

## **Who Responds to Election Campaigns?**

### **The Two-Mediator Model Revisited \***

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Campaign events affect election outcomes. This claim, once unpopular, is now virtually undisputed (e.g., Johnston et al. 1992; Holbrook 1996; Johnston, Hagen and Jamieson 2004; Hillygus and Jackman 2003). But while campaign effects have been shown to be powerful and widespread, no-one would dare say that campaigns influence all voters. Interpersonal heterogeneity is evident in every form of political behavior, after all (e.g. Rivers 1988; Sniderman et al. 1991; Krosnick 1988, 1990; Bartels 1996; Miller and Krosnick 2000; Fournier et al. 2003). And election operatives direct their communication efforts as much as possible towards those voters available for conversion.

In this paper we ask, Which voters are influenced by campaign events? We suggest that existing studies of campaign effects accurately reflect the net impact of campaigns but largely ignore the potential for different responses to campaign events by different kinds of voters.<sup>1</sup> More precisely, the typically implicit assumption of homogeneity in campaign effects overestimates the influence among unaffected voters, and underestimates the influence among affected voters. This homogeneity restriction leads much past work to fail at least in part to provide a satisfying portrayal of the causal processes that drive election outcomes.

This study consequently seeks to improve our understanding of which individuals are most susceptible to campaign effects. To do so, we employ the most promising cognitive model of persuasion by new information. It conceives of attitude change resulting from a pair of mechanisms: (1) *reception* of persuasive information and (2) *acceptance* of that information. In making this distinction we draw heavily on work by Zaller (1992, 1996), as well as earlier work

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<sup>1</sup> There are some exceptions, including Zaller, 1990a, 1992, 1996; Johnston et al, 1996; Fournier et al., N.d..

by Converse (1962) and McGuire (1968, 1969).

This *two-mediator* model of attitude change has received theoretical attention, then, but its empirical implementation has been less than satisfactory. The general tendency is to use a crude simplification of the model – to modify the model operationally by combining reception and acceptance into a non-monotonic, one-mediator model, where the mediator is political sophistication, information, or education. Zaller has argued that in the context of elections this one-mediator model is inappropriate. His own statistical approach presents its own problems, however: it involves multiple functions and redundant variables, and moreover does not use dynamic data directly tapping information flow and attitude change.

Our goal below, then, is to clarify, simplify, and refine the Converse-McGuire-Zaller model, by drawing on recent theoretical and conceptual elaborations of *information* and *ambivalence*. We then test this new model on a number of campaign effects: ads, debates, media coverage, and polls. These tests provide an additional improvement in the implementation of the model – we examine a number of different campaign events, using direct measurements of campaign information as the inputs to the model. Our data are drawn from the rolling cross-section 2003 Ontario Election Study, allowing us to measure information flow and voting behaviour over a one-month election campaign.

Our results buttress recent work on campaigns by showing that the campaign did matter, which is to say that information conveyed during the campaign had an effect on individuals' voting choices. But it is also true that these effects are for the most part limited to voters who had high levels of information and who were also somewhat ambivalent – or cross-pressured – in their vote choice. Before we move to analysis, however, we review below the existing literature on election campaigns and the two-mediator model.

## Campaigns and the Cognitive Two-Mediator Model

Elections are among the most prominent features of politics. Certainly, they are the focus of the modern democratic process, and have accordingly played particularly prominent roles in democratic theory and political science research. The significance of election *campaigns* for voting behaviour – or, more precisely, of the information provided in those campaigns –has not been obvious, however. In a literature that began with an emphasis on the stability of partisan preferences and on voter inattentiveness and ignorance, it has taken a long time for researchers to answer affirmatively to the question “do campaigns matter?”.

When researchers first started to look for campaign effects, they turned to panel studies (Lazarsfeld, Berelson and Gaudet 1944; Berelson, Lazarsfeld and McPhee 1954). Very few effects were uncovered, and the conclusion that election campaigns had only minimal impacts on voters took hold and dominated the field for decades.<sup>2</sup> This paradigm has been gradually chipped away over the last twenty years, however. Cross-sectional and panel analyses of the American presidential primaries accomplished some of the grunt work to reverse the tide (e.g., Patterson 1980; Brady and Johnston 1997; Bartels 1988). But the real shift occurred when research designs moved to daily tracking—rolling cross-section surveys. This increase in the sensitivity of the measurement instrument allowed researchers to show campaigns effects are in fact quite common and often important in explaining election outcomes (e.g., Johnston et al 1992, 1994, 1996, 2004; Norris et al. 1999; Nevitte et al. 2000; Blais et al 2002).

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<sup>2</sup> The view was supported by work that showed vote choice was essentially driven by long-term factors, such as family-inherited party identification (e.g., Campbell et al. 1960), and that – both inside and outside election campaigns – voters really didn’t know very much about politics (e.g., Converse 1964).

That said, while campaign effects turn out to be relatively frequent, and often quite large, they surely do not affect all voters. This is as we should expect, given the many reports of interpersonal heterogeneity in political behavior (e.g. Rivers 1988; Sniderman et al. 1991; Krosnick 1988, 1990; Bartel 1996; Miller and Krosnick 2000; Fournier et al. 2003). Regarding campaigns in particular, research shows that people differ in their propensity for attitude change (Fournier, N.d.). Nonetheless, actual analyses of individual differences in response to campaign forces are few and far between.<sup>3</sup>

### **The Existing Two-Mediator Model**

How do we specify a model of susceptibility to campaign effects? A promising avenue is the cognitive two-mediator model. The model is founded on the information-processing logic of multiple mediation. For a communication to register, several steps must take place: most notably exposure, attention, comprehension, yielding, memorizing, retrieval, activation (McGuire 1999). In most theory on the matter, this process tends to be simplified into two key dimensions: (1) reception, and (2) acceptance.

It turns out that the majority of individual-difference variables have cross-cutting relationships with these two dimensions (Converse 1962; McGuire 1968, 1969). For instance, self-esteem and sophistication both increase the likelihood of receiving a message, but also decrease the likelihood of accepting it. Note that these compensatory relations help account for some of the difficulties in identifying individual-level campaign affects: a factor that renders an individual more vulnerable to persuadability through one process may simultaneously insulate her through another (see McGuire 1968; Miller and Kronick 2000; Zaller 1992).<sup>4</sup>

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<sup>3</sup> See footnote 1 for exceptions.

<sup>4</sup> Research on social influence has repeatedly encountered the conundrum of contrary findings. For instance, in social psychology, the relationship between self-esteem and influenceability is

How does one specify compensatory influences empirically? Often, the solution is to rely on a non-monotonic mediating relationship using one variable (McGuire 1968, 1969). Here is an illustration (drawing on Converse 1962; Zaller 1992, 1996): Those people who are attentive to politics are more likely to be exposed to potentially persuasive information. Since they also tend to possess relatively larger and more interconnected belief systems, however, they should also be better equipped to withstand persuasive pressures. They possess the background information to interpret messages in light of relationships between their own stronger prior considerations and the source of the message, and are thus better able to recognize political messages as self-serving (Lupia and McCubbins 1998). Conversely, individuals with a more limited understanding of politics ought to be more vulnerable to attempts at modifying their opinions because they lack the contextual information to connect message to source, or the source to their own values. They are less likely to encounter persuasive messages in the first place, however. In sum, since the probabilities of reception to and acceptance of persuasive attempts are not combined at high levels among these two groups, attitude change should not be likely among either the most or least sophisticated. Rather, people with moderate levels of sophistication should be the most susceptible – they are more likely to both receive *and* accept persuasive communications.

One can hardly criticize the use of political sophistication as a source of individual differences in political attitude change. The logic is compelling. Moreover, in addition to the priming studies cited earlier, sophistication has proven to be an important discriminator of various forms of political cognition and behavior: notably agenda-setting and framing effects

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found to be both positive (McGuire and Ryan 1955 [cited in McGuire 1999]) and negative (Janis 1954). In political science, there is evidence of priming – the influence of media coverage on the determinants of decisions – being stronger among the less politically sophisticated (Iyengar, Kinder, Peters and Krosnick 1984; Krosnick and Kinder 1990), being stronger among the most sophisticated (Krosnick and Brannon 1993; Miller and Krosnick 2000), and being unrelated to sophistication (Iyengar and Kinder 1987).

(Iyengar and Kinder 1987; Nelson, Oxley and Clawson 1997; Miller and Krosnick 2000), information processing (Fiske et al. 1990; McGraw et al. 1990; McGraw and Pinney 1990; McGraw and Steenbergen 1995), interpersonal heterogeneity in decision making (Stimson 1975; Sniderman et al. 1991; Johnston et al. 1996; Fournier 2000), and deviations from enlightened opinions (Bartels 1996; Althaus 1998; Luskin et al. 2002).

Yet this work reduces what is in theory a two-mediator model to a one-mediator, albeit non-monotonic, model. Zaller's landmark research (1990, 1992, 1996) has partly countered this trend. Though his conceptual and empirical refinements of the Converse-McGuire framework are numerous, two contributions are especially noteworthy. First, he truly attempts to operationalize a two-step process. Recognizing that reception and acceptance are two separate stages, his tests using individual-level data specify a separate function for each. His models thus have political awareness influencing both the probability of receiving a message and the probability of accepting it. Second, Zaller's analysis implies that a one-measure, non-monotonic mediator is particularly inappropriate and even misleading for the analysis of election campaigns. He suggests that we need more than a measure of political awareness to adequately model acceptance of new information in high-intensity election campaigns. Awareness is not necessary to enable voters to interpret the new information in light of their own values – what matters in campaigns is “partisan” and “inertial” resistance to new information, and these are not measured by political awareness. Consequently, Zaller's acceptance function includes measures of both *partisan resistance* – a partisan bias in information processing – and *inertial resistance* – a dilution of new information in a “pre-existing mass of stored partisan considerations” (1992: 237). The former is measured by strength of partisanship. The latter is measured by the balance of party likes and dislikes. Zaller finds that both individually, as well as in combination, mediate

the effect of awareness in electoral campaigns (1992).<sup>5</sup>

The problem is that Zaller's approach leads to complex, unwieldy empirical models. Consider, for instance, his model of two-sided information flows, which pertains to support for the Vietnam war (1992: 199). It includes awareness entered directly three times, as well as awareness interacting with other variables in three instances. The resulting multicollinearity makes interpretations rather tenuous. Even after a constrained form is estimated, only two of the six awareness terms reach statistical significance. While much more manageable, the electoral choice models are still not user-friendly (1992: Chapter 10).

### **The Two-Mediator Model: Towards a New Specification**

Part of the complexity in Zaller's models stems from the fact that he does not examine the impact of actually measured information or events on individual opinions, but performs mainly indirect analyses of collective attitude change. We attempt a more direct test of the Zaller model here. Specifically, we take Zaller's model as our point of departure, simplify it, and test a two-mediator model on data very different from those available to Zaller.

The first mediator – *reception* – is operationalized simply as a voters' level of political information. Zaller has demonstrated that political information is a much stronger predictor of news reception than media use and education (Price and Zaller 1993; Zaller 1996). Information surpasses indicators of news consumption because reception is more than a question of exposure and attention. Comprehension is also key, and this is more probable among knowledgeable citizens. Thus, reception of a political message is more likely to occur among a person that possesses a larger store of knowledge about politics. And this should be no different in the

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<sup>5</sup> Zaller finds that only at high levels of awareness is there a difference by partisan strength/inertia in the acceptance of messages. The group he measures as “disaffected partisans” (weak partisans with little inertia) accept the messages at all levels of political information while the “strong partisans” (strong partisans with high inertia) do not (Zaller 1992, fig 10.1, p. 225).



campaign frenzy than it is in more placid, normal periods in the electoral cycle.

Where the *acceptance* dimension is concerned, we believe that a simpler, more direct measure is readily available: ambivalence. Ambivalence refers to the extent to which the elements people take into account when making a decision push toward opposing positions simultaneously, in contrast to elements entirely consistent with a single position (Zaller 1992; Zaller and Feldman 1992; Alvarez and Brehm 1995, 1997; Lavine 2001).<sup>6</sup> Even many well-informed, attentive voters have conflicts among the attitudes that contribute to their decision. To use a now-dated term, they are cross-pressured (Lazarsfeld et al. 1944; Berelson et al. 1954; A. Campbell et al. 1960; J. Campbell 2000) – they are closer to indifference among choices and therefore more likely to have their choice affected by new information (Glasgow 2004). Past work shows that ambivalence is related to attitude change. Ambivalent individuals tend to exhibit greater variability in policy preferences (Alvarez and Brehm 1995), to change their issue positions more frequently over time (Zaller 1992; Zaller and Feldman 1992) or in response to counterarguments (Fournier 2003), and to exhibit instability in their vote choice during campaigns (Lavine 2001; Fournier, N.d.).

The logic regarding ambivalence is as follows: Because of their lopsided prior information, non-ambivalent individuals are likely to recognize messages that are at odds with their initial position and to reject them. Because ambivalent citizens have a mixed set of ideas and beliefs, however, they are more likely to react favourably to persuasive messages from various sides and to accept them more readily. Thus, people experiencing little ambivalence are insulated within a comfortable state of cognitive consonance, and should be relatively immune to movement in

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<sup>6</sup> While Zaller deals with both the two-mediator model of attitude change and ambivalence, the latter concept only intervenes in his survey response framework, it is not considered for the indicator of the acceptance axiom.

their voting preferences; in contrast, ambivalent individuals, who are torn between two or more positions and who have reasons to support different electoral competitors, should be more susceptible to change in vote choice.

Together, information and ambivalence yield a simple and straightforward operationalization of the models' two dimensions: the reception and acceptance functions, respectively. Combining reception and acceptance in this way allows us to directly test a theory of campaign effects derived from Converse, McGuire, and Zaller. Response to campaign information should be greatest when information and ambivalence are jointly found at high levels. This subset of voters should be the ones who respond to campaign influences such as advertising, debates, news coverage, and polls. Voters with low levels of information who do not receive much campaign information should not react to these events. And even those who do pay attention, but are poised to resist the information or have it diluted among many one-sided considerations, should show no influence from the campaign. Taking this into account should make it more likely to identify campaign effects; moreover, it should give us a more complete understanding of how exactly – and for whom – election campaigns matter.

### **The Data**

Our model is tested using data from the Ontario provincial election of 2003. Provincial elections in Canada are among the most intense, objectively important sub-national elections in the world; they are by no means the poor electoral cousins of national elections. We examine the

campaign here using the 2003 Ontario Election Study,<sup>7</sup> a survey of 2252 eligible voters. The survey was conducted using a rolling cross-section methodology (Johnston and Brady 2002).<sup>8</sup> Figure 1 shows the campaign tracking of vote intentions; clearly, there is much movement to explain.

[Figure 1 about here]

The story of the 2003 Ontario Election, in a nutshell, is as follows. The incumbent party was the Progressive Conservatives (PC), an avowedly neo-conservative party re-elected with its second majority in 1999. The Government had become increasingly unpopular in its second term, and there was a strong ‘time for a change’ tide evident in the pre-election polls. The Liberals thus began with a small advantage, bolstered somewhat by a floundering PC campaign.<sup>9</sup> The campaign quickly emerged as one dominated by a classic taxes versus spending debate – the trade-off between increased health and education spending (supported by the Liberals), versus controlling spending in all domains and reducing (particularly corporate) taxes (supported by the PCs).

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<sup>7</sup> Ontario Election Study [dataset], Principal Investigators Fred Cutler and Greg Lyle, Co-investigators Andre Blais, Patrick Fournier, Stuart Soroka.

<sup>8</sup> Each night of the election – from September 3<sup>rd</sup> through October 1<sup>st</sup>, 2003 – a unique replicate sample was released and phoned for the next seven days. Each number was called twice a day for the first four days and once a day for the final three. A target of 80 completes a night was established, and this target was reached and maintained after five days of sample replicates were released. Unreached sample from earlier replicates were re-released for the last three days as response rates declined near the end of the campaign. Fieldwork was conducted by Opinion Search Inc using CATI interviewing. A core survey was established and run throughout the election. Additional questions were added to the core survey at various points in the campaign.

<sup>9</sup> In the first week a scandal emerged about apparently insufficient provincial inspections of meat packing plants, and the Minister responsible indicated she was too busy campaigning to deal with the issue. The Premier fumbled a question on how much his campaign promises cost, and this recieved wide coverage. PC ads were resoundingly criticized as too negative.

The Liberal-PC gap narrowed gradually over the first twelve days of the campaign, but in the middle of the second week the Liberal vote share jumped around 10 points and the Conservatives lost 5. There had until then been significantly more undecided voters than supporters of any party; at this time, however, the undecided, a disproportionate number of whom were leaning to the Liberals, firmed up. It cannot have helped that a PC email was discovered denouncing Liberal leader Dalton McGuinty as an ‘evil reptilian kitten eater’ on September 12th (Day 9 of the campaign). It is also the case that the most striking and widely reported public poll of the campaign was released on September 16th (Day 13), showing the Liberals with a 15-point lead. Given that this poll was in the field for the three preceding days, the rather striking overnight shift in our own data – around Day 13 – may have been the second stage of the Liberal lift-off, though it is worth asking to what extent it was induced by the poll.

The third week of the campaign shows a steady increase in Liberal vote intentions, partly drawn from previously undecided voters, but also at the expense of the PCs. The campaign featured an extremely late debate, on September 23rd, with only a week to go. There was no clear winner, and while those who watched the leader’s debate thought Eves and Hampton did well, the media awarded McGuinty victory by default. The Liberal-PC gap did narrow following the debate, but widened again with a Liberal surge at the very end of the campaign. This surge in our data might be mere sampling error; we suspect it is not, however, as it is necessary to get our late-campaign sample to the final result: Liberals 46.5%, PC 34.6%, NDP 14.7%, Other 4.2%.<sup>10</sup>

### **Campaign Effects**

Campaign effects are usually defined as events or messages that cause changes in the

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<sup>10</sup> If we take the last five days of the campaign, we get 46.5%, 32.1%, 17.8%, 3.4% (N=286). Without the last day, we have 42.6%, 35.8%, 18.1%, 3.4% (N=204).

balance of party/candidate preference. We hew this simple conceptualization in defining our dependent variable as the choice among major parties. Indeed, we use below a binary specification of PC and Liberal choice, since not much is lost in ignoring the polytomous nature of the dependent variable in this particular case, where the principle competition was quite clearly between these two parties. Decided voters and leaners are included; undecided excluded.

We test the two-mediator model of campaign effects on four major forms of campaign information prevalent in the literature, and identified in a post-mortem of this particular campaign as likely suspects: advertisements (e.g. West 1996), debates (e.g. Johnston et al. 1992; Blais et al. 1996, 1999; Holbrook 1996), media coverage (e.g. Miller and Krosnick 2000), and polls (e.g. Johnston et al 1992; Mutz 1998; Mebane 2000):

### ***Advertisements***

First, a series of highly negative PC advertisements may have driven that party's support *down* by prompting voters to characterize the PC leader, Ernie Eves, as "too negative". We thus examine the effects of a dummy variable indicating whether the respondent had seen advertisements about the Liberals – a measure which appears to capture both positive advertising by the Liberals, as well as the infamous negative PC ads that backfired. We also estimated models including a PC ads variable, but they had little to no effect. (Unfortunately, the sample for this particular test is limited to the 12 days on which the question about ad reception was asked.)

### ***Polls***

Second, a blockbuster poll halfway through the campaign exploded the idea that the race was tight (see expectations in Figure 1B), and it may have driven voters – particularly the undecided – to the Liberals by dispelling lingering doubts about their leader's competence. For each day of

the campaign we accordingly enter the PC share of decided voters in the last published poll. Using the Liberal share or the difference Liberal-PC share produces the same substantive results, but with less clarity. All polls used here (seven in total) were reported in the major media. To control for the actual distribution of vote intentions, this specification also includes each days' aggregate PC support.

### ***Debate***

Third, the party leaders' debate appeared to stem the Liberal tide, if only temporarily, preventing a runaway victory. We treat the debate as a campaign event and simply measure the number of days since the debate. We also include a quadratic term to allow for the influence of the debate to decay or strengthen over time. This is preferable to other approaches, such as using debate viewership, since previous evidence has shown that debate effects extend through media coverage and word of mouth to non-viewers (Blais et al. 1996, 1999).

### ***Issue Coverage***

It was true throughout the campaign that a considerable majority of voters (regardless of partisanship) preferred the PCs on taxes and the economy and Liberals on health care and education. This is clearly illustrated in Figure 2A, which shows responses over the campaign (3-day averages) to the question "What party do you think will do a better job dealing with..." Results show little change over the campaign. Issues that began as Liberal issues remained so, and vice versa; and this is true even though prospective vote changes considerably over the campaign (see Figure 1A). Largely independent of vote choice, then, the Ontario electorate preferred Liberals on health and education and PCs on taxes and – albeit to a lesser extent – the economy.

[Figure 2 about here]

It is also true that at certain points in the campaign there was far more media coverage of ‘Liberal issues’ than ‘PC issues’, Indeed, shifts in the coverage of these issues quite nicely capture the dynamics of overall campaign coverage. We consequently examine media coverage here using a daily content analysis of all election articles the *Toronto Star* and the *Ottawa Citizen*. Only news stories were included (not opinion and editorials); we employ a simple summary measure of the relative weight given to Liberal versus PC issues:

$$\frac{\% \text{ Education articles} + \% \text{ Health articles}}{\% \text{ Taxes articles} + \% \text{ Economy articles}}$$

The resulting measure is illustrated in Figure 2B. The balance in coverage tells an important story about the 2003 campaign: coverage of Liberal issues is relatively steady over the campaign, while coverage of PC issues rises and falls considerably – illustrative of what turned out to be a relatively steady Liberal campaign and a PC campaign that experienced a number of highs and lows. The Figure shows these data in 3-day averages, and it is in this form that they are included in the individual-level dataset. Each individual at  $t$  is assigned a value equivalent to the average of the issue dimension from  $t-3$  to  $t-1$ . We thus assume that media effects tend to accumulate and occur over about a three-day period.<sup>11</sup> And our expectation is that coverage pushed voters to the Liberals by inducing them to place greater importance on the Liberal strengths.<sup>12</sup>

By no means do we expect the mediation of these four effects by information and ambivalence to be uniform. Yet we have little theoretical guidance to specify the pattern of

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<sup>11</sup> This assumption was confirmed in preliminary tests.

<sup>12</sup> Note that this story is slightly different from the standard priming story, in which issue salience has a direct effect on voters’ assessments of candidates, and then an indirect impact on voting behavior (e.g., Edwards et al. 1995; Iyengar and Kinder 1987; Iyengar and Simon 1993; Krosnick and Brannon 1993; Krosnick and Kinder 1990; Rabinowitz et al. 1982; Soroka 2003). In this rather clear taxes-versus-spending campaign, we suggest the possibility that issue salience had a direct impact on voting itself – that is, voting preferences may have changed as a consequence of shifting issue salience.

mediation. One may suspect that ads penetrate further down the information continuum, and thus be less clearly mediated<sup>13</sup> Yet, the type of ad effect we are anticipating, a backfire, may require a high level of information to facilitate comprehension that the Conservation allegations are far-fetched. More clearly, Johnston and colleagues (1996) found polls to be more influential for the less well-informed, and so the influence of polls may be mediated only by ambivalence or may be stronger for the low-information group. Thus, the ad, debate and issue coverage effects should perhaps be more clearly mediated by the two-mediator setup.

### **Mediators: Information and Ambivalence**

We now turn to the operationalization of the potential mediators of campaign effects:

#### ***Information***

For political information, we use a measure general factual knowledge about politics (Luskin 1987; Fiske et al. 1990; Zaller 1990b; Delli Carpini and Keeter 1993). The index is based on respondents' ability to correctly identify the three main party leaders or three political figures.<sup>14</sup> It ranges from zero to three correct answers.

#### ***Ambivalence***

Drawing from existing research (Zaller and Feldman 1992; Lavine 2001), we consider that internal conflict should stem from the various types of reasons that can motivate an individual to favor one political preference over another (values, beliefs, opinions, perceptions, and so on). To capture relevant considerations, we use correlates of the decision. All items that were found to

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<sup>13</sup> Add to this the fact that our ads variable directly measures reception.

<sup>14</sup> Two separate measures were used during the campaign. One involved three questions about the leaders of the three main parties in Ontario. The other asked respondents to identify "the last NDP Premier of Ontario", the "Federal Minister of Finance", and "Last year, former Saskatchewan premier Roy Romanow headed a royal commission. Can you recall what was the subject of that royal commission?". The first measure turned out to be significantly easier. In the dichotomized measure used below, we classified two correct answers as low information on the party leaders measure and high information on the more difficult second measure.



be associated with vote intentions were considered candidates for relevant considerations. The four strongest correlates of the electoral decision were retained for scale construction: party identification, leader evaluations, local candidate preference, and issue position on cutting taxes. Responses to each of these four items were coded as being consistent with the respondent's initial vote intention, neutral (discrete or moderate), or inconsistent.

The ambivalence index is then the ratio of consistent considerations to inconsistent considerations. Thus, a person scores low on ambivalence if he likes his party's leader more than any other leader, identifies with his party, prefers his party's local candidate, and shares his party's position on cutting taxes. A high score results from liking another leader more than one's preferred party's leader, identifying with another party, preferring another party's local candidate, and being at odds with one's party on the tax cut issue. This ambivalence measure has been found to surpass subjective measures based on open-ended and close-ended survey questions in predicting instability of opinion (Fournier, N.d.).<sup>15</sup> It must be noted, however, that this measure is taken not before the campaign, but rather at the same time as the measurement of vote choice and the determinants of voting. We believe this will only produce conservative estimates of the mediating effect of ambivalence. We provide an extended justification in Appendix A.

Four group dummies are created for the combination of information and ambivalence. First, each index was dichotomized as nearly as possible down the middle: below average / above average. A dummy variable (0/1) was then computed for each of four possible pairings:

1. low information / low ambivalence (LILA in forthcoming tables and graphs),

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<sup>15</sup> Glasgow (2004) has shown that existing measures of ambivalence are virtually indistinguishable from measures of indifference or neutrality. However, when indifference is controlled, ambivalence still dominates models of attitude change (Fournier, 2003). We exclude indifference from our analyses in order to not overtax our interactive models.

2. low information / high ambivalence (LIHA),
3. high information / low ambivalence (HILA), and
4. high information / high ambivalence (HIHA).

These group dummy variables interact with all campaign effects to determine the magnitude of the campaign effects within each group.<sup>16</sup>

## Results

Few doubt that there is heterogeneity in voters' response to campaign events (see Bartels 1988; Johnston et al. 1992; Johnston et al 1996; Johnston, Hagen and Jamieson 2004; Holbrook 1996; Mendelsohn 1996; Zaller 1990a, 1992). At the risk of setting up a straw man, however, we estimate a homogeneous model to anchor our subsequent dissection of the electorate. Table 1 presents the template, based on probit analysis: two columns, one for Liberal and one for PC vote choice, with table entries giving marginal changes in the probability of voting for the party.<sup>17</sup> Alongside the campaign effects variables and mediators, we include party identification, education, income, gender, and age as controls, though we do not interpret them in any detail here.

Campaign effects in the expected direction are detected for the debate and for polls, but not

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<sup>16</sup> In theory, we ought to use all the information in the information and ambivalence variables by using continuous interactions rather than these dichotomizations. We did estimate models using interaction terms built from the raw ordinal measures of information and ambivalence. The results were substantively similar, but plagued by very large standard errors because of the inherent multicollinearity and the small measurement scales for these variables. Presenting those results would require numerous, imprecisely estimated fitted values. Our dichotomization of the two variables gives cleaner estimates, is true to the theory, and is common practice in similar studies (Sniderman and Brody 1993; Johnston et al. 1996; Lupia 1996; Patrick fill in a few more).

<sup>17</sup> All other variables are set at their means when each marginal (one-unit) change in probability is calculated. The Stata procedure *dprobit* provided the calculations.

for ads or issue coverage. For a few days, the debate seems to have pushed back against the Liberal onslaught, perhaps firming up some wavering PC partisans. But by the end of the week following, the pro-PC impulse had evaporated. As for polls, a one-point decline in the PC share pushed their vote down by a similar amount.

[Table 1 about here]

Are these effects limited to those we predict will receive *and* accept the information contained in debates and polls? And does this homogeneous estimation mask the influence of ads and media coverage in this group? Table 2 presents our evidence for each campaign effect. Analyses are patterned after those in Table 1, but with group dummy variable interactions for each of the groups defined by the information-ambivalence interaction. Standard practice would be to include three main effects, one overall effect of the campaign effect variable, and three of the four possible group interactions. We depart from this to show mathematically equivalent estimates with three main effects and four group interactions, omitting the overall effect of the campaign variable in question. So instead of built-in tests (coefficient/s.e.) of the difference of each group's effect from the effect for the baseline group, we get separate tests of the difference of each group's effect from zero. Obviously, inferences should be identical; this estimation strategy is a matter of taste. For the sake of clarity, and since we are not directly interested in them here, the control variables are not presented in this table. They are presented in Appendix B.

[Table 2 and Figure 3 about here]

One glance at the coefficients for ads, the debate, and media coverage leaves little doubt about the quality of the two-mediator theory. These three forms of new information have a

stunning influence on voters who are attentive and yet ambivalent (HIHA). There are only weak, inconsistent, or non-existent effects for the other three groups. The effects are illustrated graphically in Figure 3. These graphs show simulations based on results in Table 2; each is based on an estimation in which (like the marginal change results in our tables) all variables are held at their mean, and the interacted campaign effects are changed appropriately, alongside the dummy variables for the four information/ambivalence groups.<sup>18</sup>

Figure 3A shows that the combination of Liberal advertising and overly negative PC ads that backfired<sup>19</sup> pushed viewers of these ads toward the Liberals and away from the PCs by twenty points – but only in the HIHA group. No significant ad influence is found among the other groups. The two-mediator model is strongly supported for the effect of advertising.<sup>20</sup>

Figure 3B shows that the only effect from the debate can be found among the HIHA group. They swing away from the Liberals for a few days following the debate, but this impulse fades within a week.<sup>21</sup> The other groups simply do not move over this period. The difference is so stunning here as to make us suspicious, so we tried to account for it using a question asking respondents who they thought won the debate. When this *debate-winner* question is regressed

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<sup>18</sup> These simulations are estimated using the Clarify routine in STATA (King, Tomz, and Wittenberg 1999).

<sup>19</sup> These ads were so negative that they were publicly criticized by PC candidates. And indeed, deeper analysis [not shown] revealed that this campaign effect worked through one particular trait judgment of the PC leader, Ernie Eves. Voters who had seen the ads were far more likely to characterize Eves as “too negative”.

<sup>20</sup> It also appears that among the LIHA group the effect is reversed. The only explanation we can provide is that because the ads variable measures reception directly, the information variable proxies not for reception of the information so much as for how critically that information is processed. The low-information group swallows the PC’s negative message, while the high-information group rejects it. Part of this rejection involves getting reaction to the ads from parties and commentators through the media. This interpretation is beyond our analysis at this point; it awaits a test in further work.

<sup>21</sup> We do not make very much of the upward trend in days 6 and 7 – this may be a consequence of other trends in the last two days of the campaign, but is likely also to be because of the rather quick decay in effects from day 3 to 5.

on partisanship and our debate variable with a quadratic term, estimates show that the politically attentive group thought Eves, the PC leader, had won the debate, but only for a couple of days. After day three this judgment is gone and it wears off completely. And among the inattentive, there is no pattern in the *debate-winner* question over the days following the debate.<sup>22</sup> Our guess is that the voters' own judgment was an Eves (PC) victory, but the media told them that the Liberal leader had won simply by not hurting his cause (in contrast to his déba(t)cle four years earlier). Again, this interpretation awaits content analysis of media coverage of, and particularly editorial comment on, the debate. Whether the effect is direct or involves the media, these results again provide evidence that campaign effects are governed by the two-mediator model.

Media issue coverage also had a significant effect on voters, though again the effect was limited to our HIHA group (see Figure 3C) – those who are attentive enough to get the message and who are ambivalent enough for it to tip the balance in their voting calculus. Comparing a voter who heard three times as many references to Liberal issues as PC issues with a voter who heard an even split, the model predicts the former to be 27% more likely to vote Liberal than the latter. The other groups simply do not exhibit susceptibility to media coverage.

Finally, we turn to the effect of published polls, in the final columns of Table 2 and in Figure 3D. In contrast with the three effects that are mediated by information and ambivalence, but in line with previous work (Johnston et al. 1996), polls affect all but the low-information, low-ambivalence group (LILA). Indeed, a different specification (not shown) which includes an overall PC poll measure and an interaction with only the LILA group reveals that the effect is reduced to zero in that group, while appearing robust and important for the others. The polls here may index the mood or momentum of the campaign, since the poll variable is essentially a

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<sup>22</sup> Results available upon request.

lagged measure of PC support. We might go so far as to characterize it as a lag of unmeasured campaign effects. Both high ambivalence groups, high *and* low information, would notice what the poll variable is measuring, even if they did so through different mechanisms: High information voters noticing the polls themselves, low information voters feeling the ‘mood’ of the campaign perhaps through social influence. Whether mood or more concrete poll estimates of collective judgment, McKelvey and Ordeshook (1986), Mutz (1998), and Mebane (2000) have provided theory and evidence that rational voters ought to take this variable into account. Further investigation is required to trace the temporal pattern over the space of a short campaign: It may be that high-information voters respond to real campaign events and then low-information voters pick up the influence after some delay because they use polls as a shortcut to judgment.

### **Discussion and Conclusions**

Our results show that the events or information of election campaigns can have powerful effects on vote choice, but only among certain voters. Together, our models give us a great deal of purchase on the twenty percent of voters that we classify as attentive and yet ambivalent. Vote choice in this group is substantially affected by advertising, debates, media issue coverage, and the horserace as reported in polls. Polls, for their part, also seem to explain part of the movement in the low information, high ambivalence and high-information, low-ambivalence groups. Reception and acceptance – or, here, information and ambivalence – quite clearly mediate campaign effects, and our picture of the campaign is considerably improved when we take these two mediators into account.

The preceding results provide an explanation for the great instability in campaign vote intentions of people who are both informed and ambivalent. Figure 4 presents the four groups’

campaign dynamics of Liberal and PC vote shares respectively.<sup>23</sup> The HIHA group exhibits important movement. In fact, they show the greatest change in Liberal vote share over the campaign.<sup>24</sup> Our analysis shows that the movement of the high information / high ambivalence group comes from systematic responses to campaign information.

[Figure 4 about here]

That said, the greatest net change in PC vote share is found among the two low-information groups (LILA, LIHA). Indeed, these were the most significant sources of the PC mid-campaign plunge,<sup>25</sup> and the fluctuations of these groups remain largely unaccounted for in the preceding models. In the case of the LIHA group, the significance of polls corroborates the notion that these citizens are responding primarily to the ‘mood’ or ‘momentum’ of the campaign. In the case of the LILA group, we can only speculate. Support for the incumbent Conservatives (PC) among this group dropped over 20% from the release of the poll until the debate. And yet we find that the last published poll does not directly affect this group’s vote intention. Future research on this campaign and others must attend to the possibility that this group of low-information voters “go with the flow” and yet seem un-ambivalent because they have few attitudes that contradict their vote choice. Their low ambivalence may, in fact, be due to “reasoning backward” *from* a vote choice that is based on vague impressions and feelings *to* intermediate attitudes out of a desire for consistency, as Sniderman, Glaser, and Griffin argue

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<sup>23</sup> Note that these charts use five-day rolling averages, as the number of respondents in any one group on any one night is relatively small.

<sup>24</sup> Using 5-day averages, these respondents show a standard deviation of 7 points, and an over-campaign net shift of 5 points.

<sup>25</sup> Using 5-day averages, both groups show a standard deviation of 6.5 points. The over-campaign net shift for low-information, low-ambivalence respondents is by far the greatest, however, at almost 19 points. Low-information, high-ambivalence respondents finish within 1 point of where they started.

(1990). If these feelings are driven by the ‘mood’ of the campaign as informed by polls and the media, it may be that instead of ballast preventing wild campaign swings, these low-information voters actually amplify campaign dynamics (Johnston et al. 1996). We can provide no evidence of this here, however.

We nevertheless have evidence that some (particular) voters are sensitive to the new information provided during election campaigns. For them, the information has a profound effect on vote choice. But researchers must heed the Converse/McGuire/Zaller injunction about where to look for effects if they wish to find these voters and identify influential campaign information. We must do so because, even if they constitute a minority of voters, this group’s response to the campaign has the potential to tip the balance in favor of the candidate or party who has a better campaign. And the influence of events on the outcome might be much larger if there is a kind of campaign multiplier effect through polls or a two-step flow of information (Katz and Lazarsfeld 1955).

Our analyses have shown the importance of accounting for heterogeneity in voters’ susceptibility to campaign effects; they have also demonstrated a relatively simple and successful implementation of the kind of two-mediator model of campaign effects that Zaller and others have suggested. The implementation of this model, we suggest, is fundamental to our understanding of how, when, and for whom campaigns matter.



## ***Appendix A: Measuring Ambivalence During the Campaign***

Our discussion of the effect of ambivalence on susceptibility to new information causing opinion change conceives of ambivalence as existing prior to the reception of the new information. But without a pre-campaign wave of the study, this ambivalence (call it  $A$ ) remains an unmeasured variable. Thus, the measure of ambivalence we use ( $A^*$ ) is better characterized as indicating how many considerations the voter has that ought to be pushing him/her toward another party. This measure, generated from the same interview as the vote choice, is therefore only a proxy, and one which could be so poor a proxy as to hide the mediating effect of ambivalence completely. It therefore warrants an extended discussion.

When the sample is divided into high and low ambivalence groups on the basis of  $A^*$  ( $A_{lo}^*$  and  $A_{hi}^*$ ), those two groups will each contain voters high and low on  $A$ .

$$A_{lo}^* = \theta(A_{lo}) + (1-\theta)A_{hi}, \quad 0 < \theta < 1$$

$$A_{hi}^* = \lambda(A_{hi}) + (1-\lambda)A_{lo}, \quad 0 < \lambda < 1$$

Consider the low ambivalence group first. It contains both voters who have had their ambivalence resolved by the time of the interview ( $A_{hi}, A_{lo}^*$ ), perhaps by the same events we identify, as well as those who have had one-sided considerations all along, such as strong partisans ( $A_{lo}, A_{lo}^*$ ). Our high ambivalence group, by the same logic, will consist of those who have been ambivalent all along ( $A_{hi}, A_{hi}^*$ ), and those who were not ambivalent who have become ambivalent, probably due to the events of the campaign ( $A_{lo}, A_{hi}^*$ ). Importantly, the distribution of  $A$  and  $A^*$  may not be identical. That is, the campaign might systematically reduce or increase ambivalence (though in practice we find no change during the campaign wave).

The true mediating effect of  $A$  will therefore be expressed in our models through coefficients on variables that include interactions with both  $A_{lo}^*$  and  $A_{hi}^*$ . The relative shares will be

determined by the proportions of  $A_{lo}$  and  $A_{hi}$  in  $A^*_{lo}$  and  $A^*_{hi}$ .

If real campaign effects on vote choice are limited to those who were *a priori* ambivalent  $A_{hi}$ , our coefficient estimates on the interaction of ambivalence ( $A^*$ ) with a campaign event would never be biased upward. They would be biased downward by a factor of  $1-\lambda$ , the proportion of initially low ambivalence voters who have become ambivalent over the campaign. Of course, there will turn out to be some among the low-ambivalence group ( $A_{lo}$ ) who become ambivalent ( $A^*_{hi}$ ) and who change their vote intention. In that case, part of the campaign effect that really belonged in the low ambivalence group ends up in the high ambivalence group. Yet this upward bias is in some sense justified as a campaign effect among those who were not so low on ambivalence that they were inoculated against campaign information.<sup>26</sup>

In practice, however, we believe that our estimates of the mediating effect of ambivalence will remain conservative, because we believe that campaign events are more likely to resolve ambivalence than create it. Fundamentally we assume that all of the ambivalent are in some sense available to have their ambivalence resolved; whereas many of the low ambivalence group are strong partisans who are highly resistant to changing the attitudes that affect their vote choice, as Zaller argued (1992, Chapter 10). In this campaign, ambivalence appears to have risen slightly through the middle of the campaign and then dropped slightly at the end, though no linear or quadratic trend is statistically significant.

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<sup>26</sup> We also investigated an instrumental variables approach to mitigate the endogeneity of the ambivalence measure. We would need an instrument correlated with  $A$  but not with  $A^*$ , which would be hard to find. And in fact, suitable instruments could not be found: even a 'kitchen sink' model of ambivalence could produce an  $R^2$  of only .05.

*Appendix B: Control Variables for Models in Table 2*

Independent Variables Dependent Variables	Saw Ads Libs		Debate & Debate <sup>2</sup>		Issue Coverage		Polls (PC share)	
	Lib	PC	Lib	PC	Lib	PC	Lib	PC
HILA	.148 (.199)	.029 (.163)	.148 (.199)	.029 (.163)	.148 (.199)	.029 (.163)	.148 (.199)	.029 (.163)
LIHA	.457** (.220)	-.282 (.205)	.457** (.220)	-.282 (.205)	.457** (.220)	-.282 (.205)	.457** (.220)	-.282 (.205)
HIHA	.414 (.318)	-.296 (.188)	.414 (.318)	-.296 (.188)	.414 (.318)	-.296 (.188)	.414 (.318)	-.296 (.188)
PID PC	-.573*** (.073)	.617*** (.067)	-.573*** (.073)	.617*** (.067)	-.573*** (.073)	.617*** (.067)	-.573*** (.073)	.617*** (.067)
PID Lib	.787*** (.073)	-.534*** (.052)	.787*** (.073)	-.534*** (.052)	.787*** (.073)	-.534*** (.052)	.787*** (.073)	-.534*** (.052)
PID NDP	-.311*** (.070)	-.667*** (.101)	-.311*** (.070)	-.667*** (.101)	-.311*** (.070)	-.667*** (.101)	-.311*** (.070)	-.667*** (.101)
Education	.058*** (.020)	-.043*** (.013)	.058*** (.020)	-.043*** (.013)	.058*** (.020)	-.043*** (.013)	.058*** (.020)	-.043*** (.013)
Female	.050 (.033)	-.033 (.030)	.050 (.033)	-.033 (.030)	.050 (.033)	-.033 (.030)	.050 (.033)	-.033 (.030)
Under 30	-.018 (.045)	-.115*** (.036)	-.018 (.045)	-.115*** (.036)	-.018 (.045)	-.115*** (.036)	-.018 (.045)	-.115*** (.036)
Over 60	-.012 (.033)	.009 (.034)	-.012 (.033)	.009 (.034)	-.012 (.033)	.009 (.034)	-.012 (.033)	.009 (.034)
Low Income	-.072** (.033)	-.021 (.028)	-.072** (.033)	-.021 (.028)	-.072** (.033)	-.021 (.028)	-.072** (.033)	-.021 (.028)
High Income	.019 (.034)	.013 (.034)	.019 (.034)	.013 (.034)	.019 (.034)	.013 (.034)	.019 (.034)	.013 (.034)
Missing Income	-.108** (.045)	.031 (.045)	-.108** (.045)	.031 (.045)	-.108** (.045)	.031 (.045)	-.108** (.045)	.031 (.045)
Day	-.004** (.002)	.002 (.002)	-.004** (.002)	.002 (.002)	-.004** (.002)	.002 (.002)	-.004** (.002)	.002 (.002)
Agg PC Support	-.917*** (.216)	1.081*** (.256)	-.917*** (.216)	1.081*** (.256)	-.917*** (.216)	1.081*** (.256)	-.917*** (.216)	1.081*** (.256)
N	1683	1683	1683	1683	1683	1683	1683	1683

Cells contain changes in probability, based on a binary probit model with the other variables held at their means. Standard errors (corrected for clustering by day) are in parentheses.

\* p < .10; \*\* p < .05; \*\*\* p < .01

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**Table 1.** A Model of Homogenous Campaign Effects

Independent Variables		Dependent Variables	
		Vote Liberal	Vote PC
Campaign Effects	Liberal Ads	0.019 (0.039)	-0.022 (0.042)
	Debate	-0.066** (0.030)	0.048 (0.042)
	Debate <sup>2</sup>	0.009** (0.004)	-0.007 (0.006)
	Polls (PC share)	-0.011*** (0.004)	0.013*** (0.004)
	Issue Coverage	0.013 (0.015)	-0.010 (0.020)
Controls	PID PC	-0.644*** (0.072)	0.663*** (0.063)
	PID Lib	0.696*** (0.067)	-0.457*** (0.048)
	PID NDP	-0.329*** (0.073)	-0.602*** (0.093)
	Education	0.053*** (0.018)	-0.040*** (0.011)
	Female	0.049 (0.032)	-0.026 (0.029)
	Under 30	-0.046 (0.046)	-0.090** (0.039)
	Over 60	-0.017 (0.033)	0.007 (0.035)
	Low Income	-0.057* (0.034)	-0.033 (0.027)
	High Income	0.019 (0.035)	0.010 (0.036)
	Missing Income	-0.110** (0.050)	0.024 (0.048)
N		1548	1548

Cells contain changes in probability, based on a binary probit model with the other variables held at their means. Standard errors (corrected for clustering by day) are in parentheses.

\* p < .10; \*\* p < .05; \*\*\* p < .01



**Table 2.** Campaign Effects, Mediated by Information and Ambivalence

Independent Variables (campaign information) Dependent Variables : vote (binary)	Saw Ads Libs		Debate & Debate <sup>2</sup>		Issue Coverage		Polls (PC share)	
	Lib	PC	Lib	PC	Lib	PC	Lib	PC
LILA	-.034 (.050)	-.009 (.040)	-.035 (.025)	<b>.038*</b> (.020)	<b>.022*</b> (.013)	<b>-.032**</b> (.014)	-.003 (.007)	.006 (.005)
			.004 (.004)	<b>-.007**</b> (.003)				
HILA	-.017 (.051)	<b>.122*</b> (.063)	-.020 (.047)	-.003 (.049)	.028 (.018)	-.027 (.021)	-.008 (.005)	.005 (.005)
			.004 (.007)	.000 (.008)				
LIHA	-.115 (.107)	.117 (.103)	.000 (.038)	-.017 (.066)	.002 (.025)	-.013 (.033)	<b>-.013**</b> (.006)	<b>.013*</b> (.007)
			.000 (.006)	.003 (.010)				
HIHA	<b>.194***</b> (.073)	<b>-.225***</b> (.051)	<b>-.196***</b> (.047)	<b>.124***</b> (.037)	<b>.135***</b> (.033)	<b>-.096**</b> (.042)	-.010 (.010)	.0120 (.010)
			<b>.032***</b> (.010)	<b>-.023***</b> (.007)				
N	1683	1683	1683	1683	1683	1683	1683	1683

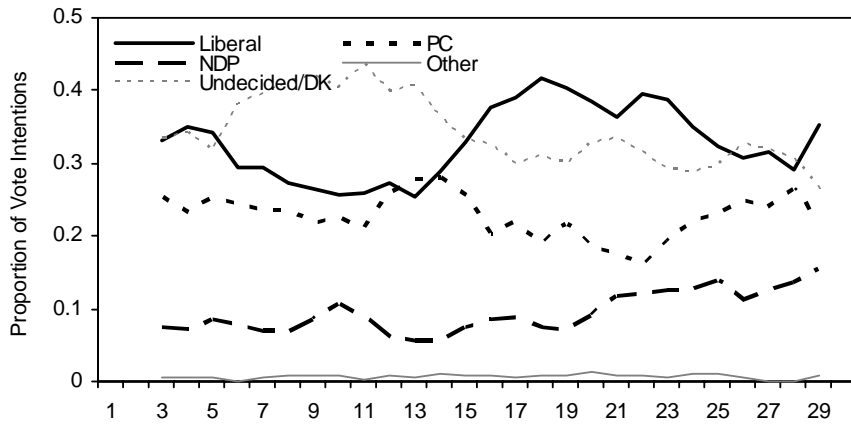
Cells contain changes in probability, based on a binary probit model with the other variables held at their means. Standard errors (corrected for clustering by day) are in parentheses.

Significant coefficients are in **bold**.

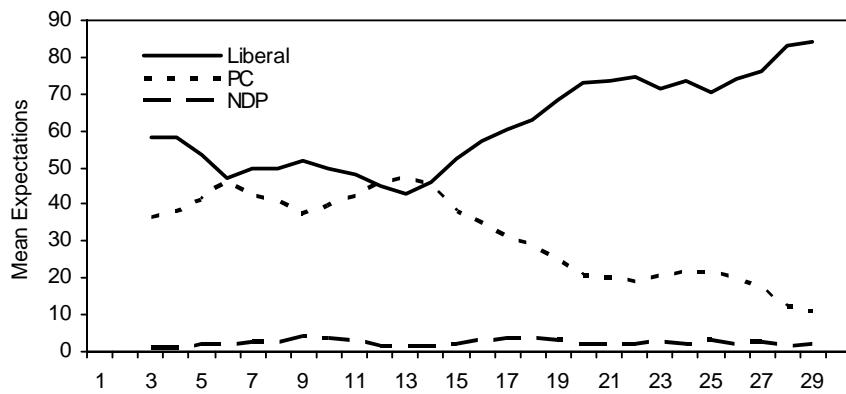
\* p < .10; \*\* p < .05; \*\*\* p < .01

**Figure 1.** Campaign Dynamics

1A. Vote Intentions Over the Campaign (3-day averages)

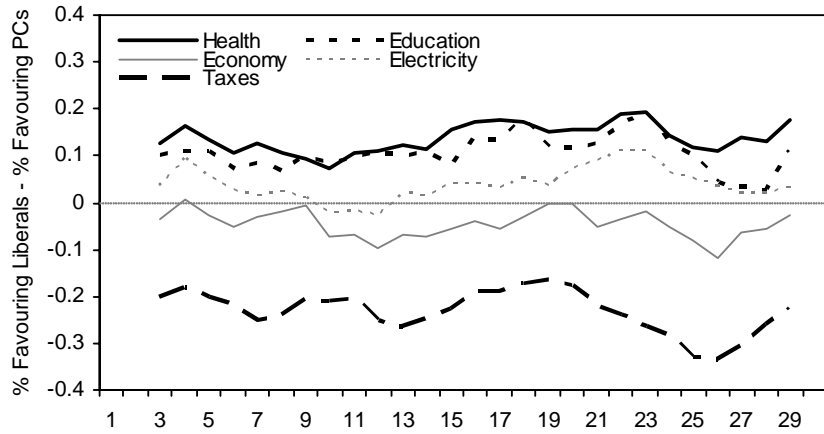


1B. Expectations Over the Campaign (3-day averages)

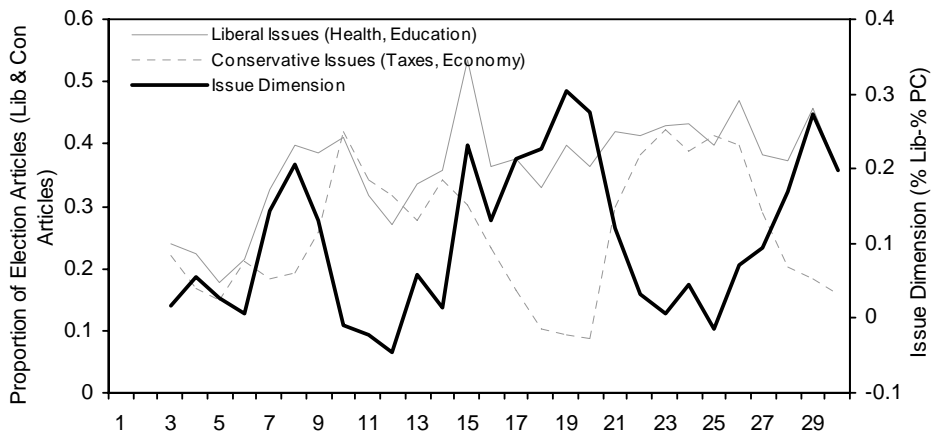


**Figure 2.** Issue Preferences and Media Coverage

2A. Issue Preferences and Party Over the Campaign (3-day averages)

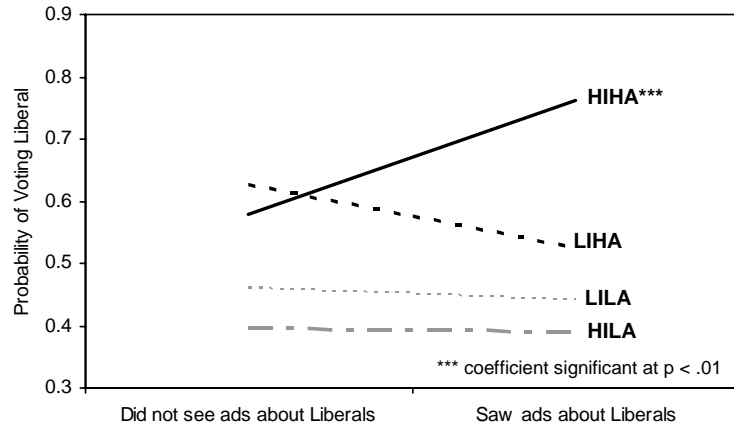


2B. Media Issue Salience in the Over the Campaign (3-day averages)

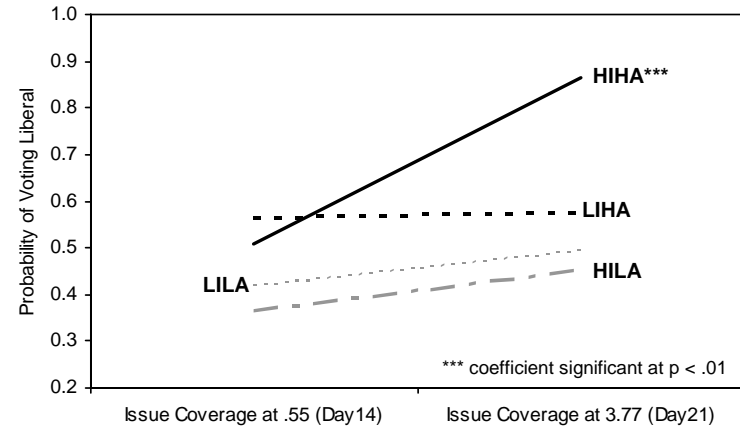


**Figure 3.** Campaign Effects: Changes in the Probability of Voting Liberal

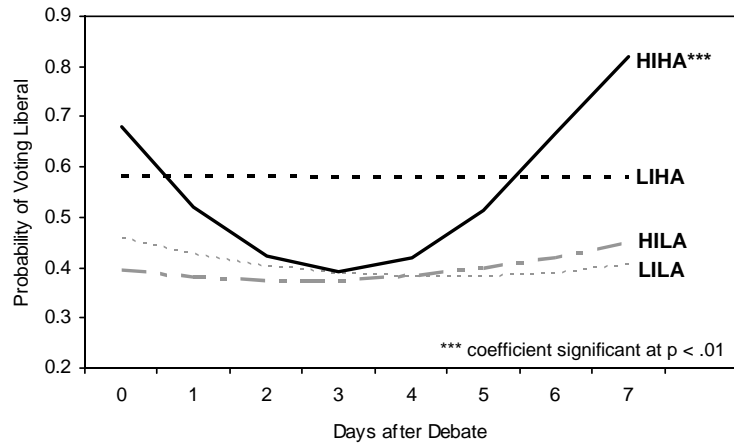
3A. Ads



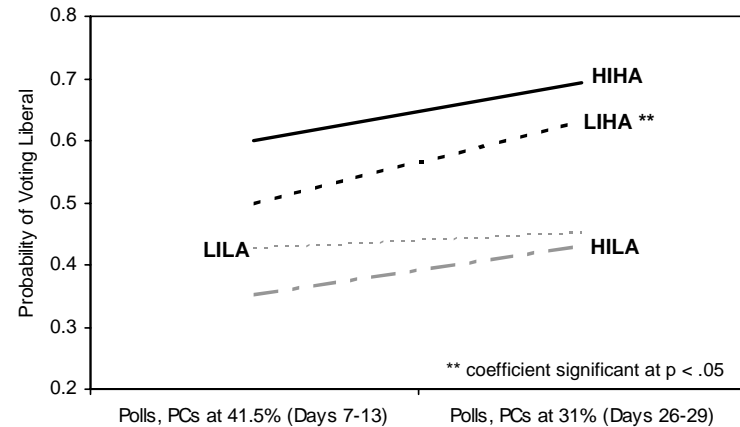
3C. Media Coverage



3B. Debate



3D. Polls

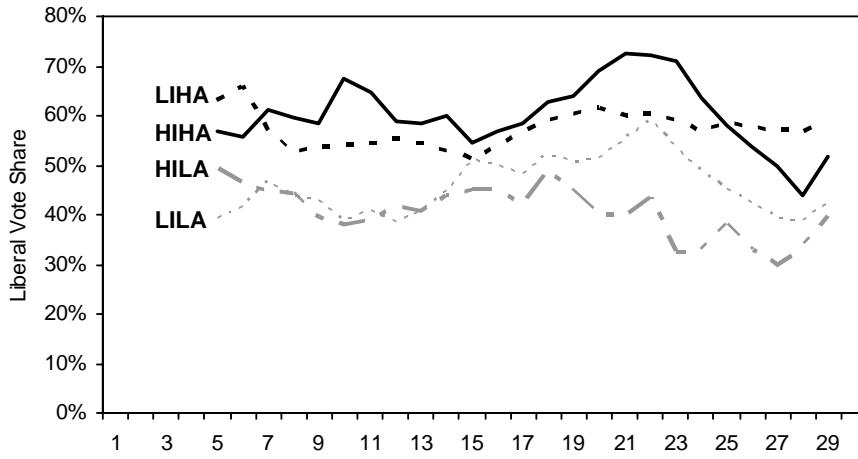


LILA Low Information, Low Ambivalence  
 HILA High Information, Low Ambivalence

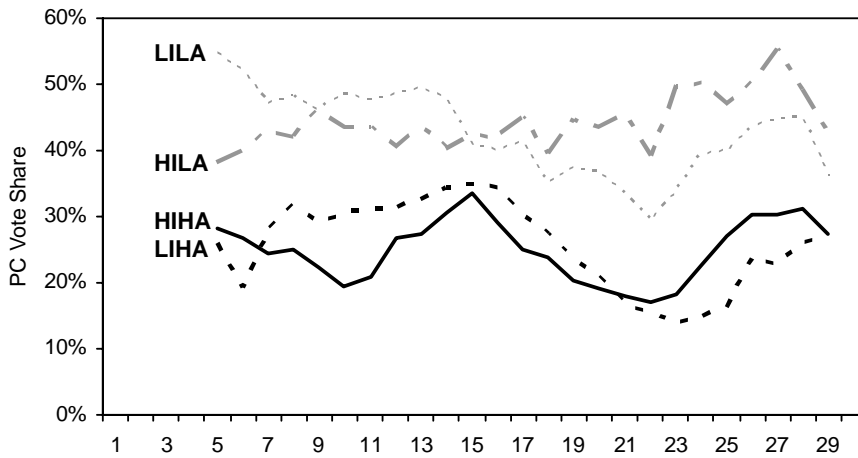
LIHA Low Information, High Ambivalence  
 HIHA High Information, High Ambivalence

**Figure 4.** Vote Share by Information/Ambivalence Cohort (5-day averages)

3A. Liberal



3B. Progressive Conservative



LILA Low Information, Low Ambivalence  
 HILA High Information, Low Ambivalence  
 LIHA Low Information, High Ambivalence  
 HIHA High Information, High Ambivalence