The Clarity Incentive
for Issue Engagement in Campaigns

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Abstract

Although parties focus disproportionately on favorable issues in their election campaigns, it is also the case that parties spend much of the 'short campaign' addressing the same issues – and especially salient issues. If able to influence the importance of issues for voters through their emphasis, it is puzzling that parties spend any time on unfavorable issue positions. We suggest that while parties prefer to emphasize popular issue positions, they also face an additional incentive to emphasize issues that are salient to voters: clarifying their positions on these issues for sympathetic voters. Leveraging the surprise general election victory of the British Conservative party in 2015—which brought about a hitherto unexpected referendum on EU membership—we show that, consistent with this hypothesis, voter uncertainty is especially costly for parties on salient issues. We formalize this argument using a model of party strategy with endogenous issue salience.

1 Introduction

A vast body of work on what might variously be described as 'heresthetics', 'issue competition', 'saliency theory' or 'issue ownership theory' (Robertson 1976; Budge and Farlie 1983; Riker 1993; Petrocik 1996; Green-Pedersen 2007) has argued that parties primarily compete by drawing voters' attention to particular issues, in an effort to alter the dimensions on which they are evaluated.[1] To date, researchers have amassed considerable evidence from a wide range of countries that parties do focus disproportionately on issues that favor them.[2] However, the incentives described in these studies cannot entirely explain issue selection by parties in campaigns.

In particular, contrary to what might be expected under saliency or ownership theory, it is well-established that parties actually spend much of their campaigns focusing on the same issues as each other – and in particular, on issues which are already salient to voters.[3] Most commonly, this has been explained as resulting from the importance of particular issues to voters. It is reasoned, for instance, that parties may not want to ignore issues of public concern that are the subject of extensive media coverage (Ansolabehere and Iyengar 1994; Aldrich and Griffin 2003), as this may relinquish control over the framing of the issue to their opponents. It is also possible that parties may be forced to confront unfavorable but salient issues by their political opponents and by the media.[4] Yet, few studies have satisfactorily explained why, if a party is able to influence the salience of a preferred issue, it will devote any time to an issue on which it is disadvantaged, even if this is an important issue for voters.[5]

We observe that the extent to which a party emphasizes an issue can have two effects

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[1] A large empirical and experimental literature on the importance of "priming effects" argues that political advertising has a significant effect on voters' issue priorities (Iyengar and Kinder 1987; Krosnick and Kinder 1990).

[2] For instance, Green and Hobolt (2008) observe that during the 2005 British elections, both Labour and the Conservatives campaigned predominantly on their respective 'owned' issues, while Green-Pedersen and Mortensen (2010) note that during the period of left-wing governments in Denmark between 1993 and 2001, the right-wing opposition continually drew attention to immigration, an issue on which it was favored by voters. Other studies with similar findings include Druckman, Jacobs and Ostermeier (2004), Vavreck (2009), Dolezal et al. (2014) and de Sio and Weber (2014).

[3] This has been particularly noted in U.S. presidential and congressional campaigns (Kahn and Kenney 1999; Aldrich and Griffin 2003; Damore 2004, 2005; Sigelman and Buell 2004; Kaplan, Park and Ridout 2006; Sides 2006; Milita, Ryan and Simas 2014), but has also been observed in multiparty contexts like Austria and Denmark (Green-Pedersen and Mortensen 2010; Dolezal et al. 2014; Meyer and Wagner 2015). For instance, when analyzing presidential campaigns in the U.S., Sigelman and Buell (2004) found that both candidates spoke on the same issue, on average, a staggering 73% of the time.

[4] In keeping with this logic, Sides (2006) notes that both the Democrats and the Republicans focused on Social Security, education and health care in campaigns for U.S. House and Senate races in 1998—the issues most prominent on the public's agenda at the time—while Kaplan, Park and Ridout (2006) identify a sizeable effect of issue salience on candidates' emphases in Senate campaigns.

[5] For an important exception, see Minozzi (2014), who argues that disadvantaged parties will choose to campaign on salient issues in order to improve their reputation on such issues.

on voters: it may influence the importance of the issue for voters, but it may also influence voters' certainty regarding the party's position on the issue. Based on this observation, we propose one reason parties may choose to engage with voters on issues where their position is unpopular with a majority of voters: clarifying their position on such issues for the benefit of potentially sympathetic voters, and particularly on salient issues. We suggest that this incentive coexists and competes with parties' more studied incentive to address and emphasize the issues on which their policy positions are popular. We contend that this may account for why we observe parties competing by trying to focus voters' attention on issues where their positions are more popular, while simultaneously being compelled to emphasize issues on which voters' attention is already focused.

This is in keeping with a sizable literature arguing that the more uncertain a voter is about candidate positions, the less likely she is to support the candidate (Alvarez 1998).[6] However, this argument may seem at odds with recent research that, instead, stresses the electoral benefits of positional ambiguity (Campbell 1983; Alesina and Holden 2008; Tomz and van Houweling 2009; Rovny 2012; Kartik, van Weelden and Wolton 2015; Somer-Topcu 2015). We counter that this line of reasoning confounds two distinct attributes: voter uncertainty regarding parties' true positions, and candidate or party ambiguity.[7] While closely related, these attributes are conceptually distinct: uncertainty is 'a psychological state in which voters are unsure about the policy positions of candidates', while ambiguity is 'an attribute of candidate [or party] position taking' (Tomz and van Houweling 2009, 83).[8] We possess considerable evidence that strategic ambiguity—when parties take 'vaguely broad positions' on select issues[9]—may be electorally beneficial, whether due to 'projection' by partisan voters, or a perception that ambiguity on an issue indicates 'flexibility'. However, *evasion* by parties or candidates, especially on salient issues, cannot be excused by voters on these same grounds. That Tomz and van Houweling (2009) find risk-averse voters who are certain about their own position least likely to embrace ambiguous candidates seems consistent with this claim.[10]

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[6]For other studies that argue similarly, see Enelow and Hinich (1981), Shepsle (1972), Bartels (1986), Gill (2005) and Ezrow, Homola and Tavits (2014).

[7]Aldrich, Ley and Schober (2013) also draw a distinction between voter uncertainty and candidate or party ambiguity, investigating the implications of each for voters' ability to place parties on a left-right scale.

[8]Other studies that reference such distinctions include Aldrich, Ley and Schober (2013) and Milita, Ryan and Simas (2014).

[9]For instance, Alesina and Holden (2008) and Kartik, van Weelden and Wolton (2015) both explicitly model ambiguity as candidates choosing an interval on an issue dimension rather than a single point, while in their survey experiment, Tomz and van Houweling (2009) ask respondents to consider candidates who take a position within some specified range. In Somer-Topcu's analysis, a 'broad-appeal' strategy can encompass parties taking clear but multiple positions on various issues, or a party selecting centrist candidates while releasing an extreme election manifesto (Somer-Topcu 2015, 843).

[10]Tomz and van Houweling (2009, 96) further qualify their findings with the statement that "[v]oters may, for example, accept ambiguity within the range we studied but shun candidates who are totally

We present further empirical evidence in support of this claim. We leverage the surprise general election victory of the Conservative party in the United Kingdom on 8 May 2015, which prompted a hitherto unexpected referendum on Britain's membership of the European Union (EU), as an exogenous shock to the salience of the issue of EU membership in British public opinion. Using individual-party level panel data from Britain between March 2014 and July 2016, we show that an individual was less likely to vote for a party if uncertain about its position on the EU membership *after* May 2015, but not before. To further investigate this mechanism, we distinguish between respondents who expected, in May 2016, that Britain would vote to leave the EU, and those who expected a vote to remain. We find that, among those expecting a remain vote, uncertainty about a party's position on the EU only reduced their support for that party after Britain narrowly voted to leave the EU on 23 June 2016, but did not significantly influence their vote choice before this date. By comparison, we identify a sharp increase in the effect of uncertainty regarding parties' EU stances on the preferences of those expecting a leave vote in May 2015 itself. Assuming that, between May 2015 and June 2016, the issue of Britain's membership of the EU was more salient to those expecting a leave vote than those expecting a vote to remain, these findings cumulatively support the claim that voter uncertainty regarding a party's position on an issue is costly, and especially costly on salient issues.

Using a formal model, we show that incorporation of this 'clarity' incentive into a model of party strategy with endogenous issue salience can explain why parties may campaign on unfavorable issues, and especially when these are salient to voters. In our model, parties take distinct policy positions on two issues, X and Y and strategically choose which issues to emphasise in order to maximise their vote share. There are two reasons for a party to emphasise an issue. First, emphasizing an issue increases the proportion of voters that considers the issue important, which may be advantageous to a party if its position on the issue is relatively popular. Second, there is the 'clarity incentive'. That is, emphasizing an issue increases the proportion of voters that are aware of the party's position on the issue. This benefits the party electorally because voters are less inclined to vote for a party if they do not know its position on a salient issue. We show that, under certain conditions on the parameters, both parties choose to emphasize both issues. Nevertheless, parties tend to emphasize more salient issues relatively more and also emphasize issues on which they are advantaged relatively more.

We view this as a significant advance over earlier theoretical work on parties' salience strategies. While there exists a small body of work seeking to formally model parties' issue selection strategies (Austen-Smith 1993; Simon 2002; Amorós and Puy 2013; Ascencio

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vague."

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and Gibilisco 2014; Aragonês, Castanheira and Giani 2015; Egorov 2015; Dragu and Fan 2016), most of these studies do not find parties addressing the same issues in equilibrium, and none of these studies have been able to explain why parties might address issues they do not already 'own' – contrary to the empirical evidence.[11] We believe that our model is one of only a few models of issue selection that find opposing parties campaigning on the same issue in equilibrium, and the only model which finds that parties will campaign on unfavorable, or non-owned, issues if these are especially salient to voters – as is consistent with the empirical evidence.

2   Is Evasion Costly? Some Empirical Evidence

2.1   Background

The issue of European Union membership and integration has long been a thorn in the side of both Labour *and* Conservative party elites in Britain – and one that seems no less likely to subside even after a narrow popular vote in favor of 'Brexit' on 23 June 2016. For several decades, both major parties have included 'Eurosceptics' and 'Europhiles' – the former being those in favor of weakening European integration or leaving the EU altogether, and the latter those in favor of continuing EU membership and further integration. For instance, in 1975, in response to worsening intra-party divisions over continuing European Economic Community membership, a Labour government held, and won, a referendum on this question (Butler and Kitzinger 2016).

However, in recent decades, it is the Conservative party which has been more riven by divisions on the question of EU membership in the face of further European integration. Between 1992 and 1995, Conservative prime minister John Major faced repeated rebellions by MPs over the implementation of the Maastricht treaty in British law (Sowemimo 1996)– with some of the rebels eventually joining the fledgling United Kingdom Independence Party (UKIP). Again, and for an assortment of reasons, tensions within the Conservative party over the European question mounted over the course of the 2010–15 parliament (Lynch 2015).[13] The 2010–15 parliament witnessed Conservative rebellions

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[11]Studies only find parties campaigning on the same issue when parties have roughly equal abilities on both issue dimensions (Egorov 2015), when parties share ownership of an issue (Ascencio and Gibilisco 2014), or when a party is favored by voters on both issues (Amorós and Puy 2013). Meanwhile, in the model presented by Aragonês, Castanheira and Giani (2015), while parties may 'invest' in the quality of their proposals on the same issue in equilibrium, parties never devote time to more than one issue in their campaigns. Similarly, Dragu and Fan (2016) find that parties will never advertise the same policy issue in equilibrium.[12]

[13]Lynch (2015, 193) highlights the role of the following factors: "the Eurozone crisis, the dilution of Conservative policy in coalition, the growth of hard Euroscepticism on the Conservative benches, ineffectual party management and the rise of UKIP."

on 49 votes relating to the EU by 103 different MPs, including two Private Member's Bills and one amendment calling for an 'in-out' referendum on EU membership. In 2013, viewing this in combination with growing support for UKIP among 2010 Conservative voters,[14] Conservative party leader David Cameron announced that should the Conservatives win the 2015 general election he would renegotiate Britain's relationship with the EU, and then hold a referendum on EU membership. By promising a referendum, Cameron hoped to defuse future rebellions by Eurosceptic MPs, as well as draw voters gravitating towards UKIP back within the Conservative fold.

Crucially, much of the public, and most contemporary commentators, did not think it likely that the Conservatives would win an outright majority in the next general election. Throughout 2013, the Labour party maintained a comfortable lead over the Conservative party in opinion polls. While the Labour lead narrowed in the months and days leading up to the May 2015 general election, the electoral arithmetic was such that it was widely assumed the next government would require some coalition arrangement involving one of the two major parties. This meant that a referendum on Britain's membership of the EU seemed a distant prospect to most even on election day. Consequently, that the Conservative party had secured a 7% lead over the Labour party—and so obtained an outright majority of seats in parliament—came as a shock to pollsters, pundits, and also to David Cameron.[15] The scale of the surprise prompted a nationwide inquiry into the methods used by British pollsters, which concluded that pollsters had been systematically oversampling politically engaged voters, who tended to disproportionately favor the Labour party (Mellon and Prosser 2016).

As Figure 1 illustrates, the salience of EU membership in public opinion increased substantially between May 2015 and May 2016 – very likely as a consequence of this unexpected result, and so the prospect of a referendum on this issue. In particular, whereas only 0.7% of respondents considered the EU the most important issue facing the country right before the May 2015 general election, 1.3% did so within a few weeks of the result. By May 2016—with a month to go until the referendum on EU membership—the proportion of respondents considering the EU the most important issue facing the country had grown to 9.5%.[16] We observe an even more substantial increase in the salience of

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[14]UKIP obtained an average of 23% in wards that it contested in the 2013 local elections, and had consistently scored above 10% in public opinion polls from 2012 onwards. One of the central components of UKIPs platform was an 'in-out' referendum on EU membership was a central, and widely known, component of UKIP's platform.

[15]On David Cameron's response to his surprise election victory, see 'U.K. Conservatives' Euphoria Over Election Victory Tempered By Prospect of Future Battles' by Conal Urquhart and Naina Bajekal, published in *Time* magazine on 8 May 2015.

[16]I measure the salience of the EU in British public opinion using data from the British Election Study Internet Panel survey series, waves 1 to 10 (conducted between May 2014–November 2016). To measure issue salience, I calculated the share of individual responses to the'most important issue' question which

Figure 1: The Salience of the European Union in British Public Opinion
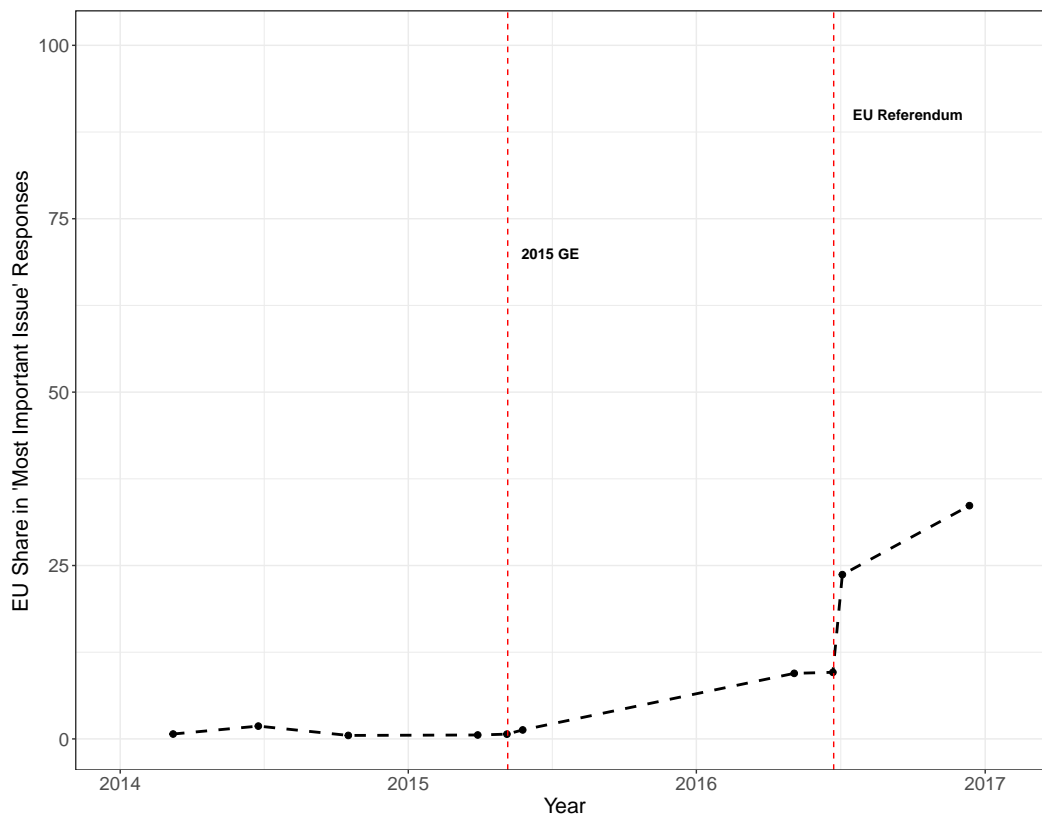
EU membership in British public opinion after the referendum, in which the electorate narrowly voted to leave the European Union. For instance, whereas 9.6% of respondents considered EU membership the most important issue facing the country in June 2016, 33.6% of respondents held this view by November 2016.

2.2 Empirical Approach

We thus view the May 2015 general election result as an exogenous shock to the salience of the European Union for the British public. Using data from Waves 1 to 10 of the British Election Study Internet Panel survey series (collected between May 2014 and November 2016), we are able to examine the effect of this increase in the salience of the EU on its importance for vote choice. We hypothesize that voters are less likely to vote for a party if they are uncertain about their position on an issue, and especially if that issue is salient to them. Consequently, parties possess an incentive to address unfavorable issues, especially when an issue is salient to voters.

In estimating the effect of voter uncertainty on vote choice, studies have typically resorted to indirect measures of uncertainty. Most prominently, in his analysis of voting

mentioned the 'European Union', 'Brexit', 'leave', or 'remain', in each wave.

behavior during the 1980 U.S. presidential election, Bartels (1986) obtains predicted probabilities of non-response for each respondent using a probit model of non-response (with a variety of demographic and political characteristics as regressors), and uses each predicted probability as an individual-level measure of uncertainty. Berinsky and Lewis (2007) use the same approach in their analysis of voter risk aversion and its implications for vote choice under uncertainty. While the two-stage approach is essential if one is trying to estimate the relevant parameters of a voter utility model – as both these studies aim to do – it is, however, only able to estimate the effect of that component of voter uncertainty that is determined by these observable characteristics, and which largely vary between individuals, rather than varying for the same individual across parties. This seems, if anything, likely to attenuate estimates of the effect of voters' uncertainty on their vote choice[17], and does not necessarily comment on the implications of variation in an *individual* voter's certainty regarding parties' positions on an issue for her choice among parties. Moreover, with the exception of Tomz and van Houweling (2009) – who use a survey experiment to isolate the causal effect of candidate ambiguity on voter preferences – these studies have not attempted to deal directly with the possible endogeneity that may result from either the tendency of voters to find out more about parties that they already favor, or from voters' tendency to over-estimate the precision of positions expressed by parties they like, or to project their own views onto such parties.

In an effort to ameliorate these concerns, we compare the effect of uncertainty regarding a party's position on Britain's EU membership on *an individual's preferences* before and after the May 2015 general election result – which, we argue, unexpectedly increased the salience of the EU for voters. This allows us to rely solely on within-individual variation across waves in uncertainty, party preference and issue salience in order to identify the relationship of interest. We restrict our attention to individuals included in all relevant waves of the panel, which leaves us with a panel of $7,237$ respondents. We also restrict our attention to the three British parties for which data was most complete: the Labour party, the Conservative party and the Liberal Democratic party. For our main specification, we estimate the following regression equation using OLS:

$$\mathbf{Y_{ijt}} = X_{ijt}D_t^{<GE}\beta_1 + X_{ijt}D_t^{>GE}\beta_2 + \alpha_{ji} + \theta_{jt} + \phi_{jk} + u_{ij}$$

Here, $\mathbf{Y_{ijt}}$ is a vector containing each respondent i's self-reported likelihood of ever voting for party j in wave t, and X_{ijt} is a dummy variable measuring whether respondent i was

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[17]Indeed, Bartels (1986) notes that his parameter estimates are only able to account for about a quarter of the total variance in non-response for the issues included in his model. As long as the imputed measure of voter uncertainty is noisy, estimates of the effect of uncertainty on vote choice may be subject to attenuation bias.

able to place party j on the issue of EU membership in wave t.[18] The variable $D{<}GE_t$ takes the value 1 if wave t was completed before 8 May 2015, and 0 otherwise. The reverse applies to $D{>}GE_t$. In an alternate specification, we also estimate the above regression equation with separate dummies for each wave t, which allows us to estimate a wave-specific coefficient on the effect of uncertainty regarding a party's EU membership position on individual preferences. In all specifications, we include individual-party, party-wave and party-constituency fixed effects—indexing constituencies by k—and report standard errors clustered by individual.

The inclusion of individual-party fixed effects is important, as this eliminates possible bias due to individuals' propensity to take less interest in the campaigns of less-preferred parties. On the other hand, the inclusion of party-wave fixed effects means that our estimates are not biased by the possibility that respondents were less able to place a party on the EU issue in some waves relative to others (e.g., over the course of the EU referendum campaign). Finally, party-constituency fixed effects control for any constituency-specific differences in respondents' preferences over parties.

2.3   Results and Discussion

Table 1 reports OLS coefficient estimates from several specifications of interest. Across specifications, we find that respondents were more likely to penalize a party if uncertain about their position on EU membership *after* the 2015 general election, than before. We attribute this to the increased salience of the EU after the shock Conservative victory, which made an 'in-out' referendum on Britain's membership of the EU a certainty in the near future. Model 1 estimates a single coefficient for all waves prior to the 2015 general election, and similarly for all waves after. We do not estimate that uncertainty regarding parties' EU position had a statistically significant effect on preferences *before* the 2015 general election. However, we find that, after the 2015 election, on average, respondents were 2.18% less likely to vote for a party if they could not identify their position on EU membership than if they could do so. Next, Model 2 re-estimates the main specification after allowing for a separate coefficient on voter uncertainty for each wave. The results of this analysis reaffirm that there was a sudden, but persistent, increase in the importance of respondents' uncertainty regarding party positions on EU membership for vote choice immediately after the 2015 general election. These results are consistent with the claim that voters penalize parties if uncertain about their position on salient issues.

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[18]The precise question asked of respondents was the following: 'Some people feel that Britain should do all it can to unite fully with the European Union. Other people feel that Britain should do all it can to protect its independence from the European Union. Where would you place yourself and the political parties on this [0–10 point] scale?' This question was included in waves 1–4 and waves 6–9 of the British Election Study Internet Panel survey series.

Table 1: OLS Analysis of Voter Uncertainty on EU Placement Effect on Party Choice

		Likelihood of Vote for Party j		
	(1) Full Sample	(2) Full Sample	(3) Expecting Remain	(4) Expecting Leave
EU_j DK $\times$ before GE	−0.083			
	(0.056)			
EU_j DK $\times$ after GE	−0.218***			
	(0.044)			
Pre-GE Waves				
EU_j DK $\times$ Wave 1		−0.122	0.046	−0.208**
		(0.078)	(0.138)	(0.096)
EU_j DK $\times$ Wave 2		−0.106	−0.139	−0.095
		(0.102)	(0.163)	(0.129)
EU_j DK $\times$ Wave 3		0.080	0.146	0.045
		(0.091)	(0.143)	(0.116)
EU_j DK $\times$ Wave 4		−0.170	−0.114	−0.200
		(0.090)	(0.144)	(0.115)
Post-GE Waves				
EU_j DK $\times$ Wave 6		−0.297***	−0.221	−0.344***
		(0.096)	(0.154)	(0.122)
EU_j DK $\times$ Wave 7		−0.163***	−0.185**	−0.151**
		(0.054)	(0.088)	(0.069)
EU_j DK $\times$ Wave 9		−0.244***	−0.272***	−0.230***
		(0.055)	(0.092)	(0.068)
Observations	72,979	72,979	29,160	43,819
No. of Respondents	7,237	7,237	2,884	4,353
R^2	0.882	0.882	0.886	0.878

Note: **p<0.05; ***p<0.01

Note: Cell entries report OLS coefficient estimates from a fixed effects model of voter preferences over parties in Britain. Parties included in the analysis were: the Labour party, the Conservative party, and the Liberal Democratic party. All models include individual-party, party-wave and constituency-party fixed effects. Robust standard errors clustered by individual are given in parentheses.

Figure 2: Voter Uncertainty on EU Placement and Party Choice in Britain
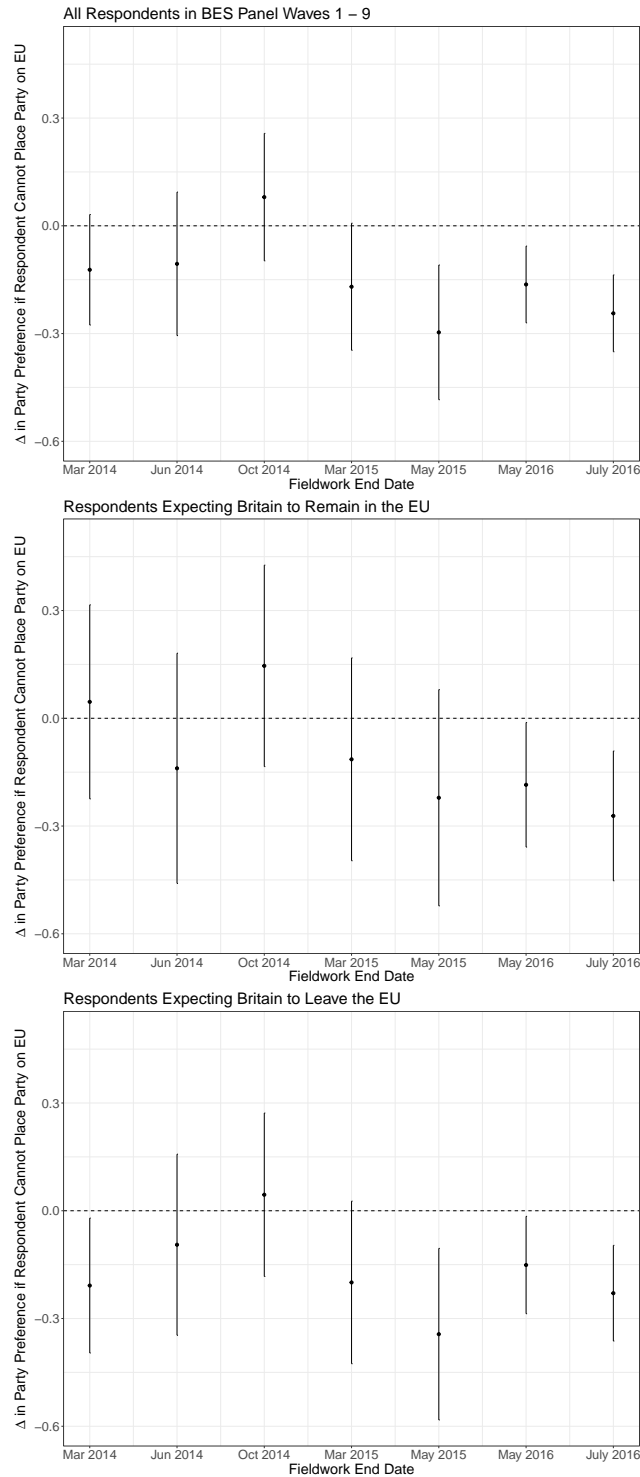
Note: These figures plot coefficient estimates for the main regressor of interest from Models 2, 3 and 4 in Table 1, respectively. We classify an individual as expecting Britain to remain in the EU if, between 6 May 2016 and 22 June 2016 (Wave 8), they assigned $p < 0.5$ to a Leave vote. Conversely, we classify an individual as expecting Britain to leave the EU if they assigned $p \geq 0.5$ to a Leave victory within the same timeframe.

Models 3 and 4 re-examine the relationship between voter uncertainty and party preference in two separate subsamples: among respondents expecting a vote for 'Remain' in the EU referendum, and, conversely, among respondents expecting a vote for 'Leave'. The results of these analyses are presented graphically in Figure 2. Respondents were classified as belonging to the former category if they assigned $p < 0.5$ to a Leave vote between 6 May 2016 and 22 June 2016, and to the latter category if they assigned $p \geq 0.5$ to the same outcome within the same timeframe. We expect that respondents anticipating a Leave vote would be more likely to consider Britain's EU membership a salient issue immediately following the May 2015 election result, whereas respondents anticipating a Remain vote would be more likely to consider Britain's EU membership a salient issue only during the short referendum campaign and after the referendum result to leave the EU. Consistent with this reasoning, we find that, for respondents anticipating a Remain vote, uncertainty regarding party positions on Britain's EU membership only became a significant predictor of party preference during the short campaign and after Britain voted for 'Brexit'. By contrast, for respondents anticipating a Leave vote, uncertainty regarding party positions on Britain's EU membership became a significant predictor of party preference immediately after the general election result.

3 Formalization of Argument

In this section, we formally explore the implications of the 'clarity incentive' for party strategy using a model of electoral competition with two vote-maximizing parties and two issues. We describe party positions and voter behavior in turn, before discussing their joint implications for the equilibrium party emphasis strategies.

3.1 Parties

There are two parties – denoted L and R – which compete for votes over issues X and Y. On each issue, the position of each party j is denoted x_j and y_j, respectively. As in previous models of endogenous issue salience (Amorós and Puy 2013; Dragu and Fan 2016), parties' issue positions are exogenously given. We assume that $0 < x_L, y_L < \frac{1}{2}$ and $\frac{1}{2} < x_R, y_R < 1$, implying that party L has a left-wing position on both issues, and party R a right-wing position on both issues. Additionally, we assume that $|x_L - x_m| < |x_R - x_m|$ and $|y_R - y_m| < |y_L - y_m|$, where $x_m = y_m = \frac{1}{2}$ is the position of the median voter on each issue. This indicates that party L's position is closer to the median voter on issue X than on Y, and party R's position is closer to the median voter on issue Y than on X.

Although party positions are exogenously given, each party is able to choose a level

of emphasis on each issue.[19] e_L^X and e_R^Y denote the level of emphasis placed by each party on each issue, respectively, where $0 \leq e_L^X \leq 1$ and $0 \leq e_R^Y \leq 1$. These constraints capture the notion that both parties have limited resources, and therefore cannot increase their emphasis on an issue indefinitely. Additionally, by increasing their emphasis on one issue, parties must devote less time to the other issue. This is formalized in the requirement that $e_L^X = 1 - e_L^Y$ and $e_R^Y = 1 - e_R^X$.[20] As we discuss below, the extent to which a party emphasizes each issue has two consequences: it influences the salience of issues X and Y for voters, and also influences the certainty with which voters observe the party's position on each issue.

3.2 Voters

There exists a continuum of voters, with voters' ideal points uniformly distributed on each issue. Some fraction of voters only care about issue X and some fraction only care about issue Y. These fractions are determined endogenously, as will be discussed below. Voters who care only about issue X have ideal points uniformly distributed over the $[0, 1]$ interval for issue X, and similarly for those voters who care only about issue Y. Voters' utility functions are as follows:

$$U_{ij}(x_j) = -(\hat{x}_i - x_j)^2$$
$$U_{ij}(y_j) = -(\hat{y}_i - y_j)^2$$

where $U_{ij}(\cdot)$ measures how much voter i likes party j. Here, x_j and y_j denote the positions chosen by each party j on issues X and Y respectively, and $\hat{x}_i$ and $\hat{y}_i$ denote the ideal points of voter i on issues X and Y respectively. Thus, each individual voter's support for a party is decreasing in her squared distance from the party's position on the issue she cares about.

Without loss of generality, let ψ_X denote the proportion of voters who care about issue X and prefer L on issue X, with $1 - \psi_X$ denoting the proportion of issue X voters that prefer R on issue X. Similarly, let ψ_Y denote the proportion of issue Y voters that prefer R on issue Y, with $1 - \psi_Y$ of issue Y voters preferring L's position. ψ_X and ψ_Y

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[19]This follows from the rationale that party platforms are considerably less flexible than the issues on which they choose to campaign. This may be because of institutional factors anchoring parties to particular policy positions (for instance, links with religious organizations or trade unions), or because parties fear voters might perceive them as "irresponsible" (Downs 1957; de Sio and Weber 2014).

[20]Alternatively, we may model parties as choosing their level of emphasis on each issue independently, but requiring that their total emphasis on both issues not exceed one. It is easy to show that parties will never choose a level of emphasis on each issue such that this constraint does not bind.

are formally defined as follows:

$$\psi_X = \int_0^1 \mathbf{1}\{U_L(x_L, x_{aL}) > U_R(x_R, x_{aR})\} \ dx_i$$

$$\psi_Y = \int_0^1 \mathbf{1}\{U_L(y_L, y_{aL}) < U_R(y_R, y_{aR})\} \ dy_i$$

where $\mathbf{1}\{\cdot\}$ denotes the indicator function, $0 \leq \psi_X \leq 1$ and $0 \leq \psi_Y \leq 1$.

There are two types of voters: 'impressionable', and 'non-impressionable'. Impressionable voters are those whose issue priorities are influenced by the extent to which parties emphasize each issue, whereas non-impressionable voters are those whose issue priorities are inflexible. The proportion of impressionable voters in the populace is given by α, where $0 < \alpha < 1$. In effect, α determines the sensitivity of the electoral salience of each issue to parties' issue emphases in their campaigns. We discuss the voting behavior of each type of voter in turn.

3.3   Non-Impressionable Voters

Each non-impressionable voter cares only about one issue and this issue is assumed to be insensitive to party campaigning. Fraction $\overline{\pi}_X$ non-impressionable voters care only about issue X, and fraction $\overline{\pi}_Y$ non-impressionable voters care only about issue Y. Since all voters care about one of the two issues, we impose $\overline{\pi}_X + \overline{\pi}_Y = 1$. We refer to $\overline{\pi}_X$ and $\overline{\pi}_Y$ as the salience of issues X and Y for non-impressionable voters.

The extent to which voters observe a party's campaign on an issue depends on the degree to which the party emphasizes that issue. For non-impressionable voters, the proportion who observe the campaign of party j on issue $k \in \{X, Y\}$ is given by $\theta_N \eta(e_j^k)$ where $\theta_N \in (0, 1]$ is a constant, e_j^k is party j's emphasis on issue k, and $\eta(\cdot)$ is a strictly increasing, continuously differentiable and (weakly) concave function, with $\eta(0) = 0$ and $\eta(1) = 1$. Therefore, if party j does not emphasize issue X, for instance, at all, then $\theta_N \eta(e_j^X) = \theta_N \eta(0) = 0$ and so no non-impressionable voters observe party j's campaign on the issue. If party j talks solely about issue X, then $\theta_N \eta(e_j^X) = \theta_N \eta(1) = \theta_N$ and so fraction θ_N non-impressionable voters observe j's campaign on the issue. For convenience, we use η_j^k to denote $\eta(e_j^k)$, where $j \in \{L, R\}, k \in \{X, Y\}$. For each non-impressionable voter, the probability that the voter observes L's campaign on an issue K is independent of the probability that the voter observes R's campaign on the issue and is also independent of the voter's policy preferences.

Whether a non-impressionable voter observes a party's campaign on an issue matters because it determines the probability that the voter observes the party's position on the issue. If a non-impressionable voter who cares only about issue $K \in \{X, Y\}$ observes both

parties' campaigns on the issue then she observes both parties' positions on that issue. However, if a voter observes only one party's campaign on the issue, she will observe that party's position with probability 1 and its opponent's position with probability $\frac{1}{2}$. The implicit assumption here is that observing one party's campaign improves a voter's understanding of both the issue positions taken by that party and the positions taken by their opponents.

It follows from the previous discussion that the non-impressionable voter i, who cares about issue K sees the parties' positions with the following probabilities:

1. Sees only L's position on K with probability:
$$\frac{\theta^N \eta_L^K (1 - \theta^N \eta_R^K)}{2}$$

2. Sees only R's position on K with probability:
$$\frac{\theta^N \eta_R^K (1 - \theta^N \eta_L^K)}{2}$$

3. Sees both parties' positions on K with probability:
$$\theta^{N2} \eta_L^K \eta_R^K + \frac{\theta^N \eta_L^K (1 - \theta^N \eta_R^K)}{2} + \frac{\theta^N \eta_R^K (1 - \theta^N \eta_L^K)}{2}$$

4. Sees neither parties' positions on K with probability:
$$(1 - \theta^N \eta_L^K)(1 - \theta^N \eta_R^K)$$

Finally, we assume that voters are ambiguity averse in the sense of Epstein (1999) and do not have any knowledge of parties' positions unless they observe them in the campaign. Recall that voters are issue voters, each voter basing her voting decision on only one of the two issues. It is assumed that if a voter does not observe a party's position on the issue the voter thinks is important, then the voter 'fears the worst', that the party could be extremely distant from the voter in policy terms. Therefore, if a voter observes one party's position on the issue K that this voter cares about, but does not observe the other party's position, then the voter will always vote for the party whose position she observes. That is, voters always chooses to vote for 'the devil they know' rather than for a party whose position is unknown. If a voter observes both parties' positions on the issue K that she cares about, then voters vote for whichever party's position gives them higher utility. So, for instance, of the voters who care about issue X who observe both

15

parties' positions on the issue, fraction ψ_X will have an ideal point closer to party L and so will vote for that party and fraction $1 - \psi_X$ will vote for party R. Lastly, if a voter sees neither party's position on issue K, she will vote for each party with probability $\frac{1}{2}$.

Let V_L^{NK} denote party L's vote share among the non-impressionable voters who care about issue K. Then, the preceding discussion implies that:

$$
\begin{aligned}
V_L^{NK} &= \frac{\theta^N \eta_L^K (1 - \theta^N \eta_R^K)}{2} + \psi_X \left(\theta^{N2} \eta_L^K \eta_R^K + \frac{\theta^N \eta_L^K (1 - \theta^N \eta_R^K)}{2} + \frac{\theta^N \eta_R^K (1 - \theta^N \eta_L^K)}{2} \right) \\
&+ \frac{(1 - \theta^N \eta_L^K)(1 - \theta^N \eta_R^K)}{2}
\end{aligned}
$$

Furthermore party L's total vote share among non-impressionable voters is given by $V_L^N = \overline{\pi}_X V_L^{NX} + \overline{\pi}_Y V_L^{NY}$. Party R's vote shares among non-impressionable voters who care about issue K and among all non-impressionable voters are given by analogous expressions.

These expressions for V_L^{NK} and V_L^N can be rearranged to give:

$$
\begin{aligned}
V_L^N &= \overline{\pi}_X \psi_X \left(\frac{1 + \theta_N \eta_L^X}{2} \right) + \overline{\pi}_X (1 - \psi_X) \frac{1 - \theta_N \eta_R^X}{2} \\
&+ \overline{\pi}_Y (1 - \psi_Y) \left(\frac{1 + \theta_N \eta_L^Y}{2} \right) + \overline{\pi}_Y \psi_Y \left(\frac{1 - \theta_N \eta_R^Y}{2} \right)
\end{aligned} \tag{1}
$$

Since $\eta(\cdot)$ is a concave, continuously difference and increasing function, it follows that V_L^N is jointly concave, continuously differentiable and increasing in (e_L^X, e_L^Y).

3.4 Impressionable Voters

The behavior of impressionable voters is similar to non-impressionable voters, however impressionable voters care about whichever issue they see a party campaign on. Impressionable voters are less engaged than non-impressionable voters in general and each impressionable voter only sees at most one party's campaign on one issue. An impressionable voter sees party j's campaign on issue K with probability $\theta_I \eta_j^K$, where, as before, $\eta_j^K = \eta(e_j^K)$ and $\theta_I \in (0, \frac{1}{4}]$ is a constant.[21] Then, the impressionable voter sees some party's campaign on some issue with probability $\sum_{K \in \{X,Y\}} \sum_{j \in \{L,R\}} \theta_I \eta_j^K$, and sees no party's campaign on any issue with probability $1 - \sum_{K \in \{X,Y\}} \sum_{j \in \{L,R\}} \theta_I \eta_j^K$.

Impressionable voters care about the issue on which they see a party's campaign. Therefore, the salience of issue K for impressionable voters is given by $\pi_K = \sum_{j \in \{L,R\}} \theta_I \eta_j^K$.

---

[21]$\theta_I \leq \frac{1}{4}$ is necessary to ensure that the probability of a voter observing a party's campaign does not exceed 1.

This is assumption is designed to capture the idea that the degree to which voters care about an issue is determined by the degree to which parties campaign on the issue. As with non-impressionable voters, if an impressionable voter sees party j's campaign on issue K, then that voter sees the party j's position on issue K for certain and sees the other party's position on issue K with probability $\frac{1}{2}$. Impressionable voters are ambiguity averse, just like non-impressionable voters, and so if an impressionable voter sees one party's position and not the other party's position on the issue K that the voter cares about, then they will vote for the party whose position they observe. If the impressionable voter sees both party's positions on the issue that they care about then they vote for whichever party's position is closer to their ideal point. Impressionable voters are assumed to have the same issue preferences as non-impressionable voters. Therefore, for instance, fraction ψ_X vote for party L if they care about issue X and observe both parties' position on that issue. Finally, if an impressionable voter does not observe any party's campaign then they see no party's position on any issue and vote for each party with probability $\frac{1}{2}$.

From this discussion, it follows that party L's vote share among impressionable voters is given by:

$$
V_L^I = \theta_I \eta_L^X \left(\frac{1}{2} + \frac{\psi_X}{2} \right) + \theta_I \eta_L^Y \left(\frac{1}{2} + \frac{1 - \psi_Y}{2} \right)
$$
$$
+ \theta_I \eta_R^X \left(\frac{\psi_X}{2} \right) + \theta_I \eta_R^Y \left(\frac{1 - \psi_Y}{2} \right) + \left(\frac{1 - \sum_{K \in \{X,Y\}} \sum_{j \in \{L,R\}} \theta_I \eta_j^K}{2} \right) \tag{2}
$$

with an analogous expression V_R^I for party R. Since $\eta(\cdot)$ is a concave, continuously difference and increasing function, it follows that V_L^I is jointly concave, continuously differentiable and increasing in (e_L^X, e_L^Y).

3.5 Equilibrium Party Strategies

We define an equilibrium in this model as a vector of issue emphases (e_j^X, e_j^Y) for each party j and a vote share for each party j, where each party j's vote share is equal to $(1 - \alpha)V_j^N + \alpha V_j^I$, with V_j^N and V_j^I given according to equations (1) and (2) above, and each party chooses its issue emphases to maximise its vote share, given the strategy of the other party and subject to the constraints $e_j^X \in [0,1]$, $e_j^Y = 1 - e_j^X$.[22]

Party j's problem of choosing emphases to maximize vote share subject to these two

---

[22]Given the vote share functions (1) and (2), this corresponds to a Nash equilibrium in pure strategies between the two parties. At the same time, this is not a Nash equilibrium in the sense that voters are ambiguity averse and so are not acting to maximise expected utility.

constraints can be solved by forming the Lagrangian:

$$\mathcal{L}_j = (1 - \alpha)V_j^N + \alpha V_j^I + \lambda_j e_j^X + \mu_j(1 - e_j^X) + \nu_j(1 - e_j^Y - e_j^X)$$

where λ_j, μ_j and ν_j are Lagrange multipliers.

V_j^I and V_j^N are jointly concave and continuously differentiable in the choice variables (e_L^X, e_L^Y) and so the Kuhn Tucker first order conditions are sufficient for an optimum. Furthermore, the constraints are all linear and so the constraint qualification is satisfied and so the Kuhn Tucker conditions are also necessary for an optimum. The first order conditions for party j can be rearranged to give

$$(1 - \alpha)\frac{\partial V_j^N}{\partial e_j^X} + \alpha\frac{\partial V_j^I}{\partial e_j^X} - (1 - \alpha)\frac{\partial V_j^N}{\partial e_j^Y} - \alpha\frac{\partial V_j^N}{\partial e_j^Y} + \lambda_j - \mu_j = 0 \qquad (3)$$

where $\lambda_j \geq 0, \mu_j \geq 0$ and $\lambda_j e_j^X = 0$ and $\mu_j(1 - e_j^X) = 0$.

Using these conditions, the optimal strategy of each party in equilibrium can be derived easily. Significantly, party R's issue emphases do not enter the first order condition (3) for party L (all the terms involving party R's emphasis either cancel or vanish when we take the derivatives of V_L^N and V_L^I with respect to e_L^X and e_L^Y.). Similarly, party L's issue emphases do not enter the first order condition for party R. Therefore, the amount each party wishes to emphasize each issue does not depend on the degree to which the other party is emphasising the issue. As a consequence, characterising the equilibrium is relatively straightforward.

Recall that $\eta(0) = 0$, $\eta(1) = 1$ and η is increasing and concave. We now solve for the optimal party strategy under two distinct additional assumptions about the η function. First, we consider the case where η is linear: $\eta(e) \equiv e$. Second, we consider the case where η is strictly concave, and where $\lim_{e \to 1} \eta(e) = 0$. The first case implies that the probability that a voter observes a party's campaign on an issue is proportional to the party's emphasis on the issue. The second case implies that increasing emphasis on an issue increases the probability that voters observe the party's campaign on the issue, but at a decreasing rate.

If η is linear, we have the following result.

Proposition 1. *If $\eta(e) \equiv e$ then, for each value of the parameters $\psi_X, \psi_Y, \theta_N, \theta_I$, there exists an $\alpha^\star \in [0, 1)$ such that, for $\alpha > \alpha^\star$, the unique equilibrium is for party L to choose $e_L^X = 1, e_L^Y = 0$ and for party R to choose $e_R^X = 0, e_R^Y = 1$. If $\alpha < \alpha^\star$ the unique equilibrium is for each party j to choose $e_j^X = 1$ if $\overline{\pi}_X > \overline{\pi}_Y$, and to choose $e_j^Y = 1$ if $\overline{\pi}_X < \overline{\pi}_Y$.*

Proof. See Appendix A. □

Therefore, with the linear function η, and for sufficiently high α, the unique equilibrium involves each party only emphasising the issue on which its position is more popular with a majority of voters. This is similar to results in the formal literature (e.g. (Austen-Smith 1993; Simon 2002; Amorós and Puy 2013)). The intuitive explanation for this result is that, when α is high, most voters are impressionable and so the electoral salience of issues for most voters is determined by parties' campaigns. As a consequence, each party prefers to emphasize the issue on which its position is more popular, to increase the proportion of voters who care about this issue when making their voting decision.[23]

On the other hand, when α is sufficiently small and $\eta(e) \equiv e$, both parties may instead talk about whichever issue is more salient. This is because, for a low value of α, most voters are non-impressionable and so parties' abilities to manipulate the salience of issues is limited. Instead, the purpose of parties' campaigns becomes primarily to reveal their positions to voters, because voters are more likely to vote for parties whose positions they see, due to voter ambiguity aversion. If most voters consider a particular issue—say, Y—to be salient, then parties will stand most to gain by revealing their position to voters on issue Y, and so winning voters who care about this issue. By contrast, parties would gain less by emphasising the issue that most voters do not think is important—in this case, issue X—since there are few votes to be gained by revealing one's position on this issue. As a consequence, both parties will put all emphasis on the more salient issue.[24]

We now turn to the case of strictly concave η.

Proposition 2. *Suppose that $\eta(\cdot)$ is strictly concave and that $\lim_{e \to 1} \eta'(e) = 0$. Then there exists a unique equilibrium in which both parties talk about both issues. That is, $e_j^K > 0$ for each $K \in \{X, Y\}, j \in \{L, R\}$. Party L's equilibrium emphasis on X is strictly increasing in $\overline{\pi}_X$, strictly increasing in ψ_X, and strictly increasing in ψ_Y. Similarly, party L's emphasis on Y is strictly increasing in $\overline{\pi}_Y$ and strictly decreasing in ψ_X and ψ_Y. Symmetrical results hold for party R.*

Proof. See Appendix B. $\square$

So, once η is sufficiently concave, the equilibrium becomes one where both parties emphasize both issues. The reason that the result is so different from the linear η case is that with strict concavity there are diminishing returns to emphasising a particular issue. If a party does not emphasize an issue at all, small increases of emphasis will considerably

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[23]In some cases, $\alpha^\star = 0$, so parties talk about their more popular issue even when all voters are non-impressionable. This is because parties stand more to gain by revealing popular positions to voters than by revealing unpopular positions. Therefore, the clarity incentive may, in some cases, lead parties solely to emphasize their more popular positions.

[24]Proposition 1 only covers the cases $\alpha > \alpha^\star$ and $\alpha < \alpha^\star$. In the knife-edge case $\alpha = \alpha^\star$, parties are indifferent over different strategies and there is no unique equilibrium.

increase the proportion of voters who see the party's campaign on this issue. On the other hand, if a party talks entirely about an issue, then small decreases of emphasis will not much reduce the proportion of voters who see the party's campaign on this issue. It follows that a party's campaigns will be seen by the most voters if the party emphasizes both issues to some degree. Since voters are more likely to vote for a party if they see its position on the issue they care about, it follows that parties want voters to observe their campaigns as much as possible. This encourages both parties to emphasize both issues to some degree.

The comparative statics contained in Proposition 2 are intuitive. When issue X is more salient—and so $\overline{\pi}_X$ is higher—parties emphasize this issue more. This is because when voters primarily care about issue X, parties can gain more votes by revealing their positions on issue X than on issue Y. Consequently, parties increase their emphasis on issue X. When ψ_X is higher, party L's position on issue X is relatively more popular. This encourages party L to increase its emphasis on issue X for two reasons: first, in order to reveal its more popular position to voters, and second, to increase the proportion of impressionable voters who care about issue X. On the other hand, an increase in ψ_Y means that party L's position on issue Y is relatively less popular in comparison to the position of party R. This encourages L to increase its emphasis on issue X and correspondingly decrease its emphasis on issue Y. Again this is for two reasons. First, emphasizing X more and Y less increases the proportion of voters who see the party's relatively more popular position on issue X and decreases the proportion who see its relatively less popular position on issue Y, and second, emphasizing X more and Y less increases the proportion of impressionable voters who care about issue X, where L's position is more popular.

4   Conclusion

Why do parties devote any time to unfavorable issues during their campaigns? Existing research on issue selection by parties has established that parties spend much of their campaigns focusing on the same issues as each other, and has also struggled to explain why, if a party is able to influence the salience of a preferred issue for voters, it will spend any time on an issue on which its position is unpopular with the majority of voters. We suggest that one reason parties may choose to engage with voters on such issues is because doing so reduces voter uncertainty about the party's position on the issue. This provides a 'clarity incentive' for parties to campaign on the issues that voters care about – since voters may be disinclined to vote for a party if they do not know its opinion on the issues that matter. This clarity incentive is distinct from the tendency—already noted in the

literature—for parties to emphasize issues on which they are favored, in order to increase the importance of these issues in the minds of voters.

We show evidence from the United Kingdom (UK) to suggest that parties genuinely do benefit electorally if voters know their policy positions on the issues that matter. In 2014, few if any commentators anticipated that the UK would imminently leave the EU. A surprise victory for the Conservative Party in May 2015 led to an n-out' referendum in June 2016, in which the UK narrowly voted to leave the EU. Rapidly, the UK's relationship with the EU rose to become one of the most important issues for the British electorate. Using a panel of UK voters over the 2014-2016 period, we show that a voter considered themselves less likely to vote for a party if the voter did not know the party's position on the EU after May 2015, but that this was not case before May 2015. Furthermore, for those voters that, even after May 2015, expected the UK to remain in the EU, their uncertainty regarding a party's position on the issue did not affect their reported likelihood of voting for that party until after the UK voted to leave in June 2016. We interpret this as evidence that voters are less likely to vote for a party if the voter is unsure of the party's position on an issue of importance.

Motivated by this evidence, we develop a formal model in which the tendency of voters to avoid parties if they do not know their positions encourages parties to emphasize the issues that are salient to voters in their campaigns. In our model, we establish the conditions under which this 'clarity incentive' leads parties to place some emphasis on every issue in campaigns, and also to particularly emphasize issues that are salient to voters. At the same time, a party chooses to emphasize an issue relatively more if its position on this issue is relatively more popular, in order to increase the salience of this issue to voters. Our findings contrast with much of the formal theoretic literature, which finds that parties should never campaign on issues unfavorable to them. The 'clarity incentive' in our model therefore provides an explanation hitherto missing from the formal literature for why a party might emphasize an unfavorable issue, and also why multiple parties may campaign on the same issues when these issues are particularly salient to voters.

Appendices

A Proof of Proposition 1

Assume without loss of generality that $\pi_Y > \pi_X$. The proof proceeds in two steps. First we show that it is optimal for party R to choose $e_R^Y = 1$ regardless of party L's decision. Second, we find $\alpha^\star \in [0, 1)$ such that it is optimal for party L to choose $e_L^X = 1$ regardless of R's decision provided $\alpha > \alpha^\star$ and optimal for L to choose $e_L^Y = 1$ provided $\alpha < \alpha^\star$. Then, it follows that there is a unique equilibrium in which both parties are emphasising the issue on which their position is more popular for $\alpha > \alpha^\star$ and that there is a unique equilibrium when both parties are emphasising the more salient issue for $\alpha < \alpha^\star$. This proves the result.

Step 1: From equation (3), the first order condition for party R is:

$$(1 - \alpha)\frac{\partial V_R^N}{\partial e_R^X} + \alpha\frac{\partial V_R^I}{\partial e_R^X} - (1 - \alpha)\frac{\partial V_R^N}{\partial e_R^Y} - \alpha\frac{\partial V_R^N}{\partial e_R^Y} + \lambda_R - \mu_R = 0$$

where $\lambda_j \geq 0, \mu_R \geq 0$ and $\lambda e_R^X = 0$ and $\mu(1 - e_R^X) = 0$.

By symmetrical arguments to the derivation of equations (1) and (2), the vote shares of party R among impressionable and non-impressionable voters are given by:

$$V_R^N = \overline{\pi}_X(1 - \psi_X)\left(\frac{1 + \theta_N\eta_R^X}{2}\right) + \overline{\pi}_X\psi_X\frac{1 - \theta_N\eta_L^X}{2}$$
$$+ \overline{\pi}_Y\psi_Y\left(\frac{1 + \theta_N\eta_R^Y}{2}\right) + \overline{\pi}_Y(1 - \psi_Y)\left(\frac{1 - \theta_N\eta_L^Y}{2}\right)$$

$$V_R^I = \theta_I\eta_R^X\left(\frac{1}{2} + \frac{(1 - \psi_X)}{2}\right) + \theta_I\eta_R^Y\left(\frac{1}{2} + \frac{\psi_Y}{2}\right)$$
$$+ \theta_I\eta_L^X\left(\frac{1 - \psi_X}{2}\right) + \theta_I\eta_L^Y\left(\frac{\psi_Y}{2}\right) + \left(\frac{1 - \sum_{K \in \{X,Y\}}\sum_{j \in \{L,R\}}\theta_I\eta_j^K}{2}\right)$$

Differentiating, these and using that $\eta(e) = e$, we obtain that:

$$\frac{\partial V_R^N}{\partial e_R^X} = \frac{\theta_N \overline{\pi}_X (1 - \psi_X)}{2}$$

$$\frac{\partial V_R^N}{\partial e_R^Y} = \frac{\theta_N \overline{\pi}_Y \psi_Y}{2}$$

$$\frac{\partial V_R^I}{\partial e_R^X} = \frac{\theta_I (1 - \psi_X)}{2}$$

$$\frac{\partial V_R^N}{\partial e_R^Y} = \frac{\theta_I \psi_Y}{2}$$

substituting into the first order condition, we obtain:

$$\frac{(1-\alpha)\theta_N \overline{\pi}_X (1-\psi_X)}{2} + \frac{\alpha\theta_I (1-\psi_X)}{2} - \frac{(1-\alpha)\theta_N \overline{\pi}_Y \psi_Y}{2} - \frac{\alpha\theta_I \psi_Y}{2} + \lambda_R - \mu_R = 0$$

this can be rewritten as:

$$\frac{(1-\alpha)\theta_N}{2} \left[\overline{\pi}_X (1 - \psi_X - \psi_Y) - (\overline{\pi}_Y - \overline{\pi}_X)\psi_Y\right] + \frac{\alpha\theta_I}{2} \left[1 - \psi_X - \psi_Y\right] + \lambda_R - \mu_R = 0 \quad (4)$$

Now, $\overline{\pi}_Y > \overline{\pi}_X$ and $\psi_X + \psi_Y > 1$ by assumption. Therefore, it follows that the first two square bracketed terms of equation (4) must both be negative. Now $\lambda_R \geq 0$, $\mu_R \geq 0$ and $\lambda_R = 0$ unless $e_R^X = 0$ and $\mu_R = 0$ unless $e_R^X = 1$. Therefore it follows that equation (4) can only be satisfied if $e_R^X = 0$, in which case it follows that $e_R^Y = 1$. This completes the first step.

Step 2: As in step 1, we differentiate the vote share functions in equations (1) and (2) and substitute into the first order condition (3) for party L. This gives the expression

$$\frac{(1-\alpha)\theta_N}{2} \left[\overline{\pi}_X \psi_X - \overline{\pi}_Y (1 - \psi_Y)\right] + \frac{\alpha\theta_I}{2} \left[\psi_X + \psi_Y - 1\right] = \mu_L - \lambda_L \quad (5)$$

Note that $\psi_X + \psi_Y - 1 > 0$. Suppose that $\overline{\pi}_X \psi_X - \overline{\pi}_Y (1 - \psi_Y) < 0$ is strictly negative. Then, the left hand side of equation (5) is strictly increasing in α, and will be negative for $\alpha = 0$ and positive for $\alpha = 1$. Then, by the intermediate value theorem, there is a cutoff $\alpha^\star \in (0, 1)$ such that the left hand side of (5) is strictly negative for $\alpha < \alpha^\star$ and positive for $\alpha > \alpha^\star$. Now $\lambda_L \geq 0$, $\mu_L \geq 0$ and $\lambda_L = 0$ unless $e_L^X = 0$ and $\mu_L = 0$ unless $e_L^X = 1$. Then, it follows that it must be optimal for L to choose $e_L^X = 1$ if $\alpha > \alpha^\star$ and optimal for L to choose $e_L^X = 0$ (and therefore $e_L^Y = 1$) when $\alpha < \alpha^\star$.

Finally, suppose that $\overline{\pi}_X \psi_X - \overline{\pi}_Y (1 - \psi_Y) \geq 0$. Then, since by assumption $\alpha > 0$, and $\psi_X + \psi_Y - 1 > 0$, it follows that the left hand side of equation (5) is strictly positive.

23

Then, by the same line of argument as above, it must be the case that choosing $e_L^X = 1$ is optimal for party L. Then, we put $\alpha^\star = 0$ and conclude that L optimally chooses $e_L^X = 1$ if and only if $\alpha > \alpha^\star$.

$\square$

B   Proof of Proposition 2

First we show existence and uniqueness of the equilibrium. Then, we derive comparative statics. We focus on party L. The argument for party R is similar. Differentiating the vote share functions (1) and (2) with respect to e_L^X, e_L^Y, we obtain:

$$
\frac{\partial V_L^N}{\partial e_L^X} = \frac{\theta_N \overline{\pi}_X \psi_X \eta_L^{X\prime}}{2}
$$
$$
\frac{\partial V_L^N}{\partial e_L^Y} = \frac{\theta_N \overline{\pi}_Y (1 - \psi_Y) \eta_L^{Y\prime}}{2} = \frac{\theta_N (1 - \overline{\pi}_X)(1 - \psi_Y) \eta_L^{Y\prime}}{2}
$$
$$
\frac{\partial V_L^I}{\partial e_L^X} = \frac{\theta_I \psi_X \eta_L^{X\prime}}{2}
$$
$$
\frac{\partial V_L^N}{\partial e_L^Y} = \frac{\theta_I (1 - \psi_Y) \eta_L^{Y\prime}}{2}
$$

where, in a slight abuse of notation, $\eta_L^{K\prime}$ represents $\eta'(e_L^K)$. Since $\eta(\cdot)$ is strictly increasing and strictly concave, with $\lim_{e\uparrow 1} \eta'(e) = 0$, it follows that $\eta_L^{K\prime}$ is a positive and strictly decreasing function of e_L^K and $\eta_L^{K\prime} = 0$ when $e_L^K = 1$.

For party L, the first order condition (3) can be written as:

$$
(1 - \alpha) \frac{\partial V_L^N}{\partial e_L^X} + \alpha \frac{\partial V_L^I}{\partial e_L^X} - (1 - \alpha) \frac{\partial V_L^N}{\partial e_L^Y} - \alpha \frac{\partial V_L^N}{\partial e_L^Y} + = \mu_L - \lambda_L \tag{6}
$$

where $\lambda_L \geq 0, \mu_L \geq 0$ and $\lambda_L e_L^X = 0$ and $\mu_L (1 - e_L^X) = 0$.

Impose $e_L^Y = 1 - e_L^X$. Then, by the properties of $\eta_L^{K\prime}$ just noted, it follows that the left hand side of equation (6) is strictly positive when $e_L^X = 0$, strictly decreasing in e_L^X and strictly negative when $e_L^X = 1$. Then, by the intermediate value theorem, there exists an $e_L^X \in (0, 1)$ for which the left hand side of equation (6) is zero. At this value of e_L^X, setting $\lambda_L = \mu_L = 0$ solves the Kuhn Tucker conditions. Furthermore, since η is strictly concave, the vote share of party L is a strictly concave function of (e_L^X, e_L^Y). Given strict concavity of the objective function, it is a standard result that the optimum is unique. Therefore it follows that $e_L^X \in (0, 1)$ for which the left hand side of (6) is zero represents the unique optimal decision by party L.

The derivatives of V_L^N and V_L^I with respect to e_L^X, e_L^Y do not depend on the decisions of

party R. Therefore, it follows that the unique optimal choice of (e_L^X, e_L^Y) for party L does not depend on the decisions of party R. By a symmetrical argument, the unique optimal choice of party R does not depend on the decisions of party L. Then, it follows that a unique equilibrium must exist in which $e_j^K \in (0,1)$ for each $j \in \{L, R\}, K \in \{X, Y\}$

The comparative static results follow immediately from applying the implicit function theorem to equation (6). We have shown that at the equilibrium the left hand side of (6) equals zero, and furthermore that the left hand side of (6) is strictly decreasing in e_L^X (after imposing $e_L^Y = 1 - e_L^X$). Then, the implicit function theorem implies that the change of the equilibrium e_L^X when some parameter t is changed must have the same sign as the partial derivative of the left hand side of equation (6) with respect to the parameter t.

Using the derivatives of V_L^N and V_L^I with respect to e_L^X and e_L^Y and the properties of $\eta_L^{K\prime}$, it is immediate that the left hand side of equation (6) is strictly increasing in $\overline{\pi}_X, \psi_X$ and ψ_Y. The comparative static results for e_L^X follow immediately, as do the results for e_L^Y since $e_L^Y = 1 - e_L^X$. The results for party R follow by a symmetrical argument. $\qquad\square$

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