Election Campaigns as Information Campaigns: Who Learns What and with What Effect?

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Abstract

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 rather 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? Drawing on the combined 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. Further, 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.

Elections are opportunities for voters to acquire valuable information that can help them make informed choices (Bartels 1996; Gelman and King 1993; Holbrook 1996; Just et al. 1996; Popkin 1994). Growing interest in the role of information has produced a convergence between how information campaigns and election campaigns are being conceptualized. For example, Holbrook (1996) identifies election campaigns as a particular type of information campaign, and Zaller (1989) more elaborately views election campaigns as the encounter of information flows, resulting from a competition between rival information campaigns.

Recent investigations of the information diffused by parties (West 1997; Norris et al. 1999), its delivery by the media (West 1997; Just et al. 1996; Norris et al. 1999), and its absorption by voters during campaigns (Zhao and Chaffee 1995; Just et al. 1996; Marcus and MacKuen 1993; Zaller 1991; Johnston et al. 1996) 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 than might otherwise be the case. A richer and more systematic perspective on the diffusion, penetration and consequences of campaign information can be developed by combining these insights from political science research with those in social psychology (McGuire 1968, 1969) and communications research (Tichenor, Donoghue and Olien 1970; Chaffee, Zhao and Leshner 1994; Chaffee and Kanihan 1997; Kwak 1999).

A particularly promising line of investigation is opened up by linking Converse's (1962) and Zaller's (1989, 1996) work on information flows with one of the most fertile concepts pioneered by communications researchers, namely, the knowledge gap (Tichenor, Donoghue and Olien 1970; Gaziano and Gaziano 1996; Viswanath and Finnegan 1996; Kwak 1999). Integrating these two

theoretical perspectives brings key research questions into sharp focus: *Who* receives *what* information, in *what* context, and with *what* effects?

We take advantage of the multifaceted design of the Canadian Election Study of 1997 to address these questions. The combined use of the different components of that study provides the most detailed portrait to date of the diffusion, penetration, and influence processes of political information during an election campaign. We show in particular that the longstanding fears of communication specialists (Hyman and Sheatsley 1947; Star and Hughes 1950; Tichenor, Donoghue and Olien 1970; Gaziano and Gaziano 1996; Viswanath and Finnegan 1996; Kwak 1999) that campaigns benefit already well-informed individuals and so widen the 'knowledge gap' between the "information rich" and the "information poor" are well-founded in the electoral context. These results raise questions about the effectiveness of election campaigns as information campaigns and about the democratic virtues of the electoral process.

General and Campaign Specific Information

Most typologies of political information (see Gaziano 1983; Neuman 1986; Delli Carpini and Keeter 1993, 1996; Price and Zaller 1993; Viswanath and Finnegan 1996; Gaziano and Gaziano 1996) distinguish between general political information and information that is specifically linked to the campaign context. Converse (1962) was the first to compare the general stock of political information available to individuals before elections with the information gains they make during campaigns. Building on that distinction, Zaller (1991, 1996) suggests that the general stock of political information measures the voters' level of political awareness (motivation and competence in obtaining and understanding political information).

Communications researchers (Chaffee, Zhao and Leshner 1994: 306; see also Kwak 1999) similarly distinguish between "pre-campaign knowledge," which reflects an understanding of the parties' general ideological orientation and "campaign knowledge" which measures the knowledge of the parties' specific political positions taken during the campaign. They also show that prior knowledge is a crucial determinant of campaign knowledge (see Tichenor, Donoghue and Olien 1970; Ettema and Kline 1977; Chaffee, Zhao and Leshner 1994; Gaziano and Gaziano 1996).

These conceptual and empirical parallels extend to common perspectives on what are the principal sources of information intake during campaigns. Both research domains typically rely on respondents' knowledge of candidates' and parties' positions on the issues as indicators of information gains registered during the course of a campaign (Zaller 1991; Chaffee, Zhao and Leshner 1994; Chaffee and Kanihan 1997; Kwak 1999: 396-397). This measure closely resembles that used by Berelson and his collaborators [1] and indicates "voter enlightenment" for Chaffee, Zhao and Leshner (1994: 306).

These observations suggest two hypotheses about the stability and dynamics of campaign specific information and general political information during campaigns. Hypothesis 1a, as illustrated in Figure 1, is that voters' *general* stock of political information (GSI) will remain practically stable during campaigns. After all, neither political parties nor the media have much incentive to diffuse a type of information that is of little interest to voters and that has little prospect of influencing partisan choices (Norris 2000). Voters, similarly, have no incentive to acquire general information that is of no utility to decision-making (see Lupia and McCubbins 2000). The case for campaign specific information is clearly quite different. Voters do have an interest in learning about the positions of the parties on the issues of the day and parties do have an interest in informing voters about their stands on what they

perceive to be «winning» issues. We should thus expect a significant increase of *campaign specific* information (CSI) during the course of the election campaign (hypothesis 1b).

[FIGURE 1 ABOUT HERE]

The Knowledge Gap

The most intriguing and important feature of the electoral dynamic concerns the possibility that there will be an unequal penetration of information among different segments of the electorate, an information or knowledge gap. **[2]** In their classic account of the knowledge gap, communications theorists Tichenor, Donoghue and Olien argue 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: 159-160). Tichenor, Donoghue and Olien go on to speculate that "one principal function of a presidential campaign would be to increase the difference in level of information at educational extremes". They conclude that "the prospects for closing knowledge gaps in broad areas of science and public affairs appear dismal" (1970: 170).

The source of their pessimism springs from the very nature of political information and the specific context of election campaigns. The lack of depth and uniformity in the social distribution of electoral information is alternately attributed to the complexity of this information (Tichenor, Donoghue and Olien 1970), its limited pertinence (Ettema and Kline 1977; Ettema, Brown and Luepker 1983) and the briefness of electoral campaigns (Tichenor, Donoghue and Olien 1970; Moore 1987) **[3].** It is these considerations that led communications theorists to suspect that the knowledge gap hypothesis

might apply 'primarily to public affairs and science news' (Tichenor, Donoghue and Olien 1970: 160; Ettema, Brown and Luepker 1983: 193).

Among the individual determinants of widening knowledge gaps, communication specialists typically rely on two indicators, education and motivation (i.e. interest in an issue) to explain the knowledge gap (see Kwak 1999 for a discussion of these models). One of Zaller's most important contributions to this debate is his demonstration that factual information about politics is the best predictor of specific information gains (CSI) during a campaign (1991, 1992, 1996; see also Price and Zaller 1993). Of all the different measures of aptitude and motivation which should highlight the existence of a knowledge gap during campaigns, it is the measure of "political awareness" as defined by Zaller that brings out this phenomenon most strikingly.

Zaller's analysis (1989) of the variable intensity of campaigns' fluxes may also shed light on campaign specific factors related to the knowledge gap. According to Zaller, campaigns can be differentiated according to the intensity (high for presidential elections, medium for senatorial campaigns, and generally weak for elections to the House of Representatives) and the partisan balance (about even between the presidential candidates of the major parties, largely dominated by incumbents for local elections) of their communication flows. Zaller's idea that the penetration and effects of communication flows vary according to their intensity can be applied to the analysis of a single campaign: as a result of agenda-setting battles and the collision of partisan information flows, issues within a single election campaign will be characterized by the varying intensity of their media coverage.

Our second set of hypotheses predicts that the force of the informational signal for each issue will have different effects. Specifically, we hypothesize that the relationship between the evolution of the information gap and the intensity of the media coverage of the various issues during a campaign should

be nonlinear. When an issue is covered intensely and continuously (strong signal), all categories of voters should be able to make information gains, with the result that the information gap on that issue will be stable from the beginning to the end of the campaign (hypothesis 2a). But, when an issue signal is very weak and sporadic, even the most attentive will not be able to make significant and continuous gains, and the gap between the information rich and the information poor will remain stable (hypothesis 2c). Between these extremes lies another alternative, namely, when a signal is strong enough to be heard by the most attentive but not sufficiently loud to be noticed by the less attentive (medium signal). Under these circumstances, we expect that only the information rich will make learning gains, with the result that the knowledge gap should increase as the campaign unfolds (hypothesis 2b).

Figures 2a to 2c schematically represent these principal hypotheses concerning the knowledge gap. They illustrate the expected increase in campaign specific information according to the level of voters' general political information, in the case of weak, medium and strong media signals on issues. These figures suggest that the overall penetration of information and its dissemination among different groups vary according to its intensity of coverage. To the extent that these hypotheses imply the maintenance or growth of the knowledge gap depending on the issue, hypothesis 2(d) expects the gap between the information rich and the information poor to grow wider during the election campaign, as Figure 2d illustrates. **[4]**

[FIGURE 2 ABOUT HERE]

Information Intake and Voting Behavior

Given the considerable interest in determining 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). A preliminary step for assessing the effects of the unequal penetration of information across different social groups is to determine the impact of electoral information on vote choice. There are good reasons to expect that the acquisition of campaign specific information has, for some voters at least, the potential to change vote intentions (Holbrook 1996; Norris 2000). **[5]** There are also good reasons 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 1969; Zaller 1989, 1996). Consequently, we hypothesize that gains in campaign specific information will encourage vote volatility (hypothesis 3a) while voters' general stock of information works in the opposite direction to encourage vote stability (hypothesis 3b).

From this perspective, it is voters who are moderately well informed who will be the most susceptible to influence by information diffusion. It is reasonable to suppose that new information must be both important and intelligible to constitute a decisive element in evaluating a party or a candidate. These conditions are not necessarily present to the same degree among different groups of voters according to their level of awareness. For low aware voters, new pieces of information obviously form important additions to their existing stock of political information but their inability to interpret this information limits its impact. **[6]** We expect the same lack of sensitivity to information gains among the highly aware voters. Information gains are meaningful for these voters but the additional information may not be sufficiently new and important to dislodge well-established vote intentions. It is the moderately sophisticated and informed voters, those who are sufficiently experienced to understand the information that is diffused but not well enough informed at the start to avoid being "surprised", that are the most likely to be influenced by the new information. We thus expect that the impact of campaign

specific gains on vote instability will be positive and significant for moderately sophisticated voters and zero for those who lie at the extremes of the information ladder (hypothesis 3c).

The Design of the 1997 Canadian Election Study

Analyzing the role of information gains during an election campaign presents a number of methodological challenges. The research design must be able to distinguish between general political information and campaign specific information, it must be able to detect information flows during the course of a campaign, and to connect those information flows to the dynamics of individual vote choice. The design of 1997 Canadian Election Study's design meets these challenges. **[7]** The daily rolling cross-section component of the study enables us to measure fluctuations in campaign information intake by voters. The campaign survey contains measures of respondents' general stock of political information as well as campaign-specific knowledge. Along with standard SES indicators and vote choice variables, the study also includes a content analysis component that enables us to measure the strength of television media signals on the three issues that are used to gauge campaign specific knowledge for voters. Together, these data allow us to examine diffusion, penetration and influence processes of information from both an aggregate and individual perspective.

Measuring Information Intake

Knowledge of campaign-specific issues is a standard measure of information gains during a campaign (Converse 1962; Zaller 1989; Chaffee, Zhao and Leshner 1994: 306; Kwak 1999). Our measures are derived from factual questions about the issue-positions of three of the parties during the 1997 election **[8]**. The first question concerned a 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. The answers to these questions are examined separately but they are also grouped to create a single measure of campaign-specific information. Though not exhaustive **[9]**, this battery of questions is particularly useful for this investigation because, as the results of the content analysis show, each issue was covered with different levels of media intensity (see below). Consequently, it is possible not only to test the general hypothesis concerning the growth of the knowledge gap between chronically poorly and well-informed voters during campaigns (Tichenor, Donoghue and Olien 1970; Kwak 1999), but also to explore the more specific hypothesis concerning the link between the intensity of media coverage and the expected evolution of the knowledge gap during an election campaign.

The Determinants of Information Gains

There is a substantial body of research that focuses on the determinants of political information (Converse 1962; Neuman 1986; Luskin 1990; Delli Carpini and Keeter 1993, 1996; Nadeau and Niemi 1995; Zaller 1989, 1991, 1992, 1996). The conclusions of this work generally support those of communication specialists (see Gaziano and Gaziano 1996, and Viswanath and Finnegan 1996 for a literature review). Research shows that male and older voters are generally better informed (Nadeau, Niemi and Levine 1993; Delli Carpini and Keeter 1996). Accordingly, both variables are included in our explanatory model of campaign information gains. The intensity of partisan identification is also included as an indicator of the importance of the election and its result for a respondent (Zaller 1989).

The other variables used measure respondents' ability and motivation to acquire new information even more directly. Education is a central variable to most analyses of the knowledge gap

(Tichenor, Donoghue and Olien 1970). It is usually taken to indicate people's general capacity to acquire information. But the education variable can be interpreted in other ways; it sometimes takes on a "catch-all" character in analyses of political information (Gaziano and Gaziano 1996; Viswanath and Finnegan 1996). High levels of formal education are sometimes associated not only with individuals' cognitive capabilities, but also with social roles where information is valorized and useful, and with access to networks where this information circulates more widely. **[10]**

This dual interpretation of education is potentially confounding. For that reason, we include additional variables that more specifically measure voters' interest and motivation in acquiring political information (Ettema and Kline 1977; Ettema, Brown and Luepker 1983; Kwak 1999). The first measures the respondents' interest in the current election (on a scale of 0 to 10 where 10 reflects a very high interest). Secondly, we include two indicators of the respondents' degree of exposure to election news during the campaign (using 0 to 10 scales measuring exposure to televised and newspaper coverage of election news, respectively; see Chaffee, Zhao and Leshner 1994, and Kwak 1999 for a similar operationalization). These exposure measures indicate the reception of campaign-specific information (see Converse 1962, and Zaller 1989, 1991, 1992, 1996).

The measure of voters' general stock of political information is based on knowledge of four political actors: (1) the premier of the respondent's own province; (2) the first woman Prime Minister of Canada (Kim Campbell); (3) the name of Canada's Finance Minister (Paul Martin) **[11]**; and (4) the name of the United States' President (Bill Clinton) **[12]**. Classifying voters according to their number of correct answers (0,1=1,2,3,4) divides the electorate into four groups of roughly equal size (23, 29, 27 and 21% respectively, n=2,957) that distinguish respondents according to their level of general stock of

information (very low, fairly low, fairly high, very high). Various indications confirm that this battery provides an adequate operationalization of voters' levels of awareness **[13]**.

Content Analysis: Strong and Weak Signals

In Canada, as in most western countries, television has become the principal source of campaign information (Ansolabehere, Behr and Iyengar 1993; Nevitte et al. 2000). The practice of using the coverage provided by the major television networks as an indicator of media coverage as a whole is common in Canada and elsewhere (Johnston et al. 1992; Taras 1993; Mendelsohn 1993; Zaller 1996; Nadeau and Niemi 1999; Nevitte et al. 2000). Many studies demonstrate a substantial convergence between information presented on television and that found in newspapers, as well as between the television networks themselves (Zaller 1996). Content analysis of television news thus provides essential information for evaluating the nature and amplitude of the media signal received by voters during a campaign. The content analysis of the 1997 Canadian election focused on the late night newscasts of the four principal television networks in Canada. **[14]** Two of the 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 **[15].** Then the analysis turned to determining the intensity of the media coverage of the three issues that are of central concern. The aggregate results for the French language (Radio-Canada and TVA) and English-language networks (CBC and CTV) are presented in Table 1 **[16].** 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. The relative proportions indicate that the electoral race dominated campaign coverage (76% of news items for both the French and English networks), a trend found in most western democracies (see Norris et al. 1999; West 1997). The second part of the table compares the coverage given to the three issues under study. The results show that they occupied a significant place in the electoral coverage devoted to issues, both in Québec and the rest of Canada. Moreover, the data indicate that there were significant variations in the intensity of the media signals. For the English and French networks, the signal was strong for the Reform Party's constitutional position, medium in terms of the Conservatives tax position, and weak for the NDP's jobs policy. Finally, a week by week analysis confirms the characterization of these media signals and shows that the intensity of these signals can be linked to the parties' battle for visibility in the 1997 Canadian election. **[17]**

[TABLE 1 ABOUT HERE]

Aggregate Patterns of Campaign Communications

Based on previous work on information flows (Converse 1962; Zaller 1989) and recent advances in cognitive psychology (Lupia and McCubbins 2000), we expect that, during campaigns, voters' general stock of information (GSI) will remain stable (hypothesis 1a) and that campaign specific information (CSI) will increase (hypothesis 1b). These hypotheses, examined in Figure 3 with data from the rolling cross-section survey, are broadly confirmed. The stability of the general stock of information (GSI) contrasts sharply with the upward movement of campaign-specific information (CSI). These results are important, first, because they empirically ground the conceptual distinction between general political and campaign-specific information. And, second, the overall increase in the level of electoral information during the campaign shows that when information is sufficiently available and, more

importantly, pertinent, that a certain number of voters bother to integrate it in order to possibly clarify their voting choices (Popkin 1994; Holbrook 1996) **[18].**

[FIGURE 3 ABOUT HERE]

Campaign Knowledge Gap

Borrowing from communications research, we expect that the overall knowledge gap between the information rich and the information poor will grow during campaigns (hypothesis 2d). Following Zaller's work on the variable intensity of information flows, we also expect that knowledge gaps on specific issues will remain the same when the media coverage of an issue is either strong or weak (hypotheses 2a and 2c) and will widen when it is of average intensity (hypothesis 2b).

Figure 4d 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 (very low, fairly low, fairly high, very high). The overall gains in information are clearly more pronounced among voters who are already well-informed at the beginning of the campaign. Figures 4a to 4c illustrate the evolution of the knowledge gap when each of the issues is taken singly. The overall shape of the curves corresponds quite closely to the stylized expectations presented in figures 2a to 2c. They show a widening of the gap between the groups when it comes to knowledge of the Conservative (medium signal) issues. Furthermore, there is a relative maintenance of the initial gap in knowledge of the New Democratic (weak signal) and Reform parties' positions (strong signal).

[FIGURE 4 ABOUT HERE]

The knowledge gap hypothesis is examined in a more rigorous fashion in Table 2. Campaign specific information for the three parties combined is analyzed in column 1. The expectation is that we will find a widening of the knowledge gap across time (hypothesis 2d). The Reform and New Democratic cases (columns 2 and 4) should exhibit a stable gap between the information rich and the information poor (hypotheses 2b and 2d), while the gap should increase for the Conservative Party (column 3; hypothesis 2c). In each case, the critical test entails determining whether, ceteris paribus, the impact of general political information on campaign specific information increases, or not, during the course of the campaign.

[TABLE 2 ABOUT HERE]

The results presented in column 1 confirm the hypothesis about the overall widening of the knowledge gap. **[19]** Voters' level of information is linked to the habitual factors separating the better- and less-informed voters. As expected, voters who are older, male, better educated, interested in the campaign and attentive to televised election news, show a higher level of campaign specific information **[20]**. More importantly, the results confirm that voters who are better informed about political matters in general are also those who are better informed about campaign specifics, even after all of the other determinants are taken into account. The gap in campaign specific information between those who are very well-informed about politics in general and those who are very poorly-informed is .19 on a scale of 0 to 1 early in the campaign. This already large gap grows significantly during the campaign, as the variable measuring the interaction between the proximity of the election (measured in campaign-days) and the impact of the awareness variable shows. The data clearly indicate that this gap increases as the campaign unfolds, reaching .33 on the eve of the election **[21]**.

The knowledge gap hypothesis, shared by communication specialists and political scientists (Tichenor, Donoghue and Olien 1970; Moore 1987) is thus confirmed; the inequality in the information distribution did increase during the campaign. The hypothesis, inspired by Zaller's work (1989, 1996), about the presence of interaction effects between the intensity of media issue coverage and the knowledge gap is also very clearly confirmed by the results in columns 2, 3 and 4 of Table 2. As predicted, the data show a very clear increase in the knowledge gap in the case of a signal of medium strength: it widened from .15 to .48 between the beginning and the end of the campaign for the voters at opposite ends of the general political information scale (column 2).

Significantly, the findings are quite different for those issues that were either intensely or weakly covered. The limited and sporadic coverage of the NDP's position on unemployment (see note 17) severely limits the possibility for learning gains, even among the most attentive [22]. But on the issue that was most intensely covered, the Reform's Party's constitutional position on national unity, the data are very different. In this case, the information penetrated the less attentive groups, with the effect that the knowledge gap holds virtually steady (the coefficient measuring the evolution of this impact during the campaign is not significant).

The results in Table 2 show that the dissemination of information among the information rich and the information poor during campaigns varies with the intensity of media coverage. Knowledge gaps tend to remain steady when coverage is very low or very high and to increase when it is of medium intensity. That the knowledge gap increases in certain cases while at best maintaining itself in others provides further reason to be pessimistic about the role of campaigns in increasing the quantity *and* the diversity of the information stock of the least aware voters [23].

The Impact of Political Information

Given these findings, the central question becomes whether these information flow dynamics have any consequence for the stability of vote choice. We examine three hypotheses in this section, namely that electoral volatility is positively related to campaign-specific information gains (hypothesis 3a) and negatively related to the general stock of political information (hypothesis 3b) and that the impact of information gains during a campaign will be higher for voters who have moderate levels of general political information (hypothesis 3c).

The models presented in Table 3 investigate these hypotheses. Here, the dependent variable is vote volatility, which takes the value of '1' if respondents' reported vote after the election is different from the stated vote intention when they were interviewed during the campaign. The model in column 1 includes all voters. It links respondents' vote volatility to four variables, namely, the moment of the interview, the strength of their partisan attachment, and their levels of general and campaign specific information.

[TABLE 3 ABOUT HERE]

The results confirm the impact of these four variables on the volatility of vote choice. All the variables included in the model are of the expected sign and statistically significant. The proximity of voting day, the strength of partisan attachment and the level of general political information all diminish the probability that a voter will modify his or her choice during the campaign, whereas the acquisition of campaign specific information increases 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 who are average in terms of their general stock of political information is also confirmed by our data. The relative weakness of the impact of information gains on electoral change for respondents as a whole results from the contrast between the effect of this variable on those who are moderately well informed, and those who are either highly informed or poorly informed. Information gains do not cause a questioning of choices for those who are too poorly informed [24] at the beginning to give meaning to this new information (column 2) or for those who already possess too much to be influenced by it (group 4, column 5). But for the voters who occupy the middle ground, the impact of information gains is significant and strong. A voter belonging to this group and having acquired information on taxation, economic and constitutional positions of the parties under study has a probability of changing his or her vote that is roughly 20 percentage points higher than a respondent of the same group who remained insulated from information flows during the campaigns.

Discussion and Conclusions

Viewing election campaigns as information campaigns both encourages a more systematic research agenda on the diffusion, penetration and impact of information during election campaigns, and allows us to harness the theoretical and empirical contributions of specialists who have examined these questions from different disciplinary viewpoints. Certainly, combining Converse and Zaller's work on communication flows with that of Tichenor, Donoghue and Olien's on the knowledge gap provides both a richer and clearer understanding of campaign information dynamics than does the separate use of either of these major contributions.

The major findings illustrate the benefits of thinking of electoral campaigns as campaigns of information (Holbrook 1996; Salmon 1989). The patterns of campaign communications reported here provide useful empirical and theoretical insights about the macro-dynamics of electoral information. The evidence about the dissemination of campaign specific information across groups not only confirms Chaffee and Kanihan's conjecture that "the concept of knowledge gap... is applicable to political knowledge as well" (1997: 426) but also documents how and when campaign knowledge gaps occur. Finally, the study of the direct impact of information gains offers suggestive evidence to explain "the gap between knowledge and behavior" which is, according to Hornik (1989: 113) "the central theoretical problem in the field of purposive communication."

The results clearly indicate that different segments of the electorate do respond differently to a certain type of campaign specific information. Information gains matter for the moderately sophisticated voters but apparently not for those who sit at the extremes of the information ladder. For these latter groups, the implications of the weak marginal impact of new information are quite different. For the least aware voters, the costs associated with learning about issues are high, and most of them lack the knowledge necessary to interpret new information.

Those at the top of the information ladder exhibit the same lack of responsiveness 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. This does not imply that highly aware voters are immune to all kinds of information flows. Rather, it suggests that parties' positions per se do not form the type of rich, complex and "surprising" pieces of information that make these voters susceptible to reconsidering their partisan choices. In this sense, learning *why* a candidate is standing for certain policies, rather than merely

catching *what* he or she is standing for, is perhaps the equivalent for highly aware voters of what issue position is for moderately sophisticated voters and even simpler cues are for low aware voters.

Campaigns contain a variety of information flows and media signals, not all of which are about issues. It is plausible that poorly informed voters are more susceptible to the cognitively cheap and simple information about leaders. Moderately well informed voters may respond more to information about issues, whereas well-informed voters are more likely to respond to the more complex information about arguments (Lupia and McCubbins 2000: 53-54). Well-informed voters have an incentive to search out factual information about leaders and party positions not simply because they are interested, but because that factual information is necessary to construct arguments. If election campaigns are information campaigns that 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.

These observations raise important questions about what voters should know to vote competently (Lupia and McCubbins 1998, 2000). Recent work by Bartels (1996) and Kuklinski and Quirk (2000; see also Kuklinski and Hurley 1994) showing that judgmental shortcuts do not necessarily pave the way to enlightened choices is a powerful reminder that cognitive psychologists view heuristics decision making as leading to inferior decisions. The suggestion that heuristics rules may be an inadequate substitute for basic information, such as knowledge of parties' positions, gives a stronger meaning to the results about the distribution and the incidence of information gains documented here. And, accounting for the fact that the explicit objective of most information campaigns is to reach the least favorable segments of the population (Salmon 1989), it raises even more acute questions about the efficiency of election campaigns as information campaigns.

Increasing or persistent knowledge gaps are regarded as undesirable social outcomes from a variety of vantage points. The notion that a "relative deprivation of knowledge may lead to a relative deprivation of power" is a primary concern expressed by Donoghue, Tichenor and Olien 1973: 4). And the observation made by Viswanath and Finnegan (1996: 189) that "knowledge inequalities… may lead to serious power differentials and reflect on the capacity of [social system] to serve the needs of all their members equitably" resembles Verba and Nie's (1972) worry that information and participation gaps work to the advantage of the higher-status groups. A common understanding of the benefits of widespread political information for the workings of democracy also characterizes both disciplines, as exemplified by Gaziano's (1984: 556) conclusion that "inequalities in knowledge...run counter to the fundamental assumption that an informed citizenry is essential to democracy" and Delli Carpini and Keeter's (1996: 8) comment that "information is the currency of citizenship."

These considerations underline the dual nature of campaigns and provide a larger, and more appropriate meaning, to the question "Do Campaigns Matter?" Campaigns do matter from a purely partisan perspective and the conceptualization of election campaigns as information campaigns is important for understanding *how* they matter. But campaigns also matter from the vantage point of democratic citizenship, and interpreting electoral campaigns as information campaigns is critical for understanding the information dynamics that lead to increasing knowledge gaps. The criteria for judging campaigns clearly reflect this dual perspective. 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. But those same strategies are obstacles to voters' ability to make enlightened choices (Page 1978: 187; Butler and Kavanagh 1988: 277). Campaigns matter, in our view, because they are unique opportunities to "lift the bottom" (Delli Carpini and Keeter

1996: 280, 287) and to bring voters back in (Cappella and Jamieson 1997: 241). The challenge is to determine why most campaigns fall short of these objectives and why, as Butler and Kavanagh suggest (1997), campaigns are rarely great educational experiences.

NOTES

[1] It is worth restating *Voting*'s (1954: 308) famous quotation: "The democratic citizen, according to Berelson, Lazarsfeld and McPhee, is expected to be well informed about political affairs. He is supposed to know what the issues are...what the relevant facts are, what alternatives are proposed, [and] what the likely consequences are."

[2] In their original formulation, Tichenor, Donoghue and Olien (1970) do not distinguish between knowledge and information. Lupia and McCubbins (2000: 52) argue that knowledge refers to the ability to make predictions whereas information refers to data. For the purposes of this article, we use the terms interchangeably.

[3] The general point by Tichenor, Donoghue and Olien (1970: 170) that "media coverage tends to wane before the knowledge gap closes" prompted Moore (1987: 198) to consider longer campaigns as a solution to allow low-educated voters more time to learn about issues.

[4] The generality of hypothesis 2d rests on the assumption that the circumstances conducive to decreasing knowledge gaps (e.g., the occurrence of "ceiling effects"; see Ettema and Kline 1977, and Mendelsohn and Cutler 2000) are infrequent during electoral campaigns.

[5] For some voters, acquiring new information may be decisive. Consider the case of voters who support the Conservatives but who are opposed to tax cuts and unaware that the party is proposing a

10% tax cut. Those voters learning this new information may reconsider their vote preference, or decide to change their vote. For other well informed voters making "reasoned choices" (Lupia and McCubbins 2000), this additional information will come as no surprise and so would not induce a vote change.

[6] Our expectation about the low aware voters is consistent with Khazee's (1981: 517) observation that for the poorest among the information poor, "information enters [their] cognitive space having undergone little or no interpretation". This perspective explains why we conjecture that the rival hypothesis that exposure to information flows produces high voting instability among low aware voters (Converse 1962; Zaller 1992) holds primarily for pieces of information (scandals, events, leaders) presenting clear, simple and direct implications in terms of leader and party evaluations. We consider the question of the sensitivity of the various groups of voters to different forms of information gains in the conclusion.

[7] The data for the CES 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. A total of 3,949 interviews were conducted, approximately 110 per day of the campaign using a rolling cross-section strategy. The total sample was broken down into 36 sub-samples with a new sub-sample being released each day of the campaign. Random digit dialing was used to select households, and the birthday selection method was used to select respondents. The response rate was 59 percent. The post-election survey was conducted with respondents to the campaign survey in the eight weeks after the election. A total of 3,170 persons, 80

percent of the campaign survey respondents, were re-interviewed. Because the questions on the New Democratic Party's and the Reform Party's positions were only introduced into the campaign wave questionnaire on May 3rd, the period analyzed is limited to the last four weeks of the campaign (from May 3 to June 1) and the definition of the weeks (from the first to the fourth) thus corresponds to the last four weeks of the election campaign. This means that the number of days for the analysis of chronological series is 30, and the total sample for these 30 campaign days is 3467. Separate analyses of the Conservative Party's position on taxes over all 36 campaign days in no way modify any of the conclusions. These results are available upon request.

[8] The complete text of all the questions used is reported in the Appendix.

[9] Two parties are excluded from the battery used here. The first of these is the Bloc Québécois, a single issue party calling for Quebec sovereignty. Because the Bloc runs candidates only in Quebec, this party's role is essentially that of opposition. This necessarily limits the diffusion and penetration of its positions on issues other than sovereignty, even among its own members (Nadeau et al. 2000). The Liberal Party of Canada, the incumbent governing party, led a prudent campaign based more on its record than on clear positions on the issues. To account for the partisan bias of the indicators, variables measuring the party identification of respondents were introduced in a systematic manner throughout the analysis.

[10] For a recent assessment showing the limits of education as an indicator of cognitive capacity, see Price (1999).

[11] Because Paul Martin was the Finance Minister during the entire tenure of the incumbent government (from 1993 to 1997), and had a high profile during Canada's vigorous deficit-cutting years, it is reasonable to suppose that knowledge of his name taps general specific information rather than campaign-specific awareness. Weak information gains about Martin during the campaign confirm this interpretation. See Nadeau and Niemi (1999) concerning the visibility of the Finance Minister in parliamentary contexts.

[12] These questions vary in their degree of difficulty for respondents. The high percentage capable of identifying Bill Clinton (84%), higher even than for the provincial premiers (77%) illustrates the high visibility of the United States in the Canadian media. The questions on Kim Campbell and Paul Martin were more difficult; about two fifths of voters identified them correctly.

[13] Following Zaller (1991: 134, Table 1) and Price and Zaller (1996: 30, Table 3), Tables A1 and A2 are included to check on rival measures of determinants of information gains. The similarity between the patterns observed in A1 and in Zaller's work is reassuring and leads us to conclude, following Zaller (1991: 134), that if "information performs... as the best measure of political awareness, the results in Table 1 will make it difficult to claim that information's success is due to the weakness of the competing measures." The matrix of correlations in A2 is also reassuring. First, note the highest correlation between information about the issues and the different measures of reception of this information is in fact the one linking respondents' general stock of information to the scale of knowledge on issues (0.47). Second, the overall pattern of correlations, the strong links among the cluster of campaign variables (interest and media exposure), the relatively loose tie between these variables and education and the

direct links between GSI and both measures of ability (education) and motivation (interest and exposure) also boost our confidence about the validity of our measure of voters' level of awareness.

Table A1. Comparison of Rival Measures of Political Awareness

	Score on the battery of general information stock				
	0 / 1	2	3	4	4 to 0 / 1 DIFF
Education	.49	.55	.60	.65	.16
Interest	.45	.48	.58	.66	.21
TV exposure	.36	.41	.51	.58	.22
Newspapers	.26	.33	.42	.53	.27

Table A2. Correlation Matrix: Determinants of Information Gains

	CSI	*GSI*	*School*	*Interest*	*TV*	*Newspapers*
CSI	1.00					
GSI	.47	1.00				
School	.25	.30	1.00			
Interest	.31	.30	.12	1.00		
TV	.30	.29	.07	.66	1.00	
Newspapers	.28	.32	.16	.54	.54	1.00

[14] The analysis was led by two coders and the reliability level is .90. All the material used in this content analysis is available upon request.

[15] Reports of the electoral race variety are those which give priority to campaign activities, party leaders or candidates, polls, election advertisements, races in certain regions, or any other event linked to the unfolding of the contest between the political parties. News of the issue variety treats elections in terms of themes, debates, and the positions defended or promoted by the various parties or by voters. These news items take a particular journalistic form; they tend more towards the feature, or the in-depth report on a particular theme, than towards the election column.

[16] The results show a large convergence between the broadcast patterns of the different networks. These detailed results are also available upon request.

[17] As Table A3 below shows, the signal for the NDP was not only weak overall but mostly limited to the beginning of the campaign. Unemployment never dominated the agenda; it ran second early in the campaign but became nearly invisible thereafter. By contrast, the Conservatives' position on taxation dominated the first two weeks of the campaign and was still ahead in terms of cumulative mentions after the third week, but the coverage of taxation never approached the visibility of the Reform Party's position on national unity. An account of the campaign dynamics at the origins of the unequal visibility of parties and issues in the 1997 Canadian election can be found in Nevitte et al. (2000).

Table A3. Issue Coverage During the 1997 Election

	Week 1	Week 2	Week 3	Week 4	Week 5
Unity (Reform)	0	4	10	21	26
Taxation (PC)	8	9	5	3	1
Unemployment (NDP)	4	1	3	1	1

[18] OLS regression analyses using GSI and CSI as dependent variables and time as the independent variable also confirm hypothesis 1a and 1b (see below).

GSI = .47 (.02)** + .03 (.03) ; R2 = .02 ; N =30.

CSI = .24 (.01)** + .10 (.02)** ; R2 = .44 ; N =30.

[19] All the analyses in this section have been redone using logistic regression because the dependent variable is dichotomous (Menard 1995). The results are barely affected by using this method. We use Ordinary Least Squares here to simplify the presentation.

[20] The non-significant coefficient for the newspaper variable must be interpreted in context. When general political information is regressed on the various measures of information reception (education, interest in the campaign, attention to televised and published news), newspaper exposure turns out to be the most strongly linked to awareness.

[21] We also examined the possibility that the knowledge gap phenomenon can manifest itself through other variables by adding a series of interactive variables between time and the other usual determinants of information (education, interest, attention to media) in the specification of column (1). Almost all of these interaction terms were of the expected sign but not significant.

[22] Detailed analyses show that the only group that was significantly more knowledgeable about the NDP's position was formed of the respondents belonging to the fourth quartile in terms of general political information. This confirms that weak coverage has made that information a highly specialized piece of information.

[23] Panel analyses show that information gains about the widely covered issue of national unity account for almost three-fourths (73%) of the learning gains of the least aware voters and for less than one-third (31%) for the more knowledgeable voters (55 and 36% for the intermediate groups, respectively).

These numbers thus confirm that the information gains of respondents at the bottom of the information scale are not only limited in quantity but also in diversity. This may explain, in part, why information gains do not have a decisive impact in that group, knowing a party's position being less meaningful (and helpful) if the policies of the other contenders remain unknown.

[24] Two things increase our confidence that the nil finding for the low aware group is a statistical artifact due to higher levels of guessing among that group. First, our measure of information gains includes a correction for guessing. Second, more detailed analyses show that the amount of guessing is not substantially higher among the low aware group.

APPENDIX: Description of variables

Dependent variables:

Vote Change (VC) = coded 1 if respondent changed his vote between the campaign interview and the post-election interview, coded 0 if his actual vote was the same as his vote intention.

Campaign-Specific Information (CSI) = added score (standardized from 0 to 1) on three questions related to campaign promises for which the respondent mentioned the right party (coded 1), mentioned it with another party (coded 0.5), or did not mention the right party at all or didn't remember (coded 0, including no opinions): "Do you happen to remember which party is promising to lower personal income taxes by ten percent ?" (Conservatives); "...is promising to cut unemployment in half by year 2001?" (NDP); "...is against recognizing Quebec as a distinct society?" (Reform).

Independent variables:

Age = actual age of respondent (continuous variable divided by 100).

Male = coded 1 for male, coded 0 for female.

School = a 11-point scale running from zero (no schooling) to 1 (professional degree or Ph.D.).

Political Interest = a 10-point scale running from zero (no interest) to 1 (a great deal of interest) using a question measuring respondent's interest in the election campaign.

TV News = a 10-point scale running from zero (no attention at all) to 1 (a great deal of attention) using a question measuring respondent's attention to news about the election campaign on TV.

Newspapers = a 10-point scale running from zero (no attention at all) to 1 (a great deal of attention) using a question measuring respondent's attention to news about the election campaign in the newspapers.

Party ID: strength = dummy variable coded 1 if respondent feels a very strong or a fairly strong identification with a political party, coded 0 otherwise.

Party ID: Reform, PC, NDP and Bloc = four dummy variables coded 1 if respondent identifies with the given party, coded 0 otherwise.

Information Gains (IG) = the difference (standardized from 0 to 1, with negative values recoded 0) between the CSI index and the same index as measured in the post-election survey using the same three questions: "Do you happen to remember which party promised to lower personal income taxes by ten percent?"; "...promised to cut unemployment in half by year 2001?"; "...was against recognizing Quebec as a distinct society?"

General Stock of Political Information (GSI) = a 4-point scale (standardized from 0 to 1) adding scores on four questions of factual knowledge (each coded 1 if respondent gave the right answer, and 0 if he did not or if he didn't know): "We would like to see how widely known some political figures are. Do you recall the name of the President of the United States? The Minister of Finance of Canada? The Premier of [your province]? The first woman to be Prime Minister of Canada?"

Time = day of the campaign in ascending order, standardized to run from 0 (first day of the campaign) to 1 (last day of the campaign).

REFERENCES

Ansolabehere, Stephen, Roy Behr, and Shanto Iyengar. 1993. *The Media Game: American Politics in the Television Age*. New York: Macmillan.

Bartels, Larry M. 1996. "Uninformed Votes: Information Effects in Presidential Elections." *American Journal of Political Science* 40: 194-230.

Berelson, Bernard R., Paul F. Lazarsfeld, and William N. McPhee. 1954. *Voting: A Study of Opinion Formation in a Presidential Campaign*. Chicago: University of Chicago Press.

Butler, David, and Dennis Kavanagh. 1988. *The British General Election of 1987*. London: Macmillan Press.

Butler, David, and Dennis Kavanagh. 1997. *The British General Election of 1997*. London: Macmillan Press.

Cappella, Joseph N., and Kathleen Hall Jamieson. 1997. *Spiral of Cynicism: The Press and the Public Good*. Oxford: Oxford University Press.

Chaffee, Steven H., Xinshu Zhao, and Glenn Leshner. 1994. "Political Knowledge and the Campaign Media of 1992." *Communication Research* 21: 305-24.

Chaffee, Steven H., and Stacey Frank Kanihan. 1997. "Learning about Politics from the Mass Media." *Political Communication* 14: 421-30.

Converse, Philip E. 1962. "Information Flow and the Stability of Partisan Attitudes." *Public Opinion Quarterly* 26: 578-99.

Delli Carpini, Michael X., and Scott Keeter. 1993. "Measuring Political Knowledge: Putting First Things First." *American Journal of Political Science* 37: 1179-1206.

Delli Carpini, Michael X., and Scott Keeter. 1996. *What Americans Know about Politics and Why It Matters*. New Haven, Conn.: Yale University Press.

Donoghue, George A., Phillip J. Tichenor, and Clarice N. Olien. 1973. "Mass Media Functions, Knowledge and Social Control." *Journalism Quarterly* 50: 652-59.

Ettema, James S., and F. Gerald Kline. 1977. "Deficits, Differences, and Ceilings: Contingent Conditions for Understanding the Knowledge Gap." *Communication Research* 4: 179-202.

Ettema, James S., James W. Brown, and Russell V. Luepker. 1983. "Knowledge Gap Effects in a Health Information Campaign." *Public Opinion Quarterly* 47: 516-27.

Gaziano, Cecilie. 1983. "Knowledge Gap: An Analytical Review of Media Effects." *Communication Research* 10: 447-86.

Gaziano, Cecilie. 1984. "Neighborhood Newspapers, Citizen Groups and Public Affairs Knowledge Gaps." *Journalism Quarterly* 61: 556-66, 599.

Gaziano, Cecilie, and Emanuel Gaziano. 1996. "Theories and Methods in Knowledge Gap Research Since 1970." In *An Integrated Approach to Communication Theory and Research*, ed. M.B. Salwen and D.W. Stacks. Mahwah, NJ: Lawrence Erlbaum, 127-43.

Gelman, Andrew, and Gary King. 1993. "Why Are American Presidential Polls So Variable When Votes Are So Predictable?" *British Journal of Political Science* 23: 409-51.

Holbrook, Thomas. 1996. *Do Campaigns Matter?* Thousand Oaks, CA: Sage.

Hornik, R.C. 1989. "The Knowledge-Behavior Gap in Public Information Campaigns: A Development Communication View." In *Information Campaigns: Balancing Social Values and Social Change*, ed. Charles T. Salmon. Newbury Park, CA: Sage, 113-38.

Hyman, H.H., and P.B. Sheatsley. 1947. "Some Reasons Why Information Campaigns Fail." *Public Opinion Quarterly* 11: 412-23.

Johnston, Richard, André Blais, Henry E. Brady, and Jean Crête. 1992. *Letting the People Decide: Dynamics of a Canadian Election*. Montréal: McGill-Queen's University Press.

Johnston, Richard, André Blais, Elisabeth Gidengil, and Neil Nevitte. 1996. *The Challenge of Direct Democracy: The 1992 Canadian Referendum*. Montréal: McGill-Queen's University Press.

Just, Marion, Ann Crigler, Dean Alger, Timothy Cook, Montague Kern, and Darrell West. 1996. *Crosstalk: Citizens, Candidates, and the Media in a Presidential Campaign*. Chicago: Chicago University Press.

Khazee, Thomas A. 1981. "Television Exposure and Attitude Change." *Public Opinion Quarterly* 45: 507-18.

Kuklinski, James H., and Norman L. Hurley. 1994. "On Hearing and Interpreting Political Messages: A Cautionary Tale of Citizen Cue-Taking." *Journal of Politics* 56: 729-51.

Kuklinski, James H., and Paul J. Quirk. 2000. "Reconsidering the Rational Public: Cognition, Heuristics, and Mass Opinion." In *Elements of Reason: Cognition, Choice, and the Bounds of Rationality*, ed. Arthur Lupia, Mathew D. McCubbins and Samuel L. Popkin. Cambridge: Cambridge University Press, 153-82.

Kwak, Nojin. 1999. "Revisiting the Knowledge Gap Hypothesis: Education, Motivation, and Media Use." *Communication Research* 26: 385-413.

Luskin, Robert C. 1990. "Explaining Political Sophistication." *Political Behavior* 12: 331-61.

Lupia, Arthur, and Mathew D. McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What They Need to Know?* Cambridge: Cambridge University Press.

Lupia, Arthur, and Mathew D. McCubbins. 2000. "The Institutional Foundations of Political Competence: How Citizens Learn What They Need to Know." In *Elements of Reason: Cognition, Choice, and the Bounds of Rationality*, ed. Arthur Lupia, Mathew D. McCubbins and Samuel L. Popkin. Cambridge: Cambridge University Press, 47-66.

Marcus, George E., and Michael B. MacKuen. 1993. "Anxiety, Enthusiasm, and the Vote: The Emotional Underpinnings of Learning and Involvement in Presidential Campaigns." *American Political Science Review* 87: 672-85.

McGuire, William J. 1968. "Personality and Susceptibility to Social Influence." In *Handbook of Personality Theory and Research*, ed. E.F. Borgatta and W.W. Lambert. Chicago: Rand-McNally, 1130-1187.

McGuire, William J. 1969. "The Nature of Attitudes and Attitude Change." In *Handbook of Social Psychology*, ed. Gardner Lindsey and Elliot Aronson. Reading, MA: Addison-Wesley, 136-314.

Menard, Scott. 1995. *Applied Logistic Regression Analysis*. Sage University Paper series on Quantitative Applications in the Social Sciences, 07-106. Thousand Oaks, CA: Sage.

Mendelsohn, Matthew. 1993. "Television's Frames in the 1988 Canadian Election*." Canadian Journal of Communication* 18: 149-171.

Mendelsohn, Matthew, and Fred Cutler. 2000. "The Effect of Referendums on Democratic Citizens: Information, Politicization, Efficacy and Tolerance." *British Journal of Political Science* 30: 685-701.

Moore, David W. 1987. "Political Campaigns and the Knowledge-Gap Hypothesis." *Public Opinion Quarterly* 51: 186-200.

Nadeau, Richard, Richard G. Niemi, and Jeffrey Levine. 1993. "Innumeracy about Minority Populations." *Public Opinion Quarterly* 57: 332-47.

Nadeau, Richard, and Richard G. Niemi. 1995. "Educated Guesses: The Process of Answering Factual Knowledge Questions in Surveys." *Public Opinion Quarterly* 59: 323-46.

Nadeau, Richard, and Richard G. Niemi. 1999. "Rating the Chancellors and their Budgets." *Political Studies* 47: 857-76.

Nadeau, Richard, André Blais, Elisabeth Gidengil, and Neil Nevitte. 2000. "Perceptions of Party Competence in the 1997 Election." In *Party Politics in Canada*, 8th edition, ed. Hugh Thorburn and Alan Whitehorn. Toronto: Prentice-Hall.

Neuman, W. Russell. 1986. *The Paradox of Mass Politics: Knowledge and Opinion in the American Electorate.* Cambridge: Harvard University Press.

Nevitte, Neil, André Blais, Elisabeth Gidengil, and Richard Nadeau. 2000. *Unsteady State: The 1997 Canadian Federal Election*. Don Mills: Oxford University Press.

Norris, Pippa, John Curtice, David Sanders, Margaret Scammel, and Holli A. Semetko. 1999. *On Message: Communicating the Campaign*. London: Sage.

Norris, Pippa. 2000. *A Virtuous Circle: Political Communications in Postindustrial Societies*. Cambridge: Cambridge University Press.

Page, Benjamin I. 1978. *Choices and Echoes in Presidential Elections: Rational Man and Electoral Democracy*. Chicago: Chicago University Press.

Popkin, Samuel L. 1994. *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*, 2nd edition. Chicago: University of Chicago Press.

Price, Vincent. 1999. "Political Information." In *Measures of Political Attitudes*, ed. John P. Robinson, Philip R. Shaver, and Laurence S. Wrightsman. New York: Academic Press.

Price, Vincent, and John Zaller. 1993. "Who Gets the News? Alternative Measures of News Perceptions and their Implications for Research." *Public Opinion Quarterly* 57: 133-64.

Price, Vincent, and John Zaller. 1996. "Measuring Media Exposure and Gauging its Effects in General Population Surveys." Presented at the annual meetings of the American Political Science Association, San Francisco.

Salmon, Charles T. (ed.). 1989. *Information Campaigns: Balancing Social Values and Social Change*. Newbury Park, CA: Sage.

Star, Shirley, and Helen M. Hughes. 1950. "Report of an Educational Campaign: The Cincinnati Plan for the United Nations." *American Journal of Sociology* 55: 389-97.

Taras, David. 1993. "The Mass Media and Political Crisis: Reporting Canada's Constitutional Struggles." *Canadian Journal of Communication* 18: 131-148.

Tichenor, Phillip J., George A. Donoghue, and Clarice N. Olien. 1970. "Mass Media Flow and Differential Growth in Knowledge." *Public Opinion Quarterly* 34: 159-70.

Verba, Sidney, and Norman H. Nie. 1972. *Participation in America: Political Democracy and Social Equality.* New York: Harper and Row.

Viswanath, K., and John R. Finnegan, Jr. 1996. "The Knowledge Gap Hypothesis: Twenty-Five Years Later." In *Communication Yearbook 19*, ed. B.R. Burleson. Thousand Oaks, CA: Sage, 187-227.

West, Darrell M. 1997. *Air Wars: Television and Advertising in Election Campaigns, 1952-1996*. Washington: Congressional Quarterly.

Zaller, John. 1989. "Bringing Converse Back In: Modeling Information Flow in Political Campaigns." In *Political Analysis*, ed. James Stimson. Chicago: University of Michigan Press, 181-234.

Zaller, John. 1991. "Political Awareness, Elite Opinion Leadership, and the Mass Survey Response." *Social Cognition* 8: 125-153.

Zaller, John. 1992. *The Nature and Origins of Mass Opinion*. Cambridge: Cambridge University Press.

Zaller, John. 1996. "The Myth of Massive Media Impact Revived: New Support for a Discredited Idea." In *Political Persuasion and Attitude Change*, ed. Diana C. Mutz, Paul M. Sniderman, and Richard A. Brody. Ann Arbor: University of Michigan Press, 17-78.

Zhao, Xinshu, and Steven H. Chaffee. 1995. "Campaign Advertisements versus Television News as Sources of Political Issue Information." *Public Opinion Quarterly* 59: 41-65.

Table 1. Content Analysis of TV News

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

Source: *Canadian Election Study*, 1997 (content analysis).

Table 2. A Regression Analysis of the Evolution of the Knowledge Gap During the 1997 Campaign

	CSI			Reform			PC			NDP		
	b	S.E.	â	b	S.E.	â	b	S.E.	â	b	S.E.	â
Constant	-.12	(.03)**		-.22	(.05)**		-.12	(.05)*		-.03	(.04)	
Age	.12	(.04)**	.06	.11	(.06)*	.04	.23	(.06)**	.08	.05	(.04)	.03
Male	.07	(.01)**	.12	.09	(.02)**	.09	.10	(.02)**	.11	.03	(.01)*	.04
Schooling	.16	(.03)**	.10	.37	(.05)**	.14	.08	(.05)	.03	.04	(.04)	.02
Party ID strength	-.02	(.01)*	-.04	-.01	(.02)	-.01	-.01	(.02)	-.01	-.04	(.01)**	-.06
Interest	.09	(.03)**	.09	.14	(.05)**	.07	.10	(.05)*	.06	.07	(.03)*	.06
TV News	.12	(.03)**	.12	.14	(.04)**	.08	.15	(.04)**	.09	.06	(.03)	.05
Newspapers	.02	(.02)	.02	.08	(.04)*	.05	-.03	(.04)	-.02	.02	(.03)	.01
GSI	.19	(.03)**	.23	.38	(.05)**	.27	.15	(.05)**	.11	.07	(.04)*	.08
Time	.01	(.03)	.01	.08	(.05)	.05	-.06	(.05)	-.04	-.02	(.04)	-.01
Time × GSI	.14	(.05)**	.13	.09	(.08)	.05	.33	(.08)**	.19	.01	(.06)	.01
Adjusted R²		.27			.25			.14			.03	
N =		*2412*			*2398*			*2410*			*2400*	

Note: See the Appendix for the definition of the variables (*$p < .05$; ** $p < .01$).

Source: *Canadian Election Study*, 1997.

**Table 3. A Regression Analysis of the Impact of Information Gains
on Vote Volatility During the 1997 Campaign**

	All	Level of GSI			
		1	*2*	*3*	*4*
Constant	.35 (.03)**	.42 (.06)**	.29 (.05)**	.30 (.05)**	.24 (.04)**
Time	-.13 (.03)**	-.15 (.08)*	-.11 (.07)	-.11 (.06)*	-.14 (.05)**
Party ID: strength	-.15 (.02)**	-.27 (.05)**	-.13 (.04)**	-.14 (.04)**	-.10 (.03)**
GSI	-.07 (.03)**	—	—	—	—
Information gains	.06 (.03)*	.04 (.13)	.20 (.10)*	.16 (.08)*	-.09 (.07)
Adjusted R²	.06	.13	.04	.04	.05
N =	*1366*	*228*	*316*	*414*	*413*

Note: Entries are unstandardized OLS regression coefficients with standard errors in parentheses

   (* $p < .05$; ** $p < .01$). See the Appendix for the definition of the variables.

Source: *Canadian Election Study*, 1997.

Figure 1. Expected Evolution of CSI and GSI

Time
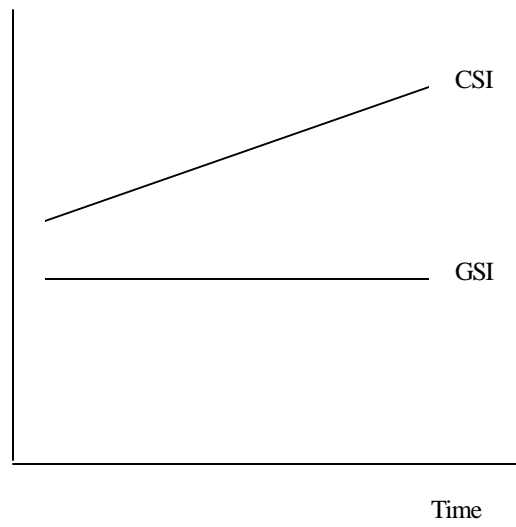
**Figure 2. Expected Evolution of Information Gains Under Various Conditions
of Awareness and Media Coverage**
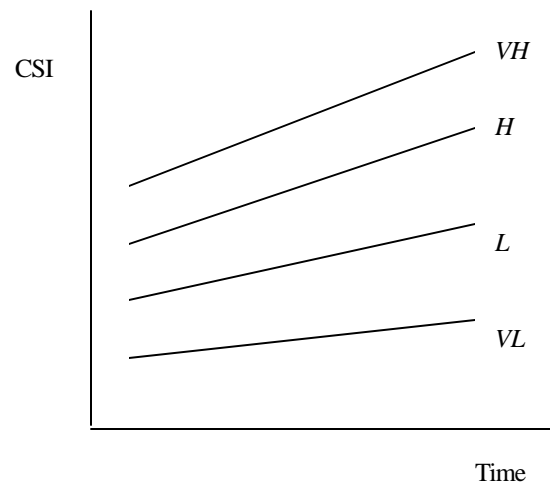
2a) High Coverage:
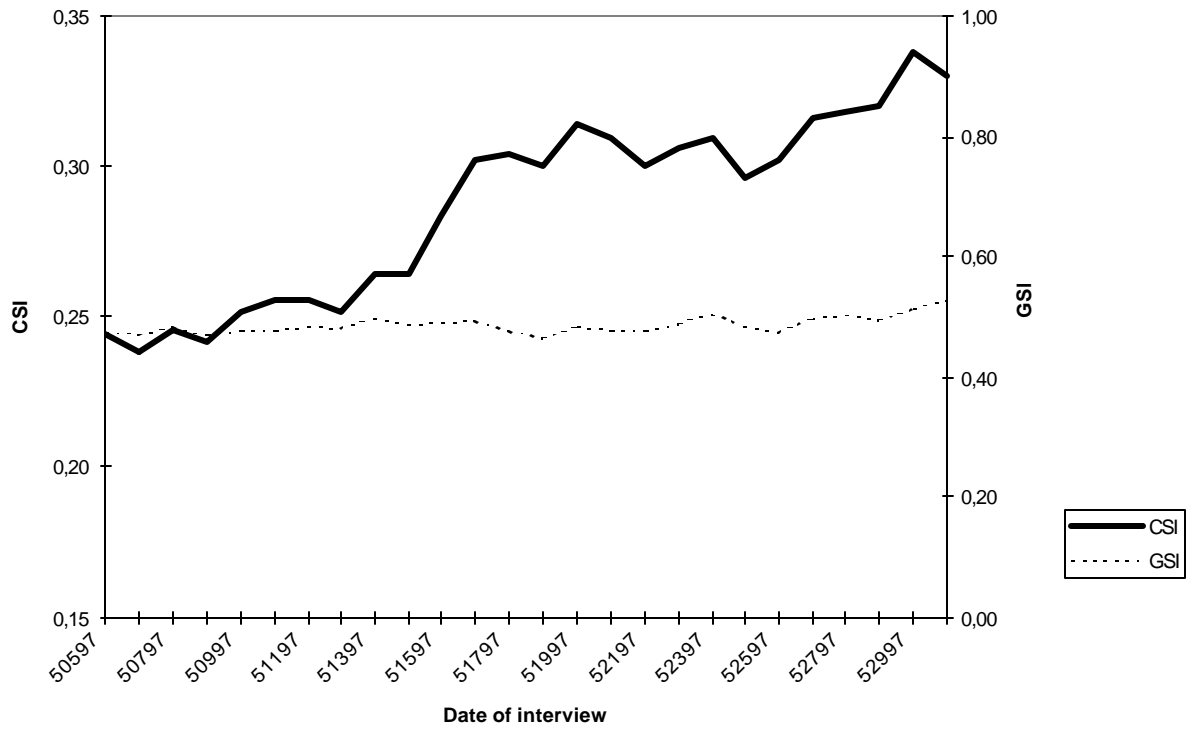
CSI

VH

H

L

VL

Time
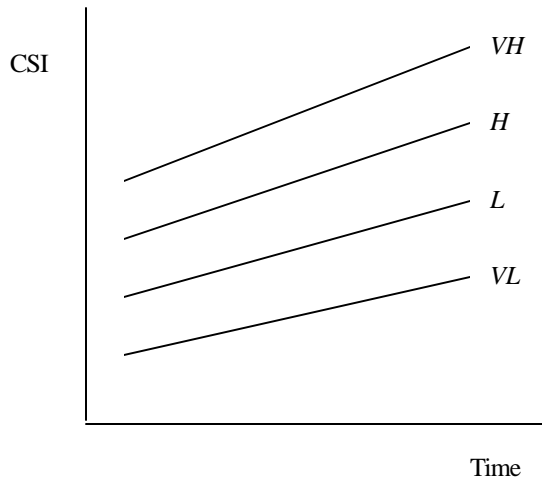
2b) Medium Coverage:

CSI

VH

H

L

VL

Time

2c) Low Coverage:

CSI

VH

H

L

VL

Time

2d) Combined:

CSI

VH

H

L

VL

Time
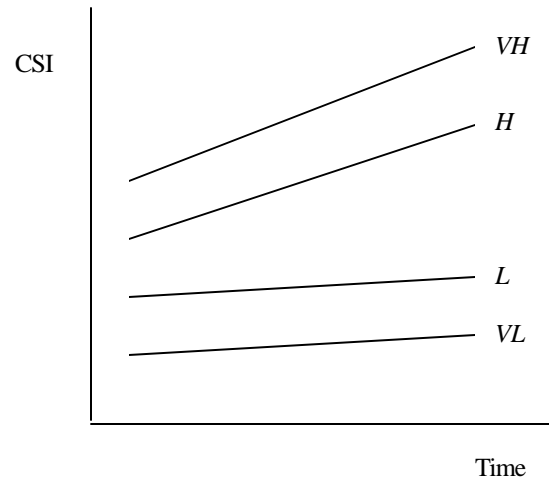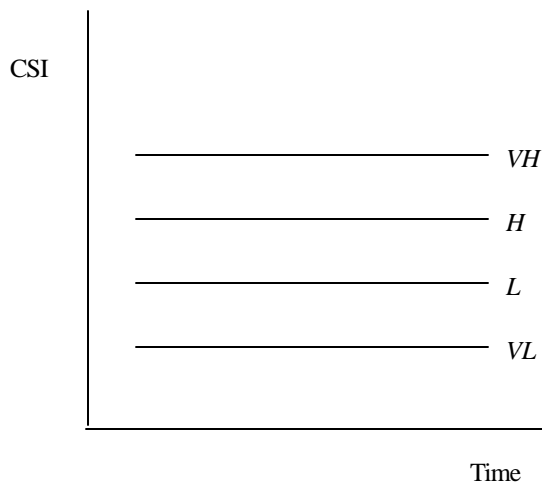
Note: VH = Very high awareness
H = High awareness
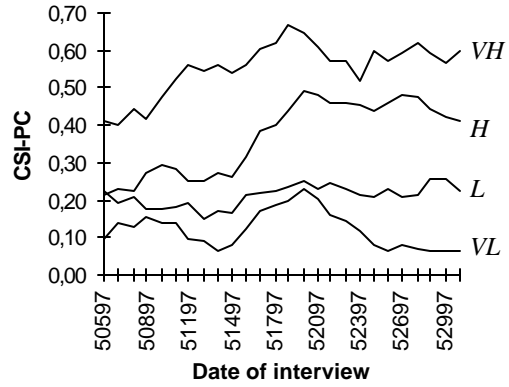*L = Low awareness*
VL = Very low awareness

Figure 3. Evolution of CSI and GSI

Figure 4. Evolution of CSI by Levels of GSI
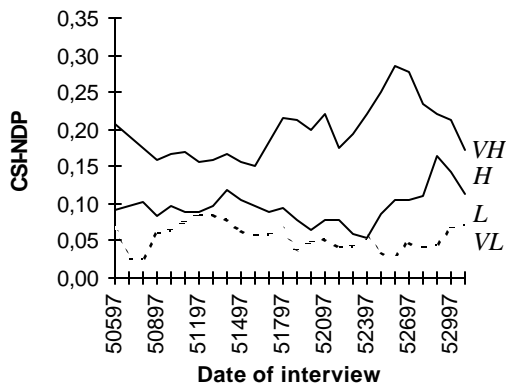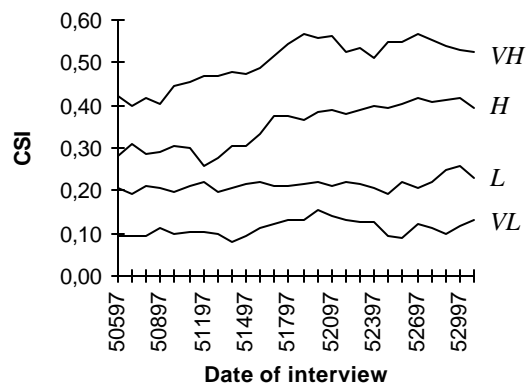**(five-day moving averages)**

4a) CSI-Reform:
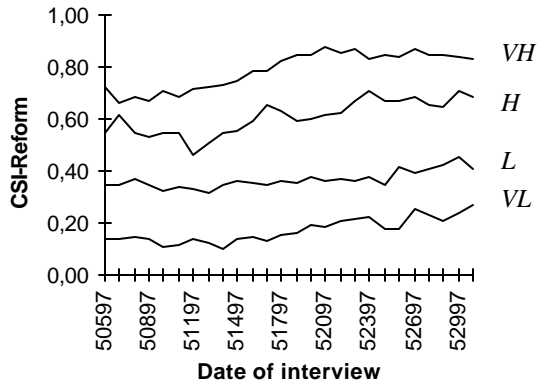
4b) CSI-PC:

4c) CSI-NDP:

4d) CSI:

Source: *Canadian Election Study*, 1997.