

# Elements of Political Persuasion: Content, Contact or Cue\*

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## Abstract

Political actors often try to persuade others of their policy positions but they vary in how effective they are. We focus on three components of political persuasion that are impossible to parse in most observational settings. The first is the *content* of the messages used to persuade. Second is the effect of *contact* with individuals who vary on characteristics—for example charisma, clarity, confidence—that make them more or less persuasive. The third is the *cue* that a listener obtains when receiving a message from a leader with certain characteristics. The first of these elements of persuasion is a property of the message; the other two elements are related to properties of individual agents or leaders involved in persuasion. To understand the relative contributions of these elements we need independent variation in all three. In general this is unavailable from observational data. We employ an empirical strategy that generates this variation from a unique field experiment implemented with the BC-STV campaign in the May 2009 British Columbia referendum on electoral reform. Our strategy employs random assignment of canvassers to voting areas, coupled with random assignment of messages and endorsements by prominent figures. We find evidence of a relatively strong overall campaign effect which we attribute largely to the content of the arguments used by the campaign and the overall effect of endorsement, variation across campaigners yields little or no evidence for important contact effects. We find, at best, weak evidence that endorsers vary in their capacity to strengthen effects.

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# 1 Introduction

The role that leaders play in influencing the views of voters is poorly understood. Whilst contact with leaders may be correlated with attitudinal change, it is not clear whether or how contact *causes* such change. The problem of identifying political persuasion arises because it is hard to separate the impact of political leaders from other confounding features that might influence opinion formation. Moreover, in general it is hard to disentangle the impact of a political ‘messenger’ from that of the message that she conveys. Different strands of theoretical work emphasize different sources of influence, yet empirically we have little evidence to assess the relative importance of these features.

We seek to make progress by distinguishing between three dimensions of an act of political persuasion that have been examined in the theoretic and empirical literature: the *content* of the message, the effect of *contact* with the messenger, either directly or via some medium, and the *cue* received via an endorsement of the message. The first aspect of persuasion differs from the others in that it is not an effect of agency: the development of messages can be outsourced and, once developed, messages can be adopted by others. Once messages are chosen, however, other elements of persuasion come into play that depend on the particular characteristics of those trying to persuade. The ability to deliver a message effectively and/or to draw on a reputation to lend authority to it can not be so readily adopted or borrowed by others who do not have the same attributes. These aspects depend on traits, some observable, some not, that are intrinsic to the individual. Of course the effect of a message, and that of a messenger, may be context specific. Some arguments, and some leaders, may work well with some audiences and not with others.

This discussion raises an interesting set of questions not adequately addressed by existing studies: would the effect of a position be different if advocated by person  $i$  rather than person  $j$ ? would the influence of an individual be as great if delivering message  $A$  rather than message  $B$ ? and how would both messages and individuals fare when switching from audience  $X$  to  $Z$ ? We seek to identify different dimensions of persuasion by estimating the effect of changing the identity of the person making an argument (in our design we refer to this person as a “leader” or an agent) and distinguishing this from the content of the message and the context of the decision. Moreover, in assessing the effects of persuasion that are due to agency we seek to distinguish between two channels of persuasion: that due to contact with an individual and which depends upon the communicative ability, persona, charisma, of the leader; and that due to what, in the literature, is termed a cue, which depends upon some fixed characteristic that followers ascribe to a leader—such as experience, seniority, or intelligence—which makes them place more (or less) weight on the leader’s views.

A political campaign presents a natural environment in which to explore these questions. For example, a referendum campaign, by definition, involves a concerted attempt by a group of individuals to influence the opinions of voters toward a particular viewpoint (the status quo or an alternative). To that end a campaign adopts a set of messages. Agents associated with the campaign seek to persuade voters of the merits of these positions either via direct contact through speeches and campaigning or via endorsements. To understand a “pure” agency effect we need to disentangle the impact of such contact from that of the content of the message and location. Likewise, to understand a pure “message” effects we need to distinguish the effect of content from other effects. Answers to our questions depend on being able to fix the “leader”, whilst allowing the message and context to vary, and vice versa.

An additional reason for studying our question within the context of a campaign is that a campaign systematically varies these quantities of interest: the campaign position is endorsed by different individuals with varying characteristics; these individuals convey different messages, each deemed effective in persuading the public; and a campaign will typically cover a wide geographic area comprised of distinct local entities. Moreover, a campaign deploys individuals in different ways: some individuals aim to persuade voters of the merits of the position via door-to-door canvassing or media contact; whilst other individuals are used to endorse the position of the campaign, via the use of personal images on posters or short advertisements.

Since most campaigns use a variety of different messages, conveyed to the public and endorsed by different individuals, one can, in principle, measure the impact of a campaign on public opinion and break down this overall effect into its constituent parts: the extent of the effect that is due to the content of the arguments the campaign deploys; the impact of contact with those getting the message across; and/or the cues taken by the public from the endorsements of the campaign message made by leading public figures. However, even in such a situation where each of the factors of interest vary, observational studies are likely to fall short in identifying these effects. This is because a number of campaigning strategies are likely to confound attempts to isolate the different channels of persuasion. Consider three examples: first, some campaigners may be associated with certain types of message; second, both campaigner and message may be chosen by the campaign to address certain types of audience; and third, perhaps most importantly, campaigners may adapt their messages to suit the audience. These problems relate to problems of correlation, selection-bias and endogeneity, respectively. The presence of any of these in isolation, or in combination with each other, will be enough to confound any analysis of leadership—or persuasion—effects.

The method of randomized evaluation, however, provides a strategy for identifying

the causal effects of interest. In this paper we describe an empirical strategy and report the results of its implementation in the field, analyzing the impact of agents and messages on a referendum on electoral reform in British Columbia. Working directly with the British Columbians for Single Transferable Vote political campaign we randomly assign both leaders to different localities, and randomly assign messages within those localities. This creates a hierarchical structure that allows us to directly isolate the effect of each on political outcomes of interest conditional on locality.

The campaign devised two political messages that they believed would enhance the prospects of a *yes* vote on the proposal to change the electoral system of British Columbia from the first-past-the-post system to STV, in the referendum on electoral reform on May 12<sup>th</sup> 2009. The first of these arguments highlighted the fairness aspects of change in the electoral system, whilst the second emphasized the increase in voter choice and accountability corresponding with a switch to STV.

The campaign deployed individuals who they believed would be effective at getting these messages across (this would help them discover which of their messages were effective). In addition, all of those selected to take part received training from the campaign at specially arranged sessions. These agents were then randomly assigned to different local voting areas. Within each area a (random) subset of households received a “placebo” message in which voters were told that a referendum will take place on May 12<sup>th</sup> (but received no further information), whereas a random subset of households received, in addition, one from a list of “treatments” in the form of an official communication from the campaign. These treatments, described more fully in section 4.2 below, always involved one (or none) of the two messages communicated orally (by the agents) and backed up by a campaign flyer outlining the key points of the message. Some of these messages were endorsed by leading public figures associated with the campaign. Researchers then tracked the houses visited by the campaign and implemented a simple survey in which the main question asked respondents about their intended vote in the referendum.

This approach allowed us to examine the dimensions of persuasion in two ways. First, we could separate the effect of messages and messengers on the one hand from characteristics of listeners on the other. In general one might expect that particular messengers and leaders are dispatched to particular areas for strategic reasons thus rendering it difficult to separate campaign effects from subject attributes. By comparing randomly assigned conditions across localities we could ascertain how much of the differences in attitudes toward STV could be accounted for by the campaign itself. Second we could address the different dimensions of persuasion. To examine content we varied which (if any) substantive message was delivered. To examine contact we independently varied the identity of the individual delivering the message. These individuals were not well known public figures

and thus could not draw on their political reputation to convince the listeners. Rather their influence—if it existed—came from their persuasive abilities, communicative style, and charisma in face-to-face contact with respondents.<sup>1</sup> To examine what we term cue effects, we varied the identity of the individuals used to endorse the campaign messages. The endorsers, unlike those individuals involved in door-to-door canvassing, were well known public figures. These figures could associate their political reputation with the position that they endorsed but, in our design, they were unable to engage in direct contact with the respondents. The persuasive effects of these endorsers—if it existed—was then independent of the substantive message and was likely due to respondents taking positional cues from the act of endorsement.

Our results are surprising. We had designed our study in order to estimate an overall campaign effect and to separate this effect into three different channels of persuasion. Overall, we found that the campaign was effective: being visited by the campaign increased the likelihood of supporting the referendum proposal. In breaking this campaign effect down into its constituent parts we found relatively strong evidence of content effects: the presence of a substantive message increased the probability of supporting the campaign by an estimated 6 percentage points (approximately 9 points for the accountability message and 2.5 points for the fairness message). This finding suggests that, to some extent, the messages stand on their own merits, with the accountability message having a somewhat larger effect on differences in public opinion (the differences between the two messages is not, however, significant). We also found some evidence for cueing effects: the association of *some* endorser increased the probability of supporting the campaign by an estimated 6 percentage points. However, and surprisingly, we found little or no evidence that intrinsic style matters: it made little difference with whom voters made contact. Specifically, and in contrast to existing studies, we were unable to reject the hypothesis that the individuals deployed to persuade voters varied in their ability to do so.

In the remainder of the paper we set out our research question and empirical strategy more fully, explain the details of our field experiment and implementation, and present our results.

## 2 Contact, Cue, or Content

Our interest is in distinguishing between three dimensions of political persuasion: the content of the message, the contact with an agent who presents the case, and the cue taken from the intrinsic features of an individual associated with the message. We make no claim

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<sup>1</sup>We recognize that some level of cueing is still likely to be associated even with unknown canvassers since listeners may extract information from features such as gender, race, or even confidence.

that these are exhaustive dimensions, but there are good theoretical and empirical reasons to believe that each of these, in isolation, will impact upon political behavior.<sup>2</sup> Moreover, since these three dimensions constitute core features of political campaigns, that are subject to manipulation by managers of these campaigns, they can be the subject of systematic enquiry. We discuss each of these dimensions in turn and discuss how their effects have been analyzed in the extant literature.

## 2.1 Content

Whilst leadership effects are in principle separable from the arguments a leader deploys, in many common political settings a conflation of leadership and message effects occur and so straightforward inferences are hard to make. For example, suppose that voters are more open to some types of arguments than others, and thus their willingness to follow a leader reflects the fact that she made an argument they were persuaded by. This suggests that arguments may stand on their own merits irrespective of the person delivering or associated with that view. What we might commonly think of as a leadership effect is then due to the arguments a leader has at her disposal.

Indeed, recent research finds that some arguments can be more effectively deployed than others. In an important field experiment on content and persuasion, Wantchekon (2003) has shown the differential effects of arguments in political campaigns. In his experiment, presidential candidates in the 2001 national elections in Benin randomly employed different types of political messages in different communities. In some places they deployed messages emphasizing the local benefits of their policies; in others they used messages emphasizing national benefits. In a follow up study, Wantchekon (2009) studied the effect of the “national benefits” message when devised by a group of policy “experts”, comparing the voting intentions of those who received this treatment with that of those who received a standard party message. However, and although this work presents persuasive evidence that the messages that campaigns deploy matter, the study is unable to separate the effect of the message from that of the candidates who delivered the message.

Other work shows how the effect of messages may depend on the initial information followers have available to them. For example, a leader might be more persuasive when communicating a message that conforms to latent dispositions held by audience members (Hafer and Landa, 2007). Related to this, a leader may face obstacles to persuasion if the arguments employed *do not* conform to or take account of strongly held dispositions among the audience (Loewen and Rubenson, 2010). Some arguments may also be more (or less) effective when pitted against specific other arguments (Loewen, Rubenson, and Spirling,

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<sup>2</sup>Other dimensions certainly exist, including coercion; thus the aphorism: “When you’ve got ’em by the balls, their hearts and minds will follow.”

2008). Moreover, this feature of the strategic environment might lead to some arguments not being made at all (Hafer and Landa, 2008). We distinguish conceptually, however, between persuasion effects that are due to the content of the message, and those that are due to the contact of the messengers or the cues they convey: we do so by emphasizing the *transferable* nature of the messages and the relative *nontransferability* of the intrinsic properties of individuals.

## 2.2 Contact

Although the content of the message matters, substance may be trumped by style. Thus Conrad's (1912) advice to leaders is that to persuade one should "trust not in the right argument, but in the right word. The power of sound has always been greater than the power of sense" 1912, 11.

The classical study of political rhetoric is moreover premised on the idea that the form of argumentation is critical to the production of a persuasive effect. Political rhetoric may command less respect than it once did,<sup>3</sup> but political marketing thrives nevertheless. The ability of an individual to persuade may depend then not on the arguments at her disposal, but instead on some persuasive element of her persona. This may be due to tangible elements of a leader's character, such as her oratorical flair, wit, or common touch, but may also be due to aspects that are hard for the analyst to discern. Thus an individual may be persuasive not due to her particular leadership abilities, or, (as we explore below), because she provides a cognitive information shortcut by virtue of her traits, but due to her intrinsic communicative abilities.

Indeed recent empirical work suggests that the identity of the leader can have important effects independent of the messages they provide. In one recent field experiment, Humphreys, Masters, and Sandbu (2006) randomly assigned leaders to discussion groups during a national level public deliberation in the island state of São Tomé e Príncipe. The random assignment was undertaken to estimate the extent to which leaders influenced discussion outcomes. These effects were found to be substantial: leader characteristics often predicted up to 50 percent of the variation in discussion outcomes. Indeed the authors argued strongly that

These results are unambiguous. Leaders matter profoundly. . . . Knowing which member of the country's political elite was randomly selected to lead the discussions provides an extraordinarily powerful indicator of what policies the partic-

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<sup>3</sup>Thus Hume argues in 'Of Eloquence' (*Essays, Moral, Political, and Literary; Part I, Essay XIII*) that it "may be pretended that the decline of eloquence is owing to the superior good sense of the moderns, who reject with disdain all those rhetorical tricks, employed to seduce the judges, and will admit of nothing but solid argument in any debate or deliberation. . . . Now, banish the pathetic from public discourses, and you reduce the speakers merely to modern eloquence; that is, to good sense, delivered in proper expression."

ipants in each group ostensibly supported (Humphreys, Masters, and Sandbu, 2006, 604).

While this study suggests that the intrinsic factors such as style and charisma are important (the leaders were generally unknown and in principle had a null message to convey) the study does not cleanly separate the effect that is due to contact with the leaders, from that which is due to the content of their message. It is plausible that the recorded differences in opinion arose from variation in the arguments employed by different facilitators deployed in different areas. In order to draw strong inferences about the effects of leaders it is important to distinguish between these elements.

### 2.3 Cue

Substance or style—content and contact in our usage above—or some combination of the two may be determinants of persuasiveness. However, there is also reason to believe that individuals can be persuaded by an agent without any contact, either direct or indirect, and irrespective of the content of the message. How might this work? Research in cognitive psychology suggests that people rely on “information shortcuts” or “heuristics” to make complex decisions such as which candidate to vote for or which position on an issue to adopt (Kahneman, Slovic, and Tversky, 1982; Lupia, 1994). As an example, an individual may be persuaded not by the message, but because she infers something about the desirability of an outcome by virtue of the characteristics of the person endorsing it. A large body of empirical work looks at the relationship between election outcomes and the cues taken by voters from the characteristics of political leaders (see, for example, Conover and Feldman, 1989; Kinder, Peters, Abelson, and Fiske, 1980). An agent’s persuasive abilities can depend upon her personality type, age, gender, or race, if followers take their cues from these ascribed traits. In addition, an individual’s occupation—or position in society—or their affiliation with some organization or movement may also provide cues to potential voters.<sup>4</sup>

The effect of such cues can work via subtle mechanisms. A cue is effective when followers place more trust in a message because they believe that the messenger has more knowledge on the issue. This may be because the follower believes the leader has better information—the cue is then provided by *inter alia*, a leader’s position, her experience, and/or her seniority—or, perhaps, that she shares common interests with the leader. This is how Lupia and McCubbins (1998) relate the notion of cue-taking to partisan identification and

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<sup>4</sup>For example, Campbell, Converse, Miller, and Stokes argue that political parties, act

... as a supplier of cues by which the individual may evaluate the elements of politics. The fact that most elements of national politics are far removed from the world of the common citizen forces the individual to depend on sources of information from which he may learn indirectly what he cannot know as a matter of direct experience (1960/1980, 128).



the role of opinion leaders. A related theory that depends upon the discernable traits of leaders is the focal theory of leadership (Calvert, 1995; Dewan and Myatt, 2007, 2008; Myerson, 2004). This suggests that followers will be attracted to leaders simply because they believe that these leaders have traits that other followers will find attractive also.

The persuasive effects of what we term contact and cue clearly rely upon the properties of agents. Whilst these channels of persuasion are, in principle, distinct from the content of the message, there are important and subtle differences between these mechanisms also. Whereas the latter is enhanced when the leader has an established reputation, the former depends upon characteristics of the agent that are unrelated to any prior knowledge a follower has about her. Whilst our notion of contact depends solely upon the properties of the messenger, a cue, by contrast, links both message and messenger: the cue is the inference the follower draws about the message from the characteristics of the messenger.

## 2.4 Disentangling Persuasive Effects

Previous studies, that have looked at leadership effects on the one hand, and messages effects on the other, have been unable to identify pure (leadership or message) effects. An additional question that arises from the study by Humphreys, Masters, and Sandbu (2006) is the mechanism by which leaders influence outcomes. If, indeed, it is in fact the case that the outcomes of the deliberation process were causally related to participants having made contact with specific leaders, it is unclear whether this effect was due to the participants using leadership traits as heuristic shortcuts or the persuasive abilities of the leaders deployed. In sum, both the Humphreys, Masters, and Sandbu (2006) and Wantchekon (2003, 2009) studies provide important lessons about leaders and arguments and demonstrate that these kinds of questions can be addressed using fully randomized field experimental designs, thereby improving greatly on the extant, observational work described above. However, neither is able to untangle the effect of agency from that of message, nor cleanly separate the different dimensions of persuasion to which we refer.

The growing field experimental literature on voter mobilization also suggests that differences in the content of messages—or arguments—can have different effects on behavior (see, for example, Arceneaux and Nickerson, 2005; Gerber, Green, and Larimer, 2008; McNulty, 2005; Panagopoulos, 2009). For example, by varying the focus placed on “civic duty” versus self-interest, or by conveying partisan versus nonpartisan messages, get-out-the-vote strategies have markedly different effects. Thus far, however, this literature has not distinguished between core elements of political persuasion in order to isolate the effect of different messages. In a study that is related to ours, Arceneaux and Kolodny (2009) attempt to separate the effects of source cues from those of messages on political preferences. The authors worked together with a liberal activist group in the 2006 Pennsylvania

statehouse elections. The group endorsed candidates from the Democratic Party and were involved in canvassing core supporters as well as voters supporting the Republican Party but whom the group deemed to be persuadable. Individuals were randomly assigned to either be contacted by the activist group or not. The authors' findings suggest that cues matter in that Republicans who were contacted by the group were less likely to support the endorsed candidates (Arceneaux and Kolodny, 2009, 18). While the motivation for this study is closely related to ours, it is limited in its ability to distinguish between the dimensions of interest since it does not systematically vary either messenger or message.<sup>5</sup>. In their own words: "the design does not allow us to tease out the independent effects of the message and the source cue; it only allows us to test whether politically unaware voters use the combination of the source cue and the contextual information contained in the groups message to behave as if they were politically aware voters" (2009, 759). Similarly, Arceneaux and Nickerson (2010) assess the opinions of voters who are randomly assigned messages that emphasize either the positive aspects of a party programme or negative aspects of an opponents stance: whilst the study emphasizes the role played by direct contact with individuals from the campaign, it does not distinguish between the effects of contact or content.

In sum, despite a large literature on the importance of contact, content, and cue-taking in politics, little attempt has been made to distinguish between these elements of persuasion. Below we describe an empirical strategy that allows us to disentangle the effects of our three dimensions of persuasion.

### 3 Empirical Strategy

Our aim is to distinguish between three dimensions of persuasion in terms of the effect they have on public opinion. Two of these dimensions of persuasion, those pertaining to what we term contact and cue, are related to the characteristics, observable or otherwise, of those doing the persuading. We can (loosely) define such individuals as leaders: their effect may be due to some observable trait (age, race, gender, or station in life) or due to their mastery of the persuasive art of communication. The third element of persuasion is that relying on the content of the message. Fortunately, each of these elements vary systematically in a political campaign. In principle then, when analyzing such processes, we can ask: how would the opinions of listeners have changed if different arguments had been employed? And how would the opinions of the population have changed if different individuals had been associated with, or dispatched to make, these arguments? In practice,

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<sup>5</sup>However, recent work by Bullock (2009) systematically varies the content of the message, the quantity of information provided, and a partisan cue, and finds that the informative content of a message can outweigh that of the cue

however, it is hard to discern whether people are convinced by the argument being deployed or by the person who is delivering the message. An argument or leader that is effective with one audience may not work as well with another. Different groups of individuals may be more or less responsive to different leaders and so we may falsely attribute effectiveness to a leader whose appeal is limited to a small sample of the population. In addition there are three related problems that we are likely to encounter in our attempt to distinguish between the effects of leaders and the arguments they make.

Firstly, certain leaders may be prone to making certain types of arguments. Even when accounting for ideological differences, systematic differences between a leader's type and the message they deliver are likely to arise. For example, experienced politicians may be more cautious in the types of policies they promote, and younger politicians may promote policies that reflect their longer time horizons. Thus there may be a correlation between a leader's characteristics and the arguments she uses. This correlation hinders any empirical assessment of the causal effect of each on political outcomes of interest.

Secondly, since a leader aims to convince voters of a particular viewpoint, and uses her powers of persuasion to that effect, she may also adapt her message to suit her audience. For example, suppose that a leader uses argument  $A$  but senses that her audience might be more swayed if she deployed argument  $B$  instead; she will then be tempted to switch the emphasis of her message. In this sense the audience is affected by the arguments of a leader *and* vice-versa. This strategic component of political communication introduces a classic problem of endogeneity that confounds analysis of leadership effects.

Thirdly, both arguments and leaders are typically selected because they are deemed likely to be effective in a given setting. Some leaders may be more effective when campaigning in particular areas, and this may be due to their having local roots or connections. Similarly certain types of argument may work better when deployed amongst some communities rather than others. A political campaign is likely to match leaders and arguments to local areas to maximize the impact of the campaign. This strategic component of campaigning introduces a selection bias that can confound attempts to isolate the causal effect of leaders and the arguments they make.

Each of these problems is likely to arise as part of the natural process of political campaigning. Thus it may appear impossible to draw an empirical distinction between the effects of agents and the messages they deploy and across the different channels of persuasion. However analyzing political behavior in a controlled environment provides some leeway to addressing our key questions. Randomizing on the variables of interest gets around the problem of selection bias and correlation described above. If, for example, a campaign were to randomly assign agents to different localities, and randomly assign different messages to different addresses within localities, the estimates of these effects

would be unbiased. One way to implement this is via a door-to-door campaign in which the opinion leaders are individual canvassers randomly assigned to localities but who deliver pre-assigned messages at randomly assigned households. That is the design we implement in our study, but the general model we describe below could also be implemented in other campaign scenarios.

### 3.1 Quantities of Interest

During the course of a campaign different individuals, or groups of individuals, are exposed to different agents who make the case for the campaign. Some agents may be more persuasive in making campaign arguments and this may be due to their traits and communicative abilities. Others may be persuasive because of who they are and the reputations they enjoy, independent of how they communicate. Moreover an agent may be more or less persuasive for different groups and their effect may be specific to, or magnified, in certain localities, with certain message, or in association with certain endorsers.

To identify each of these three effects we analyze a model in which individual responses reflect both idiosyncratic and group level features. More specifically, we think of subjects as clustered in local areas and we examine variation in (i) the messages delivered (ii) the individuals that deliver those messages and (iii) the individuals that “endorse” them. The distinction between (ii) and (iii) arises regularly in political campaigns: an individual campaigner may attempt to persuade a voter of the merits of a particular position that is associated with one or more well known public figures, even though the campaigner herself will likely not be known. In principle this feature of a campaign allows us to distinguish between our dimensions of interest as, in this setting, (i) captures content effects, (ii) captures ‘contact’ and (iii) captures ‘cue’ effects.

The “potential outcome” for individual  $i$  in area  $j$  is written:

$$y_i(m, c, e, X_j)$$

where  $m \in M = \{\emptyset\} \cup \{1, 2\}$  is the message received,  $c \in C = \{1, 2, \dots, n_c\}$  is an agent, or messenger, and  $e \in E = \{\emptyset\} \cup \{1, 2, \dots, n_e\}$  is an endorser. The set of treatments is given by the Cartesian product of  $M$ ,  $C$ , and  $E$ . In addition  $y_i$  can depend on a set of community level features,  $X_j$  that lie beyond our control. We let  $m(i)$ ,  $c(i)$  and so on denote the condition that is allocated to individual  $i$  and with some abuse of notation we let  $\pi(m)$ ,  $\pi(e)$  denote the share of subjects assigned to a given condition.

The effect of an endorser  $A$  for individual  $i$  (given message  $m$  and leader  $c$ ) is then  $y_i(m, c, A, X_j) - y_i(m, c, \emptyset, X_j)$ , the effect of endorser  $A$  relative to endorser  $B$  is  $y_i(m, c, A, X_j) - y_i(m, c, B, X_j)$ , the effect of message 1 is  $y_i(1, c, e, X_j) - y_i(\emptyset, c, e, X_j)$  and so on. The av-

erage effect of a leader or message is the average of these individual effects given some distribution of treatments. Of course average effects of any treatment may be different for different combinations of treatments and for different localities,  $j$ .

In practice we examine a setting in which the elements of  $M$  and  $E$  are varied at the individual level, within localities, and the elements of  $C$  are varied across localities. Thus we examine individual level randomization for  $M$  and  $E$  and cluster randomization for  $C$ . The empirical design we implement is a special case of this set-up in which each individual is exposed to at most one substantive argument, at most one endorser and exactly one agent. We undertake different analysis for the estimation of message treatments and messenger treatments.

To examine ‘content’ effects we need to distinguish the effect of the messages from other confounding effects. In particular we need to distinguish between the the effect of the message and that of the agent delivering the message and that of location. We employ a simple strategy. We compare the mean outcomes amongst a group assigned a specific message whilst accounting for location and the assignment of agents. To do so we generate an independent variable which ‘purges’ the outcome variable of average effects associated with location and the agents assigned to those locations. We then estimate an average treatment effect for this purged variable, matching on endorser treatments. Formally let  $F(c, j)$  denote the set of subjects that meet agent  $c$  in location  $j$ , then define  $y'_{i \in F(c, j)} = y_i - \text{Mean}_{h \in F(c, j)} y_h$ . The estimated effect of message  $m$  compared to  $m'$  is then:

$$\hat{\tau}_{m, m'} = \sum_{e \in E} \pi(e) \left( \text{Mean}_{(i|e(i)=e, m(i)=m)}(y'_i) - \text{Mean}_{(i|e(i)=e, m(i)=m')}(y'_i) \right).$$

In our analysis, typically,  $m' = \emptyset$ , as this represents a natural control group for those who receive one or other of the message treatments. For examining ‘contact’ effects, however, we confront the problem that it is hard to imagine a situation in which a respondent receives a message without making contact with an agent. In such cases there is no natural control group to compare the impact of the agent (that is, there may be poor contact but not *no* contact). Nevertheless even in such cases *variation* in the effects of different agents can be examined. This is the approach used by Humphreys, Masters, and Sandbu (2006) to distinguish between leaders. If leaders have differential effects then we should expect that the post-treatment differences in opinion amongst the population responds in some way to the different agents they were exposed to. In practice, and in the application we describe more fully below, agents worked in clusters of locations on a given day. So we can undertake this analysis by defining outcomes at the cluster level, purged of message and endorser effects. Formally let  $(m, e)$  denote the set of subjects that encounter messenger  $m$  and endorser  $e$ , then define  $y'_{i \in G(m, e)} = y_i - \text{Mean}_{h \in G(m, e)} y_h$ . Then for campaigner  $c$  in

location  $j$  we define:  $\bar{y}_{c,j} = \text{Mean}_{i \in A(c,j)}(y'_i)$ . To estimate the effects of agents across average responses in each location we can then deploy a standard  $F$  test to test the hypothesis that average outcomes on  $\bar{y}_{c,j}$  are invariant across agent identities.

For the analysis of cueing effects we can employ both types of analysis; that is we can examine the effect of the presence of an endorser compared with no endorser and we can examine whether there is variation in endorser effects. The estimate of the effect of the presence of an endorser is done in the same way as the examination of message content, in this case purging location and campaigner effects and matching on message effects. Since there is no geographic clustering of the endorser treatment the examination of variation can also be undertaken at the respondent level.

The key outcome variable we examine is the subject's expected voting behavior. In practice this outcome takes three values for 478 subjects for whom we have data on this question: "yes" (42%), "No" (21%) and "Don't know" (38%).<sup>6</sup> Given the large number reporting that they do not know it is possible that treatment could lead simultaneously to an increase in the propensity to vote *yes* and the propensity to vote *no*. For this reason we will examine separately the effects of treatments on *yes* votes and *no* votes (and sometimes explicitly on 'don't know' positions).

\* \* \*

We are interested in persuasion, specifically in disentangling the effects of an agent's contact, or the cue received from an endorser, from that of the substantive content of messages deployed by the campaign. As we discuss above, several problems related to correlation, endogeneity and selection bias present themselves when attempting to sort out these effects. We have outlined an experimental design to overcome these obstacles. However, the design itself presents a set of practical difficulties. We need variation on both agents and the messages they employ. Preferably this variation would occur in a real campaign as opposed to in the lab or in the context of a survey. Therefore, it is necessary to find an organization willing to agree to allow a research team to randomize parts of their campaign—both agents, messages, and endorsements—during an election. And ideally, the election in which to implement the design would be one fought over some central issue for which there are several arguments on both sides. A referendum suits these purposes very well and we were able to secure cooperation from the *yes* side of the campaign for the 2009 referendum on electoral reform in British Columbia. We turn now to discuss an implementation of the research design outlined above, using data from a unique field experiment during this campaign.

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<sup>6</sup>Numbers subject to rounding error; in addition a small subset of respondents refused to answer this question.

## 4 The Political Campaign

### 4.1 British Columbians for STV

To implement this research design we worked directly with the *British Columbians for Single Transferable Vote* (BC-STV) in their build up to the referendum on electoral reform of May 12<sup>th</sup>, 2009. We initially made contact with former members of the British Columbia Citizens' Assembly on Electoral Reform which was created by the Government of British Columbia in 2003 as an independent, non-partisan assembly of citizens to examine the province's electoral system and to make recommendations for reform. The Assembly of 160 members spent an 11 month period of consultations, deliberations and public hearings before advocating the Single Transferable Vote (STV) in their final report to the people of British Columbia in December 2004 (British Columbia, 2004). Members of the assembly campaigned across the province for the proposal, with over 800 meetings being lead by assembly campaigners. Despite winning a majority in 77 of the 79 districts, the reform narrowly failed to meet the 60 percent Province wide threshold in the referendum of May 17<sup>th</sup>, 2005. A second referendum on the same proposal was held in May 2009 and our work involved analyzing the effects of the campaign in the run in to that date.

In correspondence and face to face meetings with the campaign we designed a strategy that would allow us to answer our core questions and provide them with valuable information about the effects of different elements of their campaign. As part of the implementation of this design, the campaign identified a set of mid-level activists who would serve as opinion leaders, a set of messages that the campaign believed would support their position on STV and a set of sites where campaigning would take place. A further critical aspect of the campaign that we were able to exploit was that it was endorsed by leading public figures. We asked the campaign to select from amongst their endorsers those they believed would have the biggest positive effect on campaign outcomes.

As we make clear below, our design thus allowed us to separate different channels through which leadership could impact the campaign. On the one hand, since we analyzed the door-to-door campaign we were able to assess whether the messages the campaign deployed and/or the messengers the campaign deployed were effective. Since these individuals were not publicly known figures their effect is less likely to be due to cue-taking and more due to their persuasive ability. By contrast, the campaign endorsers *were* well known public figures, and, since they had no direct contact with participants, their effect can only have been due to more indirect forms of influence such as cue-taking. It was important that these different elements—the messages, messengers, and endorsers—were chosen by the campaign with our involvement limited to guidance in the randomization protocols we describe below.

## 4.2 The Treatments

To identify campaign effects with confidence we used the first best method of randomized assignment to ensure that observed differences are truly due to treatment effects and not due to selection or other confounding effects. In a (random) subset of households, the campaign delivered a “placebo” message in which voters were simply told that a referendum will take place on May 12<sup>th</sup>, 2009. In addition to these placebos, a random subset of the households that received the placebo, received in addition one from a set of “treatments” described more fully below.

The placebo was designed to ensure a level playing field between those who were directly contacted by the campaign and those not. A key problem in assessing the effect of the campaign was that the level of information about the referendum varied from household to household. However, since households were randomly sampled, in expectation, the level of information about the referendum was the same in treated and non-treated households. Nevertheless, and in the absence of the placebo, it is possible that one effect of being visited by the campaign was in raising awareness about the referendum in treated houses over and above that which existed in non-treated households. It would be hard for us to identify our quantities of interest, were this the case. For this reason all households received an informative placebo that contained no information that could be construed as favorable to the *yes* side. In this way, we can be reasonably certain that any differences in voting intention arose only from differences in the treatments received.

A random subset of households received one from a set of treatments. These treatments came in the form of a campaign document and a presentation by an agent who canvassed these households. The communication combined different elements that the campaign believed might be effective in securing a *yes* vote from the recipient of the treatment. In particular, agents were dispatched to give one of two arguments in favor of STV—an argument that makes the case that STV leads to fairer outcomes and an argument that STV allows for greater choice—and a flyer summarizing the main points of the argument. Some of these flyers were also endorsed by leading public STV supporters. Some treatments involved a simple endorsement with no supporting argument.

### 4.2.1 The Messages

The two messages constructed by the campaign to make the case that STV is the right electoral system for British Columbia are shown in Figure 1. One set of arguments focused on the general claim made in favor of proportional systems that such systems are fairer. This message emphasized that STV translates votes into seat-shares more proportionally and reduces the phenomenon of wasted votes. It emphasized that plurality rule elections



often lead to governments being elected on less than 50 percent of the vote, and that in the past BC has had governments that have received a lower province-wide vote share than an opposition party. A second message focused on issues of choice and accountability.

FAIRNESS	ACCOUNTABILITY
<div style="text-align: center; background-color: #c0e0e0; padding: 10px;"> <h2 style="margin: 0;">Fairer Results</h2> </div> <p>No more distorted outcomes. It will take roughly the same number of votes to elect an MLA, no matter what riding, no matter what party. Across the province, a party's share of the votes will be very similar to their share of the seats. Your vote will count.</p> <p>Under the present system the Legislature we get is not the one we voted for. The current system — single-member plurality, or “first-past-the-post” — distorts people's votes, producing unrepresentative legislatures.</p> <ul style="list-style-type: none"> <li>• We usually have a majority government that has been elected by a minority of voters - a <b>'false majority'</b>.</li> <li>• Sometimes the winning party does not even have the most votes – a <b>'wrong winner'</b>, as happened in 1996.</li> <li>• A majority of our votes are usually <b>'wasted'</b> – in 2005, 64% of voters had no effect on the outcome. Both major parties, and all smaller parties and independent candidates, have suffered from our antiquated voting system.</li> </ul> <p>Many countries around the world, including Germany, Ireland, Sweden, Australia and New Zealand, use modern systems that avoid these problems.</p> <p><b>BC-STV will give British Columbians the governments they vote for — and that's the way it should be.</b></p>	<div style="text-align: center; background-color: #c06040; color: white; padding: 10px;"> <h2 style="margin: 0;">Greater Voter Choice</h2> </div> <p>Under our present voting system voters only have one candidate per party to choose from and are only represented by one candidate.</p> <p>But under STV, parties nominate multiple candidates in each district and the voters have the final say on which ones are elected.</p> <p>This means:</p> <ul style="list-style-type: none"> <li>• <b>No more 'safe seats'</b> - the voter's choice is all that counts.</li> <li>• Since voters are represented by several candidates from the same, or different, parties at election time, they can <b>compare how all of their district MLAs measure up</b> between elections.</li> <li>• More voter choice means <b>MLAs have a stronger incentive</b> to represent their community's best interests in the legislature.</li> <li>• If you need help after Election Day <b>you can approach</b> the MLA you voted for, the one who lives closest to you, <b>or all of your MLAs.</b></li> </ul> <p><b>BC-STV puts the power in the hands of the voters — and that's the way it should be.</b></p> <div style="text-align: center; background-color: #e0c080; padding: 10px;"> <h2 style="margin: 0;">Accountable Local MLAs</h2> </div>

Figure 1: Messages

Here the argument was made that parties would be forced to nominate more than one candidate, inducing a choice amongst different party representatives and a comparison of performance between local districts. The campaign argued that STV would lead to better local representation, as with more local Members of the Legislative Assembly (MLAs), citizens would be able to choose amongst representatives to go to with their concerns, including the choice to visit all local MLAs.



Figure 2: A Message with Endorsement

#### 4.2.2 The Canvassers

A group of activists was trained by the campaign to engage in door-to-door canvassing. This was a central element of the campaign strategy, as it is in many election campaigns. Canvassers shared a commitment to the campaign's goals but varied on several dimensions—including sociodemographic characteristics and political orientation. Just over two thirds of the canvassers who participated in the study were women. Canvassers ranged in age from 19 years to 63. Roughly fifty five percent had completed a university degree and forty percent were full time students while the rest were employed. The group was ethnically diverse as well as being diverse in terms of political orientation. Half of the canvassers intended to vote for the Green Party in the Provincial election, thirty percent for the left wing New Democratic Party and the remainder were evenly split between the Liberal Party and the Conservative Party. In addition to this variation in background characteristics and political orientation, activist's may also have varied on many unobservable dimensions that could affect their persuasiveness. Our design allowed us to identify whether such observed or unobserved differences between canvassers could explain a part of the campaign effect.

### 4.2.3 The Endorsers

Some of the messages were also endorsed by leading public figures who supported the campaign. BC-STV settled on four main endorsers for the purpose of the study: David Suzuki, a well known media figure and environmentalist, seen in Figure 2; Preston Manning, a former politician, founder and leader of the Reform Party; Andrew Coyne, the editor of Maclean’s Magazine and a well known journalist; Lorne Nystrom, former New Democratic Party Member of Parliament. The list gives some balance on politician and non-politician as well as ideology with Manning and Coyne generally considered to be on the right while Suzuki and Nystrom are further on the left of the political spectrum in Canada. Ultimately these were the endorsers the campaign believed would have the biggest impact.

Ex ante, there are a number of reasons to believe that the campaign’s endorsers would vary in their effectiveness with regard to persuading individuals to vote for the STV proposal. First, the four endorsers, while all publicly known figures, vary in how well they are known to the general public. It is safe to say that Preston Manning and David Suzuki are known by most Canadians. Manning has been a central figure in Canadian politics for two decades, is (arguably) responsible for redefining party politics, and is the face of western Canadian populism. Suzuki is one of the best known environmentalists and television personalities in the country. In contrast, Nystrom and Coyne are less well known. Second, while all the endorsers supported electoral reform and held the view that STV was preferable to the status quo, they varied in how vocal and public these views were. Third, it is likely that the public’s perception of the motivations for the endorsers’ support of electoral reform varied. In particular, Manning and Nystrom may have been perceived to have adopted their positions for reasons of political strategy. Each of these factors suggests that the cue taken by voters would vary according to which if any endorsement they received and our design allowed us to isolate this channel of persuasion.

## 4.3 Voting Areas

To analyze our quantities of interest we distinguish the general effects of messages and messengers from those that are specific to particular neighborhoods. British Columbia has eighty five single member electoral districts—ridings, in the Canadian vernacular—that return representatives to the Provincial Legislature. These districts are broken down further into ‘voting areas’, analogous to American polling precincts. Voting areas assign voters to a single voting place and ballot box and their population is capped, by legislation, at 400 voters to ensure that a voting officer and voting clerk can administer the votes in one day.

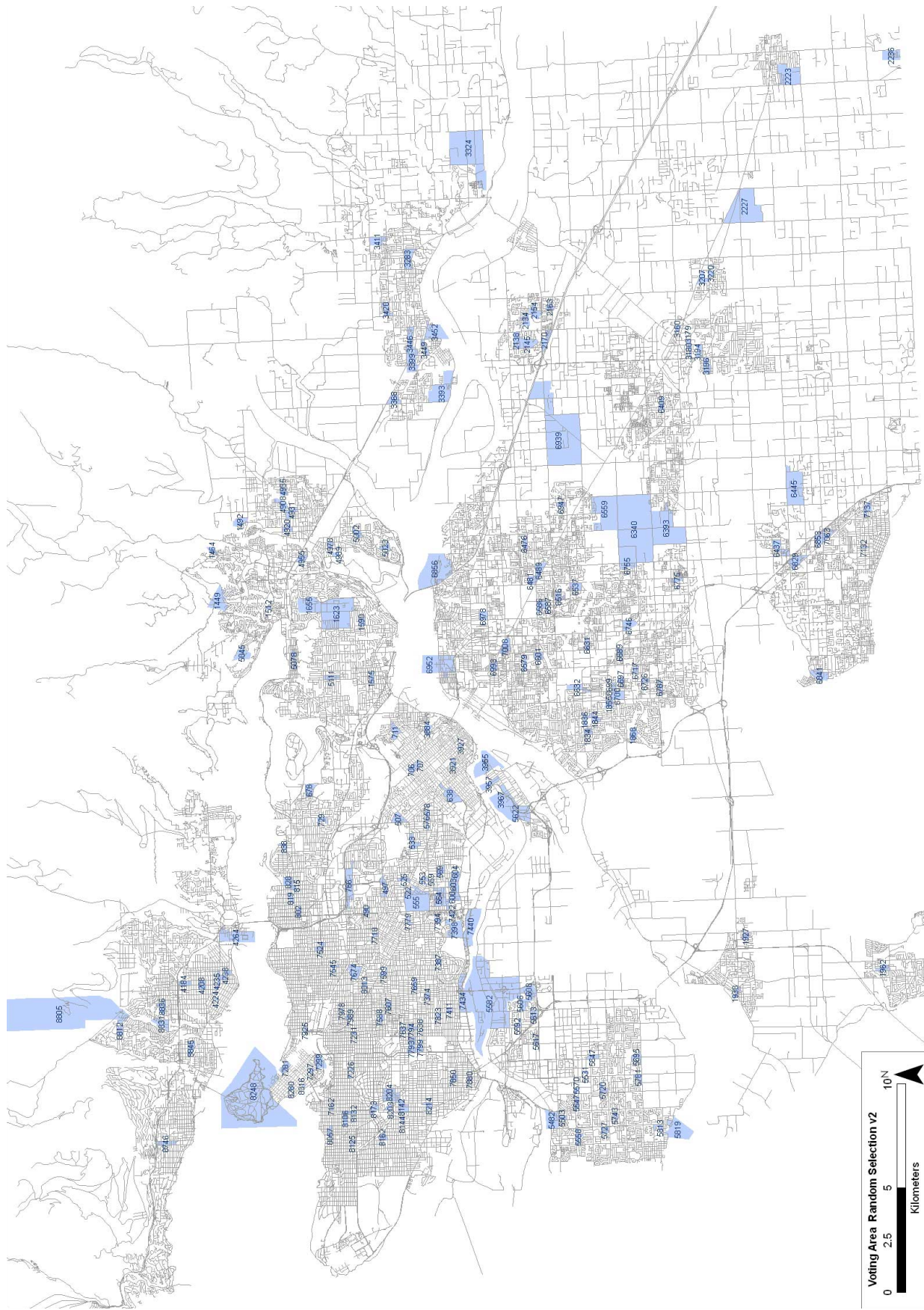


Figure 3: Location of Sampled Canvassing Sites

Table 1: Research Design Distribution of Messages and Endorsers

		<b>Endorser</b>					
		<b>None</b>	<b>Coyne</b>	<b>Manning</b>	<b>Nystrom</b>	<b>Suzuki</b>	<b>Total</b>
<b>Message</b>	<b>Accountability</b>	216 (8%)	126 (5%)	126 (5%)	126 (5%)	126 (5%)	720 (28%)
	<b>Fairness</b>	216 (8%)	126 (5%)	126 (5%)	126 (5%)	126 (5%)	720 (28%)
	<b>No Message</b>	648 (25%)	126 (5%)	126 (5%)	126 (5%)	126 (5%)	1152 (44%)
<b>Total</b>		1080 (42%)	378 (15%)	378 (15%)	378 (15%)	378 (15%)	2592 (100%)

There are 4799 voting areas in the Greater Vancouver Regional District. In drawing our sample of 216 voting areas for our experiment—our design called for twenty four canvassers, each daily visiting a different voting area for nine days—we used data from the 2006 Canadian Census to stratify by wealth, education, ethnic demography and geographic size. Wealth and education were divided into two categories while ethnic demography (measured using the ethno-linguistic fractionalization index) and geographic size were divided into three categories. Sampling was proportionate to voting area population size. All voting areas were included in the sampling; that is, our strategy simply stratified, it did not assign different weights to different types of area. The design involved the 216 voting areas in the Greater Vancouver area that are shown shaded in Figure 3. Canvassers were randomly assigned to voting areas and treatments administered within voting areas.

#### 4.4 Randomization Procedure

As described above a group of agents were trained to take part in the evaluation program. Training took place over several days with the first leaders trained by the research team and later ones trained by members of the campaign team. These agents, or messengers, were told to follow their usual campaigning contact, but were given instructions as to which areas to visit and which households to visit in each area, with the former being randomly assigned on a daily basis.

In each voting area, our agents were provided with a map of the area on which a randomly generated starting point and direction were indicated, along with a randomly generated route that they would follow. They were told to start on one side of the indicated street and to visit the fifth residential structure to deliver the first message. If they made contact they would then move to the tenth residential structure; if unsuccessful, they would go to the next residential structure. In addition, leaders were given instructions as to which

Table 2: Sample Distribution of Messages and Endorsers in Surveyed Areas

		Endorser					
		None	Coyne	Manning	Nystrom	Suzuki	Total
Message	Accountability	50 (10%)	20 (4%)	18 (3%)	24 (5%)	26 (5%)	138 (27%)
	Fairness	48 (9%)	26 (5%)	27 (5%)	26 (5%)	28 (5%)	155 (30%)
	No Message	126 (24%)	26 (5%)	21 (4%)	22 (4%)	32 (6%)	227 (44%)
<b>Total</b>		224 (43%)	72 (14%)	66 (13%)	72 (14%)	86 (17%)	520 (100%)

order they should deliver their messages. A typical daily sheet is shown in Figure A1, in Appendix A.

#### 4.5 Matching of Treatments to Voters

In our design, the types of message delivered to households varied in the content of the message delivered and the identity of the endorser associated with the message, according to the distribution given in Table 1. The planned overall matching of treatments to individuals aimed to give overall balance on each of the treatments.

The sample distribution of messages and endorsers is reported in Table 2. In practice, data collection fell considerably short of what had been planned, and so the sample of respondents is smaller than anticipated. However sufficient data was still collected to allow core questions to be answered.

The data shortfall arose due to a combination of factors. First, although 2592 households were targeted for canvassing, engaging sufficient numbers of canvassers for the duration required proved very difficult. In part this was due to the fact that the randomization strategy required greater time spent traveling than normally needed for canvassing. The effect was that 1044 rather than 2592 houses were canvassed.

Enumeration teams were able to locate and visit 968 (93%) of these households. Often enumerators would have to visit a household several times before making contact. Enumeration was successful—in that the enumerators were able to get a full response to the survey—in 520 cases. Of the remainder, in 255 cases enumerators were unable to find anybody at home after multiple visits (at least 3 per house, often 6); in 192 cases those answering the door refused to respond to the survey (although in 32 of these cases the respondents did agree to answer a single question on voting intentions).

## 4.6 Voter Profiles

Our aim was not to reach a population representative of all British Columbia voters, or even those in the Greater Vancouver area, but to construct a sample of households who were *likely to be reached by the campaign* during door-to-door canvassing. Thus the aim of the study was to discern campaign effects and to separate different channels of persuasion amongst a representative sample of those contacted by the campaign. For this reason the campaigners were encouraged to use their normal canvassing techniques with the exception of strict implementation of the randomization protocols described above. Canvassers were asked to provide basic descriptive information on the respondents. This basic information allowed us to get an overview of the sample of respondents and of the type of people the campaign is likely to make contact with in door-to-door canvassing. It also aided enumerators in identifying individuals within households on whom to collect data.

Our sample is composed of 48% women and 52% men. The median age is 48 and about 48% of the sample had completed a university degree with only 8% of the sample having less than a high school education. The voting profile of the respondent pool largely matches the overall results from the previous referendum on electoral reform held in 2005. Of those reporting, 65% report not having voted in the last referendum; and of those that voted, 58.6% reported having voted *yes* and 41.4% reported having voted No.

A team of enumerators followed up the canvassers with a lag of between two and four days. These enumerators made contact at the door and administered a short survey measuring opinion on various aspects of the referendum issue, vote intention, knowledge about the endorsers, general political knowledge and recall of campaign contact, in addition to basic socio-demographic information.<sup>7</sup>

## 5 Results

The basic results for the *yes* outcome is shown in Table 3. The table shows the share of subjects who report an intention to vote ‘*yes*’ after accounting for average location and campaigner effects (this is the average of the quantities  $y'_i$  described above). To facilitate interpretation we report the difference between the outcome for some combination of treatments with the outcome under the placebo condition. Thus each reported number can be interpreted as an estimate of how more or less likely a subject in a given condition is to vote *yes* compared to a subject in the placebo condition, conditioning on location and canvasser effects. Scanning the outcomes in the ‘total’ rows and columns provides initial insights into the effects of messages and endorsers; on average we see that the propensity for supporting STV is highest among those receiving the accountability message for example, and for

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<sup>7</sup>See the Appendix for the complete survey instrument.

Table 3: Effect of Messages and Endorser Conditions on Estimated Propensity to Vote *yes*

		Endorser					
		None	Coyne	Manning	Nystrom	Suzuki	Total
Message	Accountability	0.136 (0.059)	0.193 (0.117)	-0.038 (0.141)	0.265 (0.083)	0.069 (0.082)	0.134 (0.038)
	Fairness	0.021 (0.053)	0.036 (0.084)	0.127 (0.073)	0.150 (0.094)	0.116 (0.086)	0.079 (0.033)
	No Message	0.000 (0.033)	0.046 (0.099)	-0.015 (0.100)	0.102 (0.098)	0.181 (0.068)	0.038 (0.027)
Total		0.035 (0.026)	0.072 (0.056)	0.045 (0.056)	0.171 (0.053)	0.127 (0.045)	0.074 (0.019)

those who received a treatment that contained an endorsement by a prominent individual associated with the campaign. As we shall see, these patterns hold as we examine content, contact, and cueing effects for all three outcome variables in the following sections.

Our design was implemented in such a way that we could distinguish the effects of message content from two types of messenger, or leader, effects—contact and cueing capacity. We now examine the evidence for each of these three effects.

## 5.1 Content

We begin with a treatment of message content. Is there evidence that message content matters and is there evidence that there is a substantive difference in effect across messages? Figure 4 reports the core results for the key outcomes of interest. Our primary outcome of interest is the the decision to vote ‘*yes*’ for the reform. In addition, since subjects could report both a ‘no’ position and a ‘don’t know’ know position we report the results for these outcomes also. Examining these is important since in principle any treatment could increase support for a campaign either by shifting uncertain voters into the *yes* camp, by producing shifts from the no camp to the *yes* camp, or by shifting voters from the ‘no’ camp to an uncertain position. The campaign, naturally, seeks an increase in the *yes* vote and a decline in the no vote.

The first result shows the campaign effect on the likelihood of a *yes* in the referendum on the introduction of STV in British Columbia by comparison of the likelihood of a *yes* vote amongst the treated group (those contacted by the campaign) with the control (those that received the placebo). The estimated magnitude of this effect is in the region of 10 percentage points (ci: 2 - 18). In a one tailed test this effect is significant at the 99% level. Looking down the column we see that the effect is associated with a drop in the No support and a much larger drop in the numbers reporting no position (significant in a two tailed



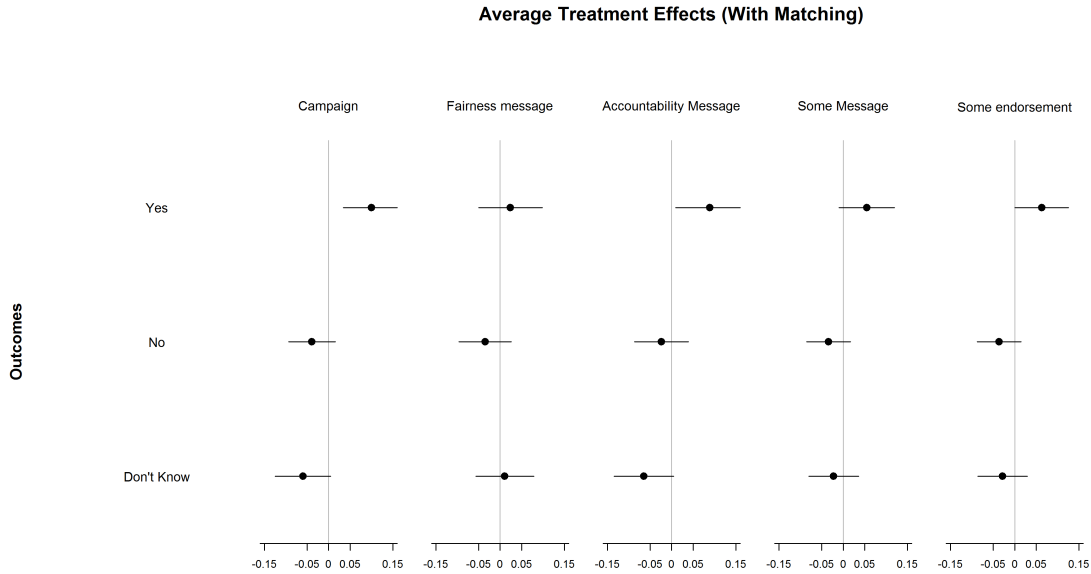


Figure 4: Figure shows estimated average treatment effects for five treatments (columns) and four outcome measures (rows). 90% confidence intervals are indicated.

test at the 90% level).

Looking along the rows we can see that the overall campaign effect derives from two sources: an overall message effect and an overall endorsement effect. Our concern is to separate this effect into its constituent parts. In particular, how much of this effect is due to the substantive messages deployed by the campaign. The figures show the impact of content: our estimates of  $\hat{\tau}_{m,m'}$  where the vote intention of the treatment group (those that received  $m = m'$ ) is compared with that of the control group (those that received  $m = \emptyset$ ), whilst conditioning on all geographic data and average canvasser effects.<sup>8</sup> The content effect is about 6 points (significant at the 90% level in a one tailed test) which averages an effect from the Accountability treatment (9 points, significant at the 95% level in a one tailed test) and from the Fairness treatment (2.4 points, not significant at conventional levels). While the effect on a *yes* vote was stronger for the accountability message than the fairness message we should also note that the gain from the accountability is associated with a reduction in the ‘don’t knows’ while the gain from the fairness message is associated with an increase in the ‘don’t knows’ (and a decline in the ‘No’ vote). Thus the fairness measure while it had a weak effect on the *yes* vote, had a moderate effect on the *yes* vote as a share of *yesses* and *Nos*.

The results described above give the average message effects matching on endorser treatments. Figure 5 shows the fundamental effects within endorser strata as well as the average effects across strata for each message and for ‘any message’; in addition it shows the

<sup>8</sup>Note that the control group for the message treatment includes those that received only an endorsement with no substantive message.

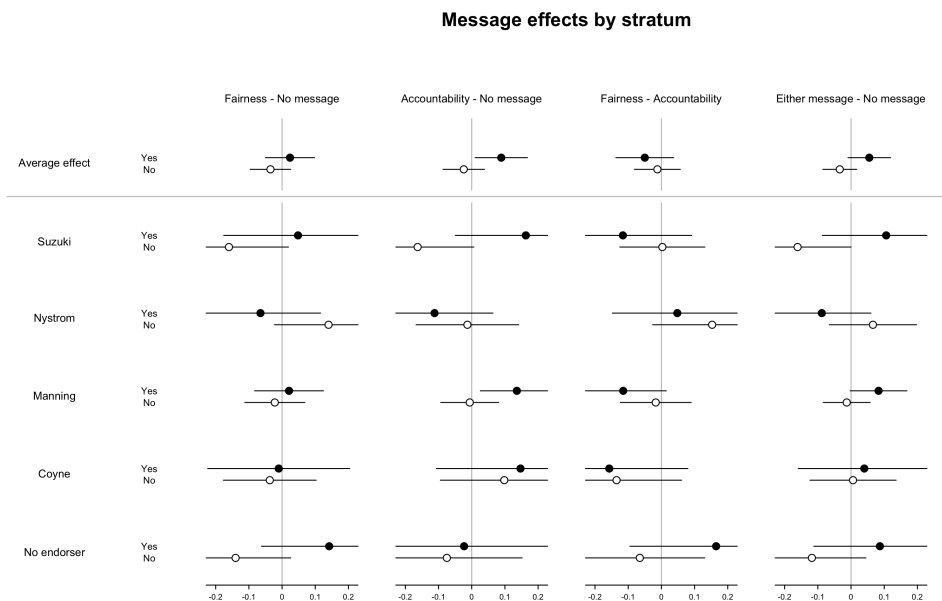


Figure 5: Figure shows estimated average treatment effects for four message treatments (columns) and two outcome measures (marked in each row with white and black points). Within stratum and overall average effects are provided. 90% confidence intervals are indicated.

differential effects of the messages across strata. We see some evidence for heterogeneity across strata (although little of it is statistically significant). In general all messages had a positive effect across endorsers with the exception of Suzuki—for Suzuki we estimate a negative (though not significant) effect of all messages. On average we see that the effects of messages are largely independent of the endorser, and indeed, with the exception of Suzuki, the effect of messages is similar for any endorser to that when there is no endorser.

## 5.2 Contact

To analyze the campaign effect that is due to direct contact with a campaign agent—and thus the element of persuasion that is due to the charisma of the individual deployed—we examine whether those individuals who had been contacted by one or other of the campaigners were more likely to support reform. Note that in effect what we examine is the differences between the effect of agents deployed by the campaign; we do not ask whether it makes a difference for there to be a canvasser or not but whether it makes a difference which individual (from the relevant population) the voter had contact with. We expect that, if contact effects exist, variance in the opinions of respondents should

Table 4: Relative Impacts of Canvassers on Outcomes

Condition: <i>Campaign</i>	<i>yes</i>	<i>No</i>	<i>Don't Know</i>
	0.03 (0.23)	0.03 (0.22)	0.04 (0.18)
Condition: <i>Message</i>	<i>yes</i>	<i>No</i>	<i>Don't Know</i>
	0.05 (0.15)	0.02 (0.28)	-0.03 (0.70)

Table reports Adj- $R^2$  and  $p$ -values from  $F$  test

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

reflect differential exposure to canvassers. Put another way : a necessary condition for an individual contact effect is that some agents or leaders are more persuasive than others.

This approach was adopted by Humphreys, Masters, and Sandbu (2006) in their analysis of leadership effects in deliberative exercises. In their study, individuals were assigned to record deliberations on the use of natural resources in São Tomé e Príncipe. As no such meetings took place without an official recorder of the debate, their study, as ours, lacked a natural control group consisting of leaderless citizens. To detect leadership effects they estimated a series of models on deliberative outcomes, controlling for leader specific fixed effects, using an  $F$  test to test the hypothesis that the joint difference between these individual leader fixed effects was zero. Indeed, they were unable to reject this hypothesis, concluding that a large part of the variance in post-treatment outcomes reflected the influence of leaders.

Here we perform a similar analysis for two different ways of conditioning the set of responses examined. We examine the same three outcomes (*yes*, *no*, *don't know*) and condition our analysis first on cases in which the campaign made contact (that is we exclude placebo cases) and second on cases in which canvassers had a message that they could use to persuade voters. We expect canvasser effects to be stronger under the second condition since in this case canvassers had material to work with. The results are presented in Table 4.

We see from Table 4 that in no case are we able to reject the null that outcomes are invariant to the identity of canvassers. As expected, the relationship between canvasser identity and a *yes* outcome is somewhat stronger under the message condition than under the campaign condition, but even in this case the relationship is not significant at conventional levels. Canvasser effects, if they exist, appear weak.

Endorser effects (difference between row and column conditions)

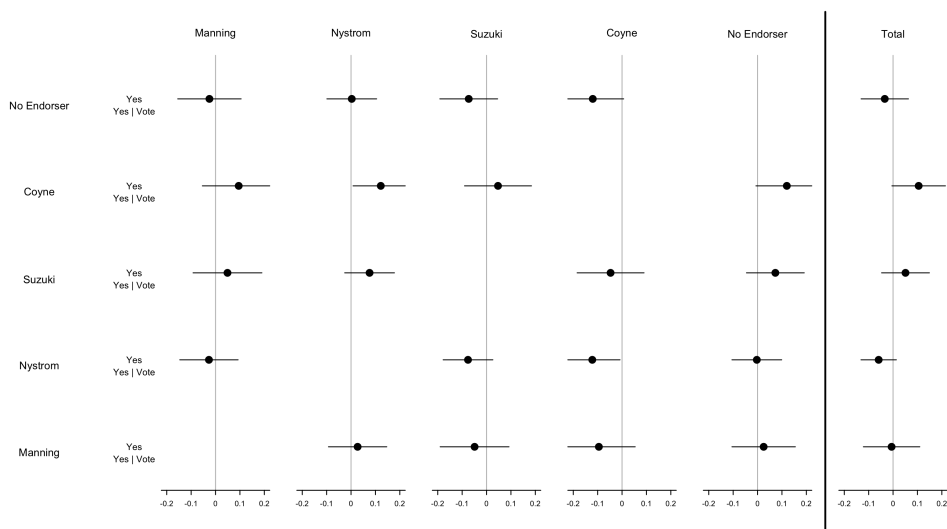


Figure 6: Figure shows the difference in average outcomes for different endorser types, including the “no endorser” treatment for the two main outcome variables. Outcomes are purged of canvasser, location, and message effects. Bars represent 90% confidence intervals for the ‘No endorser’ treatment pairings and 95% confidence intervals for all other pairings.

### 5.3 Cues

Our final area of investigation examines whether leadership worked via an indirect cue-taking channel, by which respondents’ views were affected by the personal endorsement of a message by a well known public figure. Figure 6 reports the differences in outcomes associated with different endorsers. The first five rows and columns form a matrix with data points indicating the the propensity to report ‘yes’ when exposed to a row type relative to the propensity when exposed to a column type. The final column then gives the average effect of exposure to the row type endorsement when compared to all other types.

As we saw before there is evidence that having *some* endorser makes a difference. This is seen across the first row of the figure. Endorsements increase the chances of *yes* vote and decrease the chances of a no vote. However there is little evidence that it matters **which** public figure makes the endorsement. On average Suzuki and Nystrom are associated with more positive results and Coyne and Manning are associated with more negative results. But these individual level differences are not strong and the difference between the most successful endorser (Nystrom) and the least successful one (Manning) is not itself significant. Table 5 confirms the weakness of the between-endorser relations. For each

Table 5: Relative Impacts of Endorsers on Outcomes

Condition: <i>Some Endorser</i>	<i>yes</i>	No	Don't Know
	0.000	-0.010	-0.001
	(0.38)	( 0.92)	( 0.44)

Adj- $R^2$  and  $p$ -values from  $F$  test\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ 

outcome variable we test the null hypothesis that the identity of the endorser matters and in each case we are unable to reject the null.

Grouped together there is some evidence of endorser effects. As described above the four endorsers are balanced in two ways: two of the four are politicians while the other two are media personalities; and two of the four are broadly associated with the left of the political spectrum and two with the right. These two dimensions of balance produce a two by two table. Analyzing at the level of dimensions rather than individuals we find that endorsements from politicians and endorsements from the left are more strongly associated with *yes* votes; the latter of these relations—reflecting the effects of Suzuki and Nystrom—is significant at the 95% level in a two tailed test (see Table 6). While suggestive, the evidence for endorser effects remains weak and since in fact each dimension only consists of two endorsers these relations are properly thought of as the effects of two endorsers and not of the dimensions that distinguish them. Although groups of endorsers are associated with more positive effects it remains the case that we are unable to reject the null that all endorser effects are zero.

## 6 Power of Our Test

A concern is whether the weakness of the identified contact effects reflects the power of our test. We address this question by estimating the probability of a relationship as weak or weaker than what we observe if in fact the probability of voting ‘*yes*’ took the form  $q = \underline{q} + \beta_i$  where  $\underline{q}$  reflects the average probability of voting *yes* and  $\beta_i \sim N(0, \sigma^2)$  captures the increased or decreased likelihood of voting *yes* given that one is exposed to agent  $i$ . For any effect value of  $\sigma^2$  and given the structure of our data, we use simulation to assess the probability of observing a  $p$ -value as low or lower than what we in fact observe. The results, for different values of  $\sigma$  ranging from 0 to 0.25 are shown in Figure 7.

The figure suggests that given our data structure, such weak results are reasonably likely for values of  $\sigma$  below about .2 and extremely unlikely for values above about .25. How big a value is a standard deviation of 0.25 in this context? To help intuition, consider

Table 6: Propensity to vote ‘yes’ given exposure to endorsers of different types

	Media	Political	Total	Difference (Political v Media)
Right	0.01	0.01	0.01	-0.00 (0.06)
Left	0.08	0.13	0.11	0.05 (0.07)
Total	0.03	0.07		0.04 (0.04)
Difference (Left v Right)	0.07 (0.05)	0.12 (0.08)	0.09 (0.04)**	

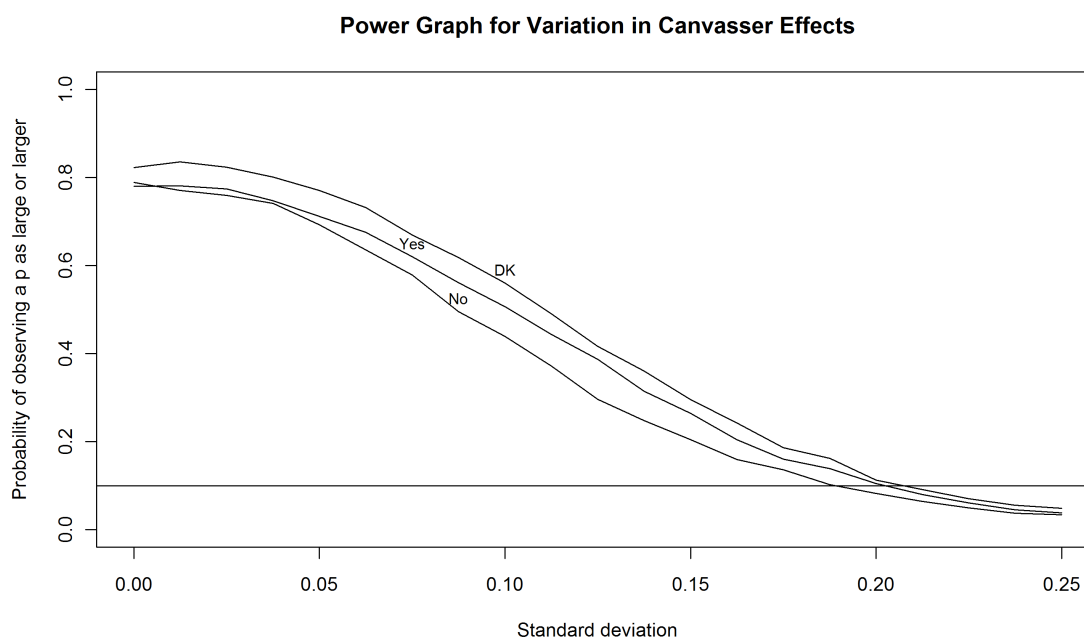


Figure 7: Figure shows the probability of observing evidence of individual contact effects as weak or weaker than observed in our data for hypothetical values of  $\sigma$  for two outcome variables.

a simple structure in which the average outcome was  $q$  and that with a .5 probability a canvasser is ‘effective’ and produces outcome  $q + \alpha$  and with .5 probability a canvasser is ‘ineffective’ and produces an outcome of  $q - \alpha$ . In this case the standard deviation for the distribution on  $\beta$  is simply  $(.5\alpha^2 + .5\alpha^2)^{.5} = \alpha$ . Thus for canvasser effects of this form a division of canvassers into those in which there is a .5 point spread between the effective and ineffective canvassers would be extremely unlikely to produce results so weak. There are approximately even odds however of getting results as weak as we find for spreads half as large.

Power Graph for Variation in Endorser Effects

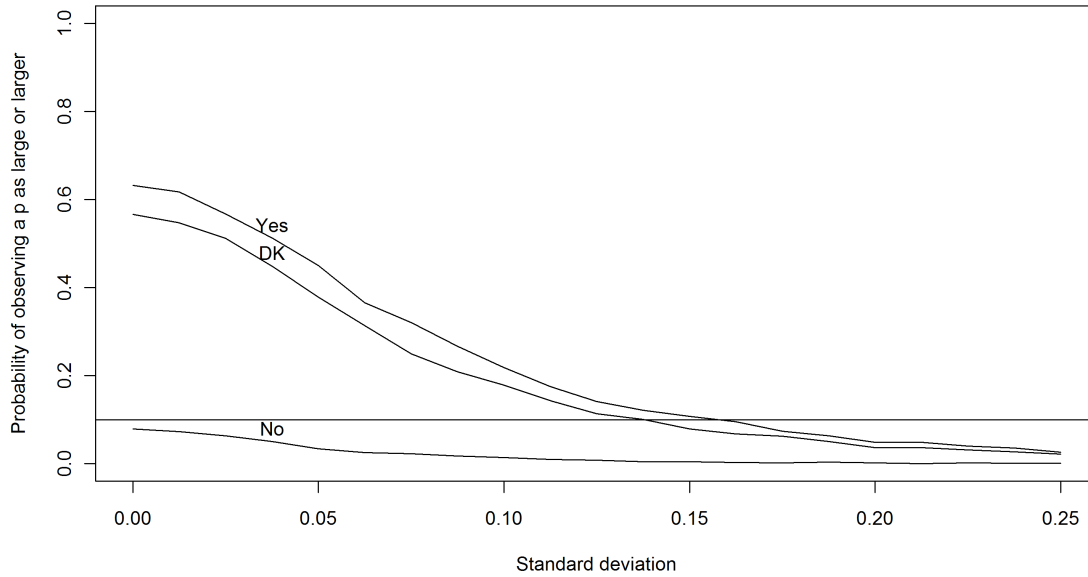


Figure 8: Figure shows the probability of observing evidence of endorser effects as weak or weaker than observed in our data for hypothetical values of  $\sigma$ .

We can ask a similar question with respect to our finding that, despite an overall effect of endorsement, there is weak evidence suggesting that it matters which individual endorsed the message. Are these non-results simply reflective of the low power of our test? We address the question by estimating the probability that one would find results as weak or weaker for different types of true effects. Employing the same strategy as before we estimate that, with even a moderately small amount of variation in the effects of endorsers, we would be unlikely to see results so weak. These results are shown in Figure 8.

The analysis does not suggest *which* individual endorser has an effect on public opinion. Combined with results reported earlier, they suggest that the largest campaign effect is due to the arguments used in favor of STV and to the presence of *some* endorser.

## 7 Heterogeneous Effects

Our focus so far has been on features of political actors and not on those of the public they are trying to persuade. Yet we can expect that the effectiveness of approaches to persuasion may depend significantly on who the recipients of these messages are. Moreover if variation in features of the recipients is important this can have important implications for the generality of the results we find here.

In examining heterogeneous effects we are motivated by one particular consideration.

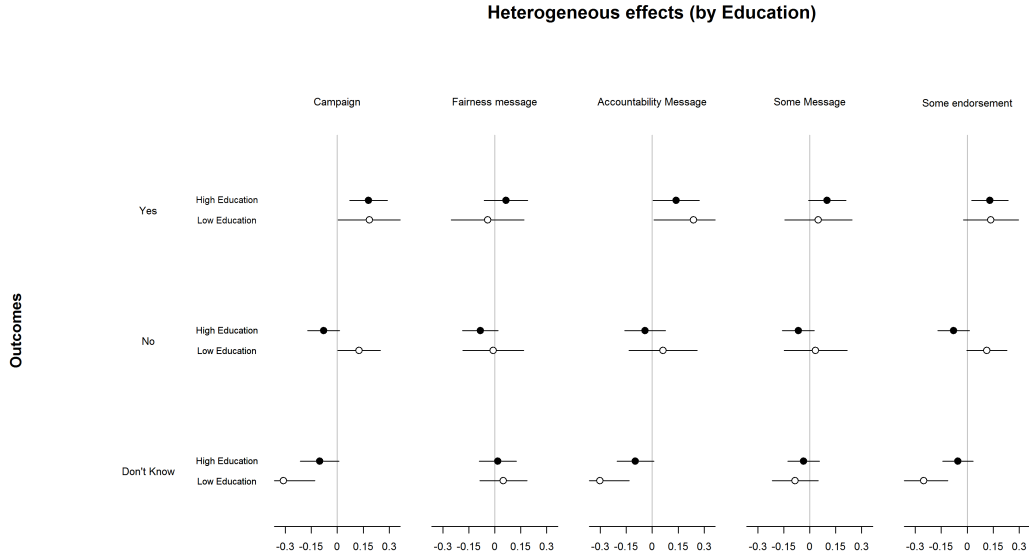


Figure 9: Main treatments broken down for “high education” and “low education” respondents. Columns represent independent variables (treatments) and rows dependent variables (outcomes). Horizontal bars show 90% confidence intervals

In previous work in developing countries there has been some evidence, consistent with what we find here, that message matters (Wantchekon, 2003). Other work, not consistent with our results here, has found very strong effects associated with individual leaders (Humphreys, Masters, and Sandbu, 2006). There are many features that differentiate the setting we examine from that in Humphreys, Masters, and Sandbu (2006); but one obvious one is the education level, and perhaps, political sophistication, of respondents. Perhaps individual leaders had such an effect in São Tomé e Príncipe because of the relatively large education gap between leaders and respondents in that setting.

To examine this logic we turned to our data to examine whether messenger and endorser effects are stronger or weaker among different types of voters. We divided our voters in two ways. First we distinguished between a group of ‘low education’ voters (those with secondary education or less; 27%) and ‘high education’ voters (those with tertiary level education, including both university and vocational 77%); second we distinguished between voters based on political sophistication; in particular we asked respondents to provide a guess of the number of seats in the provincial legislative assembly in Victoria. We classed subjects as ‘sophisticated’ if they estimated between 42 and 128 seats (50%) and ‘less sophisticated’ if they guess outside this range (50%). We have 250 subjects for whom we



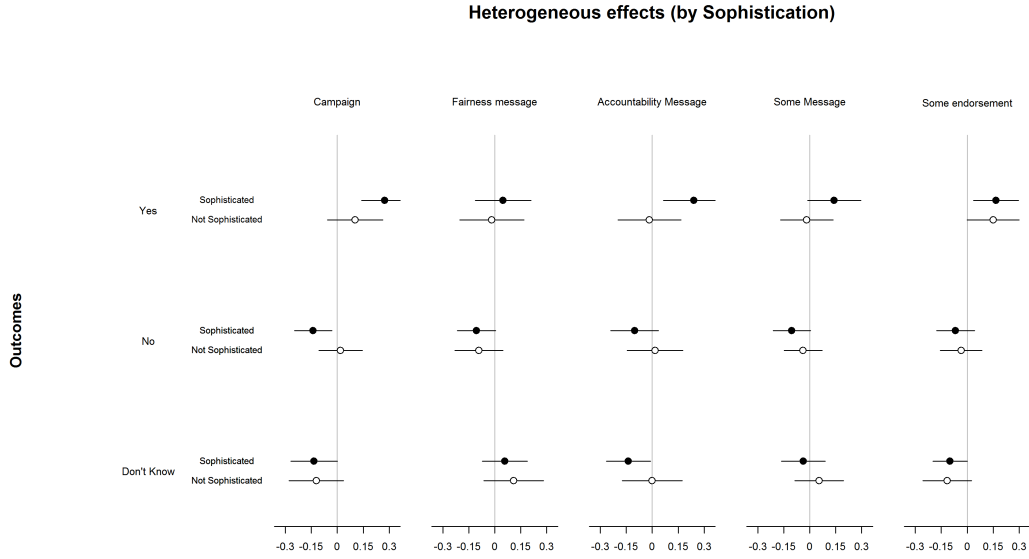


Figure 10: Main treatments broken down for “sophisticated” and “not sophisticated” respondents. Columns represent independent variables (treatments) and rows dependent variables (outcomes). Horizontal bars show 90% confidence intervals

have data on both of these measures and for these there is a correlation of 0.13 which suggests that these measures, though related (the correlation is significant at the 95% level), pick out substantially different subsets of subjects.

In figures 9 and 10 we show the estimates of the main message effects and of the ‘some endorser’ treatment for these subgroups. We find that the message effects are generally larger for the sophisticated subjects than for the less sophisticated subjects and that the effect of having some endorser is about the same for the two groups. For the education breakdown we find similar effects of messages for the propensity to vote *yes*; but we also find an increased, though more moderate, effect on the propensity to vote *no*. The strongest effect of the campaign was to produce *some* opinion among less educated voters, although that opinion was not necessarily in the desired direction. This effect for the campaign derives especially from the presence of endorsers. In table 7 we show the effects of canvassers and endorsers for these subgroups. For one in eight analyses there is a moderate suggestion of endorser effects—for low education subjects in particular. While this result is in our hypothesized direction, more generally the evidence remains weak that it matters which endorser is assigned.

Table 7: Impacts of Canvassers and Endorser on *yes* Outcomes (Heterogeneous Effects)

Treatment: <i>Canvassers</i>	Low education	High education	Low sophistication	High sophistication
	-0.12 (0.74)	0.02 (0.36)	-0.007 (0.49)	0.04 (0.29)
Treatment: <i>Endorsers</i>	Low education	High education	Low sophistication	High sophistication
	0.13 (0.08)*	0.02 (0.22)	0.04 (0.19)	0.04 (0.15)

Adj- $R^2$  and  $p$ -values from  $F$  test

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

## 8 Robustness

The low canvasser contact rate (40%) and low enumerator response rate among those contacted by canvassers (51%) limit our ability to perform subgroup analyses of various forms. But does it also introduce bias? Our design is such that we are protected from bias from the canvasser contact rate—treatment, including placebo treatment, is orthogonal to contact success. However there is a concern that the assignment to treatment could affect response rates for our enumerators; if this occurs then this could introduce bias in our analysis.

We examine the data to assess the importance of this concern for each of the dimensions under study. Figure A3, in Appendix C, shows the relation between treatments and non-responses for all subjects and for the heterogeneous population examined in section 7. For the message treatments (first four columns) we find little cause for concern that treatment may have resulted in greater data missingness. Of the twenty estimates only one approaches statistical significance in a two tailed test—the effect of the fairness message on non-response rates of sophisticated voters.

The evidence for the effects of ‘some endorser’ on the data missing is perhaps more concerning. Here there is an estimated 8 percentage point effect. We cannot determine whether this non-response introduces bias into the results or the direction of bias if there is any. We can, however, use this estimate to establish some approximate bounds. If, on the one hand, that subset of our subjects that saw our endorser were so convinced that they went campaigning for STV and missed our enumerators, our estimate of the overall endorsement effect would be around 37%). On the other hand, if a subset of our subjects that saw our endorser were so turned off to politics that they decided never to answer their door again, then our estimate of the total effect would be -17%. Under this, admittedly extreme, assumption the effect of missing data would be enough to wipe out our estimated

7% endorsement effect.

It is reassuring that contact with the campaign is not correlated with non-responsiveness and, moreover, that receipt of a particular message does not affect the sample of respondents. Whilst we cannot rule out the possibility the sample of respondents is biased due to the endorsers used by the campaign, we believe it unlikely that this is so. Probing further, in Table A1, in Appendix C, we show results of tests to see whether some canvassers, or some endorsers, are more likely than others to lead to high non-response rates. In each case we test the hypothesis that missing data is invariant to the identity of the canvasser or the endorser, conditioning on cases in which subjects were exposed to the campaign (first row) or to substantive messages (second row). In no case is the relation between canvasser or endorser identity and data missingness significant at the 90% level although in one case (for endorsers when we do not condition upon message) the relationship is borderline significant.

## 9 Conclusion

We identify three different elements of political persuasion: the effect on opinion formation that is due to the *content* of the message; that due to *contact* with the messenger; and that due to the *cue* received from an endorser about the relative merits of the position. Previous studies, such as those by Humphreys, Masters, and Sandbu (2006) and Wantchekon (2003) have highlighted the importance of contact and content respectively and in isolation from each other. Other studies, have looked at the effects of party cues and informative messages together but fail to isolate the effect of each (Arceneaux and Kolodny, 2009). In our paper we isolate these elements of persuasion, explore their interaction, and thus provide a more nuanced account of the persuasive effects of leaders and the messages they deploy.

We provide well identified preliminary findings based on a unique field experiment in which we randomly vary three elements of persuasion. Our study analyzes whether leaders are effective because of some intrinsic qualities—for example, their clarity, trustworthiness or focality—or because of the particular arguments they employ. Working together with the BC-STV campaign in the May 2009 British Columbia referendum on electoral reform we randomly assign canvassers to voting areas, who then randomly assign messages to households. We then obtain estimates of two different leadership effects: (i) the between voting area differences in opinion that are due to the assignment of different canvassers; and (ii) the impact on the campaign of endorsements by leading public figures.

As expected, we find clear evidence that *both* leaders and messages are persuasive. Moreover, we find that in our data these effects are evenly balanced. Exploring different types of leadership effects, we show that voters do respond to cues provided by leaders.

Whilst this finding is consistent with earlier results in the literature, it would be impossible to uncover in the absence of a design that explicitly distinguishes between different elements of persuasion. Moreover, as well as isolating the impact of leadership cues we also find that, surprisingly, leadership effects that are due to direct contact with agents appear not to matter at all.

One possible explanation for the relatively strong overall effect of endorsements is the technical nature of the issue of electoral reform: if voters are less informed on such issues they may be more open to cues; however, on average, people did respond to the information the campaign provided, (even if they were not persuaded by the individuals making the case), less informed voters were more responsive to the campaign, though not always positively so, and we found no difference in the effect of endorsements across voters with different levels of education.

Perhaps the strongest conclusion stemming from our analysis is that the content of campaign messages does affect opinion formation even when accounting for heterogeneity amongst the set of agents who deliver these message. In isolating this effect, we provide evidence to support the findings of Wantchekon (2009) that voters do respond to message content. Indeed, whilst it is apparent that political campaigns believe that the messages they choose matter, our results provide strong evidence that such faith is not misguided.

In sum we we have taken a step toward providing a better understanding of opinion formation within the context of political campaigns and, within that context, distinguishing leadership from other elements of political persuasion. Our results show both message content and leadership cues are important in opinion formation, but more work needs to be done to replicate these findings.

# Appendix A: Daily Campaigner Sheet

BC STV MESSAGE TESTING CAMPAIGNER FORM

Campaigner NAME \_\_\_\_\_

TOTALS

Date: \_\_\_ March 2009

Date: \_\_\_ April 2009


Number of Unsuccessful calls (no one at home): \_\_\_\_\_

Number of Unsuccessful calls (no common language): \_\_\_\_\_

Number of Unsuccessful calls (no eligible voters): \_\_\_\_\_

Number of Unsuccessful calls (not interested): \_\_\_\_\_

You	Side of Street	CASE ID	Riding	Voting Area	Apt #	House #	Street Name	Type	Message	Endorser	Start Time	Visit Length	Stayed on message?	Team contact?	Apprx age	Gender	Knowledge of STV/referend
1	L	10101	NEW	128				O/Apt/Mult OHse/Single	ACCOUNT	SUZ	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10102	NEW	128				O/Apt/Mult OHse/Single	Endorser Only	MNG	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10103	NEW	128				O/Apt/Mult OHse/Single	FAIRNESS	MNG	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10104	NEW	128				O/Apt/Mult OHse/Single	Placebo Only	.	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10105	NEW	128				O/Apt/Mult OHse/Single	FAIRNESS	SUZ	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10106	NEW	128				O/Apt/Mult OHse/Single	ACCOUNT	.	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10107	NEW	126				O/Apt/Mult OHse/Single	FAIRNESS	SUZ	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10108	NEW	126				O/Apt/Mult OHse/Single	ACCOUNT	MNG	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10109	NEW	126				O/Apt/Mult OHse/Single	Placebo Only	.	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10110	NEW	126				O/Apt/Mult OHse/Single	Placebo Only	.	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10111	NEW	126				O/Apt/Mult OHse/Single	FAIRNESS	.	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]
1	L	10112	NEW	126				O/Apt/Mult OHse/Single	Endorser Only	SUZ	__ : __ HH MM	__ MINS	OYES ONO	OYES ONO	__ YRS	OM OF	___ [0-10]

Figure A1: Example of Daily Contact Sheet

# Appendix B: The Survey Instrument

<b>MARCH 2009 STV VOTER SURVEY</b>		Riding: _____	Survey ID: _____	Non Response: <input type="radio"/> No one at home <input type="radio"/> No common language <input type="radio"/> Refused to respond				
Enumerator ID: _____		Voting Area: _____	Date: _____			Language: _____		
<p><b>CONSENT SCRIPT:</b> Hello, I am undertaking a survey on behalf a research team from Ryerson, Columbia and LSE universities. We are trying to understand attitudes of people in British Columbia towards the upcoming referendum on the way that British Columbians elect their representatives. There are only 20 questions and we estimate that the survey will take approximately 10 minutes. This is an <b>anonymous</b> survey. I do not need to ask or record any names, and while I have your address, this information will not be associated with responses. [Can I speak to a [male/female/you] eligible voter in this household?]  <b>To respondent:</b> [Repeat non bracketed part above] Please know that you do not have to answer any questions if you don't want to and you can stop this interview at any stage if you wish to. <b>Are you willing to take part in this survey?</b></p>								
Q 1	Have you <b>heard of</b> the referendum on British Columbia's electoral system?		<input type="radio"/> Yes <input type="radio"/> No					
*Q 2	Do you <b>expect to vote</b> in the <b>May provincial elections</b> ?		<input type="radio"/> Not likely <input type="radio"/> Likely <input type="radio"/> Very likely		<input type="radio"/> Other			
Q 3	Do you <b>expect to vote</b> in the <b>referendum to change British Columbia's voting system to STV</b> ?		<input type="radio"/> Not likely <input type="radio"/> Likely <input type="radio"/> Very likely		<input type="radio"/> Other			
Q 4	If not likely: <b>Why not?</b>		<input type="radio"/> Unavailable <input type="radio"/> I don't understand issues enough <input type="radio"/> Vote has no effect <input type="radio"/> I am indifferent					
Q 5	If likely/ very likely: Do you expect to vote <b>for or against</b> the proposed reform? Otherwise: If you <b>were</b> to vote, would you vote for or against the proposed reform?		<input type="radio"/> Likely to vote FOR <input type="radio"/> Likely to vote AGAINST <input type="radio"/> Leaning towards FOR <input type="radio"/> Leaning towards AGAINST					
Q 6	People's <b>opinions often change</b> in the run-up to a referendum. Compared to <b>one week ago</b> would you say that you lean more towards a yes (for reform), more towards a no, or have you not changed your opinion?		<input type="radio"/> No Change <input type="radio"/> More Yes <input type="radio"/> More No <input type="radio"/> Other					
Q 7	How strongly do you agree or disagree with the following statements:		Agree strongly	Agree	Disagree	Disagree strongly	DK	Ref'd
	A Our present voting system <b>works well</b> and does not need to be changed		<input type="radio"/> A1	<input type="radio"/> A2	<input type="radio"/> A3	<input type="radio"/> A4	<input type="radio"/> A5	<input type="radio"/> A6
	B STV would lead to a <b>more diverse representation</b> in the legislative assembly.		<input type="radio"/> B1	<input type="radio"/> B2	<input type="radio"/> B3	<input type="radio"/> B4	<input type="radio"/> B5	<input type="radio"/> B6
	C Under STV the results of elections would <b>better reflect</b> the way people vote		<input type="radio"/> C1	<input type="radio"/> C2	<input type="radio"/> C3	<input type="radio"/> C4	<input type="radio"/> C5	<input type="radio"/> C6
	D STV would <b>lead to weak political parties</b>		<input type="radio"/> D1	<input type="radio"/> D2	<input type="radio"/> D3	<input type="radio"/> D4	<input type="radio"/> D5	<input type="radio"/> D6
	E STV would make politicians <b>more responsive</b> to the needs of voters		<input type="radio"/> E1	<input type="radio"/> E2	<input type="radio"/> E3	<input type="radio"/> E4	<input type="radio"/> E5	<input type="radio"/> E6
	F STV is <b>too complicated</b> a system		<input type="radio"/> F1	<input type="radio"/> F2	<input type="radio"/> F3	<input type="radio"/> F4	<input type="radio"/> F5	<input type="radio"/> F6
Q 8	Which of these is the most important consideration for you when deciding whether to vote in favor or against STV:		___ [item A - F]. Reread list from Q 7					<input type="radio"/> Other
Q 9	For each of these parties, do you think that most members of the parties support or oppose the reform?		<input type="radio"/> Lib Support <input type="radio"/> Lib Oppose	<input type="radio"/> NDP Support <input type="radio"/> NDP Oppose	<input type="radio"/> Gn Support <input type="radio"/> Gn Oppose			
*Q 10	i. Do you know who X (Y) is?	**ii. Do you believe that X's (Y's) political positions are generally consistent with yours?	**iii. Do you believe that X (Y) has a good understanding of the issues on STV?	**iv. Do you know whether X (Y) supports or opposes the reform?	** v If yes: How do you know this?			
	X <input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Supp <input type="radio"/> Opp <input type="radio"/> DK	<input type="checkbox"/> campgn <input type="checkbox"/> othr			
	Y <input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Supp <input type="radio"/> Opp <input type="radio"/> DK	<input type="checkbox"/> campgn <input type="checkbox"/> othr			
Q 11	Have you or others in your household been contacted by people arguing in favor or against STV?		<input type="radio"/> No <input type="checkbox"/> You, In Favor <input type="checkbox"/> You, Against		<input type="checkbox"/> Others, In Favor <input type="checkbox"/> Others, Against			
Q 12	*How did you <b>vote</b> in the <b>LAST referendum for STV</b> ?		<input type="radio"/> Voted against <input type="radio"/> Did not vote		<input type="radio"/> In favor of STV <input type="radio"/> Other			
Q 13	*Mark the respondent's <b>gender</b> :		<input type="radio"/> Male		<input type="radio"/> Female			
Q 14	*Year of <b>Birth</b>		19 ____					
Q 15	* <b>Employment</b>		<input type="radio"/> unemployed <input type="radio"/> working for pay, <input type="radio"/> selfemployed <input type="radio"/> student <input type="radio"/> retired <input type="radio"/> working at home					
Q 16	* <b>Education level</b>		<input type="radio"/> < high school <input type="radio"/> completed high school <input type="radio"/> some univ/cllge <input type="radio"/> othr 3rd lvl <input type="radio"/> cmpltl uni degree					
Q 17	*How many eligible <b>male and female voters</b> live in this household?		___ male ___ female					
Q 18	*What were the ethnic/ <b>regional origins</b> of your ancestors? [Mark as many as apply]		<input type="checkbox"/> Abrg. <input type="checkbox"/> Brtsh <input type="checkbox"/> Fr <input type="checkbox"/> Oth Eur <input type="checkbox"/> Afr <input type="checkbox"/> MENA <input type="checkbox"/> S.Asn <input type="checkbox"/> E.Asn <input type="checkbox"/> W.Asn <input type="checkbox"/> LaAm&Car <input type="checkbox"/> N.Am					
Q 19	*For which <b>party</b> do you expect to vote in the upcoming provincial elections?		<input type="radio"/> BC Liberal Party <input type="radio"/> New Democratic Party <input type="radio"/> Green Party <input type="radio"/> Cons <input type="radio"/> None <input type="radio"/> Other					
Q 20	*Can you tell me approximately how many seats there are in the provincial legislative assembly in Victoria?		_____					
<b>Contact</b>	Can we contact you for a very short follow up after the vote? If yes, can you give us your email address or telephone number and a contact name? Your number will not be shared with third parties or linked to any responses you have given here.		<input type="radio"/> Yes <input type="radio"/> No Name _____ Email and/or No. _____					

\* If answer to Q1 is "No" then only ask starred questions \*\* Ask double starred questions only if answer to Q10 (i) is Yes

Figure A2: Survey Instrument

## Appendix C: Robustness

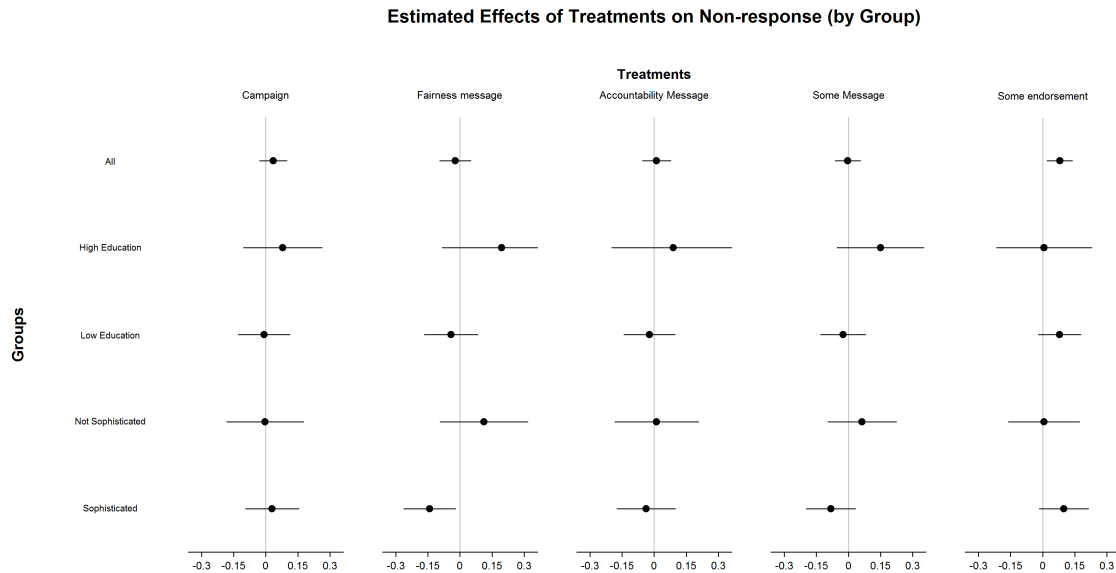


Figure A3: Main treatments broken down by non-response. Columns represent independent variables (treatments) and rows dependent variables (outcomes). Horizontal bars show 90% confidence intervals

Table A1: Relative Impacts of Campaigners and Endorsers on Data Missingness

Condition: <i>Campaign</i>	Canvasser	Endorser
	0.03 (0.26)	0.004 (0.105)
Condition: <i>Message</i>	Canvasser	Endorser
	0.02 (0.33)	-0.003 (0.710)

Table reports Adj- $R^2$  and  $p$ -values from  $F$  test

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

## References

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