

Election Campaigns as Information Campaigns: Who Learns What and Does it Matter?

RICHARD NADEAU, NEIL NEVITTE,
ELISABETH GIDENGIL, and ANDRÉ BLAIS

During election campaigns political parties compete to inform voters about their leaders, the issues, and where they stand on these issues. In that sense, election campaigns can be viewed as a particular kind of information campaign. Democratic theory supposes that participatory democracies are better served by an informed electorate than an uninformed one. But do all voters make equal information gains during campaigns? Why do some people make more information gains than others? And does the acquisition of campaign information have any impact on vote intentions? Combining insights from political science research, communications theory, and social psychology, we develop specific hypotheses about these campaign information dynamics. These hypotheses are tested with data from the 1997 Canadian Election Study, which includes a rolling cross-national campaign component, a post-election component, and a media content analysis. The results show that some people do make more information gains than others; campaigns produce a knowledge gap. Moreover, the intensity of media signals on different issues has an important impact on who receives what information, and information gains have a significant impact on vote intentions.

Keywords information gains, knowledge gap, electoral campaigns, media coverage, voting choices

Voters' lack of political information raises important concerns about contemporary democratic practices. Those concerns encourage questions not only about how voters compensate for these information shortfalls (Lupia & McCubbins 1998) but also about which voters acquire politically relevant information given the opportunity to do so.

Election campaigns involve intense exchanges of political information. Political parties and leaders have powerful incentives to inform voters about their positions on the issues of the day, and the media cover and relay these messages. For voters, campaigns are opportunities to gather politically relevant information that can help them make informed choices (Bartels, 1996; Popkin, 1994). Election campaigns and information campaigns are increasingly being conceptualized in similar ways. Holbrook (1996, 2002), for example, identifies election campaigns as a particular type of information campaign, while Zaller

Richard Nadeau is Professor in the Department of Political Science, University of Montréal. Neil Nevitte is Professor in the Department of Political Science, University of Toronto. Elisabeth Gidengil is Hiran Mills Professor in the Department of Political Science, McGill University. André Blais is Professor in the Department of Political Science, University of Montréal.

Address correspondence to Richard Nadeau, Department of Political Science, University of Montréal, C.P. 6128, succursale Centre-ville, Montreal, Canada H3C 1J7. E-mail: richard.nadeau@umontreal.ca

(1989) views election campaigns as the encounter of information flows resulting from the competition between rival information campaigns.

Investigations of the information diffused by parties, its delivery by the media, and its absorption by voters during campaigns (e.g., Norris et al., 1999) have deepened our understanding of the role of information in campaigns. But taken singly, these advances have been less useful for developing precise hypotheses about the dynamics of campaign information. A richer perspective on the diffusion, penetration, and consequences of campaign information emerges when these insights are combined (McGuire, 1968; Tichenor, Donoghue, & Olien, 1970; Kwak, 1999).

A particularly promising line of investigation opens up, we argue, when Converse's (1962) and Zaller's (1989) work on information flows is linked with communication researchers' insights concerning the knowledge gap (Tichenor et al., 1970; Gaziano & Gaziano, 1996; Viswanath & Finnegan, 1996; Kwak, 1999). Integrating these perspectives brings key research questions into sharp focus: *Who* receives *what* information, in *what* context, and with *what* effects?

This analysis begins by combining political science and communications research to develop conceptual and operational definitions of political information. After outlining theories about the knowledge gap, we propose a Converse–Zaller model to explore the effects of information on electoral choices. Data from the Canadian Election Study are used to test eight hypotheses. Four concern the penetration of political information during the campaign among groups, and four focus on the effects of political information on individual vote choices. The design of the Canadian Election Study of 1997 is uniquely suited to address these questions. It is the first to incorporate all the necessary building blocks for testing the knowledge gap hypothesis during an election campaign. These provide the first explicit demonstration that information gains are more consequential for moderately sophisticated voters. The novel methodology, combined with insights from political and communication sciences, provides a deeper understanding of the still understudied phenomenon of information acquisition during campaigns (Mendelsohn & Cutler, 2000). It also provides a firmer foundation for preceding research findings while opening up new perspectives for future research.

Communication specialists such as Tichenor et al., (1970) worry that information campaigns benefit already well-informed individuals and widen the “knowledge gap” between the “information rich” and the “information poor.” Those concerns turn out to be well founded. The broader implications of these findings for campaigns, for persuasion, and for democratic theory are considered in the conclusions.

Electoral Campaigns as Information Campaigns: The Theoretical Approach

General and Campaign-Specific Information

Most typologies of political information (Zaller, 1991; Price & Zaller, 1993) distinguish between general political information and campaign-specific information. Converse (1962) explicitly distinguishes between the notion of “mass of stored information” and that of “current information intake” just as communication researchers (Chaffee, Zhao, & Leshner, 1994, p. 306; see also Kwak, 1999) distinguish between “pre-campaign knowledge” and “campaign knowledge.”

Communication researchers and political scientists also agree on two other fundamentals. First, respondents' knowledge of candidates' and parties' issue positions are key indicators of information gains registered during the course of a campaign (Zaller, 1991; Chaffee et al., 1994; Chaffee & Kanihan, 1997; Kwak, 1999, pp. 396–397).¹

Second, general political information (see Tichenor et al., 1970; Ettema & Kline, 1977; Chaffee et al., 1994; Gaziano & Gaziano, 1996) best predicts information gains in specific contexts such as elections.

General and campaign-specific information thus carry quite different meanings. The amount of general information about politics, the general stock of information (GSI), indicates “political awareness,” a concept Zaller applies to voters’ aptitude and motivation for absorbing information during campaigns (1991). Campaign-specific information (CSI), by contrast, measures what voters learn about parties’ position on various issues during campaigns.

The distinction between general and campaign-specific information is vital to the analysis of election campaigns as information campaigns. We argue that the knowledge gap between the information rich and the information poor grows during the course of a campaign. The general information variable (GSI) allows us to sort individuals into these groups and then to distinguish those who should make the biggest information gains (CSI) during the campaign. After specifying the Converse-Zaller model, hypotheses linking electoral choices, general information and campaign information gains are tested. Reliable measures of both general and campaign specific information are, of course, essential for identifying those voters most susceptible to modifying their electoral choices during a campaign.²

The Knowledge Gap

Does campaign-specific information penetrate different segments of the electorate in the same way? Or is there an information or knowledge gap? Tichenor et al.’s classic account argues that as “the infusion of mass media information into a social system increases, segments of the population with higher socio-economic status tend to acquire this information at a faster rate than the lower status segments, so that the gap in knowledge between the segments tends to increase rather than decrease” (1970, pp. 159–160). They speculate that “one principal function of a presidential campaign would be to increase the difference in level of information at educational extremes” and conclude that “the prospects for closing knowledge gaps in broad areas of science and public affairs appear dismal” (1970, p. 170).

That pessimism springs both from the nature of political information and the specific context of election campaigns. The social distribution of electoral information is complex (Tichenor et al., 1970) and of limited pertinence (Ettema & Kline, 1977), and campaigns are brief.³ Consequently, Tichenor et al., speculate that the knowledge gap applies “primarily to public affairs and science news” (1970, p. 160).

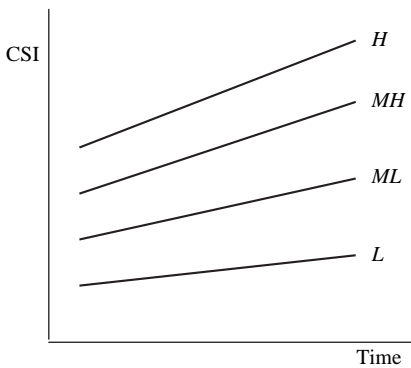
Holbrook’s (2002) comprehensive analysis of knowledge gaps during six presidential campaigns (1976–1996) demonstrates that “knowledge gaps do not always grow over the course of presidential campaigns and that some events, such as debates, may actually reduce the level of information inequality in the electorate” (p. 437). But Holbrook’s approach can be sharpened. His key dependent variable, the number of good and bad points a voter can elicit about a candidate during a campaign, may measure accumulated impressions rather than information gains. Second, by using education as the key explanatory variable, it becomes difficult to discriminate between the varying levels of media coverage devoted to different campaign issues.

Zaller (1989) observes that campaigns can be differentiated both according to their intensity (high for presidential elections, medium for senatorial campaigns, and generally weak for elections to the House of Representatives) and the partisan balance of their communication flows. That same logic, we argue, is also applicable to the analysis of different issues within a single campaign: During agenda-setting struggles, the media cover different campaign issues with different levels of intensity.

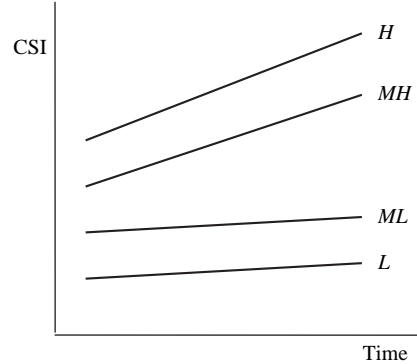
There is no reason to believe that there is a simple linear relationship between the evolution of the information gap and the intensity of the media issue coverage during a campaign. Indeed, we hypothesize that when campaign issues are covered intensely and continuously (strong signal), all categories of voters should be able to make some information gains, and so the information gap on that issue should grow relatively little during the campaign (Hypothesis 1a). Alternatively, when an issue signal is very weak, even attentive citizens will find it difficult to make significant and continuous gains. Under those conditions, the expectation is that the gap between the information rich and the information poor will increase only slightly if at all (Hypothesis 1c). When a signal is strong enough to be heard by the most attentive but not too weak to be noticed by the less attentive (medium signal), however, only the information rich will make learning gains. Thus, the knowledge gap should widen as the campaign unfolds (Hypothesis 1b).

Figures 1a to 1c illustrate the expected increase in campaign-specific information according to the level of voters' general political information,⁴ at varying intensities of media signals on issues. To the extent that these hypotheses imply the maintenance or growth of the knowledge gap depending on the issue, and given that most campaigns are too brief to allow low aware voters to "catch up" even when media signals are strong,

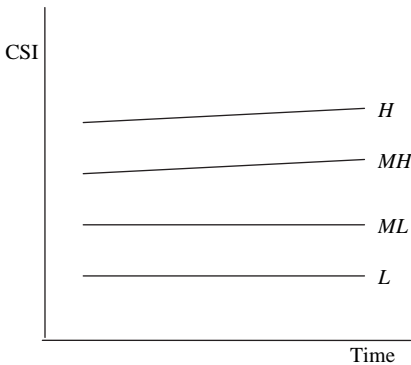
a) High Coverage:



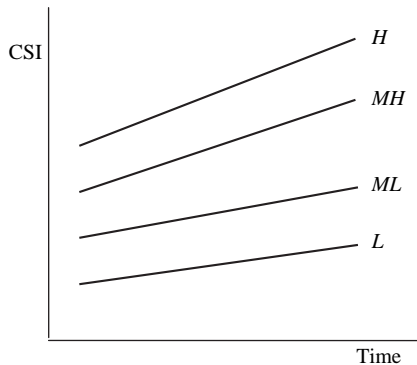
b) Medium Coverage:



c) Low Coverage:



d) Combined:



H = high awareness (GSI); MH = medium high awareness (GSI); ML = medium low awareness (GSI); L = low awareness (GSI).

Figure 1. Expected evolution of information gains under various conditions of awareness and media coverage.

Hypothesis 1d predicts a widening gap between the information rich and the information poor (Figure 1d).⁵

Information Intake and Voting Behavior

Given interest in the origins of the knowledge gap, it is remarkable that “little empirical attempt has been made to investigate consequential aspects of the SES-based knowledge gap” (Kwak, 1999). In election campaigns, the most relevant focus for assessing the effects of the unequal penetration of information concerns what impact electoral information has on the vote. There is reason to expect that an individual’s general stock of information reflects a capacity both to absorb new information and to resist it (Converse, 1962; McGuire, 1968; Zaller, 1989), and to expect that the acquisition of campaign-specific information will, for some voters at least, have the potential to change voting intentions (Holbrook, 1996).⁶ Thus, campaign-specific information gains should encourage vote volatility (Hypotheses 2a), while voters’ general stock of information works in the opposite direction (Hypothesis 2b).⁷

This perspective suggests that it is those who are moderately well informed who will be the most susceptible to influence by information diffusion. New information must be both important and intelligible to constitute a decisive element in evaluating a party or a candidate. But the extent to which voters deem new information to be important and intelligible may vary. For low aware voters, new pieces of information obviously form important additions to their existing stock of political information, but their inability, or disinclination, to interpret this information may limit its impact.⁸ The potential impact of information gains among highly aware voters may also be limited but for different reasons. For them, information gains are meaningful, but the additional information may be neither sufficiently new, nor sufficiently important, to dislodge well-established vote intentions. It is the moderately aware voters, those who are sufficiently experienced to understand the information that is diffused but not sufficiently informed at the start to avoid being “surprised,” who may be more susceptible to influence by new information. The impact of campaign-specific gains on vote instability, we hypothesize, will be positive and significant for moderately aware voters and nonexistent for those who lie at the extremes of the information ladder (Hypothesis 2c).

Combining the knowledge gap and the Converse-Zaller model suggests a general hypothesis about the global impact of information on electoral behavior among particular sub-groups: The amount of vote change induced by information gains among different groups depends on the combination of the size of these gains and their potential to change electoral preferences. Vote volatility attributable to information intake should be greatest among those with a high (but not very high) level of awareness (Hypothesis 2d), a group for which information gains are sizeable and susceptibility to influence by information diffusion significant.

Hypotheses 1a to 1d focus on global patterns of information penetration during the campaign; they are tested using daily aggregate measures of GSI and CSI. Hypotheses 1a and 1b determine whether the global stock of general and campaign-specific information in the electorate evolves or remains stable during the campaign. Hypotheses 1c and 1d concern the evolution of the knowledge gaps between poorly and well-informed voters during the campaign, overall and according to varying intensities of media coverage on issues. Hypotheses 2a to 2d, which examine the links between information intake and individual voting behavior, are investigated using panel data that record voters’ electoral preferences during the campaign and after the election. Multivariate tests of the models

are used to assess the impact of individual measures of GSI and information gains on voters' inclinations to report different electoral preferences before and after the election.

Electoral Campaigns as Information Campaigns: Methodological Requirements

Analyzing information gains during an election campaign is methodologically demanding. The research design must be able to (a) distinguish between GSI and CSI, (b) measure information flows on a daily basis during the course of a campaign, and (c) connect campaign information flows to the dynamics of individual vote choice. The 1997 Canadian Election Study meets these challenges.⁹

The Canadian Election Study

The daily rolling cross-sectional design of the Canadian Election Study (CES) makes it possible to measure fluctuations in campaign information intake by voters. The campaign wave of the survey contains objective measures of both respondents' GSI and CSI. The panel component includes repeated measurements of campaign-specific information as well as vote intention and reported vote. Consequently, we can evaluate the impact of information gains on vote change. Along with standard SES indicators, the CES also includes, significantly, a content analysis component that measures the strength of television media signals on the three issues used to gauge campaign-specific knowledge for voters.

Two types of analyses will be performed from these data to test the two subsets of hypotheses (1a to 1d and 2a to 2d) described above. First, daily averages for GSI and CSI are used to perform aggregate analyses about the global patterns of information penetration during the 30 days of the campaign (Hypotheses 1a to 1d; see Note 9, Tables 1 and 3 and Figures 2 and 3). Second, individual-level data are analyzed to gauge the impact of campaign-specific information gains on a respondent's propensity to report after the election a vote different from the intention expressed during the campaign (Hypotheses 2a to 2d; see Note 9 and Table 4).

General and Campaign-Specific Information

While general and campaign-specific information are conceptually distinct, the operationalization of this distinction is not an entirely settled question. For Converse (1962, p. 582), the "ideal" measure of campaign-specific knowledge entails tapping "all the intake of political information for our respondents during any political campaign" (p. 587). But Converse ends up relying on the number of media used by respondents "as a rough index of [information] intake during the campaign" (p. 588). As Zukin (1977) demonstrates, this measure is problematic: "first [because] it is confined to the mass media, as interpersonal information is not considered [and second because] simple exposure may not be tantamount to information intake" (p. 546). Consequently, Macaluso (1977) favors a direct measure of respondents' information level, "a procedure that strikes us as eminently desirable when one is interested in examining the influence of information on other political behaviors" (p. 256). Zaller fully exploits this idea, but his own operationalization of information intake, based on various indicators including "the individual's volunteered likes and dislikes about the candidates," is not entirely satisfactory (1989, p. 203).

Continuing in the spirit of these efforts, we suggest that campaign-specific information can be operationalized in a manner that conceptually corresponds with the measures

of people's general stock of information about politics. What is required is both a battery of questions that objectively measure GSI and questions that capture respondents' factual information specific to an election campaign (CSI).

According to Zaller, an objective measure, first, is "essentially free of the inherent subjectivity and response set problems that often beset such self-report measures as interest or media use. Second, it is a measure of ideas that have actually gotten into people's heads rather than (as in the case of interest and media use) the mere propensity for ingesting ideas. And third, neutral information consistently outperforms alternative measures in predicting relevant criterion variables" (1989, p. 186).¹⁰

Our measure of voters' general stock of political information (GSI) is based on knowledge of four political actors: (a) the premier of the respondent's own province, (b) the first woman prime minister of Canada (Kim Campbell), (c) the name of Canada's finance minister (Paul Martin), and (d) the name of the U.S. president (Bill Clinton). Classifying voters according to their number of correct answers (0, 1 = 1, 2, 3, 4) distinguishes respondents according to their level of GSI (low, medium low, medium high, high) and divides the electorate into four groups of roughly equal size (23%, 29%, 27%, and 21%, respectively, $N = 2,957$).

Campaign-specific information (CSI) is similarly measured with respondents' factual information about what issue positions three political parties took during the 1997 election. The first question concerns the constitutional position taken by the Reform party, the second dealt with the Conservative party's promise to reduce taxes by 10%, and the third asked about the New Democratic party's promise to cut Canada's unemployment rate in half by 2001.

Responses to these questions are examined separately, but they are also grouped into a single measure of campaign-specific information. Though not exhaustive, this battery of questions is particularly useful here because, as the results of the content analysis show (see below), each party's issue position was covered with a different level of media intensity. Consequently, it is possible to test the general knowledge gap hypothesis as well as specific hypotheses concerning the link between the intensity of media coverage and the expected evolution of the media coverage during the campaign.

These batteries of information questions capture voters' level of awareness about politics in general and campaigns in particular (see Zaller, 1991, p. 134, Table 1).¹¹ Because political awareness is a relatively stable attribute, voters' general stock of information should move little during the course of a campaign. Neither political parties nor the media have any incentive to diffuse general information that is unlikely to influence partisan choices, and voters have no incentive to acquire general information that is of no utility to decision making (Lupia & McCubbins, 2000). The case for campaign-specific information is clearly quite different. Voters do have an interest in learning where parties stand on issues, just as parties have an interest in informing voters about what they perceive to be "winning" issues. Consequently, we should expect to find a significant accumulation of campaign-specific information during the course of the election campaigns.

These auxiliary hypotheses, examined in Table 1 and Figure 2 with data from the rolling cross-sectional survey, are broadly confirmed. The stability of the general stock of information contrasts sharply with increases in campaign-specific information. These results, first, empirically ground the conceptual distinction between general political and campaign-specific information. Second, the overall increase in electoral information during campaigns clearly demonstrates that when the information is sufficiently available and relevant, some voters do bother to integrate it, possibly to clarify their voting choices (Popkin, 1994; Holbrook, 1996).

Table 1
Evolution of general and campaign-specific information

	Separate analyses		Stacked analysis: information
	GSI	CSI	
Constant	.47 (.02)**	.25 (.01)**	.47 (.01)**
Time	.03 (.03)	.10 (.02)**	.03 (.02)
CSI			-.23 (.02)**
CSI × Time			.06 (.03)*
Adjusted R ²	.02	.45	.88
N	30	30	60

Note. Entries are OLS regression coefficients with standard errors in parentheses. General stock of information (GSI) is a 4-point scale (standardized from 0 to 1) adding scores on four questions of factual knowledge (each coded 1 if respondents gave the right answer and 0 if they did not or didn't know). Campaign-specific information (CSI) is the added score (standardized from 0 to 1) on three questions related to campaign promises for which the respondent mentioned the right party or mentioned it with another party (coded 1), or did not mention the right party at all or didn't remember (coded 0, including no opinions). Both variables are aggregate daily averages based on the responses provided on a given day by a subsample of about 110 respondents; see Note 9). Time corresponds to days of the campaign in ascending order, standardized to run from 0 (first day of the campaign) to 1 (last day of the campaign).

* $p < .05$; ** $p < .01$ (two-tailed test).

Source: Canadian Election Study, 1997.

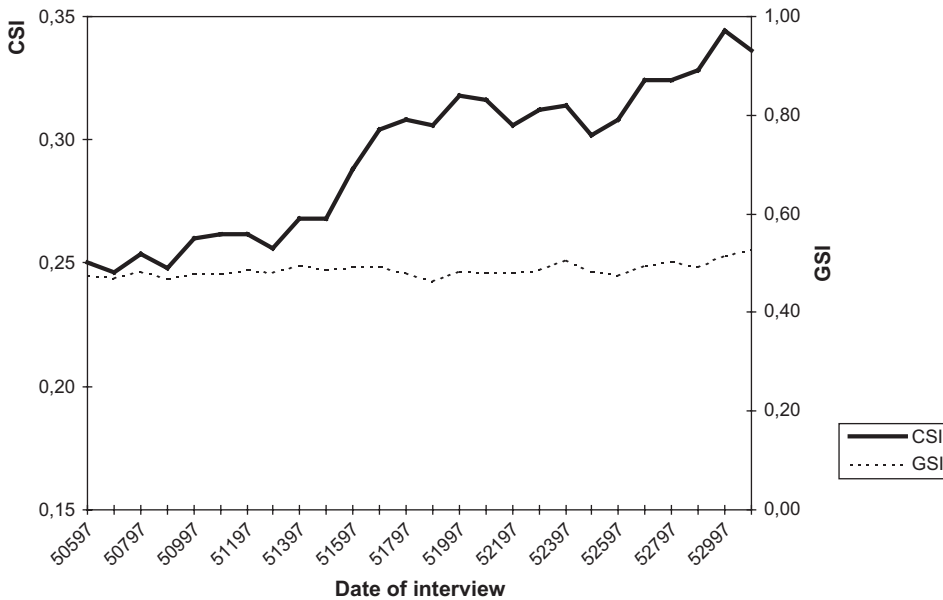


Figure 2. Evolution of CSI and GSI.
Source: Canadian Election Study, 1997.

Content Analysis: Strong and Weak Signals

Television is a principal source of campaign information in Canada as elsewhere (Ansolabehere, Behr, & Iyengar, 1993). Content analysis of television news thus provides critical information for evaluating both the substance and amplitude of the media signals broadcast to voters during a campaign. The content analysis of the 1997 Canadian election focused on the prime time nightly newscasts of Canada's four principal television networks.¹² Two networks are public (Radio-Canada in Quebec and CBC outside Quebec), and two are private (TVA in Quebec and CTV outside Quebec).

The four networks' late-night election news items were classified first, according to whether the dominant angle dealt with the issues or with the electoral race.¹³ The analysis then measured the intensity of media coverage for each of the three issues that are of central concern. The aggregate results for the French (Radio-Canada and TVA) and English-language networks (CBC and CTV) are presented in Table 2.¹⁴ The first part of the table indicates the relative importance given to the issues and to the electoral race (leaders' tour, polls, strategies etc.) during the 1997 campaign. Clearly, as in other settings (see Norris et al., 1999), the electoral race theme dominated campaign coverage (76% of news items for both the French and English networks).¹⁵ The second part of the table compares the media coverage of the three issues under study and shows that these particular issues dominated the electoral coverage devoted to issues, in Quebec and the rest of Canada. Equally important are the significant variations in the intensity of the media signals for each issue: The network signals were "strong" for the Reform party's constitutional position, "medium" for the Conservatives' tax position, and "weak" for the NDP's jobs policy.

Electoral Campaigns as Information Campaigns: The Findings

The results confirm three core findings. First, an overall knowledge gap does emerge between the information rich and the information poor during the course of an election campaign. Second, moderately aware voters are the most susceptible to influence by information diffusion. And third, the greatest amount of information change attributable to information intake occurs among those who occupy those rungs just below the top of the awareness ladder.

Table 2
Content analysis of TV news

	CBC/CTV	SRC/TVA
Total news	417 (100)	319 (100)
Campaign	317 (76)	243 (76)
Issues	100 (24)	76 (24)
Specific issues: total	60 (100)	37 (100)
Unity (Reform)	37 (62)	24 (65)
Taxes (PC)	17 (28)	9 (24)
Unemployment (NDP)	6 (10)	4 (11)

Note. Values in parentheses are percentages.
Source: Canadian Election Study, 1997.

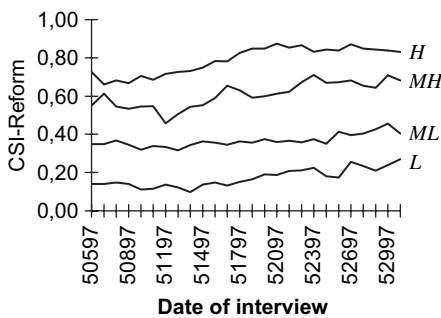
Campaign Knowledge Gap

Communications research expects that the overall knowledge gap between the information rich and the information poor will widen during campaigns (Hypothesis 1d). And Zaller’s work produces the expectation that knowledge gaps on specific issues will remain the same when the media coverage of an issue is either strong or weak (Hypotheses 1a and 1c) but will widen when messages are of average intensity (Hypothesis 1b).

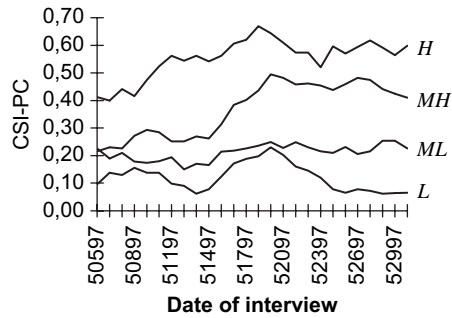
Figure 3d depicts the evolution of campaign-specific information across the campaign for all three issues combined (using 5-day moving averages) with voters differentiated according to their level of general political information (low, medium low, medium high, high). The overall information gains are clearly most pronounced among voters who are already well informed at the beginning of the campaign. Figures 3a to 3c illustrate the evolution of the knowledge gap for each single issue. These curves correspond closely to the stylized expectations presented earlier (Figures 1a to 1c). The gap between the groups widens when it comes to knowledge of the Conservatives’ (medium signal) issue, whereas the initial gap in knowledge of the New Democratic (weak signal) and Reform parties’ positions (strong signal) is sustained throughout the campaign.

Knowledge gap dynamics are examined more directly in Table 3. Here the dependent variables represent the daily knowledge gaps between the most aware (medium high and high) and least aware (medium low and low) groups of voters (see Note 4). Time is the independent variable. The results confirm the widening of the knowledge gap (from .20 to .33 on a 0–1 scale) (Hypothesis 1d), and this evolution is mainly driven by the moderately covered

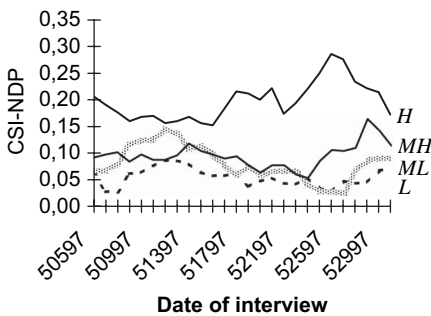
a) CSI-Reform:



b) CSI-PC:



c) CSI-NDP:



d) CSI:

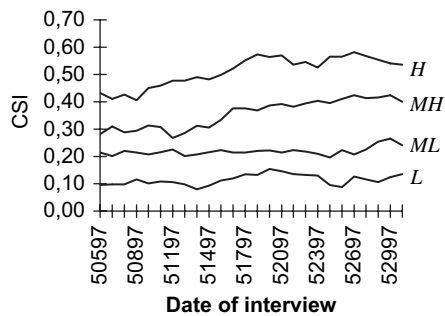


Figure 3. Evolution of CSI by levels of GSI (5-day moving averages).
 Source: Canadian Election Study, 1997.

Table 3
Evolution of the knowledge gap: A macro-level analysis

	Knowledge gap			
	CSI	Unity (Reform)	Taxation (PC)	Unemployment (NDP)
Constant	.20 (.02)**	.39 (.03)**	.17 (.03)**	.05 (.03)
Time	.13 (.03)**	.07 (.05)	.23 (.05)**	.06 (.05)
Adjusted R^2	.30	.03	.40	.02
N	30	30	30	30

	Knowledge gap: a stacked analysis			
	PC vs. Reform	PC vs. NDP	Reform vs. NDP	All
Constant	.39 (.03)**	.05 (.03)	.05 (.03)	.05 (.03)
Time	.07 (.05)	.06 (.04)	.06 (.05)	.06 (.05)
PC	-.22 (.04)**	.12 (.04)**	—	.12 (.04)**
PC \times Time	.16 (.07)*	.17 (.06)**	—	.17 (.07)*
Reform	—	—	.34 (.04)**	.34 (.04)**
Reform \times Time	—	—	.02 (.07)	.02 (.07)
Adjusted R^2	.50	.68	.82	.77
N	60	60	60	90

Notes. Entries are OLS regression coefficients with standard errors in parentheses.

The dependent variables are the aggregate daily knowledge gaps (see Note 9) between the most aware (high and medium high) and the least aware voters (medium low and low). The definition for time is provided in Table 1.

* $p < .05$; ** $p < .01$ (two-tailed test).

Source: Canadian Election Study, 1997.

taxation issue (Hypotheses 1a to 1c). The large increase in the knowledge gap in this latter case (from .17 to .40 on a 0–1 scale) explains more than 80% of the increase in the total information gap during the campaign.¹⁶ The distinctive pattern for taxation is confirmed by the results in the second part of Table 3; the gap between the information rich and poor increases significantly more for this issue than for national unity and unemployment.¹⁷

The knowledge gap hypothesis unequivocally does apply to the election setting.¹⁸ Zaller's speculation (1989) about interaction effects between the intensity of media coverage and the knowledge gap is also clearly confirmed. Finally, the positive regression coefficients (though not significant) for the issues of national unity and unemployment signify that the growing knowledge gap reflects the cumulative impact of large increases for moderately covered issues and small increases in the other cases. Overall, these results provide further reason to be pessimistic about the potential for campaigns to increase the quantity *and* the diversity of the information stock of the least aware voters.¹⁹

The Impact of Political Information

But are these information dynamics consequential for the stability of vote choice?²⁰ Four hypotheses explore that question. One possibility is that electoral volatility is positively

related to campaign-specific information (Hypothesis 2a) and negatively related to the general stock of information (Hypothesis 2b). Another possibility is that information gains will have a greater impact on voters with moderate levels of general political information (Hypothesis 2c) and that the amount of vote change attributable to information gains is highest for the group just below the top of the awareness ladder (Hypothesis 2d).

The results of multivariate tests of those hypotheses are presented in Table 4. Here, the dependent variable is vote volatility, which takes the value of 1 if respondents' reported vote in the post-election wave of the survey is different from their declared vote intention when interviewed during the campaign. The model in column 1 includes all voters. It links respondents' vote volatility to nine variables—the elapsed time between the campaign and the post-electoral interviews, the strength of partisan attachment, the preelection vote choice (supporting a losing party or not), voters' levels of general and campaign-specific information, and four other measures of information reception: education, campaign interest, television news watching, and newspapers reading.²¹

The results confirm the impact of the first five variables on the volatility of vote choice; all have the expected sign and are statistically significant.²² The time between interviews, the strength of partisan attachment, being on the losing side, and the level of general political information all decrease the probability of change in choice during the campaign. Note that the acquisition of campaign-specific information is the only measure of ability and motivation positively and significantly linked to electoral instability. The hypothesis that general political information has a negative effect on electoral change and an indirect positive effect (through information gains) on this same variable is thus confirmed.

The hypothesis that the impact of information gains will be more important for voters with average levels of GSI is also confirmed. The weak impact of information gains on electoral change for respondents as a whole is attributable to the different effect that this variable has on those who are moderately well informed compared to others. Information gains do not induce a questioning of choices either among those who are too poorly informed at the beginning to give meaning to this new information or among those who already possess too much to be influenced by it (Table 4, columns 2, 4, and 6). For those occupying the middle ground, however, the impact of information gains is significant (at .057 or better) and strong (see columns 3, 4, and 7)²³. These voters, having acquired information on taxation, economic, and constitutional positions of the parties under study, have a probability of changing their vote that is roughly 23 percentage points higher than someone from the same group but who remained insulated from campaign information flows.

The impact of information gains on vote change can be estimated under different conditions of awareness by establishing, for each group, just how much vote volatility is induced by information intake. These estimates are computed from the logistic regression coefficients in Table 4 and the overall information gains for each subgroup.²⁴ These calculations show that the impact of gains in campaign-specific information on "explained" vote change is very limited among groups at the extremities of the information ladder (respectively 0 and -1.0 percentage points; both results are derived from nonsignificant coefficients). It is more important for the groups in the middle of the scale (respectively 1 and 2.5 percentage points). And, as expected, the impact of information intake is the strongest among those who display a medium high level of awareness.

The results suggest that there are significant gaps or thresholds to consider. The first, the knowledge gap, appears to distinguish those who learn (high and medium high levels of awareness) from those who learn little or nothing (medium low and low levels of awareness) during campaigns. The second distinguishes those who are susceptible to

Table 4
Regression analysis of the impact of information gains on vote change during the 1997 campaign

	Levels of GSI						
	All	Low	Medium low	Medium high	High	L and H	ML and MH
Constant	-2.19 (.39)	-4.78 (1.11)**	-1.42 (.82)	-2.03 (.73)**	-3.69 (1.04)**	-4.55 (.81)**	-1.75 (.55)**
Time	.03 (.01)**	.07 (.02)**	.02 (.01)	.02 (.01)*	.03 (.01)**	.04 (.01)**	.02 (.01)**
Party ID strength	-1.13 (.17)**	-2.58 (.52)**	-1.06 (.35)**	-82 (.28)**	-1.20 (.37)**	-1.63 (.28)**	-92 (.22)**
Loser	.39 (.17)*	1.85 (.48)**	-1.19 (.34)	.30 (.29)	.37 (.39)	.78 (.29)**	.09 (.22)
Schooling	.16 (.44)	1.85 (1.26)	-76 (.93)	-38 (.76)	1.12 (.97)	1.43 (.76)	-.53 (.58)
Interest	.58 (.43)	.77 (1.07)	1.18 (.83)	.61 (.80)	.50 (1.15)	.37 (.75)	.88 (.57)
TV news	.01 (.37)	-1.24 (1.03)	-70 (.72)	.21 (.66)	.06 (.86)	-16 (.63)	-19 (.48)
Newspapers	-.38 (.34)	1.58 (.99)	-.41 (.69)	-.67 (.55)	-.14 (.83)	.38 (.61)	-.54 (.43)
GSI	-.68 (.25)**	—	—	—	—	—	—
Information gains	.86 (.35)*	1.32 (1.12)	1.35 (.71)	1.26 (.55)*	-1.11 (.96)	-.31 (.68)	1.31 (.43)**
Pseudo-R ²	.12	.39	.10	.10	.11	.22	.09
N	1,304	204	317	405	378	582	722

Note. Entries are logistic regression coefficients with standard errors in parentheses. A dummy variable (not shown) is included in each of the last two regressions (GSI-L and GSI-ML, respectively), the logistic regression coefficients are 1.24 for GSI-L ($SE = .35$) and $-.14$ for GSI-ML ($SE = .22$). Vote change, the dependent variable, is coded 1 if respondents changed their vote between the campaign interview and the post-election interview and 0 if their actual vote was the same as their vote intention. Information gains is the difference (standardized from 0 to 1, with negative values recoded 0) between the GSI index and the same index as measured in the post-election survey using the same three questions. Schooling is an 11-point scale running from 0 (no schooling) to 1 (professional degree or PhD). Party ID strength is a dummy variable coded 1 if respondent feels a very strong or a fairly strong identification with a political party and 0 otherwise. Loser takes the value of 1 for respondents supporting a losing party in the campaign survey and 0 otherwise. Interest, TV news, and newspapers are 10-point scales running from 0 (no interest or no attention) to 1 (a great deal of interest or attention) using questions measuring respondents' interest in the election campaign, attention to news about the election campaign on TV, or attention to news about the election campaign in the newspapers.

* $p < .05$; ** $p < .01$ (two-tailed test).

Source: Canadian Election Study, 1997.

influence by information gains (medium high and medium low levels of awareness) from those who are not (high and low levels of awareness). And the third differentiates those for whom information gains had a sizeable impact (medium high levels of awareness) from those for whom the impact of information intake was more limited, either because of a lack of susceptibility to new information (low and high levels of awareness) or because of limited information gains (medium low levels of awareness).

Evidently, the group that stands to benefit the most from a more equal penetration of campaign information is the one that occupies the rung just above the bottom of the awareness ladder. That they can make significant information gains when the media signal is strong (the unity issue) clearly indicates that efficient information campaigns do matter.

Discussion and Conclusions

Viewing election campaigns as information campaigns is methodologically demanding. To assess both global patterns of information penetration and the impact of information gains on individual vote volatility requires a multimethod approach using individual-level and aggregate data. The aggregate findings offer a useful “big picture” of information dissemination during campaigns but they are based on a limited number of cases (see Note 9), and they are not suitable for complex modeling. Individual-level data with larger samples are more flexible, but do not permit the repeated measurements necessary to account for electoral information dynamics. One promising avenue for future research is to exploit more fully the complementary strengths of both of these kinds of data.

Viewing election campaigns as information campaigns not only encourages a broader research agenda, but it also invites a more expansive consideration of the theoretical and empirical contributions of researchers who examine these questions from different vantage points. Combining Converse and Zaller’s work on communication flows with theories of the knowledge gap certainly provides both a richer and clearer understanding of campaign information dynamics.

Our major findings confirm Chaffee and Kanihan’s conjecture that “the concept of knowledge gap . . . is applicable to political knowledge as well” (1997, p. 426). They also document how, and when, campaign knowledge gaps occur. And there is suggestive evidence to explain “the gap between knowledge and behavior,” which is, according to Hornik (1989, p. 113), “the central theoretical problem in the field of purposive communication.”

Different segments of the electorate evidently do respond differently to a certain type of campaign-specific information. Those at the top and bottom of the information ladder are similarly unresponsive to new information about issues, but the reasons for their non-responsiveness may well be quite different. Beyond a certain threshold, exposure to parties’ positions is not sufficient to modify well-documented political choices. It is not that highly aware voters are immune to all kinds of information flows, perhaps, but rather that parties’ positions per se do not form the type of rich, complex, and “surprising” pieces of information that encourage the reconsideration of their partisan choices.

Not all campaign information flows, of course, or media signals are about issues. Poorly informed voters may be more susceptible to cognitively cheap and simple information about leaders. Moderately well-informed voters may be more responsive to information about issues. And well-informed voters are more inclined to respond to the more complex information about arguments because that factual information is necessary to construct arguments (Lupia & McCubbins, 2000, pp. 53–54). If election campaigns carry heterogeneous messages about issues, leaders, and arguments, then future research needs to

establish whether different types of information have differential impacts on different segments of the electorate.

From this perspective, our demonstration that the notion of the vulnerability of the poorest among the information poor to information flows is unfounded is perhaps a first step. That conclusion was based primarily on macro data showing that individuals with a low level of awareness generally made few information gains while generally displaying similar levels of volatility to those observed in adjacent groups in terms of sophistication. Thus, some conjecture that the information poor would be extremely vulnerable to new information if only that information were to reach them (Converse, 1962; Zaller, 1992). Our results, however, suggest that this hypothesis may be based on spurious correlation. If making information gains does not lead low aware voters to change their mind, the implication is that changing the attitudes of the citizens at the bottom of the information scale is not merely a problem of reaching these citizens. To draw on Lupia and McCubbins's (2000, p. 52) useful distinction between knowledge and information, these voters suffer from lack of knowledge, which prevents them of being able to take advantage of available information. In this sense, this group suffers from a "knowledge gap" as well as an "information gap" during campaigns. That characterization does not apply to those located one step above the bottom of the awareness scale. Their sensibility to new information signifies that they suffer less from a lack of knowledge than from an "information" gap. Thus, it is the individuals in this group who might benefit most from an equalization of the information gains during campaigns. For more complex pieces of information (such as arguments about policies), the threshold between those who suffer or not from the "knowledge" gap is likely on a higher rung of the awareness scale ladder.

These distinctions have implications both for theories of persuasion (Mutz, Sniderman, & Brody, 1996; O'Keefe, 2002) and of information campaigns (Salmon, 1989). The consensus is that persuasion occurs when the right message is sent to the right person. Our results show, however, that efficient strategies of communications should also consider the capabilities of the recipients of this information. Disseminating complex information to individuals who are equipped neither to absorb nor to interpret it is suboptimal. One long-run strategy might be to augment their capacity to take advantage of complex information. A short-run alternative is to present them with simpler and more tailored pieces of information. At the opposite end of the sophistication spectrum, though, providing simple information is also suboptimal. But between these two groups lies a large and receptive audience that evidently does benefit from learning simple pieces of factual knowledge. Moreover, the fact that many of those located just above the bottom of the awareness scale can make significant information gains when media signals are loud (see Figure 3a) provides some comfort to those who believe that (good) information campaigns matter.

These observations resonate with the debates about what voters should know to vote competently (Lupia & McCubbins, 1998, 2000). As Bartels (1996) and Kuklinski and Quirk (2000) show, judgmental shortcuts do not necessarily pave the way to enlightened choices. If heuristics rules are an inadequate substitute for such basic information as knowledge of parties' positions, then our evidence concerning the distribution and the incidence of information gains is particularly relevant. And, if the explicit objective of information campaigns is to reach the least favorable segments of the population (Salmon, 1989), then our results raise trenchant questions about the efficiency of election campaigns as information campaigns.

Increasing or persistent knowledge gaps are undesirable outcomes from a variety of vantage points. The worry that a "relative deprivation of knowledge may lead to a relative deprivation of power" is a concern shared by communications researchers and political

scientists alike (Donoghue, Tichenor, & Olien, 1975, p. 4). A common understanding of the benefits of widespread political information for the workings of democracy is also widely shared. Gaziano's (1984, p. 556) concern that "inequalities in knowledge . . . run counter to the fundamental assumption that an informed citizenry is essential to democracy" moves from Delli Carpini and Keeter's (1996, p. 8) assumption that "information is the currency of citizenship."

These considerations underscore the dual nature of campaigns and provide broader meaning to the question "Do campaigns matter?" Campaigns do matter from a purely partisan perspective, and conceptualizing election campaigns as information campaigns is important for understanding *how* they matter. Campaigns also matter from the vantage point of democratic citizenship, and interpreting electoral campaigns as information campaigns is vital for understanding the dynamics that produce knowledge gaps. The criteria for judging campaigns clearly reflect these dual perspectives. Staging colorful campaign events, or depriving voters of pieces of information, might be wise strategies for media outlets intent on winning the ratings contest or for parties intent on winning the agenda-setting battle. Those very same strategies, however, turn out to be obstacles to voters' ability to make enlightened choices (Page, 1978, p. 187). Political ads exemplify the problem. They are tailored to attract low information voters' attention and their informational content is not negligible (West, 2005). The ultimate goal of political ads is much more about "priming" and "framing" issues than about informing voters (Kuklinski et al., 2000; Norris et al., 1999). Extending the length of political campaigns is also an option. As David Moore argued more than 20 years ago, "longer campaigns may indeed be doing their voters a service by providing a period of time that results in a more equitable opportunity for all voters to learn what they need before voting" (1987, p. 198). Unfortunately, the length of electoral campaigns became shorter rather than longer in many democracies over the past decades (Nevitte et al., 2000). Campaigns matter, in our view, because they are unique opportunities to "lift the bottom" (Delli Carpini & Keeter, 1996, pp. 280, 287) and to bring voters back in. The challenge is to determine why most campaigns fall short of these objectives and why campaigns are rarely great educational experiences.

Notes

1. This measure resembles that used by Berelson and his collaborators (1954, p. 308) and indicates "voter enlightenment" for Chaffee et al. (1994, p. 306).

2. Lupia and McCubbins (2000, p. 52) argue that knowledge refers to the ability to make predictions, whereas information refers to data. Thus, the knowledge gap might be better characterized as an information gap, resulting from structural knowledge gaps among groups.

3. Tichenor et al. (1970, p. 170) suggest that "media coverage tends to wane before the knowledge gap closes," which prompted Moore (1987, p. 198) to propose longer campaigns to give low-educated voters more time to learn about issues.

4. Given that parties' position on issues represents a type of information that is neither exceedingly simple (such as recognizing leaders) nor particularly complex (arguments justifying a policy), the main threshold in terms of information gains should be between voters with high and medium high levels of awareness and those with medium low and low levels of awareness.

5. The generality of Hypotheses 1a and 1d rests on the assumption that the circumstances conducive to decreasing knowledge gaps (e.g., "ceiling effects"; see Ettema & Kline, 1977) are infrequent during electoral campaigns.

6. For some voters, new information may be decisive. Conservative voters who are opposed to tax cuts but unaware that the party is proposing a 10% tax cut may change their vote upon receiving that "new" information.

7. Concerning the inertia effect produced by the “mass of stored information about politics” possessed by individuals, Converse wrote (1962, p. 583): “From a psychological point of view, any cognitive modeling of these propositions could rapidly capitalize upon the many hypotheses concerning the structure and interconnectedness as the mass of information increases.”

8. This is consistent with Khazee’s (1981, p. 517) observation that for the information poor, “information enters [their] cognitive space having undergone little or no interpretation.”

9. The CES data were collected by the Institute for Social Research at York University in Toronto. The campaign-period telephone survey began on April 27, the day the election was called, and ended on June 1, the last day of the campaign; 3,949 interviews were conducted, approximately 110 per day of the campaign, using a rolling cross-sectional strategy. The response rate was 59%. The post-election survey recontacted respondents from the campaign survey in the 8 weeks after the election; 80% of the campaign survey respondents were re-interviewed ($n = 3,170$). The questions on the New Democratic party’s and the Reform party’s issue positions were introduced into the campaign wave questionnaire on May 3; thus, we analyze the last 4 weeks of the campaign (from May 3 to June 1). The campaign response rate and the level of panel attrition in the study met usual standards. A detailed description of the methodological guidelines followed to ensure the quality of the data can be found in Northrup (1998).

10. If factual measures of information are superior to indicators of cognitive engagement, then our indicator of information gains should be more strongly linked to vote change than variables like education, campaign interest, or media exposure. The superiority of our variable of general information about politics (GSI) as a predictor of campaign-specific information (CSI) as well as the dominance of our measure of information gains as a predictor of vote change indicates the validity of these information measures.

11. A regression analysis (OLS) using level of campaign-specific information as the dependent variable and the usual determinants of knowledge as independent variables shows that the GSI clearly outperforms education, interest in the campaign, television news watching, and newspaper reading in predicting CSI (detailed results are available upon request).

12. The intercoder reliability level is .90. All content analysis material is available upon request.

13. Reports of the “electoral race” variety are those that give priority to campaign activities, party leaders or candidates, polls, election advertisements, races in certain regions, or other features of the contest between the political parties. News of the “issue” variety includes the themes, debates, and positions defended or promoted by the various parties or by voters.

14. The results show a large convergence between the broadcast patterns of the networks.

15. News about the electoral race rarely contained information about issues. Moreover, the extremely rare traces of information about issues in these stories are distributed in much the same way as for the news that mainly focuses on issues.

16. An analysis of specific groups shows that, as expected, the knowledge gaps increased significantly more *between* than *among* low (low and medium low) and high (medium high and high) groups. Following an anonymous reviewer’s suggestion, we have checked if our key findings concerning the global patterns of information penetration are the same for strong and weak partisans. The coefficients among both groups are very similar for the models concerning the evolution of aggregate measures of GSI, CSI, and the knowledge gaps during the campaign. Detailed results are available from the authors upon request.

17. We discount the possibility that low aware voters make more information gains than highly aware voters in the case of intensively covered issues. The coefficient tapping the relationship between time and knowledge is higher for the highly aware group (.17 as compared to .10 for the low aware group). These data suggest that decreasing knowledge gaps are rare and probably confined to “easy” information (name recognition) and unusually long campaigns.

18. Individual-level data reanalysis shows that the impact of GSI on CSI is significantly higher among respondents interviewed later in the campaign. These results (available upon request) also reveal that the impact of GSI on the knowledge gaps became significantly higher only for the moderately covered issue of taxation.

19. Information gains about the widely covered issue of national unity account for 73% of the learning gains among the least aware voters and for 31% among the more knowledgeable voters (55% and 36% for the intermediate groups, respectively). Thus, the information gains among the least informed are limited in quantity and diversity.

20. Sixteen percent of respondents changed their vote between the pre- and post-election waves of the survey. The distributions for the vote variables before and after the election ($N = 1,410$) correspond closely to the official election results and are consistent with accounts of the dynamics of the 1997 campaign (Nevitte et al., 2000).

21. We use logistic estimations since the dependent variable is dichotomous (see Menard, 1995). The operationalizations of the time variable and the pre-election choice variable are aimed at capturing a pattern, common to post-election surveys, where the margin of victory for the winning party is overstated because of the propensity of losers to report having voted for the winning party. We thank an anonymous reviewer for her useful suggestions on this point.

22. The propensity to gain information is unrelated to initial levels of CSI. Regressions for those with and without initial campaign-specific information show that the impact of information gains on vote change in the two groups is statistically the same as the coefficient for the entire sample.

23. To test for this, we ran a regression with all four groups including an interactive term designed to assess the differential impact of the information gains variable on the vote stability of the moderately sophisticated voters (middle groups by information gains). The results show that the coefficient for the interactive variable is correctly signed, substantially meaningful, and statistically significant. Moreover, the coefficients for the information intake variable are not statistically distinguishable *within* the middle and the extreme groups.

24. We multiply the logistic regression coefficients in Table 4 by the average information gains during the campaign for each group defined in terms of their level of awareness (respectively 0, .04, .11, and .12 on a 0–1 scale for the low, medium low, medium high and high groups).

References

- Ansolabehere, S., Behr, R., & Iyengar, S. (1993). *The media game: American politics in the television age*. New York: Macmillan.
- Bartels, L. M. (1996). Uninformed votes: Information effects in presidential elections. *American Journal of Political Science*, 40, 194–230.
- Berelson, B. R., Lazarsfeld, P. F., & McPhee, W. N. (1954). *Voting: A study of opinion formation in a presidential campaign*. Chicago: University of Chicago Press.
- Chaffee, S. H., & Kanihan, S. F. (1997). Learning about politics from the mass media. *Political Communication*, 14, 421–430.
- Chaffee, S. H., Zhao, X., & Leshner, G. (1994). Political knowledge and the campaign media of 1992. *Communication Research*, 21, 305–324.
- Converse, P. E. (1962). Information flow and the stability of partisan attitudes. *Public Opinion Quarterly*, 26, 578–599.
- Delli Carpini, M. X., & Keeter, S. (1996). *What Americans know about politics and why it matters*. New Haven, CT: Yale University Press.
- Donoghue, G. A., Tichenor, P. J., & Olien, C. N. (1975). Mass media and the knowledge gap: A hypothesis reconsidered. *Communication Research*, 2, 3–23.
- Ettema, J. S., & Kline, F. G. (1977). Deficits, differences, and ceilings: Contingent conditions for understanding the knowledge gap. *Communication Research*, 2, 179–202.
- Gaziano, C. (1984). Neighborhood newspapers, citizen groups and public affairs knowledge gaps. *Journalism Quarterly*, 61, 556–566.
- Gaziano, C., & Gaziano, E. (1996). Theories and methods in knowledge gap research since 1970. In M. B. Salwen & D. W. Stacks (Eds.), *An integrated approach to communication theory and research* (pp. 127–143). Mahwah, NJ: Erlbaum.
- Holbrook, T. (1996). *Do campaigns matter?* Thousand Oaks, CA: Sage.

- Holbrook, T. (2002). Presidential campaigns and the knowledge gap. *Political Communication, 19*, 437–454.
- Hornik, R. C. (1989). The knowledge-behavior gap in public information campaigns: A development communication view. In C. T. Salmon (Ed.), *Information campaigns* (pp. 113–138). Newbury Park, CA: Sage.
- Khazee, T. A. (1981). Television exposure and attitude change. *Public Opinion Quarterly, 45*, 507–518.
- Kuklinski, J. H., & Quirk, P. J., (2000). Reconsidering the rational public: Cognition, heuristics, and mass opinion. In A. Lupia, M. D. McCubbins, & S. L. Popkin, (Eds.), *Elements of reason* (pp. 153–182). Cambridge: Cambridge University Press.
- Kuklinski, J. H., Quirk, P. J., Jerit, J., Schwieder, D., & Rich, R. (2000). Misinformation and the currency of citizenship. *Journal of Politics, 62*, 790–816.
- Kwak, N. (1999). Revisiting the knowledge gap hypothesis: Education, motivation, and media use. *Communication Research, 26*, 385–413.
- Lupia, A., & McCubbins, M. D. (1998). *The democratic dilemma: Can citizens learn what they need to know?* Cambridge: Cambridge University Press.
- Lupia, A., & McCubbins, M. D. (2000). The institutional foundations of political competence: How citizens learn what they need to know. In A. Lupia, M. D. McCubbins, & S. L. Popkin, (Eds.), *Elements of reason* (pp. 47–66). Cambridge, England: Cambridge University Press.
- Macaluso, T. F. (1977). Political information, party identification and voting defection. *Public Opinion Quarterly, 41*, 255–260.
- McGuire, W. J. (1968). Personality and susceptibility to social influence. In E. F. Borgatta & W. W. Lambert, (Eds.), *Handbook of personality theory and research*, (pp. 1130–1187). Chicago: Rand-McNally.
- Menard, S. (1995). *Applied logistic regression analysis*. Thousands Oaks, CA: Sage.
- Mendelsohn, M., & Cutler, F. (2000). The effect of referendums on democratic citizens: Information, politicization, efficacy and tolerance. *British Journal of Political Science, 30*, 685–698.
- Mondak, J. J., & Anderson, M. R. (2004). The knowledge gap: A reexamination of gender-based differences in political knowledge. *Journal of Politics, 66*, 492–512.
- Moore, D. W. (1987). Political campaigns and the knowledge-gap hypothesis. *Public Opinion Quarterly, 51*, 186–200.
- Mutz, D. C., Sniderman, P. M., & Brody, R. A. (Eds.). (1996). *Political persuasion and attitude change*. Ann Arbor: University of Michigan Press.
- Nevitte, N., Blais, A., Gidengil, A., & Nadeau, R. (2000). *Unsteady state: The 1997 Canadian federal election*. New York: Oxford University Press.
- Norris, P., Curtice, J., Sanders, D., Scammell, M., & Semetko, H. A. (1999). *On message: Communicating the campaign*. London: Sage.
- Northrup, D. (1998). *The 1997 Canadian Election Survey: Technical documentation*. Toronto: Institute for Social Research, York University.
- O’Keefe, D. J. (2002). *Persuasion: Theory and research* (2nd ed.). Thousand Oaks, CA: Sage.
- Page, B. I. (1978). *Choices and echoes in presidential elections: Rational man and electoral democracy*. Chicago: University of Chicago Press.
- Popkin, S. L. (1994). *The reasoning voter: Communication and persuasion in presidential campaigns*, (2nd ed.). Chicago: University of Chicago Press.
- Price, V., & Zaller, J. (1993). Who gets the news? Alternative measures of news perceptions and their implications for research. *Public Opinion Quarterly, 57*, 133–164.
- Salmon, C. T. (Ed.). (1989). *Information campaigns*. Newbury Park, CA: Sage.
- Tichenor, P. J., Donoghue, G. A., & Olien, C. N. (1970). Mass media flow and differential growth in knowledge. *Public Opinion Quarterly, 34*, 159–170.
- Viswanath, K., & Finnegan, J. R. Jr. (1996). The knowledge gap hypothesis: Twenty-five years later. In B. R. Burleson (Ed.), *Communication yearbook 19* (pp. 187–227). Thousand Oaks, CA: Sage.
- West, D. M. (2005). *Air wars: Television advertising in election campaigns, 1952–2004* (4th ed.). Washington, DC: Congressional Quarterly Press.

- Zaller, J. (1989). Bringing Converse back in: Modeling information flow in political campaigns. In J. Stimson (Ed.), *Political analysis* (pp. 181–234). Chicago: University of Chicago Press.
- Zaller, J. (1991). Political awareness, elite opinion leadership, and the mass survey response. *Social Cognition*, 8, 125–153.
- Zaller, J. (1992). *The nature and origins of mass opinion*. Cambridge, England: Cambridge University Press.
- Zukin, C. (1977). A reconsideration of the effects of information on partisan stability. *Public Opinion Quarterly*, 41, 244–254.1