

**LEADER HEURISTICS, POLITICAL KNOWLEDGE AND VOTING IN
BRITAIN'S AV REFERENDUM**

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Abstract

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This paper uses data gathered in a large national survey to investigate the impact of party leader images on voting in Britain's 2011 national referendum on the Alternative Vote electoral system. Previous studies have found that leader heuristics have significant effects on voting in major referendums and general elections, and some analysts have argued that these effects are stronger for voters with lower levels of political knowledge. However, consistent with recent research in experimental economics, it can be hypothesized that more knowledgeable voters actually rely more heavily on leader heuristics than do less knowledgeable individuals. Using multivariate statistical techniques suitable for analyzing interaction effects in nonlinear models, we show that a political knowledge index focusing on the electoral system does not have statistically significant effects on referendum voting. However, knowledge of leaders' positions on AV does interact with their images. The nature of these effects is consistent with the conjecture that more knowledgeable voters place greater emphasis on leader heuristics.

LEADER HEURISTICS, POLITICAL KNOWLEDGE AND VOTING IN BRITAIN'S AV REFERENDUM

This paper studies the impact of party leader images on voting in Britain's recent national referendum on the Alternative Vote electoral system. The referendum, held on May 5, 2011, resulted in crushing defeat (by a 68% to 32% margin¹) of the proposal to change Britain's electoral system from single member plurality (First-Past-The-Post') to the Alternative Ballot². Previous studies have found that leader heuristics have significant effects on voting in major referendums and general elections, and some analysts have hypothesized that these effects are stronger for voters with lower levels of political knowledge (e.g., Bartle, 2005; Mondak, 1993; see also Gomez and Wilson, 2001, 2006). However, consistent with research in experimental economics and political psychology (Gigerenzer, 2008; Sniderman, Brody and Tetlock, 1991; see also Conlisk, 1996), it can be hypothesized that more knowledgeable voters actually rely more heavily on leader heuristics than do less knowledgeable individuals. This paper investigates these alternatives.

The paper begins by discussing theoretical perspectives on the determinants of referendum voting and describing the survey data used for the empirical analyses. Then, we present descriptive data on how the British electorate assessed possible benefits and costs of switching from FPTP to AV. Next, we estimate a multivariate model of referendum voting and discuss the results. Interaction effects of interest are investigated using statistical techniques designed for studying such interactions in nonlinear models. The paper concludes by reprising major findings and suggesting avenues for future research.

Modelling AV Referendum Voting

Previous research on the determinants of referendum voting has focused on two major types of explanatory variables.³ The first type are what may be termed 'merits of the case', i.e., judgments about the benefits and costs of passage or rejection of a referendum proposal. The motivating idea is quite simple—people will vote yes if they believe that the expected benefits of a referendum proposal outweigh the anticipated costs, and if they think that the costs will outweigh the benefits, they will vote no. An extended version of the hypothesis encompasses broader political goals and values that will be furthered or inhibited by passing or rejecting the referendum proposal.

The second major type of explanatory variable involves heuristic devices that voters may employ to help them make their referendum choice. Over the past two decades experimental economists and political psychologists have emphasized the importance of heuristics as guides to action in a broad range of decision-making situations (e.g., Gigerenzer, 2008; Mondak, 1993; Lupia, 1994; Lupia and McCubbins, 1998; Sniderman, Brody and Tedlock, 1991; see also Conlisk, 1996). In research on voting behaviour scholars have focused on the cueing properties of partisan attachments⁴ and leader/candidate images. When deciding how to vote on a referendum proposal, voters look at who are the friends and who are the enemies of the proposal, and consult their store of information about these individuals and groups. For example, when trying to decide what to do in the AV referendum, Conservative identifiers and people who had a positive image of party leader, David Cameron, likely would vote no because the Conservative Party and Mr. Cameron supported the existing FPTP electoral system.

Similarly, Liberal Democrat identifiers and those with a positive image of party leader, Nick Clegg, would vote yes because Clegg and his party endorsed AV.⁵

Other heuristics have been proposed as well. One of them is party performance, with voters using their evaluations of a party's performance as a cue whether they should accept or reject the position that party takes on a referendum proposal.⁶ Yet another heuristic with considerable currency in the literature is risk orientation.⁷ The hypothesis is straightforward—*ceteris paribus*, risk acceptant people are more likely than risk averse ones to vote yes because they are more willing to 'take a chance' on change. The focus on risk acceptance/aversion in the referendum voting literature comports well with research showing that people are likely to 'privilege the downside' by emphasizing possible losses over possible gains (e.g., Kahneman, Slovic and Tversky, 1982; Thaler, 1994), and the accompanying observation that major referendum proposals typically are defeated, often by wide margins (LeDuc, 2003).

Although cost-benefit calculations and heuristics are key variables in the referendum voting model specified here, we also consider the role of voter mobilization efforts by groups who support or oppose the referendum proposal. In the case of the AV referendum, two umbrella groups were formed to mobilize supporters and opponents to the proposal. These groups were called 'Yes to Fairer Votes' and 'No to AV', respectively. In addition, we consider the impact of cognitive engagement. Following previous research (e.g., Dalton, 2008; Whiteley et al., 2011), we hypothesize that well-educated and politically knowledgeable people are more likely to be exposed to positive messages about a referendum proposal such as AV which invokes broader democratic norms concerning the desirability of effective citizen involvement in the political process

and control over elected representatives. All else equal, such persons will be more likely to vote yes than are their less knowledgeable and less well educated fellow citizens. Finally, we include several socio-demographic variables in the model as statistical controls.

In summary, the model of voting in the AV referendum includes variables measuring: (i) perceived costs and benefits of AV and FPTP; (ii) broader goals and values associated with AV and FPTP; (iii) leader, partisan and party performance heuristics; (iv) risk orientations; (v) cognitive engagement (levels of political knowledge and formal education); (vi) socio-demographic controls (age, gender, income, residence in England, Scotland or Wales⁸). Since the dependent variable (voting for or against AV) is a dichotomy, a binomial logit model (Long and Fresse, 2006) is used to estimate parameters of interest.

Data: The data employed in the study were gathered in conjunction with Continuous Monitoring Survey (CMS) component of the 2010 British Election Study (BES).⁹ The referendum survey employed a pre-post panel design, with 22,124 eligible voters being surveyed in 30 random daily replicates over the month preceding the balloting. In the week after the referendum, 18,556 of these individuals completed a second survey, yielding an 83.9% panel retention rate.

The Benefits and Costs of AV

The pre-referendum wave of the survey contained several 'agree-disagree' statements designed to ascertain views about the pros and cons of switching Britain's electoral system from FPTP to AV.¹⁰ The results (see Figure 1) reveal that there was only one statement for which a large plurality favoured FPTP over AV—nearly half of

the respondents (48.5%) agreed that FPTP helps voters to assign responsibility for policy successes and failures and less than one in five (17.9%) disagreed. In contrast, a substantial plurality (43.2%) agreed with the idea that implementing AV would make MPs work harder and less than one quarter (24.9%) disagreed. On all of the other statements, the division of opinion was well-balanced. For example, there was an even division of opinion about AV being fairer than FPTP, with 36.1% agreeing and 36.0% disagreeing. Similarly, 30.6% believed that no party could get a majority if AV was implemented, but 30.2% thought otherwise. Again, 33.7% agreed that AV was hard to understand, but 38.6% disagreed. Overall, an average of 33.6% gave pro-AV responses to the statements and 35.8% gave pro-FPTP answers. An exploratory factor analysis (EFA) of responses to the eight statements in Figure 1 yields a single factor which explains 54.9% of the item variance. Factor scores from this EFA are used to measure the perceived benefits and costs of AV versus FPTP.

(Figure 1 about here)

In addition to various specific benefits and costs of AV and FPTP, referendum voting is hypothesized to vary according to beliefs about the desirability of various kinds of political reform. Several agree-disagree statements were included in the survey to tap these views.¹¹ Responses (see Figure 2) indicate that was considerable sentiment in favour of reform. For example, 63.3% endorsed the idea of holding more referendums and only 15.8% were opposed. Similarly, 52.3% agreed with the proposition of devolving more authority to local government and only 13.8% thought this was a bad idea. Again, over three-fifths (63.7%) wanted to reduce the size of the House of

Commons and only one in ten (10.6%) disagreed. And, although division of opinion was closer, 42.2% favoured proportional representation and 30.1% were opposed.

(Figure 2 about here)

However, not all of the statements revealed strong sentiments for reform. In particular, fully two-thirds of the respondents (67.6%) disagreed with a statement about the desirability of abolishing the monarchy, and a majority (53.7%) indicated that they wanted to retain the Church of England's established status. Also, tempering evidence cited above that there is substantial support for proportional representation, in a separate question a plurality (44.2%) indicated that they thought it was more important that one party obtain a majority of seats in parliament so it could govern on its own, with slightly over one-third (36.5%) saying that it was more important for a party's seat totals to match its vote totals.¹²

An exploratory factor analysis was used to summarize these data on attitudes towards various political reforms. This EFA yielded three distinct factors that collectively explained 56.0% of the item variance. Based on the pattern of item loadings, it is evident that the first of these factors captures attitudes proportion representation, whereas the second factor taps sentiments about enhanced democratization of the political process, and the third factor concerns feelings about traditional British institutions. The three sets of factor scores generated by this analysis are employed to measure orientations towards political reform.

Heuristics and Political Knowledge

Above, we have identified a number of heuristics that might influence voting in the AV referendum. None of these heuristics advantaged the Liberal Democrats, AV's

chief proponents in the referendum campaign. For example, a mere 3.0% of the respondents indicated that they thought the Lib Dems were the party best able to handle the issue they deemed most important (24.6% chose the Conservatives, and 23.2% chose Labour). Similarly, only 9.0% thought of themselves as Liberal Democrat partisans, whereas 31.9% and 25.6% were Labour and Conservative identifiers, respectively). And, in sharp contrast to the situation during the 2010 general election campaign, Liberal Democrat Leader, Nick Clegg was heartily disliked in the spring of 2011—his score on a 0 ('dislike') to 10 ('like') scale was only 3.7, nearly two full points what it had been a year earlier.¹³ In contrast, Conservative Leader David Cameron's average like-dislike score, although far from brilliant, was 4.4, exactly what it had been in May 2010. Similarly, although Labour's new leader, Ed Miliband, was not popular, his average score of 4.2 was half a point higher than that recorded by his predecessor, Gordon Brown immediately before the 2010 general election.

Taken together, these data clearly show that none of the parties had a decisive heuristics advantage when voters cast their ballots in the AV referendum. Perhaps particularly damaging for the yes side was the fact that Liberal Democrat heuristics were very weak. Nor could the yes forces expect a strong boost from Labour. Labour had a plurality share of party identifiers, but the party was divided on the merits of AV. Although Labour Leader Ed Miliband endorsed AV, as just noted, he was not very well liked. Moreover, several senior Labour politicians, including erstwhile cabinet "heavyweights" Margaret Beckett, John Prescott and John Reid, were on record as being opposed to changing the electoral system. Conservative heuristics had little pulling power either. The Conservatives had fewer identifiers than Labour, the Conservative

edge as party favoured on important issues was very small, and their leader, David Cameron, generated little enthusiasm in much of the electorate.

As observed above, political knowledge is another potentially influential variable. Political knowledge is a key variable in cognitive engagement models of voting turnout and civic engagement, and political knowledge also is hypothesized to have an important mediating role in the use of heuristics. Political knowledge has been measured in many different ways (Delli Carpini and Keeter, 1997), but here, we employ a five-item battery of questions concerning the British electoral system. None of these questions concern the positions of parties or leaders on AV; such measures will be employed later as part of our investigation of interaction effects involving leader images and 'heuristic-specific' political knowledge.

Responses to the electoral-system knowledge battery are displayed in Figure 3. They show that impressive majorities (82.3% and 85.7%, respectively) knew that the polls close at 10 P.M. and that any eligible voter could obtain a postal vote. A smaller, but still large, majority knew that the voting age was not 16 (72.7%). In contrast, questions about the ability of Commonwealth citizens to vote and the existence of a 40% turnout threshold for the results of the AV referendum to be declared binding had far fewer correct answers (26.5% and 21.2%, respectively). Overall the mean number of correct answers to the electoral-system knowledge battery was 2.9 (possible range 0 to 5). In the next section we will use this electoral-system knowledge index as an indicator of cognitive engagement when specifying the multivariate model of referendum voting.

(Figure 3 about here)

Analyzing Referendum Voting

Parameters in the multivariate model of referendum voting are estimated using Stata 11.2's binomial logit procedure (Long and Freese, 2006). The results (see Table 1) show that the model performs well; fully 88.6% of the cases (voters) are correctly classified, this being a 71% reduction in prediction errors compared to a naive-mode guessing approach. Consonant with these numbers, the pseudo (McKelvey) R^2 is a very sizable .78. Regarding specific predictors, the coefficients reported in Table 1 indicate that judgments about the costs and benefits of AV have a highly significant effect ($p < .001$) on referendum voting, as do the three variables (proportional representation, citizen involvement, traditional institutions) measuring attitudes towards various political reforms. All of these coefficients are properly signed indicating that, *ceteris paribus*, people who see AV as having more benefits than costs, and those who favor proportional representation and greater citizen involvement in the political process are likely to vote yes. In contrast, those who support traditional British institutions (the Monarchy, the Church of England) are likely to vote no.

(Table 1 about here)

Heuristics are in play as well. Images of the three party leaders are influential and, as hypothesized, positive images of Clegg and Miliband are associated with an increased likelihood of a yes vote, and a positive image of Cameron is associated with an increased likelihood of a no vote. Partisanship is at work too, with Liberal Democrat identifiers being more prone to vote yes, and Conservative identifiers being more apt to vote no. And, although judgments about party performance on important issues are not influential, risk orientations are statistically significant. As Table 1 shows, the

relationship is quadratic, with the signs on the risk orientation terms indicating that, up to a point, increasing risk acceptance is associated with an enhanced probability of voting yes. However, at the highest levels of risk acceptance, the relationship actually turns negative. This finding is consistent with the idea that AV was a 'half-way' house in the universe of electoral reform—a 'miserable little compromise' in Nick Clegg's words.

Cognitive engagement and campaign contact variables also work as anticipated. As Table 1 documents, electoral-system knowledge has the hypothesized positive effect on yes voting; other things equal, more knowledgeable people are more favourable to AV. This is also true for education; persons with higher levels of formal education are more likely to vote yes. As for campaign contact, people contacted by the 'Yes to Fairer Votes' group campaigning for AV were more likely to respond with a yes vote than were those who were not contacted by this group. In contrast, people contacted by the 'No to AV' group campaigning against AV were more likely to vote No. Finally, net of all other considerations, men were more likely than women to support AV.

A logit model's nonlinear function form inhibits easy interpretation of the strength of the effects of statistically significant predictors (Long and Freese, 2006). Accordingly, we provide intuition about the magnitude of the effects of these variables by constructing scenarios in which a predictor of interest is varied across its range while setting other predictors at their means in the case of continuous variables or at zero in the case of multiple-category dummy variables (i.e., party identification, party best on most important issue).¹⁴ The results (see Table 1, column 3) indicate that judgments about the costs and benefits of AV have a very impressive effect; as these judgments move across their range the probability of voting yes changes by fully .98. The effects of attitudes

towards proportional representation and traditional institutions are smaller, but still sizable, being .70 for the former predictor and .39, for the latter one. Leader heuristics exert substantial effects as well, with attitudes towards Cameron, Clegg and Miliband being capable of altering the probability of voting yes by .22, .24 and .19 points, respectively. The effects of partisan heuristics are considerably smaller—.08 for Conservative identification and .07 for Liberal Democrat identification. Changing risk orientations alter the probability of a yes vote by only .05 points.

Similarly small effects obtain for other predictors. Variations in electoral system knowledge and education can vary the probability of a yes vote by .08 and .13, respectively. Campaign contact effects operate as well, with contact by the Yes to Fairer Votes increasing the probability of a Yes vote by .04 points. The impact of contact by No to AV is also very small, .03 points. Gender effects are also weak; for the scenario under consideration, men are only .07 more likely than women to vote yes.

Viewed generally, the results of the multivariate analysis of voting in the AV referendum accord well with previous research. Merits of the case considerations and a variety of heuristics are at work, with leader images being particularly influential among the latter. In the next section, we investigate the possibility that the effects of leader heuristics vary across the electorate, with those effects being mediated by variations in voters' levels and types of political knowledge.

Party Leader and Political Knowledge Interactions

The analyses presented above show that party leader heuristics behave as hypothesized—controlling for all other factors, feelings about Ed Miliband and Nick Clegg positively affected the likelihood of voting yes in the AV referendum, and feelings

about David Cameron negatively affected the likelihood of voting yes. Reacting to similar results in other studies of referendum voting and electoral choice, some scholars have conjectured that the impact of leader heuristics varies across the electorate. The claim is that less politically knowledgeable voters give greater weight to leader heuristics than do more knowledgeable ones who have the cognitive resources to make decisions in accordance with the precepts of classic microeconomic-style utility maximization (e.g., Bartle, 2005; Mondak, 1993). People in the latter group are the political "smart money"—having the requisite knowledge and ability, they downplay leader and other heuristics and "do the math" themselves.

However, there is a rival hypothesis. Consonant with recent findings in experimental economics (Gigerenzer, 2008; see also Clarke et al., 2004; 2009), it can be argued that politically sophisticated voters actually pay more, not less, attention to readily available cues, including those provided by parties and their leaders. Stated simply, such voters recognize that they do not have the knowledge and skills needed to make fully rational decisions. In a sense, they are "smart enough to know that they are not smart enough." They react by employing easily accessible cues provided by highly salient sources. In a Westminster-style democracy such as Great Britain, party leader images constitute one such source. By relying on leader cues, knowledgeable voters are the "really smart money."

It has been argued that reliance of leader cues to help make a political decision requires that voters *know* what the leader's position is on the choice under consideration (Karp, 1998). For example, to use their image of David Cameron as a heuristic when deciding how to cast their ballots in the AV referendum, voters need to know that the

prime minister is opposed to AV. This argument is incorrect; in fact, all that is required is that voters *believe* that they know Mr. Cameron's position. If they get the prime minister's position wrong, this would be no barrier to casting a yes ballot because they believed that he wanted Britain to adopt AV. People frequently act on false premises when making all sorts of decisions and there is no reason that voting behaviour should be an exception.

However, there are reasons to expect that, in fact, accurate knowledge on a leader's position will be positively correlated with the strength of that leader's image as a heuristic. The idea is that voters may be interested in using leader images as cues in their decision-making process and are thereby motivated to seek knowledge on the leaders' positions on choice in question. Extending the 'really smart money' hypothesis discussed above, one may hypothesize that there exists a group of voters who want accurate information about leaders' positions so that they can use that information together with their leader images to help them make the decision of interest. In this regard, accurate information about leaders' positions on a highly salient topic such as a change in the country's electoral system typically is relatively easy to acquire. In fact, no special effort may be required—knowledge of where the leaders stand may be obtained *en passant* as voters peruse their daily newspapers or watch the evening news, the assumption being that the media typically (not invariably) provide accurate 'for' or 'against' information about major party leaders' positions on a variety of highly salient topics. Indeed, one might conjecture that, *ceteris paribus*, the ready availability of such knowledge enhances the likelihood that voters will use a leader heuristic (e.g., Zaller, 1992). If knowledge of

where leaders' stand on an important topic is easily acquired, why not use it and save the effort of seeking out additional information?

There are, then, three interaction hypotheses of interest. The first is what we call the conventional 'smart money' hypothesis. According to this hypothesis, politically sophisticated voters, here operationalized in terms of having a relatively rich store of factual political knowledge, give less weight to leader heuristics than do less sophisticated persons. The second, rival 'really smart money' hypothesis asserts the converse, namely that sophisticated voters give more weight to leader heuristics than do less sophisticated voters. The third hypothesis is a variant of hypothesis two: hypothesis three maintains that the *kind* of information that matters is knowledge about leaders' positions—sophisticated voters are more likely to have this knowledge and to use it to help them decide. 'Really smart' voters economize by using a readily available and accurate cue, e.g., knowledge of a leader's position, in combination with their image of that leader to facilitate their decision-making task.

In the present context, these hypotheses are tested by incorporating party leader x political knowledge interaction effects in the multivariate model of referendum choice analyzed above. Hypotheses One and Two are tested using the measure of electoral system knowledge employed in that analysis (see Figure 3). In contrast, hypothesis Three is tested using variables that measure whether a voter knows the positions of Messrs. Cameron, Clegg and Miliband on AV versus FPTP. In this regard, Figure 4 shows that sizable majorities of the survey respondents had accurate knowledge of where Cameron and Clegg stood. Specifically, 67.8% knew that Cameron opposed AV, and slightly more, 71.8%, knew that Clegg endorsed it. The situation for Ed Miliband was

considerably murkier. In keeping with his low profile in the AV campaign and the split among senior Labour Party politicians regarding the desirability of jettisoning FPTP for AV, only 43.5% of the CMS respondents knew that Miliband supported changing the electoral system. For purposes of the interaction effect analyses, these three variables are dichotomized; respondents with accurate knowledge of a leader's position are scored 1 and other respondents are scored 0.

(Figure 4 about here)

These three dichotomous variables are multiplied by corresponding leader image variables. In the multivariate analyses presented above, we relied on the summary like-dislike leader variables to capture leader images. Although there is empirical warrant for this decision (Clarke et al., 2009: ch. 5), here we extend the analysis by examining two additional aspects of leader image, namely competence and trust. As a result, we perform separate analyses for interaction effects involving three aspects of leader image—*affect*, *competence* and *trust*—with knowledge of various leaders' positions on AV.

Before proceeding, it bears emphasis that interpretation of these interaction effects is not straightforward. Over the past decade, several analysts have discussed the intricacies of interpreting interaction effects in multivariate models, with most of these treatments focusing very heavily on linear models (e.g., Brambor, Clark and Golder, 2006; Kam and Franzese, 2007). Recently, Norton and his colleagues (Ai and Norton, 2003; Norton, Wang and Ai, 2004; see also Berry, DeMeritt and Esarey, 2010) have demonstrated that additional complexities arise for nonlinear models such as the binomial logit model of referendum voting specified here. Consider the interaction of two variables X_1 and X_2 . Following the analogy with what is done with linear models, one

might be tempted to interpret the marginal effect for $X1*X2$ as the derivative of $E(Y|X1*X2, \mathbf{X})$ with respect to the interaction term ($X1*X2$). However, as Norton et al. point out, the interaction effect in a logit (or probit) model is actually the cross-derivative with respect to $X1$ and $X2$.

Ai and Norton (2003: 124) note four important implications of this observation: (i) if the coefficient for the interaction effect in a model is zero, the interaction effect is not necessarily zero for all cases; (ii) the statistical significance of the interaction effect is not a simple t-test for the coefficient but rather varies across the cases in the analysis; (iii) the interaction effect is conditional on the full set of predictor variables in the model; (iv) the sign of the interaction effect is not necessarily the sign on the coefficient for the interaction effect but rather can vary depending on the values of the set of covariates in the model. Norton, Wang and Ai (2004) provide a Stata routine that enables one to take (i) - (iv) into account when analyzing interaction effects in nonlinear models.¹⁵

Here, we employ the Norton et al. approach to analyze interactions between candidate image variables and political knowledge variables in a model of AV referendum voting. The model is otherwise identical to that discussed above (see Table 1). We begin by considering interactions between leader images measured using the 0-10 affect scale and the electoral system political knowledge index employed earlier (see Figure 3). Given that the rival 'smart money' (Hypothesis One) and 'really smart money' (Hypotheses Two and Three) predict oppositely signed effects for the interaction between leader images and political knowledge, tests for the significance of the interaction effects are two-tailed ($p \leq .05$). The results (not shown) are very consistent—all of the interaction effects for Cameron, Clegg and Miliband are statistically insignificant (results

not shown in tabular form). There is no evidence that electoral system knowledge interacted with leader images to influence AV voting as per hypotheses One or Two.

We next turn to testing Hypothesis Three, the variant of the 'really smart money' conjecture that involves knowledge of the positions held by various leaders regarding AV and FPTP. Again, leader images are measured using the 0-10 affect scales. The analyses reveal that there are statistically significant interactions for Cameron and Miliband, with the signs of these effects being overwhelmingly in the expected directions (according to hypothesis Three) for these two party leaders. As Figure 5 shows, fully 99.4% of the Miliband interactions are significant ($p \leq .05$) and, as one would expect given his endorsement of AV, these effects are positive. Thus, knowledge of Miliband's position on AV strengthens the positive impact of the Miliband image heuristic in the AV voting model. There are also a large number of significant effects for Cameron (for 59.0% of the voters) and, as expected given his opposition to AV, all of these effects are negative. The case for Clegg is different; nearly all (99.8%0 of his interactions are statistically insignificant.

(Figure 5 about here)

We next consider leader image x knowledge of leaders' AV position interactions that involve two alternative aspects of leader image, namely competence and trust.¹⁶ Although there are strong correlations between various aspects of leader image,¹⁷ it still may be the case that the interaction effects of interest work differently for different components of leaders' images. As Figure 6A shows, the results for perceptions of leader competence are quite similar to those just described for leader affect—73.3% of the interactions involving perceptions of Miliband's competence and his position on AV are

statistically significant and positive. Similarly, 89.5% of the comparable interactions involving David Cameron are statistically significant and negative. Once more, however, the vast majority (97.9%) of interactions involving Nick Clegg are statistically insignificant.

For interactions involving the trust component of leader image, the situation is similar, with large majorities of the interactions for Miliband and Cameron being statistically significant (see Figure 6B). Again, significant interactions involving Miliband are positive and those involving Cameron are negative. In addition, however, there are a sizable minority (30.4%) of interactions that are statistically significant for Clegg. As anticipated, these effects are positive, i.e., interactions between the trustworthy component of Clegg's image and knowledge of his position on AV strengthens the likelihood of voting yes in the referendum.

(Figure 6 about here)

In sum, these analyses document that there are a sizable number of significant interactions between various components of leaders' images and knowledge of their positions on AV versus FPTP. As Norton et al. observe, the presence of such significant interactions can vary according to the values of the set of predictor variables in one's model. The point may be illustrated by plotting the Z-scores for the interaction between trust in David Cameron and knowledge of his position on AV-FPTP on a case-by-case (vote-by-voter) basis against the predicted probability of a yes vote. The results show that the likelihood of a significant negative interaction are greatest among persons who have only a relatively small probability of voting yes and then diminish as that probability exceeds .6 (see Figure 7). Substantively, this pattern suggests that if the

forces prompting a yes vote are quite strong, perceptions of Cameron as a trustworthy leader and knowledge of his opposition to AV have little effect. The interaction of such perceptions and knowledge tend to matter most often when other factors are aligned against a yes vote. In such a circumstance the trust in Cameron x knowledge of his opposition to AV reinforces the tendency to vote no.

(Figure 7 about here)

The comparable analysis for Nick Clegg (not shown) reveals a similar, albeit weaker pattern, with significant trust x knowledge interactions occurring when the overall probability of a yes vote is small. However, in Clegg's case, these interactions are positive. Finally, the analysis for Miliband underscores the point that it is possible that the interactions can be significant regardless of the overall probability of a yes vote. In this regard, recall that the trust in Miliband x knowledge of his position on AV was significant and positive for nearly all voters (97.9%), regardless of their probability of voting yes. This point is illustrated in Figure 8. Substantively, this pattern in the data suggests that *regardless* of the configuration of other factors at work in the campaign, Miliband could increase the likelihood of a yes vote by informing the electorate that he favoured AV. Doing so would increase the probability of a yes vote among people who viewed him as trustworthy. The distribution of his trust score suggests that, circa May 2011, many people were not convinced that this was the case.¹⁸

(Figure 8 about here)

Conclusion: The Story of Referendum Voting Reconsidered

On May 5, 2011 British voters had the opportunity to decide if their country should change its electoral system. As noted in the introduction, this exercise in direct

democracy is an example of the 'polity shaping' referendums that have been employed with increasing frequency in mature democracies over the past two decades. Although a variety of explanatory variables have appeared in research on voting in these events, a number of studies have emphasized the importance of cost-benefit calculations and heuristics provided by partisan attachments and leader images. Analyses presented in this paper testify that both types of variables affected the choices voters made in the AV referendum. Assessments of the 'pros' and 'cons' of AV and FPTP had very strong effects on voting, and both partisanship and leader images were influential as well. In these respects, the story of what shaped political choice in the AV referendum is a familiar tale.

However, there are aspects of the story that are less well-known. Analyses using statistical methods appropriate for assessing interaction effects in nonlinear models reveal that the force of leader images was conditioned by levels of political knowledge. But, contrary to what some researchers have conjectured, leader image effects were not stronger among less knowledgeable voters. Also, basic factual knowledge about Britain's electoral system was not the kind of information that counted. What did matter was knowledge of leaders' positions on AV versus FPTP—that knowledge interacted with leader images such that the effects of those images were stronger among more knowledgeable voters. These effects obtained across various components of leader images, and were more widespread for David Cameron and Ed Miliband than for Nick Clegg.

The tenor of these findings is consistent with what we have termed the 'really smart money' hypothesis. Echoing research in experimental economics and political psychology, the core idea is knowledgeable individuals make more, not less, use of

readily available cues such as those provided by party leaders. In this regard, we observe that the salience of party leaders in the mass media encourages voters to form images of them as (in)competent, (un)likeable and (dis)trustworthy, and knowledge of their positions on major issues typically can be acquired with little effort. Although it is possible that voters with inaccurate information about a leader's position might use that information in combination with their image of the leader when making a political choice, in the case of the AV referendum a large majority of people had accurate knowledge of at least one of the leaders' positions and, in turn, that knowledge boosted the impact of the leader image cue on referendum voting.

When considering how leader images affected the outcome of the AV referendum, it is clear that the yes side was disadvantaged by negative public perceptions of Nick Clegg. Although many people knew that the Liberal Democrat leader favoured AV, circa May 2011 he had become decidedly unpopular with much of the electorate, and many voters viewed him as less than competent and trustworthy. Given this negativity, it is conceivable that the yes side would have done even worse had the political knowledge interaction effects involving Clegg's image as (un)trustworthy been more widespread.

Campaign strategists for the yes side were very much aware of the Liberal Democrat Leader's image problem. They reacted by adopting a variety of curious, even bizarre, ways to make their case, while keeping Clegg 'out of sight' and, hopefully, 'out of mind.' Famous (John Cleese) and not-so-famous (Eddie Izzard) comedians were enlisted to serve as surrogate pitchmen for AV, and a YouTube video featuring terminally cute domestic cats was posted to explain the mechanics of AV and tout its democratic

virtues.¹⁹ Although entertaining, these campaign advertisements fell far short of what was needed to secure a yes majority. Although they have diverted voters' attention from Mr. Clegg, Cleese, Izzard and their feline friends failed to make a compelling case for the merits of AV.

In terms of future research, relationships between leader images, political knowledge and cost-benefit considerations bear scrutiny. Present analyses document that cost-benefit variables exerted very strong effects on choices made in the AV referendum. In general, it is possible that the perceived costs and benefits associated with a referendum proposal under consideration are partially a function of voters' images of the politicians advancing claims about those costs and benefits. And, as suggested by present findings, it is also possible that the strength of these effects is conditioned by voters' levels of political knowledge. Untangling the skein of causal relationships among these variables likely will be a challenging exercise since leader images may be consequences as well as causes of cost-benefit evaluations. Meeting that challenge promises to shed additional light on how leader heuristics affect political choice.

Figure 1. Properties of AV and FPTP Electoral Systems

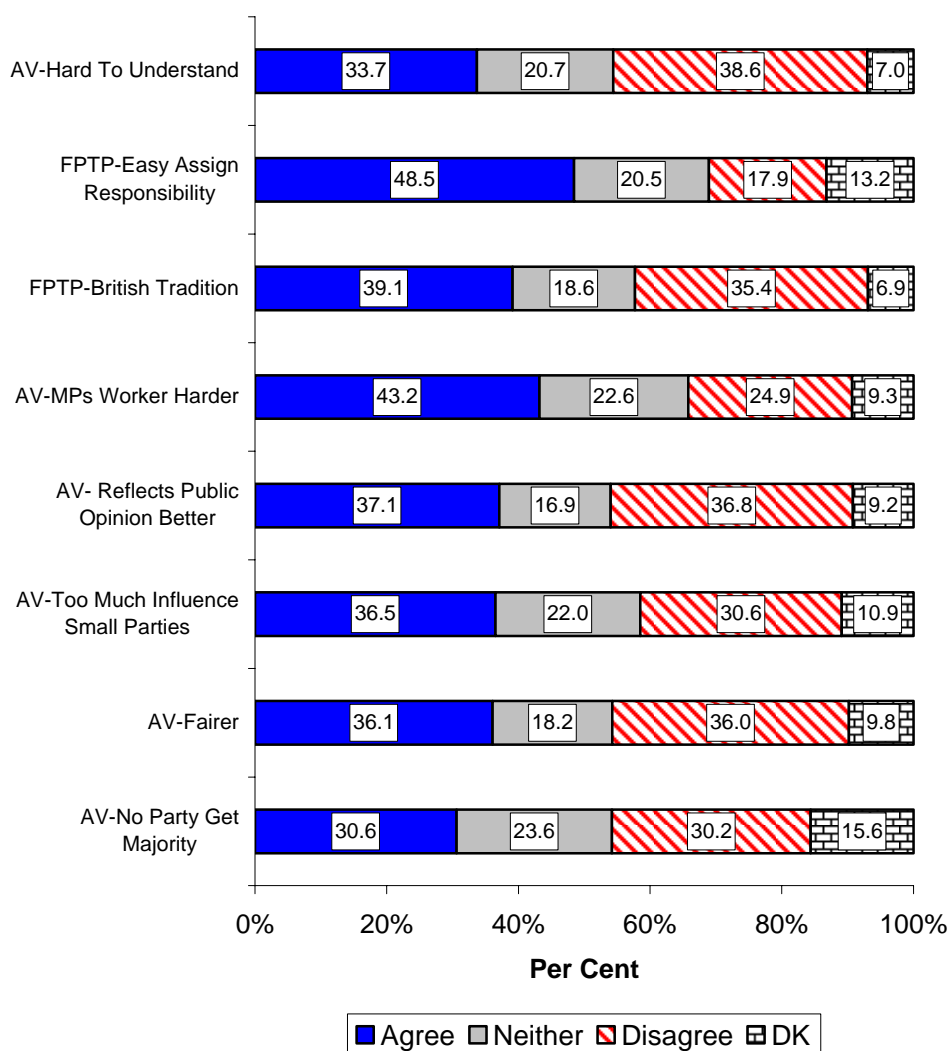


Figure 2. Opinions About Political Reforms

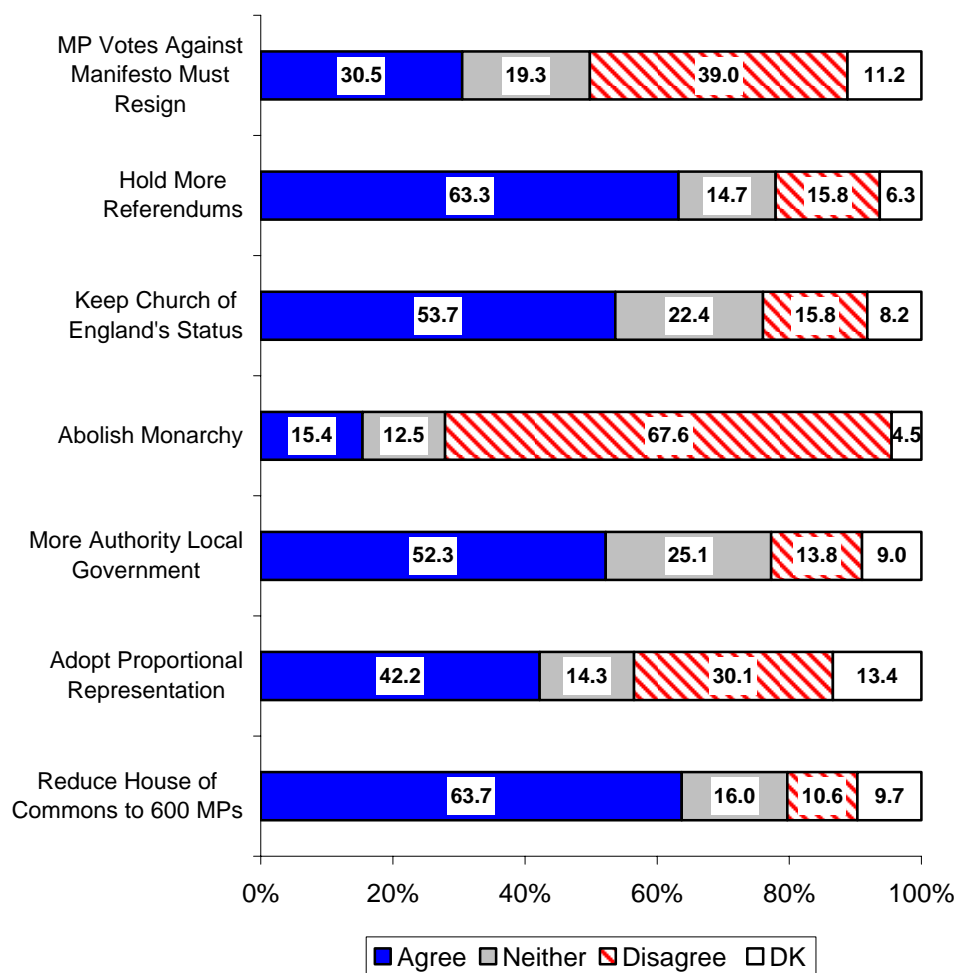


Figure 3. Electoral System Knowledge - Percentages Giving Correct Answers

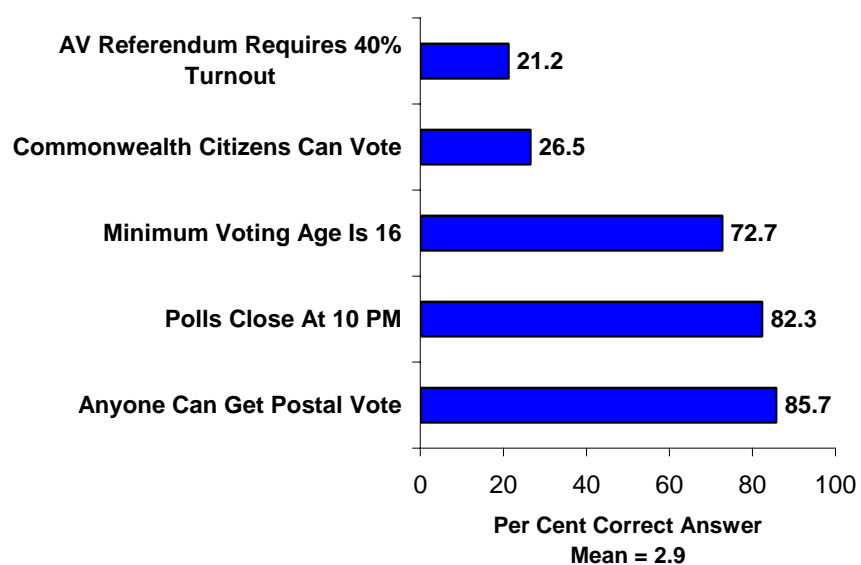


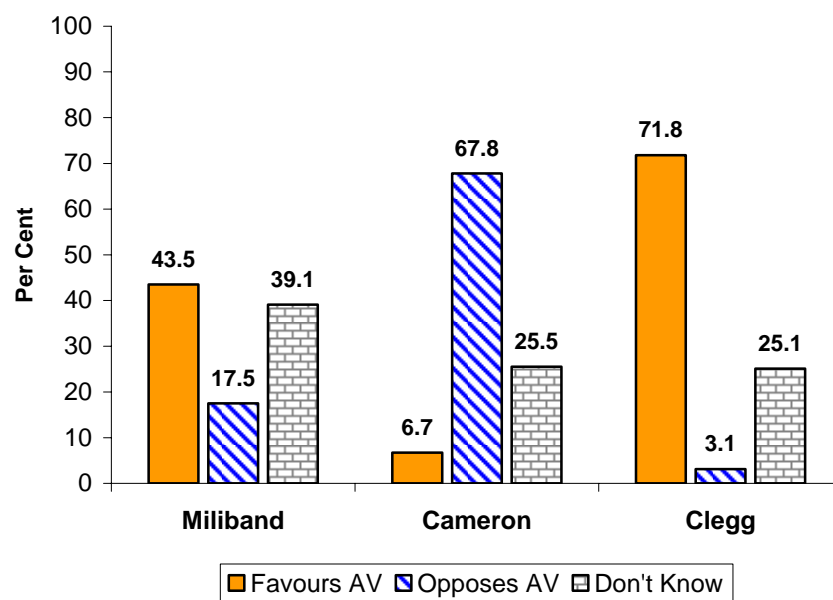
Figure 4. Knowledge of Leaders' Positions on AV

Figure 5. Summary of Interaction Effects - Affective Leader Images x Knowledge of Leaders' Positions on AV

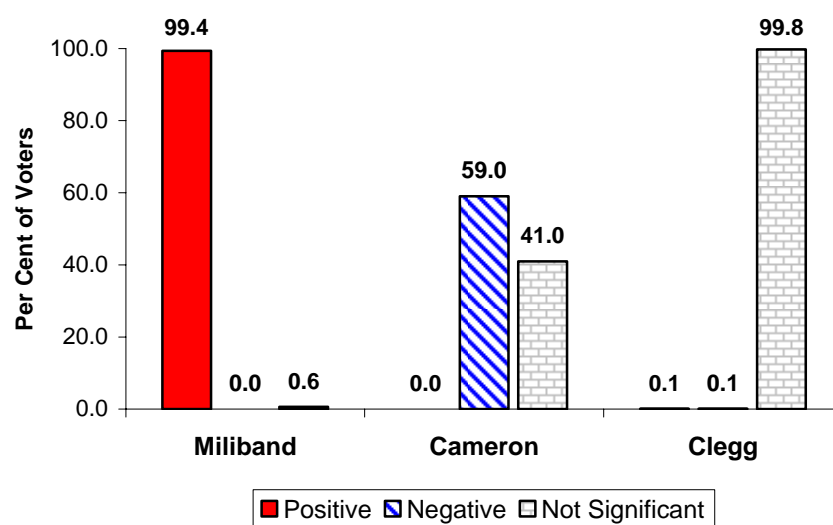
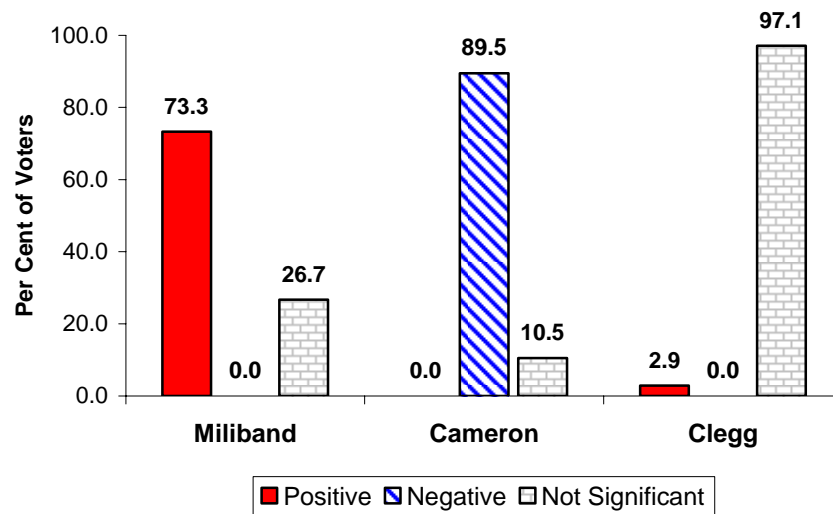


Figure 6. Summary of Interaction Effects - Competence and Trust Leader Images x Knowledge of Leaders' Positions on AV

A. Competence



B. Trust

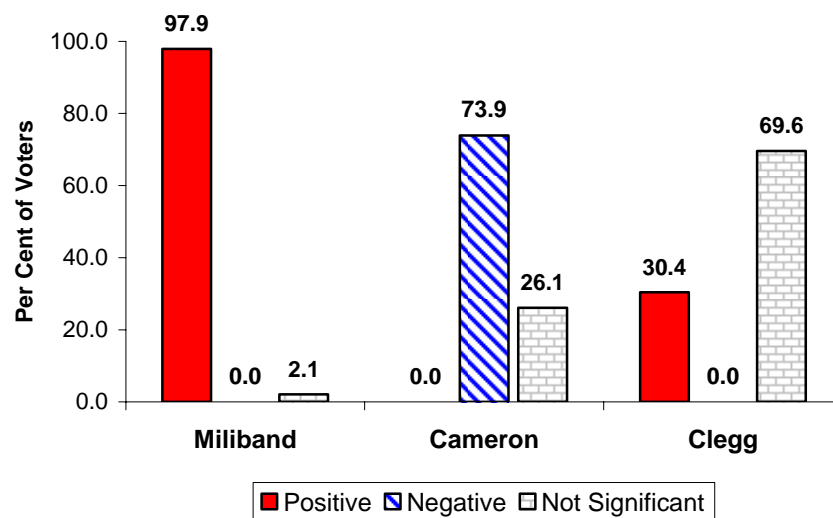


Figure 7. Interaction Effects Involving Trust Component of Cameron's Image and Knowledge of Leader's Position on AV

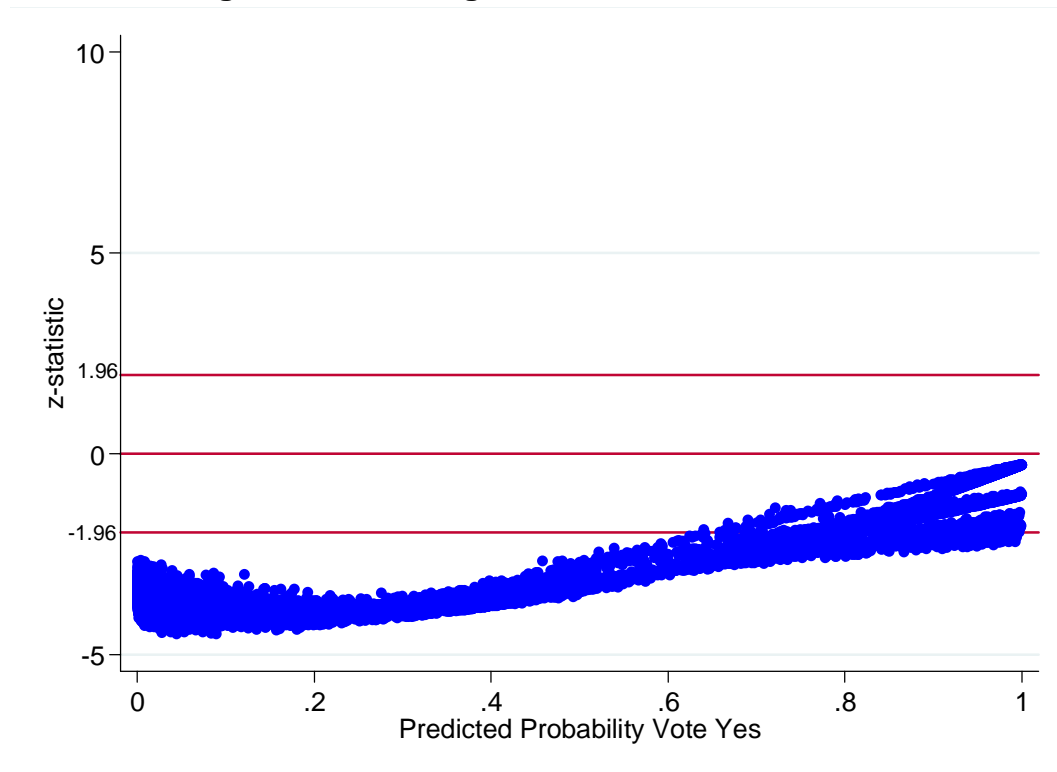


Figure 8. Interaction Effects Involving Trust Component of Miliband's Image and Knowledge of Leader's Position on AV

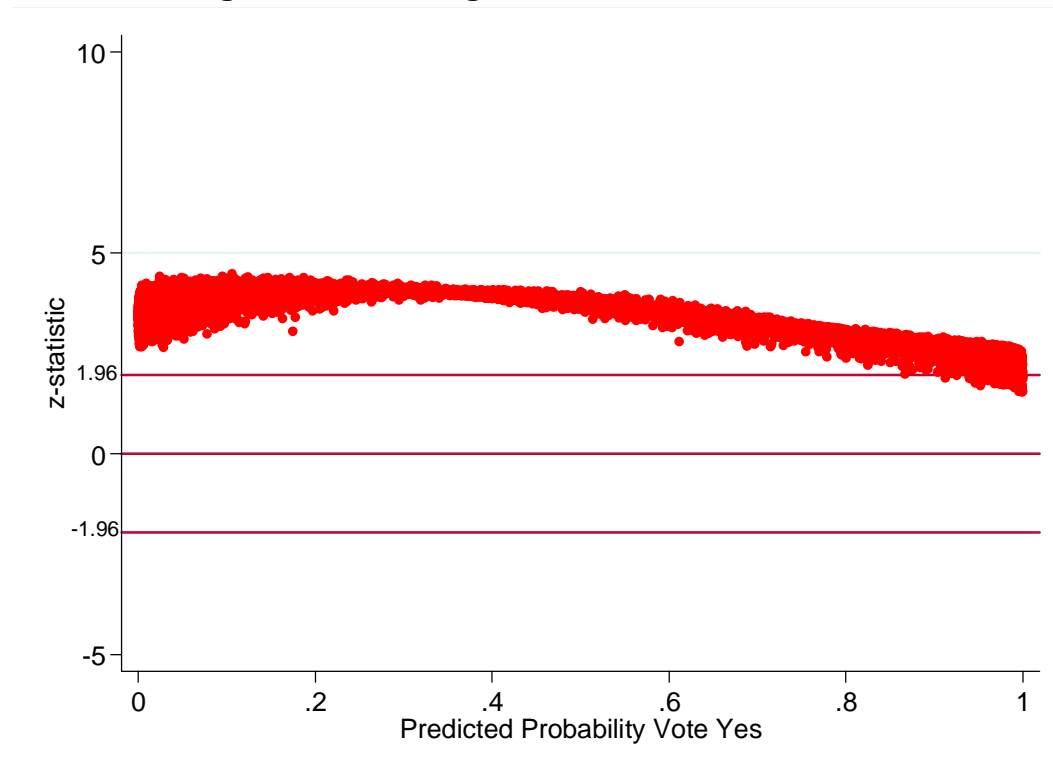


Table 1. Binomial Logit Model of Yes Voting in Alternative Vote Referendum

<i>Predictor</i>	<u>Model</u>		<u>Change in Probability of Voting Yes†</u>
	<u>B</u>	<u>s.e.</u>	<u>Δ</u>
Costs-Benefits of AV and FPTP	-2.04***	.05	-.98
Political Reform:			
Proportional Representation	.91***	.04	.70
Citizen Involvement	.11***	.03	.15
Traditional Institutions	-.34***	.03	-.39
Leader Images:			
Miliband	.10***	.01	.19
Cameron	-.11***	.02	-.22
Clegg	.12***	.02	.24
Political Knowledge	.08**	.02	.08
Party Best Most Important Issue:			
Labour	.14	.09	ns
Conservatives	-.15	.10	ns
Liberal Democrats	.26	.22	ns
Other Party	.05	.11	ns
Party Identification:			
Labour	-.06	.09	ns
Conservatives	-.48***	.11	-.08
Liberal Democrats	.30**	.12	.07
Other Party	-.16	.12	ns
Campaign Contact:			
Yes to Fairer Votes	.25**	.09	.04
No to AV	-.14*	.08	-.03
Risk Orientation	.14***	.04	.05
Risk Orientation Quadratic	-.02***	.005	‡
Age	.00	.00	.07
Education	.14***	.02	.13
Gender	.36***	.06	.07
Income	.01	.01	ns
Region: Scotland	-.12	.10	ns
Wales	-.12	.13	ns
Constant	-2.70***	.23	
McKelvey R ² =	.78		
Percentage Correctly Classified =	88.6		
Lambda =	.71		
Log-Likelihood =	-3870.46		
AIC =	7794.92		
N =	15137		

*** - $p \leq .001$; ** - $p \leq .01$; * - $p \leq .05$, one-tailed test.

ns - coefficient not significant, $P > .05$

† - change in probability of voting yes as predictor varies from lowest to highest value with other predictors held at means in the case of continuous variables or 0 in case of dummy variables.

‡ - for risk orientation, change in probability is calculated for both risk and risk squared.

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Endnotes

¹ Electoral Commission, 2011.

² In an Alternative Vote (AV) electoral system, voters in single-member districts rank-order candidates. If no candidate receives a majority of first preferences, the candidate with the fewest first preferences is eliminated and second preferences on those ballots are distributed to the remaining candidates. The process continues until a candidate obtains a majority. See, e.g., Lakeman (1974).

³ The literature on referendum voting is now substantial. See, e.g., Blais et al., 1996; Bowler and Donovan, 1998; Butler and Ranney, 1994; Clarke and Kornberg, 1994; Clarke, Kornberg and Stewart, 2004; LeDuc, 2003; Lupia, 1994; Lupia and McCubbins, 1998; Nadeau, Martin and Blais, 1999; Whiteley et al., 2011; Vowles, 1995).

⁴ Partisan attachments are measured using the first question in the standard BES party identification sequence: 'Generally speaking, do you think of yourself as Labour, Conservative, Liberal Democrat or what?' Party identification variables are a series of 0-1 dummies with 'non' and 'don't know' responses designated as the reference category.

⁵ In their manifesto for the 2010 general election, the Liberal Democrats had advocated the Single Transferable Vote (STV). See Liberal Democrats (2010). In the post-election negotiations that led to the Conservative-Liberal Democrat election, the two parties compromised with an agreement to hold a referendum on the Alternative Vote.

⁶ Party performance evaluations are based on responses to a question concerning which party is best able to handle the issue the respondent deemed most important. The party performance variables are a series of 0-1 dummies with 'none' and 'don't know' responses designated as the reference category.

⁷ In the analyses below, risk orientation is measured using the following question: In general do you dislike taking risks, or do you like taking risks? Please use the scale below where 0 means "really dislike taking risks" and 10 means "really like taking risks" to indicate how you generally feel about taking risks.

⁸ Age is measured as age in years; gender is a dummy variable with men scored 1 and women 0; income is a set of 14 categories ranging from 'less than £5000 per year' to 'more than £100,000 per year'; country of residence is two 0-1 dummy variables for Scotland and Wales with England as the reference category.

⁹ BES-CMS surveys, including the 2011 AV Referendum Survey, are conducted via the internet. Fieldwork is conducted by YouGov, with Joe Twyman serving as Study Director. On the quality of these internet surveys, see Sanders et al., 2007; Clarke et al., 2008. See also Ansolabehere and Schaffner, 2011.

¹⁰ The wording of these statements is: (1) 'If Britain adopts the Alternative Vote system for general elections, then no party could ever get a majority of seats in the House of

Commons'; (2) 'The Alternative Vote electoral system is fairer because it produces a closer correspondence between parties' percentage share of votes and the number of seats they get in Parliament'; (3) 'The Alternative Vote electoral system gives too much influence to small political parties'; (4) 'The Alternative Vote electoral system will produce electoral outcomes that more accurately reflect the political opinions of the British public than the present First-Past-The-Post electoral system does'; (5) 'The Alternative Vote electoral system makes MPs work harder for their constituents because they need the support of a majority to get them elected'; (6) 'The First-Past-The Post electoral system should be kept because it is an important part of Britain's political tradition'; (7) 'The Alternative Vote electoral system is too hard for the average person to understand'; (8) 'The First-Past-The-Post electoral system helps voters to know which party is responsible for policy success or failure'. Responses to the statements were scored: 'strongly agree' = 5, 'agree' = 4, 'neither agree nor disagree'/'don't know' = 3, 'disagree' = 2, 'strongly disagree' = 1.

¹¹ These statements are: (a) 'The number of Members in the House of Commons should be reduced from 650 to 600 MPs'; (b) 'The UK electoral system should be changed to proportional representation so that the percentage of seats that a party gets in Parliament is the same as the percentage of the votes that it receives in a general election'; (c) 'Local governments should have more decision-making authority compared to the central government in London'; (d) 'The monarchy should be abolished so that the UK can be a republic'; (e) 'The Church of England should keep its status as the official established church in England'; (f) 'The UK should have more national referendums to decide important political issues'; (g) 'Members of Parliament who vote against their own party's election manifesto should be required to resign and seek re-election'. Response options are: 'strongly agree' = 5; 'agree' = 4; 'neither agree nor disagree/don't know' = 3; 'disagree' = 2; 'strongly disagree' = 1.

¹² The question wording is: 'Thinking about the outcomes of general elections, which of these statements is more important to you?' Response options are: (a) 'That one party get more than half the seats in parliament so it can govern on its own' = 1; (b) 'That every party's percentage of seats in parliament is the same as their percentage of the vote' = -1; (c) 'Don't know' = 0.

¹³ The question measuring affect for the party leaders is: 'Using a scale that runs from 0 to 10, where 0 means strongly dislike and 10 means strongly like, how do you feel about David Cameron/Ed Miliband/Nick Clegg'?

¹⁴ The analysis is conducted using the Stata CLARIFY program developed by Tomz, Wittenberg and King (1999).

¹⁵ Greene (2008) accepts that Norton et al.'s technical analyses are correct, but argues that their approach to interpreting interaction effects is not useful unless one has articulated specific hypotheses that one wishes to test. Here, we entertain such hypotheses.

¹⁶ Respondents were asked if the words 'competent' and 'trustworthy' described Cameron, Clegg and Miliband 'very well', 'quite well', 'not very well' or 'not very well at all'. The responses were scored 'very well' = 5, 'quite well' = 4, 'not very well' = 2, 'not very well at all' = 1. Respondents saying they were 'did not know' were given a score of 3.

¹⁷ The average inter-item correlation (r) between the affect, competence and trust components of Cameron's image is .78. Correlations for Clegg and Miliband are .68 and .73, respectively.

¹⁸ Only 20.7% said they thought the word 'trustworthy' described Clegg 'very well' or 'quite well'. For Cameron and Miliband, the comparable numbers were 35.9% and 31.8%, respectively. The percentage who said the word 'competent' described Clegg 'very well' or 'quite well' was 22.6, as compared to 49.5% for Cameron and 31.4% for Miliband.

¹⁹ 'Is Your Cat Confused About the Referendum on the Alternative Vote on 5th May'. See www.youtube.com/watch?v=HiHuiDD_oTk