And yet this group includes three types of voters, those who abandoned the NDP and the Conservatives for the Liberals, and those who abandoned their previous choice for a non-winning party, the largest of whom were Liberal defectors to the NDP. We can gain a better understanding of vote switching by examining the two largest groups of voters, previous Conservative voters who backed the Liberals and previous NDP voters who also jumped to the winners. While it would be interesting to examine those who left the Liberals for the NDP the group is not large enough to warrant a multivariate analysis.

The results confirm that demographic factors do a poor job of explaining vote switching, although homeowners were less likely to abandon the NDP for the Liberals. Clearly campaign dynamics do a better job of explaining vote choice, something evident from the obvious jump in the pseudo-R²s for the fully-specified model. Even these statistics suggest, however, that the

model does a minimal job of predicting vote jumping. If the model shows anything, however, it suggests that education was a key issue here. Previous NDPers who saw education as the key issue were far more likely to abandon ship and back the Liberals. Previous Tory voters who held the same view of education, however, were significantly less likely to vote for the Liberals and significantly more likely to remain loyal to their vote choice.

F. Conclusion

Our experiment with exit polling in this Kitchener Centre constituency has accomplished two significant objectives: it has answered a number of questions (but certainly not all) about the feasibility of conducting exit polls in Canada; and it has provided some interesting insights into and hypotheses about the 2003 Ontario provincial election.

On the question of feasibility, we established that it is quite possible to mount an exit poll in a compact geographic area. These Ontario voters were not more resistant to this methodology than those in the U.S. where exit polling has been very successful. The interviewers gathered quite useful information and, with the use of the Blackberry technology, communicated it in a very timely fashion to our analysis team. Of course, there are things we might do differently in a second iteration of the experiment. For example, we need to devote more time to interviewer training for our field staff; we would attempt to recruit interviewers that were not all young; we would consider a “secret ballot” format with respect to the interview schedule rather than an oral delivery of the questionnaire to enhance co-operation and candidness; and we would economize on the number of interviewers posted to polling stations.

While the concept is feasible, we suspect that a nation wide exit poll, properly conducted would simply be out of financial reach for academic researchers and indeed for most media organizations. Although the wireless technology makes gathering and analysing such information both quicker and easier, it does not address the logistical obstacle of staffing and managing a widely dispersed field operation requiring personnel on the ground.

These obstacles aside, there are two reasons to continue to examine the feasibility and appropriateness of exit polls in Canada. First, as voter turnout continues to decline, and there is little evidence it will increase substantially in the foreseeable future, exit polls provide information on individuals who actually vote. National Election surveys provide a much more comprehensive understanding of the Canadian population prior to and after a vote. Exit polls, if properly conducted, allow us to more fully understand the mood of voters (not just those intending to vote) on election day.

Second, there is little doubt but that political parties will turn to this practice, particularly in closely fought competitive ridings. As technology continues to convey information more quickly, political operatives will use it to their advantage. We have already seen this in the opening week of the 2004 election campaign. It is difficult to imagine parties not going the next step and using exit polls as part of their election day strategy. As a result, it is in both the public and academic interest to best understand both the problems and potentials of exit polling in Canada.

Endnotes

- (1) Authors are listed in alphabetic order.
- (2) Ontario is the only province that has identical electoral boundaries both provincially and federally. The one riding that performed better as a bellwether during this period was Stoney Creek near Hamilton.
- (3) A polling cluster consisted of a location, customarily a school or church, where from 3 to 7 separate polls were located. This economy of scale has become customary in urban areas for elections. There are still a few polls at unique locations such a senior citizen's residences, but these are becoming rarer.
- (3) The Blackberry wireless handheld devices were loaned to the team by its manufacturer, Research in Motion. We would like to express our gratitude to RIM for their generous support of this research.
- (5) The use of this second person could be omitted by adopting the U.S. practice of suspending interviewing for 10 minutes of every hour for data transmission. In the U.S. case, however, transmission is by telephone).
- (6) This occurred early in the day, before any significant amount of voting had occurred. As voting picked up during the day, the officials had less time to harass the interviewers. The interviewers had been instructed to stay in place despite requests by officials that they leave. They were also informed that if the police should arrive, that was the time to depart. Some of these interactions were covered by the local television station, which also served to publicize and legitimize the process.
- (7) The “visible minority” variable recorded so little variation in this largely white constituency that it will not be included in the subsequent analysis.

APPENDICES

Table 1. Participation Rates for Demographic Subgroups and Interview Situations

		Full Participants	Refused Vote	Refused Interview	Total	Significance
Under 30 years		80.6%	4.0	15.4	100% (175)	$X^2= 65.75$ $df= 4$ $p < .0001$
31-64 years		57.7%	5.4	36.9	100% (574)	
65 or older		39.8%	9.2	51.0	100% (206)	
Male		59.9%	6.7	33.4	100% (509)	$X^2= 2.53$ $df= 2$ $p < .28$
Female		54.9%	7.8	35.2	100% (459)	
Before 4:00 p.m.		48.6%	8.2	43.2	100% (486)	$X^2= 30.79$ $df= 2$ $p < .0001$
After 4:00 p.m.		65.8%	6.9	27.3	100% (491)	
Male Interviewer		56.2%	8.2	35.6	100% (523)	$X^2= 1.02$ $df= 2$ $p < .60$
Female Interviewer		56.3%	6.3	37.5	100% (400)	
With Controls . . .						
Male Interviewer	Male Respondent	57.9%	7.1	35.0	100% (280)	$X^2= .87$ $df= 2$ $p < .65$
	Female Respondent	54.9%	9.3	35.9	100% (237)	
Female Interviewer	Male Respondent	59.7%	6.5	33.8	100% (201)	$X^2= 2.18$ $df= 2$ $p < .34$
	Female Respondent	53.3%	5.1	41.6	100% (197)	
Under 30	Before 4:00 p.m.	74.5%	3.6	21.8	100% (55)	$X^2= 2.51$ $df= 2$

years	After 4:00 p.m.	83.3%	4.2	12.5	100% (120)	$p < .29$
31-64 years	Before 4:00 p.m.	48.8%	5.3	45.9	100% (246)	$X^2 = 15.35$ $df = 2$ $p < .0001$
	After 4:00 p.m.	64.3%	5.5	30.2	100% (328)	
65 or older	Before 4:00 p.m.	42.1%	8.2	49.7	100% (171)	$X^2 = 2.82$ $df = 2$ $p < .24$
	After 4:00 p.m.	28.6%	14.3	57.1	100% (35)	

Figure 1

Participation Rates Across the Day

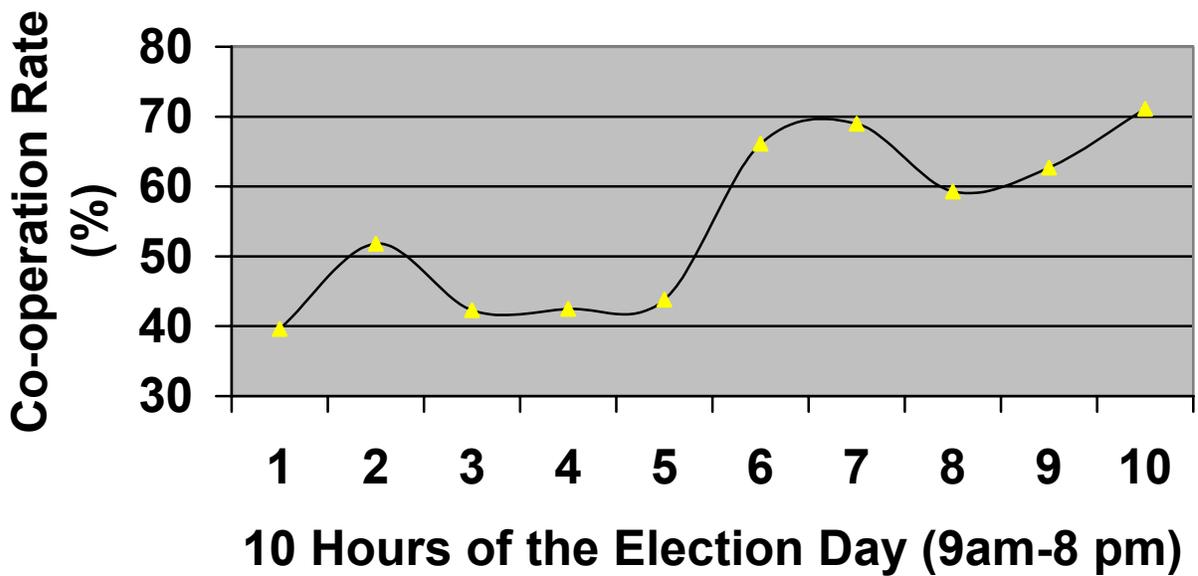


Table 2. Comparison of Exit Poll Results with Actual Constituency Results

Party	2003 Actual	2003 Sample	1999 Actual	1999 Sample
Liberal Party	42.6%	47.9%	39.9%	37.6%
Progressive Conservative Party	37.6	35.7	50.2	50.1
New Democratic Party	15.8	14.4	7.8	10.0
Other	4.0	2.0	2.2	1.8
Total	100%	100% (N=555)	100%	100% (N=452)
X ² Goodness of Fit Test	X ² =2.21, df=1, p<.02		X ² =.46 df=1, p<.0001	

Table 3. Socio-Political Profile of Morning, Afternoon and Evening Electorates

	Morning Electorate 9-12 noon	Afternoon Electorate 12-4 p.m.	Evening Electorate 4-8 p.m.
Vote in 2003			
Liberal	44.4%	44.4%	50.4%
PC	41.0	40.6	32.2
NDP	12.8	14.4	14.9
Other	1.7	.6	2.5
Age***			
Under 35	12.1	19.3	30.0
35-64 years	46.8	53.5	65.7
65 or over	41.1	27.3	4.3
Gender*			
Male	47.6	49.8	56.8
Female	52.4	50.2	43.2
Own Residence?	78.6	71.3	67.8
Belong to Union?	42.5	43.1	38.6
Single?***	11.9	22.8	20.7
Occupation***			
Professional/Manager	24.4	19.8	45.2
Clerical/Sales	3.9	7.0	12.2
Skilled Labour	11.8	17.1	16.1
Unskilled Labour	3.9	7.0	10.0
Homemaker	4.7	5.3	3.0
Unemployed	3.1	2.1	1.1
Student	3.1	7.5	5.4
Retired	44.9	34.2	7.0

*p<.1, **p<.05, ***p<.01

Table 4: Most important factor in vote decision, by political party

	Issues	Parties	Leaders	Local candidates
All	47.5	19.0	19.0	10.9
Liberals	52.1	20.8	16.6	7.2
Conservatives	40.3	18.9	23.5	14.8
NDP	53.2	13.9	15.2	12.7

Table 5: Most important issue facing voters, by political party

	Health	Education	Taxes	Gov't record	Leadership
All	23.4	23.0	15.4	9.3	4.4
Liberals	30.7	30.7	9.8	8.7	4.9
Conservatives	15.8	12.2	27.6	11.7	4.6
NDP	24.1	19.0	11.4	6.3	2.5

Table 6: Demographic characteristics of exit poll and Kitchener-Centre

	Exit poll	Kitchener-Centre
Female	47.4	51.1
18-24	8.5	16.5
25-34	15.7	14.9
35-44	21.6	16.8
45-54	19.8	13.5
55-65	17.8	8.81
65+	16.5	13.1
High school degree	36.8	26.7
Completed college or university	40.8	30.9
Married	62.1	51.1
Protestant	42.9	39.2
catholic	36.4	32.7

Sources: LISPOP exit poll, Statistics Canada Census 2001

Table 7: A model of vote choice for 2003 Ontario election

	Liberal		Tories		NDP	
Constant	-.377 (.311)	-1.487*** (.475)	-.532 (.337)	.079 (.480)	-1.912* (.435)	-.1505** (.606)
Female	.109 (.189)	-.087 (.204)	-.211 (.202)	-.083 (.218)	.186 (.267)	.244 (.275)
Age	.001 (.071)	.002 (.076)	-.037 (.076)	-.028 (.083)	.100 (.100)	.080 (.108)
Visiblemin	.362 (.390)	.392 (.403)	-.790* (.463)	-.870* (.480)	.486 (.495)	.504 (.506)
Married	.058 (.220)	.078 (.234)	.262 (.236)	.279 (.250)	-.183 (.305)	-.162 (.310)
owner	-.332 (.247)	-.314 (.261)	.769*** (.276)	.721 (.290)	-.825** (.331)	-.814** (.333)
College/uni	.194 (.187)	.119 (.202)	-.390* (.201)	-.331 (.217)	.171 (.265)	.186 (.272)
Union	.694*** (.187)	.668*** (.200)	-.876*** (.206)	-.839*** (.220)	.423 (.264)	.418 (.269)
Leader		.469 (.385)		-.041 (.378)		-.429 (.526)
Party		1.060*** (.379)		-.684* (.378)		-.318 (.512)
Issue		.729* (.336)**		-.673** (.333)		.101 (.432)
Health		1.203*** (.261)		-.888*** (.284)		-.357 (.346)
Education		1.213 ***(.266)		-.954*** (.299)		-.601* (.364)
Tax		-.287 (.304)		.868*** (.297)		-.593 (.422)
C&S, N R2	.037, .049	.136, .182	.080, .110	.171, .235	.027, .048	.038, .068

Results are binary logistic regression coefficients with standard errors in parentheses. *p<.1, **p<.05, ***p<.01

Table 8: Vote switching in the 2003 provincial election

	Liberal03	Conservative03	NDP03
Liberal99	80.6	5.9	10.6
Conservative99	25.3	66.8	3.5
NDP99	31.1	2.2	62.2

% of voters in 1999 who remained loyal or jumped ship

Table 9: A model of vote switching in the 2003 provincial election

	All Switchers		NDP-Lib		Tories-Lib	
Constant	-.335	.470	-2.746***	-11.186	-.2391***	-1.942**
Female	.098	.187	.270	-.067	-.103	.007
Age	-.128	-.138	.110	.244	.040	.024
Visiblemin	-.803	-.839	.477	.658	-1.022	-1.075
Married	-.324	-.403	-.089	-.443	-.027	-.013
Howner	-.059	-.061	-1.168*	-.930	.231	.188
College/uni	-.0026	-.041	-.230	-.298	.483	.490
Union	.333	.295	-.643	-.845	.213	.283
Leader		-.600		7.050		-.175
Party		-.1961***		5.613		-.982
Issue		.007		7.012		.392
Health		-.427		1.314		-.539
Education		-.604*		2.452**		-1.027**
Tax		-.454		1.450		-.816*
C&S, N R2	.026,.038	.103,.148	.012,.049	.044,.174	.009,.017	.044,.081

Results are binary logistic regression coefficients with standard errors in parentheses. *p<.1, **p<.05, ***p<.01

REFERENCES

- Blais, André, Elisabeth Gidengil, Richard Nadeau, Neil Nevitte (2002) *Anatomy of a Liberal Victory: Making sense of the vote in the 2000 Canadian Election*. Peterborough: Broadview.
- Bishop, George F., and Fisher, Bonnie S. (1995) “‘Secret ballots’ and self-reports in an exit-poll experiment”, *Public Opinion Quarterly*, 59: 568-588.
- Busch, Ronald J. and Lieske, Joel A.(1985), “Does time of voting affect exit poll results”, *Public Opinion Quarterly*, 49: 94-104.
- Frankovic, Kathleen A. (1992), “Technology and Changing Landscape of Media Polls”. In Thomas E. Mann and Garry R. Orren (eds) *Media Polls in American Politics*. Washington, DC: Brookings Institution.
- Fuchs, Douglas and Becker, Jules (1968), “A brief report on the time of day when people vote”, *Public Opinion Quarterly*, 32: 437-40.
- Groves, Robert M. (2002), *Survey Nonresponse*, New York: Wiley.
- Groves, Robert M. and Couper, M. P. (1998), *Nonresponse in Household Interview Surveys*. New York: Wiley.
- Hofrichter, Jurgen (1999) “Exit Polls and Election Campaigns” in Newman, Bruce (Eds) *The Handbook of Political Marketing*. Thousand Oaks, Sage Publications. 223-41.
- Klorman, Ricardo (1976), “Chronopolitics: what time do people vote?” *Public Opinion Quarterly*, 40: 182-193.
- Levy, Mark R. (1983), “The Methodology and Performance of Election Day Polls” *Public Opinion Quarterly*, 47: 54-67.
- Medlsohn, Harold and Crespi, Irving (1970), *Polls, television and the new politics*. Scranton, PA: Chandler.
- Merkle, Daniel M. and Murraray Edelman (2002), “Nonresponse in Exit Polls: A Comprehensive Analysis” in Robert M. Groves, *Survey Nonresponse*, New York: Wiley, pp. 243-258.
- Mitofsky, Warren J. and Edelman, Murray (1993), “A review of the 1992 VRS exit polls”. Paper presented to the Annual Meeting of the American Association for Public Opinion Research, May 20-23, St. Charles, IL
- Mitofsky, Warren J. (1991), “A short history of exit polls”. In Paul J. Lavrakas and Jack K. Holley, *Polling and Presidential Elections*, Newbury Park, CA: Sage, 83-99.

Nevitte, Neil, André Blais, Elisabeth Gidengil and Richard Nadeau (2000) *Unsteady State: the 1997 Canadian Federal Election*. Toronto: Oxford University Press

Sanoff, Alvin (1981), The perils of polling 1980: how the takers of the nation's pulse missed the beat", *Washington Journalism Review*, Jan/Feb.

Traugott, Michael W. and Price, Vincent (1992), "A review: exit polls in the 1989 Virginia Gubernatorial race: where did they go wrong?" *Public Opinion Quarterly*, 56: 245-253.