The dynamics of citizen forecasting: Do campaigns help citizens to form correct expectations about who wins the election?

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Abstract: How do citizens form correct expectations about who wins the election? The present research explores this question by extending Zaller’s model of attitude change to expectation change. Based on this model we derive different hypotheses for the effect of political awareness and prior certainty depending on the prior belief and the informational environment. The 2010 British general election provides an interesting case study because the leadership debates changed the informational environment. The dominant message of a Conservatives victory was challenged by countervailing messages of Nick Clegg “winning” the first debate and a rise in vote intentions for the Liberal Democrats. It turns out (a) that the first two leadership debates led many people on the “wrong” track, (b) that prior certainty becomes more important the more alien to the prior belief the current informational environment is, and (c) that the effect of political awareness depends on prior beliefs and the informational environment.

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People are pretty good at forecasting who wins the election even before the campaign started (Lewis-Beck and Stegmaier 2011; Murf forthcoming). This is an interesting and important finding for forecasting models. After all, the more lead forecasting models have, the more impressive they are. But for vote choice models, the forecast matters that voters make when deciding who to vote for. Many people make their vote decision during the campaign. And the campaign gives plenty opportunities to change one’s forecast. Do campaigns help citizens to make a correct forecast or do they lead them astray? The normative ideal would be that all voters base their decision on a correct forecast. A less strict ideal would be that deviations from being correct are purely random. Campaigns usually seem to help people learn about candidates and political parties (Althaus 2003). However, recent research in belief revision points out that prior beliefs and partisanship may shape current beliefs (Gerber and Green 1999; Bartels 2002). So even wrong beliefs may be “sticky” and partisans may engage in “wishful thinking”. Given these two contrary expectations, it would be interesting to know how the campaign affects citizens forecasting. For instance, do more people change their forecast from being incorrect to correct than from being correct to incorrect? It would also be interesting to study how prior beliefs, political awareness and partisanship interact together to shape these transitions.

The present research explores these questions by looking at the 2010 British General Election. This election is particularly interesting because the leadership debates changed the informational environment—before the debates, it was “received wisdom” that the Conservatives would win; after the first debate, people were less sure. Nick Clegg and the Liberal Democrats were on the rise. This election provides an excellent case to study how Zaller’s receive–accept–sample (RAS) model of attitude change can be applied to expectation change. This model is very powerful in that it allows to derive completely different hypothesis about the effect of prior beliefs, certainty, and political awareness depending on the the informational environments. Another interesting twist to the model is that political awareness oscillates between “gate keeping” and “truth seeking”—a result not present for attitude change.
The main findings of the present research are (a) that the effect of partisanship depends on prior forecasts, (b) that prior certainty loses importance as the current informational environment supports one’s prior, and (c) that political awareness only helps undecided forecasters to “get it right” in an informational environment that sends the “correct” message.

The paper proceeds as follows. The first section describes Zaller’s RAS model for attitude change and extends it to expectation change. This section highlights the importance of prior beliefs, partisanship, political awareness, certainty, and how they interact with the informational environment to form current beliefs. The second section describes the 2010 British Election Study (BES) Campaign Internet Panel Survey—the main data set used for the present research. This section also explains the variable codings. The third section presents the results of the empirical analysis. At the aggregate level, we describe net movements in citizen forecasting to study the effect of the leadership debates. At the individual level, we employ Markov transition models to explore the determinants of individual transitions between forecasts. A final section concludes the paper.

1 Extending Zaller’s RAS model to expectation formation in the 2010 UK election campaign

1.1 What are expectations?

Before describing and extending Zaller’s RAS model to expectation change, this section first defines what expectations are and then tries to give the intuition behind a RAS model of expectation change. The subsequent subsections spell the theory out in more detail.

Expectations are beliefs about the future that attach a probability to an event. Expecting that the Liberal Democrats would win means that this event has the highest perceived probability of happening. How do people form these expectations? One plausible starting point may be Keynes (1973: 148), who notes that “our usual practice being
to take the existing situation and to project it into the future, modified only to the extent that we have more or less definite reasons for expecting a change.” But this model seems only to apply for forming first expectations—recent research points out that current beliefs are greatly shaped by previous beliefs \cite{Gerber and Green 1999, Bartels 2002}. In other words, expectations have a history. Past expectations may shape current expectations for three reasons. First, one may have been quite certain in the past so it is unlikely that one will change one’s expectations—even when accepting a countervailing consideration. Second, one may be able to counter-argue incoming considerations once one has formed a belief. Third, to avoid cognitive dissonance \cite{Festinger 1957} people may reject considerations that are inconsistent with their prior belief. Therefore, Keynes’ initial model may be reformulated as “take your existing expectation and modify it only to the extent that you have reasons to do so”. Formulated this way, this model comes close to Zaller’s RAS model for attitude change. Indeed, the next paragraphs will argue that this is a plausible model of believe change as well. I will first describe the model and then apply it to the present case of expectation change in the 2010 UK general election.

### 1.2 Zaller’s model of attitude change

This subsection describes Zaller’s model of attitude change. The following subsections will then extend it to expectation change and slightly modify it for that purpose. The nice features of the model are that besides individual-level variables—political awareness and predispositions—it also includes contextual variables—the informational environment. In our case, the informational environment will shift from sending one dominant messages—“the Conservatives will win”—to sending increasingly a second message—“maybe the Liberal Democrats have a chance, too”. This shift in political communication has important effects for the individual-level variables: the weight of political awareness and certainty of the prior forecast depends on the informational environment.

Zaller’s model of attitude change is based on a model of survey response developed by \cite{Zaller and Feldman 1992}. So it seems worthwhile outlining it here before extending it to attitude change. The basic idea of the survey response model is that the probability of
a “positive” response is a function of how many “positive” and “negative” considerations are at the top of a respondent’s head at the moment of interview. Each time respondents are asked as survey question they sample from the considerations that are accessible to them and answer whichever side the considerations support. This process of survey response already shows three kernels of attitude change: first, attitudes may change because of random sampling; second, attitudes may change because some considerations became more or less accessible; third, attitudes may change because the balance of considerations changed. The last two processes—changing accessibility and balance—are interesting because they are not random like the first one. For the present research, we will focus on the changing balance.

Before examining how the balance of considerations can change, it seems worthwhile to describe how people receive and accept considerations. Zaller argues that receiving messages is greatly affected by political awareness. The more politically aware people are, the more likely they are to receive messages. However, politically aware people are also likely to know the source of the message and have contextual information; therefore, they may figure out that the message they just received runs counter to their predisposition. To avoid cognitive dissonance, they are more likely to reject it than the unaware. Political awareness, therefore, works as a “gate keeper”. Zaller mainly uses partisanship and values as central for avoiding cognitive dissonance. But recent research in belief change also points out the importance of prior beliefs (Gerber and Green 1999; Bartels 2002). Hence I will substitute prior beliefs for partisanship for the present purposes. The prior forecasts will be labelled “undecided”, “incorrect”, and “correct”.

Painted in this way, public opinion seems very static. The politically unaware are unlikely to receive any considerations that may change their attitudes, whereas the politically aware are unlikely to accept any considerations that may do so. Only people who are moderately aware are likely to receive and accept messages contrary to their predisposition and therefore may change their attitude.

[1] It turns out empirically that the interaction between partisanship and political awareness fails to improve the model fit.
Public opinion can be dynamic, however, if the informational environment changes—the source of considerations. Zaller distinguishes between one-message and two-message environments, between static and dynamic environments, and also between low intensity and high intensity environments. Attitude change is likely to occur if the informational environment shifts—say from a one-message to a two-message environment. For instance, Zaller examines opinions towards the Vietnam war. In this case, the press-coverage and elite opinion shifted from only sending pro-war to increasingly sending anti-war messages as well. As elite support for the war was widespread, the more politically aware liberals were, the more likely they were to support it. As more and more anti-war messages started to appear, however, the highly aware liberals were likely to receive those. As a consequence, their support declined. Besides a change in the ratio of dominant and countervailing messages, a change in the intensity of the messages can change attitudes as well. Attitudes are likely to change here because it becomes easier to receive considerations that are consistent with one’s predisposition. I will argue in more detail below that press-coverage is more intensive in campaign than in pre-campaign periods and therefore political learning should occur in these periods.

1.3 The leadership debates changed the informational environment

After having described the basics of Zaller’s RAS model of attitude change, the following paragraphs will apply it to expectation change in the 2010 British General Election. This application involves three steps. First, this subsection argues that the informational environment first intensified in the campaign and then shifted from a one-message to a two-message environment. Therefore, citizen’s forecasts are likely to change. Second, the next subsection extends the role that political awareness plays in expectation change compared to attitude change. The role is different because political awareness should also lead citizens to form correct expectations, which for some citizens runs counter to only accepting considerations consistent with their prior forecast. Third, the final subsection highlights the role prior certainty plays in expectation change. This subsection claims that prior certainty should become more important for the current forecast, the less the
current informational environment supports one’s prior forecast.

The informational environment of citizen forecasting was very dynamic in 2010. Before the campaign started, the dominant message was that the Conservatives are going to win the election. The media communicated many considerations to expect that the Conservatives would win. Let me point out perhaps the three most important ones. First, the economy was in a bad shape and some held Gordon Brown responsible for Britain’s housing crisis. An economic downturn always hurts the electoral prospects of the incumbent government—especially when the crisis can be linked to its activities. Second, people could not really warm up to Gordon Brown who faced with David Cameron an opposition leader that they liked. Third, and perhaps most importantly, opinion polls showed the Conservatives leading since more than a year before the election. And people base their expectations in part on opinion polls (Blais and Bodet 2006). All this is not to say that the election was a foregone conclusion. What this paragraph argues is that the dominant message was that the Conservatives are going to win. And this is what counts for the expectation change model.

The campaign changed the informational environment. In the first week of the campaign, the media coverage of politics and the election intensified. Even more importantly, the leadership debates reshaped the composition of political communications. Nick Clegg’s performance in the first debate surprised many. About 78 percent of BES respondents thought that he did the best job in the first debate. After the first debate, the Liberal Democrats overtook Labour in the polls and came one or two percentage points close to the Conservatives. Suddenly, a Conservative victory seemed less likely than before the debates. However, as the campaign carried on and David Cameron performed better and better in the two remaining leadership debates, the share of vote intentions for the Liberal Democrats dropped only to return to its pre-debate level. Hence the dominant message in the week before the election became again that the Conservatives would win.

To sum up, the dominant message in the first week of the campaign was that the Conservatives would win. In contrast, the second week resembles more of a two-message
environment. The following takes these two “cleanest” cases of informational environ-
ments to understand how the message composition shapes the impact of individual level
variables on expectations.

1.4 The role of political awareness oscillates between “gate
keeping” and “truth seeking”

The following describes how political awareness shapes expectation formation depend-
ing on people’s prior expectation and the informational environment. The leadership
debates shifted the informational environment from sending one dominant message—
“the Conservatives will win”—to sending two messages—adding “perhaps the Liberal
Democrats will win?” Both environments differ in how political awareness will work
for receiving and accepting considerations. Further, within each environment the role
of political awareness will depend on the prior expectation—being undecided, correct, or
incorrect. Finally, the role of political awareness has an additional twist to it because
it should also increase the chances that people get the forecast right. The following
paragraphs will spell out the argument in more detail. I begin by describing its role the
one-message environment, and then its role in the two-message environment.

Let us first look at the environment were the “correct” message is the dominant one.
In this environment, the effect of political awareness depends on the prior belief. For
the undecided forecasters, political awareness should increase their chances of switching
to a correct forecast. Although political awareness serves as a “gate-keeper” to keep
prior forecasts stable, politically aware people also should realise that the environment
is mainly sending “correct” messages. In this case, it makes sense to incorporate them—
after all, they want to be correct. In contrast, for previously incorrect forecasters political
awareness pulls in two opposite directions. On the one hand, political awareness ensures
that they receive “incorrect” messages and that they reject “correct” ones. On the
other hand, political awareness should increase their chances to change their forecast
to the correct one. Therefore, political awareness should have a small positive effect
on correctly changing one’s belief—in contrast to the two-message model that we will
Moving from a one-message to a two-message environment changes the role of political awareness. In the two-message environment, the countervailing message becomes more widespread. For undecided forecasters then, the political environment is basically mirroring their own position. Although politically aware citizens should receive both messages, the messages they receive have the same composition as their prior. Therefore, political awareness should have no effect in switching to a correct belief. Similarly, the previously incorrect forecasters still oscillate between being consistent and being right. But the informational environment suggest now that their position is not too far off. Therefore, political awareness should have no effect. Finally, for the previously correct forecasters the effect of awareness of getting it right should be weaker than in the one-message models. Though both mechanisms again pull in the same direction, the informational environment makes is more difficult than before.

1.5 The weight of prior certainty decreases with support from the current informational environment

Besides political awareness one other source of resistance to change are what Zaller calls “inertial resistance” and I will call certainty of the prior belief. Certainty is the difference between the number of considerations in favour of one belief and the number of considerations against the same belief. Inertia affects the importance of newly accepted consideration. For instance, consider two people. The first one has ten “correct” considerations and eight “incorrect” considerations; the second one has three “correct” considerations and one “incorrect” consideration. Both persons have the same certainty in their expectation—in this case $10 - 8 = 3 - 1 = 2$. However, an incoming “correct” consideration has less weight for the former than for the latter. The first person has already accepted 18 considerations, whereas the second one has only accepted 3. Therefore, the weight of the new consideration is nearly five times as large in the latter than in the former. The weight of prior certainty therefore also depends on the informational
environment.

In the first week of the campaign, the informational environment sends many “correct” considerations. Therefore, correct forecasters need to place less weight on their prior certainty than incorrect forecasters. In contrast, incorrect forecasters will have great difficulty in receiving considerations that are “incorrect”. Hence their prior has greater weight than for correct forecasters.

After the leadership debates, however, the informational environment shifts to sending two messages. Therefore, the weight of the prior certainty should increase for the correct forecasters compared to the previous week. Similarly, the weight of the prior for the incorrect forecasters should decrease compared to the previous week.

2 The present research

The present research has two goals. The first goal is to examine whether the campaign in general and the leadership debates in particular helped people to form correct forecasts. The same people were asked before and during the campaign to assess the parties’ chances to win the national election. Did people get better at forecasting the winner in the campaign? How did the leadership debates affect peoples’ forecasts?

The second goal is to examine individual transitions between forecasts. People can be undecided, incorrect, and correct. Are people, who are politically more aware, more likely to get it correct? Or does political awareness work as a “gate keeper” helping people to defend their prior belief? Do people attach less weight to their prior certainty if the current informational environment supports their prior? Markov transition models will be employed to answer these and other questions.

\(^2\) One can also derive expectations about which prior belief within a given week should have greater impact. But I leave it like that for now.
3 Data

The data for the present research come from the 2005 and 2010 British Election Study (BES) Campaign Internet Panel Survey. As both data sets are very similar and the present research relies mainly on the 2010 version, I will focus on describing the 2010 data. The BES Campaign Internet Panel Survey has two important characteristics that make it ideal to study campaign effects on expectations—its structure and content. The 2010 panel data is structured in three waves—pre-campaign, campaign, and post-election. Hence it allows to compare pre-campaign with campaign responses. Further, the campaign wave has a rolling cross-sectional design—it interviewed a minimum of 200 people each day of the campaign. Figure 1 shows the number of interviews per day. These daily samples allow to study the effects of campaign events such as the leadership debates as they happened.

The Campaign Internet Panel Survey also includes questions to elicit respondents

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3 The data-set can be downloaded from [www.bes2009-10.org](http://www.bes2009-10.org).
political awareness and their expectations who would win the election. Turning to expectations first, the BES asked respondents to assess the chances of winning the national election for Labour, the Conservatives, and the Liberal Democrats in turn. The question reads “Thinking about the UK as a whole, on a scale that runs from 0 to 10, where 0 means very unlikely and 10 means very likely, how likely is it that [insert party name] will win the general election?” (emphasis in the original). Respondents that did not answer the question received a value of zero to keep them in the analysis. The party with the highest number is coded as the party the respondent thinks will win. Those who predicted the Conservatives to win are labelled as “correct”; those who thought another party would win are labelled as “incorrect”; those who were tied between two or more parties are labelled as “undecided”.

The responses to these questions also allow to calculate a measure of how certain the respondent is about the forecast. Certainty of the forecast is the highest number assigned divided by the sum of all numbers. For instance, a respondent who assigned Labour = 7, the Conservatives = 3, and the Liberal Democrats = 4 is $\frac{7}{7+3+4} = 50$ percent certain that Labour would win (Blais and Bodet 2006; Murr forthcoming).

Finally, the BES also includes questions about respondent’s interest in the election and attention to politics. The questions read as follows: “On a scale of 0 to 10, how much attention do you generally pay to politics?” (0 = Pay no attention; 10 = Pay a great deal of attention) and “How interested are you in the general election that will be held soon?” (0 = Not at all interested; 3 = Very interested). I recode each variable to range between 0 and 0.5 and then add them to arrive at a measure of political awareness that ranges between 0 = low awareness and 1 = high awareness.

Having described the data structure and the coding of the main variables, how did the campaign affect citizen forecasting?

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4 Technically, only respondents who assigned a zero probability to the winning party are incorrect. By using this coding scheme nearly everyone would be correct—even most people who assigned equal positive probabilities to each party. And the present coding seems to work well when forecasting elections (Murr forthcoming).
4 Results

4.1 Aggregate movements

Before examining individual transitions in forecasting, it seems instructive to look at the aggregate movements of forecasts. Did the campaign help voters form correct expectations? Did the leadership debates have an effect? In order to answer these questions, I compare every respondent’s campaign forecast with their pre-campaign forecast. This comparison allows to examine weekly aggregate movements of forecasts.

Figure 2 contains two plots—one for 2005 and one for 2010. Though this paper is mainly concerned with the effect of the leadership debates in 2010, it seems helpful to have a point of comparisons. This is not to say that 2005 shows a “typical” movement, but it is the only data available for the UK. And it seems that the informational environment in 2005 was similar to the one in 2010. Labour who won in 2005 was leading in the polls since 2004; the Conservatives who won in 2010 were also leading in the polls since a long time. Therefore, it seems useful to compare both aggregate movements.

Both plots show for each week of the campaign the net movement in forecasting status (e.g., percent of respondents changing their forecast to “correct” minus percent of respondents changing their forecast away from “correct”). For instance, in the first week of the 2005 campaign, 18 percent moved to a correct forecast, whereas 5 percent moved away from making a correct forecast. Therefore, the net movement was a 13 percent increase in correct forecasts.

In 2005, people became better in forecasting in each week of the campaign. The correct forecasting group has a net increase every week. This increase is also quite substantial in the first two weeks where the net movement is nearly 15 percent each.

In contrast, the leadership debates in 2010 seemed to have a negative effect on people’s ability to forecast. The first week of the campaign shows a net increase in the correct forecasting group of more than 6 percent (16 percent moved to correct; 10 moved from correct). After the first leadership debate, however, more people move away from making a correct forecast than people move to making a correct forecast (11 percent move
Figure 2: Weekly net movements in citizen forecasting for 2005 and 2010. The plot shows that in 2005 people became better in forecasting, whereas in 2010 the first two leadership debates seem to have led some people on the wrong track.

to correct; 13 percent move from correct). Accordingly, the “undecided” and “incorrect” groups gain in magnitude. Daily analysis reveals that the drop in net movements happened two days after the leadership debates. This coincides with the day when the first post-debate opinions polls were published—showing a big rise in vote intentions for the Liberal Democrats. Only after the third leadership debate does the correct group increase again by 2 percent (11 percent move to correct; 9 percent move from correct).

This preliminary analysis suggests that the leadership debates affected people’s forecast of who would win the election. However, these aggregate analyses are limited in how well they can explain the determinants of individual transitions. What role do partisanship, political awareness and certainty play? Does their effect depend on the prior forecast? And the informational environment? The following subsection examines these questions.
4.2 Transitions

4.2.1 Markov transition models

At the individual level, the present research examines why people remain stable or change their forecast. In theory, this creates nine possible transitions from being incorrect, undecided, or correct to being incorrect, undecided, or correct. In practice, the present research limits itself to six transitions. Table 1 shows these. The rows show the three prior states; the columns show the two current states—being incorrect or correct. I limit myself to these two states because including transitions to being undecided would double the number of parameters to estimate and this group only includes one-fourth of the total respondents. Therefore, to simplify the analysis, I focus on transition to being incorrect or correct. To model these transitions, I employ Markov transition models, which are increasingly used in political science for this kind of problem (Hillygus and Jackman 2003; Beck 2008).

Markov transition models assume that the current belief is a function of the previous beliefs and some covariates (Diggle et al. 2002). These models are very flexible for two reasons: first, they allow different covariates for each transition; second, they allow the coefficients to vary for each prior believe. This flexibility of Markov transition models meets the two theoretical needs of the present research. First, certainty of the prior forecast enters the regression only for incorrect and correct forecasters—there is no measure of how certain the undecided forecasters are. Second, we have hypothesised that the effects of variables will depend on prior forecast. For instance, estimating a separate regression for each prior forecast means that undecided Conservatives will react differently than correct Conservatives or incorrect Conservatives.
The following regression equation represents the Markov transition models as used in the present research:

\[ \Pr(y_i = 1) = \logit\left(\sum_{j=1}^{J} x_i \beta_j \cdot D_{ij}\right), \]

where \( D_{ij} \) is a dummy matrix containing zeroes and ones. The columns of the matrix are dummy variables for the prior forecast—in this case we have three columns (undecided, incorrect, and correct). So if respondent \( i \) previously made an incorrect forecast, then the column for incorrect \( (j = 1) \) contains a one and the other two columns \( (j = 2 \) and \( j = 3) \) contain zeros. This model is equivalent to estimating a separate logistic regression for each prior forecast. To test for the informational environment effect, I run two different models for each of the two weeks. As control variables, I add age and gender. What are the results?

4.2.2 Partisanship

Table 2 shows the estimates. Even casual inspection of the table reveals that the effect of covariates depends on the prior forecast and the informational environment. More traditional models may have missed this contingency. The table contains many coefficients and the magnitude of the effects is not directly interpretable. Therefore, we look at predicted probabilities of transitioning to a correct forecast for key variables—partisanship, political awareness and certainty. The predicted probabilities were calculated by setting all other variables to their mean or mode as appropriate. The following examines the effects of partisanship, whereas the next section examines the impact of political awareness and uncertainty.

Table 3 shows the predicted probabilities of changing to a correct forecast depending on partisanship, prior forecast and informational environment. The predicted probabilities demonstrate the important role that partisanship plays in affecting changes in forecasts. In general, partisans of the winning party are always more likely to change to a correct forecast compared to independents and partisans of the losing parties. Similarly,
Table 2: Estimates of transition model of correct forecast for first week and second week of campaign.

<table>
<thead>
<tr>
<th>Previous forecast</th>
<th>Week before first debate</th>
<th>Week after first debate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta_1$</td>
<td>$\beta_2$</td>
</tr>
<tr>
<td>(Intercept)</td>
<td>0.63</td>
<td>-0.19</td>
</tr>
<tr>
<td></td>
<td>(0.47)</td>
<td>(0.66)</td>
</tr>
<tr>
<td>Age</td>
<td>-0.01</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Female</td>
<td>-0.24</td>
<td>-0.47*</td>
</tr>
<tr>
<td></td>
<td>(0.21)</td>
<td>(0.23)</td>
</tr>
<tr>
<td>PID winner</td>
<td>0.74*</td>
<td>1.43*</td>
</tr>
<tr>
<td></td>
<td>(0.36)</td>
<td>(0.45)</td>
</tr>
<tr>
<td>PID loser</td>
<td>-0.42</td>
<td>-0.39</td>
</tr>
<tr>
<td></td>
<td>(0.25)</td>
<td>(0.30)</td>
</tr>
<tr>
<td>Political awareness</td>
<td>1.30*</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>(0.41)</td>
<td>(0.54)</td>
</tr>
<tr>
<td>Certainty</td>
<td>—</td>
<td>-1.71*</td>
</tr>
<tr>
<td></td>
<td>—</td>
<td>(0.77)</td>
</tr>
<tr>
<td>$N$</td>
<td>424</td>
<td>456</td>
</tr>
<tr>
<td>AIC</td>
<td>535.06</td>
<td>485.18</td>
</tr>
<tr>
<td>BIC</td>
<td>632.25</td>
<td>600.61</td>
</tr>
<tr>
<td>$\log L$</td>
<td>-243.53</td>
<td>-214.59</td>
</tr>
</tbody>
</table>

Notes: Standard errors in parentheses. * indicates significance at $p < 0.05$. Dependent variable is correct forecast ($y_i = 1$) and incorrect forecast ($y_i = 0$) with undecideds excluded from the analysis.
Table 3: Predicted probability of transitioning by party identification and informational environment.

<table>
<thead>
<tr>
<th>Party identification</th>
<th>Week before first debate</th>
<th>Week after first debate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Winner</td>
<td>None</td>
</tr>
<tr>
<td>Incorrect → correct</td>
<td>65</td>
<td>30</td>
</tr>
<tr>
<td>Undecided → correct</td>
<td>84</td>
<td>71</td>
</tr>
<tr>
<td>Correct → correct</td>
<td>98</td>
<td>96</td>
</tr>
</tbody>
</table>

Partisans of the winning party are more likely to stay with their correct forecast than the other two groups. However, the prior forecast shapes the magnitude of these differences between partisans. For instance, the difference between partisans of the winning party and independents shrinks from about 35 percent (incorrect → correct), to 13 percent (undecided → correct), and 2 percent (correct → correct). The decreasing difference means that partisanship becomes less important in transitioning to a correct forecast once people’s prior forecast is undecided or correct.

Another way of looking at how the prior forecast conditions the partisan effect is to compare the predicted probabilities for one partisan group across prior forecasts. Let us focus on the week after the leadership debates. What is the predicted probability of independents to transition to correct? The answer to that question depends on the prior forecast. For instance, those who were correct in their forecast before the campaign (87 percent) are more than four times more likely to make a current forecast that is correct than those who were previously incorrect (21 percent).

Besides the prior forecast, the informational environment also is important for changing to a correct forecast. Table 3 shows that—except for two cases—, every group has a lower chance of getting it right after the debates than before. For instance, among the previously incorrect forecasters, partisans of the winning party become \((65 - 49 =)\) 16 percent less likely to transition to a correct forecast after the leadership debates. Similarly, the first debate reduced the probability of previously undecided forecasters among identifiers of a losing party to transition to a correct forecast by \((62 - 48 =)\) 14 percent. These two cases are noteworthy because they cross the typical cut-off point of 50 percent.
Having examined how partisanship shapes expectations, let us look and how the informational environment and prior forecasts interact with political awareness and certainty of the prior forecast.

### 4.2.3 Awareness and certainty of prior belief

The results also indicate that the decision to change forecasts was shaped by political awareness and uncertainty. Turning to political awareness first, the present research expected that the effect of awareness depends on the prior forecast and the informational environment. This expectation is supported by the data. When the dominant message was that the Conservatives would win, political awareness increases the chances of transition to a correct forecast for all three prior forecasts. The first row of Figure 3 illustrates the changes in predicted probabilities for each prior forecast. The effect is strongest for the undecided forecasters (29 percent), followed by the previously correct forecasters (13 percent) and the previously incorrect forecasters (8 percent). But when the debates led to an increase in the countervailing messages, the effect of awareness flattens as expected for the undecided and incorrect forecasters—the informational environment now supports their view. For both groups the effect of political awareness drops dramatically to basically zero (−1 and 1 percent, respectively). As expected, the mechanisms of “gate keeping” and “truth seeking” pull in different directions and cancel each other out. In contrast to that, for the previously correct the effect of awareness remains stable (13 percent). In this case, the two mechanisms pull in the same direction.

Moving on to the effect of certainty, it turns out that indeed the weight of prior certainty decreases with support from the current environment. The second row of Figure 3 shows the changes in predicted probabilities for the previously incorrect and correct in the two informational environments. In an environment supportive of correct forecasts, the effect of previous certainty for correct forecasters is 6 percent. After the debates, however, the previously correct rely more strongly on their prior certainty as they receive fewer considerations that are consistent with their view. Accordingly, the effect of certainty increases to 16 percent. In contrast, this pattern is reversed for the
previously incorrect. In the first week of the campaign, they probably receive very little considerations in accordance with their prior. Therefore, the weight of their prior considerations is stronger than after the debates. The debates provided them with “fresh” considerations that they could accept. Thus the effect of certainty drops from $-22$ to $-8$ percent.

5 Discussion and conclusion

The present research explored the effect of the 2010 campaign in general and the leadership in particular on citizens ability to forecast the winner of the election. The leadership debates provided an interesting case study to examine the effect of a changing informational environment on expectation change. This change was conceptualised in terms of Zaller’s RAS model of attitude change, which was in some cases modified to account for differences between expectations and attitudes. Empirically, it turned out that the leadership debates led many citizens on the “wrong” track. But prior forecasts and their certainty, partisanship, and political awareness greatly affected the decision to keep or change one’s forecast—depending on the informational environment.

The present research relied on Zaller and Feldman’s (1992) conceptualisation of attitudes to think about expectations. But other conceptualisation of attitudes may be fruitful to understand expectations as well. Another theoretical approach of attitudes is functionalism [Katz 1960]. This approach assumes that attitudes perform functions for the person. Depending on the motivational basis of the attitude, the same persuasive message may vary in its success to change attitudes. The same logic should apply also to expectations. One person may expect Labour to win to express her support for that party. Another person may expect Labour to win because she thinks this is what a reasonable person would do. A persuasive message that aims at the self-image of being knowledgeable may be less successful in the former than in the latter case. Future studies could explore this further.

Although national-level forecasts are important, future research could extend the anal-
Figure 3: Predicted probabilities of transitioning by prior beliefs, political awareness, and certainty. The plots suggest that the effects of political awareness and uncertainty depend on the prior forecast and the informational environment.
ysis to constituency-level forecasts. After all, theories of tactical voting mainly argue at the constituency-level. Previous research has shown that most respondents correctly pick the winner in their constituency and hat groups are even better in doing so (Murray forthcoming). However, the same reasoning why we need to know how the campaign affects national-level forecasts applies to constituency-level. Does the campaign help citizens to forecast their winner? Do they rely then more heavily on objective information or are they persuaded by party campaigning in their constituency? It seems worthwhile for future research to examine these questions.
References


