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## The second-order election model revisited: An experimental test of vote choices in European Parliament elections

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### ABSTRACT

This paper examines the micro-foundations of the second-order elections model of European Parliament (EP) elections. We extend the existing literature in several ways. First, we propose an individual-level model of voting behaviour in second-order elections. Second, we present the first study using experimental methods to test the predictions of the second-order model, allowing us to test the individual-level propositions about vote choice in a controlled environment. Importantly, we also examine the conditioning effect of information on the 'second-order' nature of voting behaviour in EP elections. Our findings show that while voters base their EP vote choices primarily on domestic preferences, those who are given additional information about the European integration dimension are also more likely to vote on this basis.

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### 1. Introduction

European elections are additional national second-order elections. They are determined more by the domestic political cleavages than by alternatives originating in the EC.

- Reif and Schmitt (1980: 3)

In their seminal article published after the first direct elections to the European Parliament, Reif and Schmitt (1980) describe elections to the European Parliament (EP) as 'second-order national elections'. At the heart of Reif and Schmitt's (1980) theory of second-order elections (SOE) is the proposition that they are of lesser importance than first-order elections for national office (see also Reif, 1984; van der Eijk and Franklin, 1996; Marsh, 1998). The second-order model offers three broad predictions about

aggregate-level outcomes of EP elections: Turnout is lower than in national elections, smaller parties perform better, and parties in national government are punished. Over the past 30 years, the second-order election model has remained the dominant framework for analysing EP elections, and numerous empirical studies have provided evidence in support of the model (see e.g., Reif, 1984; van der Eijk and Franklin, 1996; Hix and Marsh, 2007, 2011).

Yet, despite the longevity and success of the second-order model, several aspects of this perspective on European elections call for further attention. At the theoretical level, the original second-order election theory does not set out an explicit model of individual-level vote choice, although it makes several propositions about voting behaviour. Only very recently have scholars begun to build more explicit models of vote choice in EP elections (see Schmitt et al., 2008; Hobolt et al., 2009; Clark and Rohrschneider, 2009; Tiemann, 2009; Weber, 2009). Empirically, most studies have tested the propositions of the second-order model using aggregate-level data. This leads to a problem of observational equivalence; that is the empirical evidence may be consistent with more than one explanation (see Hix and Marsh, 2007; Hobolt et al., 2009; Tiemann, 2009).

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A related concern is that making inferences about individual-level behaviour on the basis of aggregate-level observations may lead to an ecological fallacy.

Rather than focusing on aggregate-level regularities, this paper examines the micro-foundations of the second-order elections model and asks: in what way and to what extent are vote choices in European Parliament elections shaped by the 'second-order' nature of these elections? This paper extends the existing literature on second-order elections in several ways. First, we propose an individual-level model of voting behaviour, building on the spatial voting literature, which is consistent with the second-order election model. On the basis of this model, we derive a series of hypotheses about individual-level vote choice. At the heart of this model are the assumptions that voters vote sincerely in EP elections and that vote choices are based on preferences specific to the first-order (national) arena rather than the second-order (European) arena. Second, we present the first study using experimental methods to test the predictions of the second-order model. The experimental set-up offers the distinct advantage that we test the individual-level propositions about vote choice in a controlled environment, which permits us to distinguish between alternative explanations. A potential disadvantage of laboratory experiments is the lack of external validity. To alleviate this problem, we conducted our experiment during the campaign leading up to the EP elections in June 2009 and used non-student as well as student participants in the study to achieve a more representative subject pool. Finally, we also vary the information given to subjects in our experiment to examine the conditioning effect of information on the 'second-order' nature of EP voting behaviour. Our findings show, in accordance with the second-order model, that domestic politics and cleavages matter more to voters in EP elections than attitudes towards the EU-arena. Yet, when voters are given more information about the placement of parties on the EU dimension, the importance of European concerns also increases. In contrast, additional information about the position of parties on the left-right dimension has no significant effect on vote choice.

## 2. Second-order national elections

In the 30 years since the first direct elections to the European Parliament in 1979, electoral outcomes in these elections have been interpreted through the lens of the second-order election model. This is not surprising given that empirical studies have continued to lend support to the key predictions set out in the original 1980 article by Reif and Schmitt (see e.g., Reif, 1984; van der Eijk et al., 1996; Marsh, 1998; Kousser, 2004; Ferrara and Weishaupt, 2004; Hix and Marsh, 2007, 2011). Notwithstanding the fact that successive EU treaty amendments have increased the powers of the European Parliament, the literature has shown three broad patterns of empirical regularities repeated in all six elections to the European Parliament. First, levels of turnout are lower than in national elections. Second, citizens favour smaller parties over larger parties compared to national elections. Third, parties in national governments do worse in EP elections than in national elections, especially when the EP elections take place

during the mid-term of the national election cycle. According to the second-order election model, these empirical regularities owe to the fact that less is at stake in second-order elections, and as a consequence, 'voters cast their votes not only as a result of conditions present within the specific context of the second-order arena, but also on the basis of factors in the main political arena of the nation' (Reif and Schmitt, 1980: 9).

Even though empirical evidence shows that European Parliament outcomes continue to be consistent with the predictions of the second-order models, scholars have in recent years called for a revisiting of the model (Marsh, 2007; Marsh and Mikhaylov, forthcoming; Schmitt et al., 2008; Hobolt et al., 2009; Tiemann, 2009). Two interrelated concerns have been expressed about the second-order literature. The first is primarily theoretical and focuses on the lack of an explicit individual-level model of vote choice to explain the aggregate-level regularities. Concluding their review of the second-order model, Marsh and Mikhaylov (forthcoming: 19) recommend that 'more attention is given to the mechanism(s) that give rise to the second-order effects (...) and more explicit consideration of how voters decide'. Schmitt et al. (2008: 2) also acknowledge that 'only very recently [have] scholars started to uncover some of these micro-foundations of SOE theory'.

The second concern relates to the interpretation of the aggregate-level regularities in EP election outcomes. While evidence of low turnout and defection from governing parties may be consistent with the second-order model, it can equally lend credence to alternative explanations. Most notably, scholars have suggested that the same patterns are consistent with a 'Europe matters' perspective (Hix and Marsh, 2007; Marsh, 2007; Hobolt et al., 2009). According to this perspective, low turnout and defection from governing parties may not be entirely due to the general decline in government support at mid-term, it may also be caused by dissatisfaction with the position of these parties on the European integration dimension. Recent studies do find some evidence that the European dimension influences voting patterns in EP elections (see e.g., de Vries et al., 2011). Hobolt et al. (2009) find that voters are more likely to defect from a governing party if they have more Euro-sceptic preferences than the party. Similarly, Clark and Rohrschneider (2009) find support for their '1st order hypothesis' by demonstrating that perceived performance of parties at the EU level influences the extent to which voters defect from a governing party. It has also been suggested that Europe may affect voters' party choices in European elections in a more indirect way. Carrubba and Timpone (2005) argue that it is rational for citizens to vote for different parties in different elections to 'balance' policy outcomes. They show that such behaviour is more pronounced among individuals who perceive the EP to be more powerful, suggesting that the 'European dimension' does play a role to some individuals. In a systematic comparison of the 'second-order' and the 'Europe matters' theses, Hix and Marsh (2007) employ aggregate-level data from the past six European Parliament elections to analyse whether voter desertion of governing parties is punishment over domestic matters or protest against the EU. In support of the second-order approach, they demonstrate

that large parties tend to lose votes in EP elections regardless of their left-right placement or their position on European integration. Yet, they also find some electoral gains for anti-EU parties and parties that emphasize the European issue.

These alternative explanations of defection in EP elections raise the methodological problem of observational equivalence. That is, the differences in support levels for parties in national and European elections may be due to the fact that voters are unhappy with the performance of governing parties in the first-order (national) arena, but it may be equally a result of voters disagreeing with these parties on second-order (European) issues. This concern has led some scholars to call for more rigorous individual-level tests of vote choice in EP elections and “better data”, such as panel data (Schmitt et al., 2008: 20; Marsh and Mikhaylov, forthcoming: 19; Tiemann, 2009: 1–3).

It would be a mistake to treat these two concerns – lack of an explicit individual-level theory and methodological problems of observational equivalence and ecological fallacy – separately. Many of the issues concerning the interpretations of the empirical evidence stem not only from problems with poor data, but also from the fact the individual-level predictions derived from the second-order model are somewhat hazy. Hence, this paper extends the extant literature on second-order elections in two ways. First, it proposes an individual-level model of vote choice in EP elections and derives a series of testable hypotheses from this model. Second, these propositions are tested using a laboratory experiment.

### 3. A model of vote choice in second-order elections

In a recent review article about the second-order model, Marsh and Mikhaylov (forthcoming: 7) state that ‘Reif and Schmitt do not offer a theory of a European voter. Their work is essentially an aggregate-level theory’. Yet, while the original article by Reif and Schmitt (1980) may not have set out to develop a complete individual-level model of vote choice, they do nonetheless build their aggregate-level predictions on statements about individual-level behaviour in second-order elections. Hence, if we want to develop a vote choice model that is consistent with the second-order model, these statements provide the natural starting point. To briefly summarize, Reif and Schmitt put forward four central and interrelated claims about individual-level behaviour in second-order elections: ‘the participation’ thesis, ‘the sincere voting’ thesis, ‘the first-order preference’ thesis and ‘the strategic voting’ thesis.

The key aspect of second-order elections is that less is at stake than in first-order elections, and this idea is at the heart of Reif and Schmitt’s (1980) propositions about voting behaviour. The first claim concerns the decision of voters to participate or abstain in the election: ‘fewer voters may consider [secondary elections] sufficiently important to cast a ballot’ (9). The remaining propositions, which are the focus of this paper, concern the behaviour of those people who do decide to vote. Since less is at stake, voters are more likely to vote sincerely in EP elections, compared with first-order elections: ‘The large electorally decisive parties may receive votes in first-order elections from voters whose

actual preferences lies with some small or new party’ (9). While voters may vote on the basis of their preferences, these preferences importantly relate to the first-order national arena rather than the European arena: ‘Many voters cast their votes in [second-order] elections not only as a result of conditions obtaining within the specific context of the second-order arena, but also on the basis of factors in the main political arena of the nation’ (9). This leads to the final proposition, namely that some voters vote strategically to signal their dissatisfaction with parties in national government: ‘Some, who generally support the government, vote for the opposition in secondary elections in order to apply pressure to the government (...) although not fundamentally changing their party allegiance’ (10). These statements about voting behaviour can be summarized by the following four propositions:

*Participation proposition:* voters are less likely to participate in second-order elections than in first-order elections.

*Sincere voting proposition:* voters will vote for a party with the most similar policy positions in second-order elections.

*First-order preferences proposition:* voters will choose a party on the basis of preferences relevant to the first-order rather than the second-order arena.

*Strategic voting proposition:* voters may vote strategically to punish governments.

These propositions appear to be consistent with the aggregate-level regularities of EP election outcomes outlined above. However, they do not easily form the basis of a consistent and parsimonious model of vote choice at the individual-level. Most obviously, there is potentially an inherent conflict between the proposition that voters in second-order elections decide on the basis of their sincere preferences and that they vote strategically to apply pressure on the national government. Whereas sincere voting implies that voters choose their preferred party, strategic voting suggests the very opposite, namely when voters rationally decide to vote for a party other than their overall favourite (McKelvey and Ordeshook, 1972; Cox, 1997; Cox and Shugart, 1996; Alvarez and Nagler, 2000). Hence, a voter cannot simultaneously vote sincerely *and* strategically. Of course, it is perfectly possible that some voters vote sincerely and others vote strategically in these elections, yet the second-order model provides little guidance as to when (or why) voters are likely to vote with their heart or when they use their head to strategically signal dissatisfaction with the government. This possible conflict between two contradictory voting approaches has received little attention in the second-order literature, however.

One contextual-level factor highlighted in the original study and further explored in subsequent work is the national electoral cycle (see van der Eijk and Franklin, 1996; Marsh, 1998; Hix and Marsh, 2007). According to the theory, the extent to which governments are punished in EP elections depends on the timing of the election during the national electoral cycle and the incumbent government’s performance. This has its roots in theories of mid-term elections in the US, where the president’s party tends to enjoy a comparative disadvantage (Campbell, 1960). This could be taken to imply that voters are therefore more likely

to vote strategically during the mid-term and more likely to vote sincerely when the European and national electoral cycles are more in sync, yet this proposition has not been explicitly developed in the literature. Indeed, it has been very difficult to establish whether defection from governing parties (or even abstention) is due to strategic or sincere calculations, especially for studies relying on aggregate-level data. In this paper, we use an experimental approach to distinguish between sincere and strategic voting. However, we cannot test the potentially moderating effect of the electoral cycle in an experimental setting.<sup>2</sup>

Another ambiguity in the original SOE model, and much of the literature that builds on it, is the distinction between first- and second-order preferences. A key characteristic of second-order elections is that ‘concerns which are appropriate to the first-order arena will affect behaviour in second-order elections even though second-order elections are ostensibly about something quite different’ (van der Eijk and Franklin, 1996: 12). When referring to EP elections, the ‘second-order arena’ is the European arena, that is policies of relevance to the European Union, whereas the first-order arena is the national domestic arena. However, given the intergovernmental (and indeed supranational) nature of the European arena, it is not clear that EP elections are indeed ‘about something quite different’. Reif and Schmitt alluded to this conceptual problem in their original article: ‘Although clearly of second-order nature, the European Community links several (first-order) political systems with each other’ (1980: 11). As integration has become deeper, the institutions of the European Union increasingly touch upon most of the policy areas that were previously determined solely at the national level, including monetary and fiscal policy. As a consequence, it becomes difficult – both theoretically and empirically – to determine whether voters are deciding on the basis of first-order or second-order preferences. Most scholars have argued that preferences relating to European integration (such as feelings about a federal European Union) are preferences relevant to the ‘second-order’ European arena, whereas left-right preferences (such as attitudes towards taxation and redistribution) are ‘first-order’ preferences as they structure domestic political competition (see e.g., Hix and Marsh, 2007; Hobolt et al., 2009; Clark and Rohrschneider, 2009). While this distinction makes intuitive sense, it has become increasingly problematic as the European Union has acquired competencies in most of the policy fields relevant to the nation, and voting behaviour of legislators in the European Parliament is indeed largely structured around the left-right policy dimension (see Hix et al., 2007). Thus, a truly “European vote” should perhaps be a vote based on left-right preferences as much as preferences about European integration. Theoretically as well as empirically it is therefore difficult to make a watertight distinction between ‘first-order’ and ‘second-order’ preferences. As a consequence, our theoretical model of vote choice includes preferences for both the left-right and the EU dimension, as well as strategic considerations specific to parties in national government. In the experimental set-up,

we also try to address this issue by examining the effect of providing participants with information on exclusively national issues on vote choice. Before discussing the details of the experiment, we firstly present a simple model of vote choice in European Parliament elections.

### 3.1. A spatial model of vote choice in European elections

Our model takes as a starting point the assumption that the European voter is a ‘sincere voter’ who chooses the party that ‘represents the voter’s opinion more precisely’ (Reif and Schmitt, 1980: 9). It is important to note that unlike most of the SOE literature, this model does not focus on *vote switching* between national and EP elections, but is rather a utility model of vote choices in EP elections. The most common formal presentation of a sincere voter in the literature is the proximity model,<sup>3</sup> originally developed in the context of a two-party system, where voters are assumed to vote for the candidate or party that has issue positions closest to their own ideal point (Downs, 1957; Enelow and Hinich, 1984; Alvarez, 1997). In Downs’ original model, the policy space is one-dimensional, but in light of the discussion above, we model the voter’s utility for a party as a function of proximity on two dimensions: the left-right dimension and the European integration dimension. The utility of voting for Party A can be expressed as:

$$U_i = c_i - \left[ (Peu_i - Veui)^2 + (Plr_i - Vlr_i)^2 \right] \quad (1)$$

where each voter’s evaluation of the party’s utility depends upon the sum of squared distances between the positions of the party on the EU dimension  $Peu_i$  and the left-right dimension  $Plr_i$ , as perceived by the voter, and the voter  $i$ ’s own ideal points  $Veui$  and  $Vlr_i$  on these dimensions. The term  $c_i$  represents all the domestic considerations involved in the voter’s overall evaluation of Party A other than those pertaining to the specific issue dimensions included in the model (see Bartels, 1986; Alvarez, 1997). In the particular context of European Parliament elections,  $c_i$  captures the strategic considerations about the performance of the national government that are strictly not relevant to the European arena (‘second-order’ factors). When the impact of such considerations increases, issue proximity calculus declines in influence. Hence, if voters base their vote choice purely on the basis of considerations about the national government rather than proximity considerations, they can be said to be voting strategically rather than sincerely.

<sup>3</sup> Rabinowitz and Macdonald (1989) have proposed an alternative spatial model of vote choice which incorporates ‘intensity’. They argue that voters will vote for the party with more intense views on ‘their side’ rather than the closest party. In other words, left-wing voters would vote for the more extreme left-wing party and right-wing voters for the more extreme right-wing party. In its purest form the model therefore leads to the prediction that parties have an incentive to be the most extreme party on their side of any particular dimension (at least within a certain ‘region of acceptability’ outside of which parties are penalized). We have also tested an alternative vote choice model based on the directional rather than the proximity model, and find only weak empirical support for the directional model on the EU dimension and no support on the left-right dimension.

<sup>2</sup> The external validity of an experimental set-up which would seek to imitate different stages of an electoral cycle is doubtful.

This model is consistent with the propositions about voting behaviour in second-order elections set out by Reif and Schmitt (1980). However, just like most of the SOE literature, it does not provide firm predictions about when (or why) certain factors matter more to voters than others in second-order elections. Hence, the next step to further develop the model is to incorporate factors that determine the relative weight of these different elements in the utility calculus. One important mediating factor may be the amount of information available to voters about the European arena. The second-order nature of European elections implies that the salience of the campaigns is low, and political elites tend not to prioritise campaigning efforts and information provision about Europe. Indeed, EP elections are notoriously lacklustre and low-intensity affairs with a largely domestic, rather than a European, focus. In media studies of the EP campaigns it has been shown that the political personalities and institutional actors featured in news stories about the European Parliament elections were generally national political actors and not EU actors (de Vreese et al., 2006, 2007; Schuck et al., 2011). Hence, political elites generally do not seek to mobilize voters on the basis of European issues. As a result, voters are generally poorly informed about the European politics, and EU matters do not rank among the more salient issues for European publics. Eurobarometer data,<sup>4</sup> for example, show that less than half of Europeans are aware that Members of the European Parliament (MEP) are directly elected, despite the fact that direct elections to the European Parliament have been held since 1979. In the same survey, only 30 per cent would say that they were ‘fairly well informed about European political affairs’.

Studies in political psychology have shown that information affects the attitude–behaviour relationship, because attitudes tend to be consistent with behaviour to the extent that those attitudes are readily retrievable in behavioural situations (Krosnick, 1988; Lavine et al., 1996; Alvarez and Brehm, 2002). Information reduces attitude uncertainty, and since additional information enables individuals to become increasingly certain in their opinions, this leads to stronger and more accessible attitudes. Moreover, information makes predispositions and values relevant for beliefs about specific policy positions and enables individuals to act on the basis of these attitudes. If a key reason why European preferences matter less to voting behaviour in EP elections is that voters receive limited information about such issues from the media and political parties, we would expect that if more information were provided to voters about such issues, European ‘second-order’ preferences would play a greater role in the vote calculus (Hobolt, 2009; de Vries et al., 2011). Hence, we introduce information about European integration as a factor that conditions the relative weight of proximity considerations versus other ‘second-order strategic’ considerations in the utility calculus. The importance of issue preferences depends partly on the ability of voters to use these issue preferences in their evaluation of the issue at stake. According to the model presented above, we assume that a rational voter will

consider the relative distances between her own ideal point and party positions in a two-dimensional space, when deciding. However, if the voter has very limited knowledge about the party position on one or both dimensions, it is difficult for the voter to employ these considerations in her decision-making. In other words, the relative weight of the proximity component of the voting model is variable.

In the model, we can denote this mediating effect of EU information as  $weu_i$ , which defines the relative weight of each component. It is assumed that this weight is proportional to the information that voters receive about the party positions on EU politics and that it is constrained so that  $0 \leq weu_i \leq 1$ . This means that the closer  $weu_i$  is to 1, the more the proximity issue preferences will matter to the overall utility of the proposal relative to other strategic domestic considerations. We do not expect that more information about the EU would lead voters to rely more on their left-right preferences. As discussed above, it may be argued that the left-right dimension is crucial to structuring politics in the European Parliament. Yet, it is also one of the most readily available heuristics in domestic politics, so voters with very little knowledge about, or interest in, European politics are also likely to rely more on their left-right preferences. Therefore, it seems plausible that additional EU information increases the importance of preferences on the European integration dimension and decreases the importance of strategic national considerations, whereas left-right considerations remain important regardless of the extent of EU-related information. This can be expressed as follows:

$$U_i = (1 - weu_i)c_i - [weu_i(Peu_i - Veu_i)^2 + (Plr_i - Vlr_i)^2] \quad (2)$$

Information about the EU, of course, is a very general concept that may encompass many things. In the empirical section of this paper, we concentrate on information that pertains specifically to the positions of parties on the European integration dimension, as this provides the most precise test of the model set out in equation (2). We also test the effect of providing additional information about the placement of parties on the left-right dimension. But unlike additional EU information, we do not expect this to have an effect on vote choices, since voters already have strong and accessible left-right preferences. On this basis, we can formulate the following hypotheses about voting behaviour in EP elections:

**H1:** The smaller the distance between the voter’s preferences on the left-right and the EU policy dimensions and the positions of the party, the greater the likelihood that the voter will vote for that party, all other things being equal (*sincere voting*).

**H2:** The more information the voter is provided about party positions on European integration, the more the ideological proximity on the EU dimension will matter to the vote choice (*mediating effect of EU information*).

**H3:** The greater the dissatisfaction with the performance of the national government, the greater the likelihood that the voter will vote for a party that does not belong to the national government, all other things being equal (*strategic voting*).

<sup>4</sup> Eurobarometer 67.2, fieldwork conducted in May 2007.

These hypotheses are tested in the remainder of the paper, using evidence from a laboratory experiment conducted in the context of the 2009 British European Parliament election.

#### 4. The experiment

Observational data, by definition, draw inferences about outcomes where the source of variation is the result of factors beyond the control of the researchers (Morton and Williams, 2008: 20). Traditionally, SOE studies have employed observational data, typically at the aggregate-level of analysis, to evaluate general expectations. As mentioned before, relying on aggregate data does not resolve the concerns of observational equivalence and may lead to an ecological inference fallacy. One valuable alternative to aggregate data is individual-level survey data. Since 1989, European Election Studies (EES) have been conducted after elections to the European Parliament and researchers have benefited from individual-level data with similar or identical questions used in multiple surveys over time and across member states (see e.g., van der Eijk and Franklin, 1996; Hobolt et al., 2009; Weber, 2009).

In this paper, however, we adopt an entirely novel approach to analysing voting behaviour in EP elections, namely an experimental design. The experimental design works particularly well for testing the individual-level model of voting behaviour for a number of reasons. First, because of the artificial setting and control, we introduce conditions that would be difficult or impossible to capture in the real world. In particular, we introduce varying types of information, including the placement of political parties on issues of political ideology and EU integration and news reports related to the government's handling of the financial crisis. Unlike the real world, we can control which information is given to the participants, and we can compare vote choices from the different groups. Second, due to randomization of the participants to the various treatments, we control for real world "noise" and, consequently, do not need to introduce additional control variables into the equation. The laboratory setting also allows for the introduction of greater variation than is possible to gain from observational data (Morton and Williams, 2008). Third, we are able to construct precise measures for our left-right and European integration indicators, which are identical to established indicators from previous voter surveys. Finally, we are able to implement several experimental conditions with fewer participants than what would be required for observational studies, such as with a national or cross-national election study. This is because subject pools, once recruited, tend to be reliable and inexpensive relative to large-scale surveys and field experiments (McDermott, 2002: 39).

There are trade-offs with the experimental approach, such as lack of external validity due to the artificial environment and the unrepresentative subject pool (e.g., undergraduate students) as well as experimenter bias (McDermott, 2002: 39). Nonetheless, our experimental design addresses several of these potential shortcomings. First, we reduce some of the concerns of external validity in the construction of the experimental design, which is explained subsequently, and by conducting the experiment during the EP campaign. Although the election

environment is artificially created, the timing of the experiment coincided with the events leading up to and immediately following the 2009 European Parliament elections (from 21st May to 11th June). A second possible disadvantage may be a subject pool unrepresentative of the general population or the population of interest (Sears, 1986). Drawing from unrepresentative samples makes it more difficult to generalize to a larger population. Indeed, recent evidence in experimental economics reveals stark differences in the behaviour of undergraduate students – who are typically the experimenter's sample of choice – and the behaviour of non-students (Miller et al., 2009). We therefore use a mixed sample of participants, which includes non-students. A final possible concern is the introduction of experimenter bias, which has the potential to limit the generalizability or accuracy of the results (McDermott, 2002: 40). To control for experimenter effects, we designed all procedures and instructions, supervised subject recruitment, trained on-site coordinators in the protocol, and were present for every experimental session.

The experiment in this paper follows the political psychology tradition of experimental design and procedure: it involves an individual-level decision-making situation, random assignment is used to assign participants to a treatment, the participant's behaviour is observed only once (i.e., a single-shot experiment), and each participant is exposed to one treatment condition (Morton and Williams, 2008: 55). This between-subjects design is ideal for comparing differences in vote choices across multiple groups, where the only difference – due to randomization – is the introduction of the particular experimental manipulation. The manipulations in this design are the information treatments introduced across the experimental group. The treatments are designed to resemble information participants could encounter in the real world in order to increase the external validity of the study. This approach to experimental design and procedure has a long history in political communication, as demonstrated in the media effects literature (Iyengar et al., 1982; Iyengar and Kinder, 1987; de Vreese, 2004), and in particular the research on framing (Chong and Druckman, 2007; Druckman, 2001), priming (Valentino, 1999; Valentino et al., 2002) and agenda-setting (Althaus and Tewksbury, 2002; Holbrook and Hill, 2005). In this type of experimental set-up, the treatments may come packaged in evening news broadcasts or articles from paper news sources (de Vreese, 2004).<sup>5</sup>

The experiment was designed as follows (see Fig. 1). After reading the general instructions, the participants answered a series of questions related to their attitudes on European integration and left-right political ideology, which were used to construct the left-right ( $Vl_i$ ) and European integration ( $Veu_i$ ) voter ideal points.<sup>6</sup> After answering the

<sup>5</sup> This is unlike most survey experiments which tend to involve the manipulation of just a single stimulus, such as the question wording or placement of the item in the survey (Gaines et al., 2007).

<sup>6</sup> These questions were identical to the items from the voter surveys of the 2009 European Election Study (EES) and the 1997 British Election Study (BES). See the appendix for the list of questions and sources.

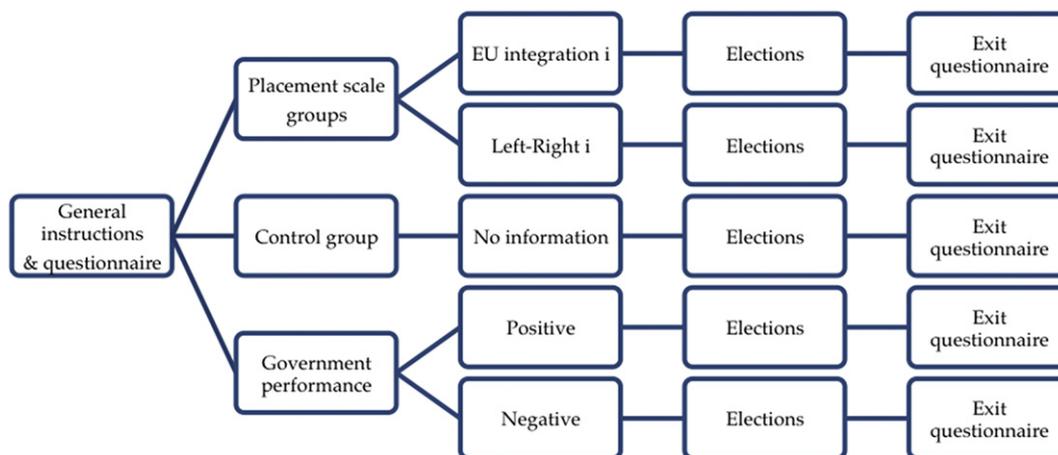


Fig. 1. Experimental design and treatments.

questions, the information conditions were introduced, and participants were randomly assigned to one of four treatments: control group, left-right information, European integration information, and government performance information. In the control group, the participants advanced directly to the EP ballot.

For the left-right information treatment, British political parties and participants were placed on the same left-right scale.<sup>7</sup> Participant placements were based on their answers to the pre-test questionnaire (see Appendix A). The participants viewed this scale (Fig. 2a) before moving to the election. This scale is very similar to the kind of graphical illustrations of the political landscape that citizens are exposed to when using popular voting advice applications, such as the *EU Profiler* and *The Political Compass*. In the European integration information treatment (see Fig. 2b), the protocol was identical to the left-right information group and respondents; however, the attitude questions pertaining to European integration (see Appendix A) were used to construct a 0 to 10 scale on the issue of EU dimension.

In the fourth group, participants received information about government performance. This information was presented in the form of a news article about the Labour government's handling of the economic crisis.<sup>8</sup> Participants in the government performance group were further assigned, at random, into groups receiving positively or negatively framed news reports. This treatment thus exposed participants to domestic considerations other than those pertaining to the specific left-right and European integration issue dimensions and is represented in the model as  $c_i$ . As stated previously, this term captures the strategic considerations about the performance of the national government that are

strictly not relevant to the European arena ("second-order" factors). When the impact of such considerations increases, we expect left-right and European integration dimensions to decrease in importance.

Following exposure to the information, the participants proceeded to a voting stage, in which participants received a ballot with the list of parties standing in the EP elections in England, at which time they could either cast a ballot for the party of their choice or they could abstain.<sup>9</sup> The next section discusses the data generated by this experiment and the methods used to test our hypotheses.

## 5. Data and methods

In all, 314 participants (app. 60 per information treatment) were recruited for the experiment, which took place at the Centre for Experimental Social Science (Nuffield College, University of Oxford). The subject pool was a mixture of students (undergraduate and postgraduate) and non-students from the greater Oxford area. The average age of the participant was 28, the majority of respondents were in either undergraduate or postgraduate education (63 per cent), the majority of non-students were employed in clerical and professional careers (25 per cent), there were slightly more men than women participants (56 versus 43 per cent), and most participants identified as middle class (49 per cent). The experimental sample thus does not mirror the general population; however, opening the experiment to non-students resulted in a sample far more representative than an experiment reliant exclusively on undergraduate students.<sup>10</sup>

To test the hypotheses derived from the individual-level voting model, we constructed predictor variables for the issue dimensions in equation (2). First, to test the relative impact of distance between a voter's ideal point and the party's position on the two dimensions (*sincere voting*), we

<sup>7</sup> The placement of the political parties was determined in two stages. First, expert data were used to place parties (Benoit and Laver, 2007). Second, this placement was cross-validated with the placements from the EU Profiler Project (<http://www.euprofiler.eu>), the voting advice application for the European Parliament elections of June 2009. The EU Profiler recorded the positions of all parties standing for election across 30 issues such as welfare, immigration, taxation, the environment, and foreign policy, European integration and law and order.

<sup>8</sup> See Appendix B for an example of one of the treatments.

<sup>9</sup> Abstention rates were negligible, which is unsurprising given the low cost of voting for participants in the experiment.

<sup>10</sup> Undergraduate students are the sample of choice for most experiments in experimental economics, political economy, political psychology, and social psychology.

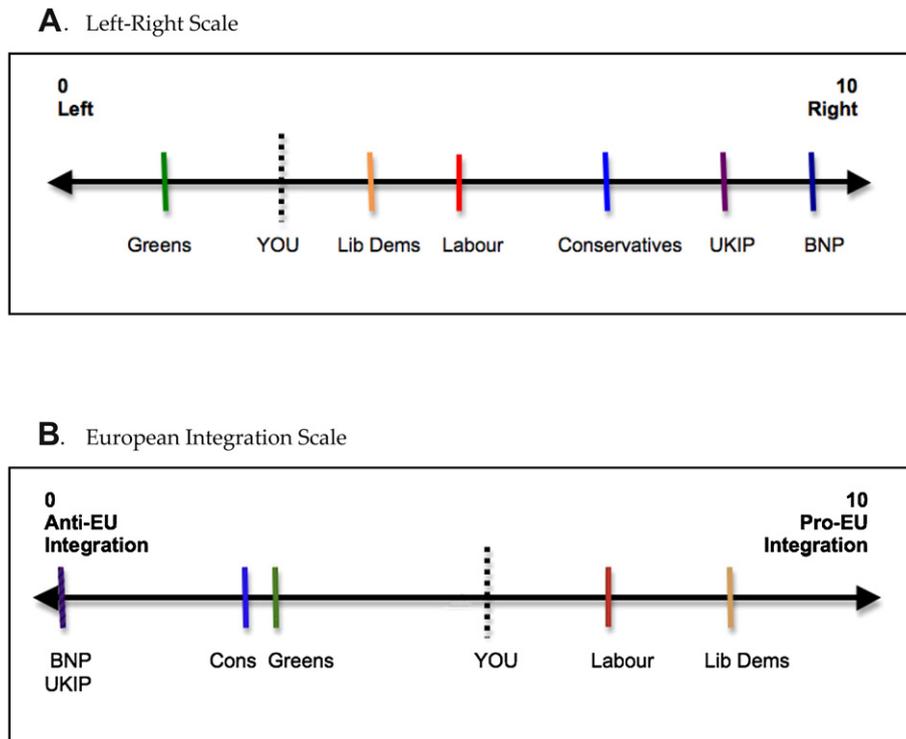


Fig. 2. Information treatments.

construct distance variables for left-right and EU integration. The absolute distance is calculated by subtracting the respondent's self-placement on the left-right and European integration on a 0 to 10 point scale from the respondent's placement of political parties on the same scale.<sup>11</sup> For the second hypothesis (*mediating effect of EU information*), we test for the moderating effect of the EU information treatment by including an interaction term of EU integration distance and the EU information treatment. We also compare with the moderating effect of the left-right information treatment, by modelling the conditional effect of this information treatment on left-right distance in a similar manner.

The dependent variable is party choice, which comprises several unordered categories (i.e., Labour, Conservatives, Liberal Democrats, Greens, BNP, and UKIP). Consequently, we require a model allowing for more than two discrete outcomes to test the sincere voting and mediating effect of EU information hypotheses. We use conditional logistic regression to model vote choice, because we are interested in examining not only how a participant's placement in

a specific treatment group (i.e., EU information, government performance information) impacts vote choice, but also to what extent an individual's utility for a party is based on characteristics of that party. To do this, we use a special case of the conditional logistic model (Alvarez and Nagler, 1998): the McFadden's choice model (1974). The McFadden's choice model permits two types of independent variables: alternative-specific and case-specific. Alternative-specific variables vary across both cases and alternatives, and case-specific variables vary only across cases. In the two models, the left-right and EU integration distance predictors are

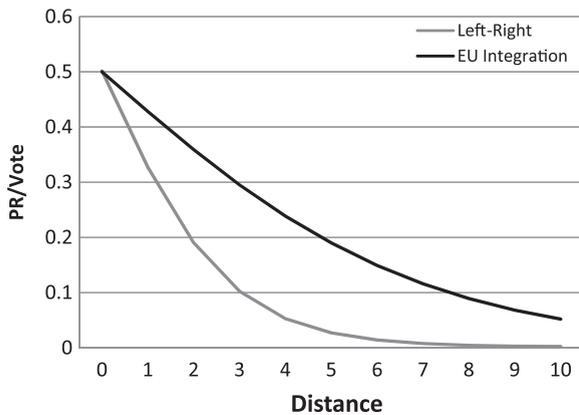
**Table 1**

A Conditional logit model of individual vote choice in the European Parliament election.

	Model 1	Model 2	Model 3
	Vote choice	Vote choice	Vote choice
<i>Choice specific predictors</i>			
Left-Right distance	-0.68*** (0.08)	-0.72*** (0.13)	-0.61*** (0.16)
EU distance	-0.13* (0.07)	0.19 (0.17)	0.14 (0.12)
European Info*EU distance		-0.61** (0.22)	
Left-right Info*Left-Right distance			-0.14 (0.23)
N observations	1176	498	462
N cases	196	83	77
Log likelihood	-221.42	-82.32	-85.31

Note: The dependent variable is vote choice in the EP election (multinomial). Information treatment dummies are also included in the model, but the coefficients (all insignificant) are not shown here. Standard errors reported in parentheses. \* $p < .10$  \*\* $p < .05$  \*\*\* $p < .01$ .

<sup>11</sup> We have opted to use the respondent's placement of the parties on the dimensions rather than expert placement of parties because this more accurately tests the proximity model. The EU integration distance was determined from question #15 ("Some say European integration should be pushed further.") in the Appendix A. The following question was used to construct the left-right distance: "In political matters people talk of "the left" and "the right". What is your position? Please indicate your views using any number on a scale from 0 to 10, where 0 means "left" and 10 means "right". And about where would you place the following British parties on this scale?".



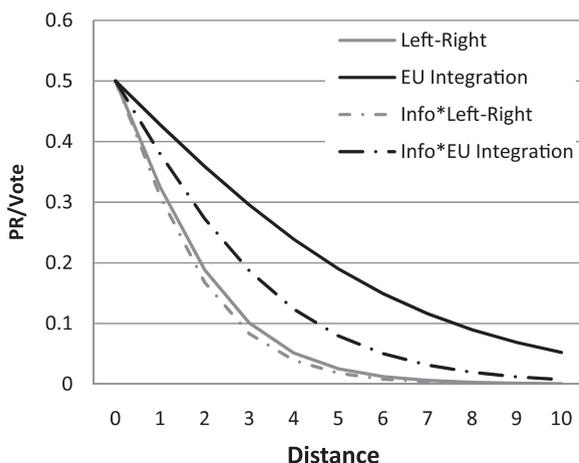
**Fig. 3.** Predicted probabilities of vote choice by distance. *Note:* Based on estimates from McFadden's choice models of EP vote choice by left-right and EU distance (see Table 1, Model 1).

alternative-specific in nature (i.e., the distance varies for each political party).

Testing the third hypothesis (*strategic voting*) is straightforward with a binary logistic regression, since the dependent variable is dichotomous (0 = a vote cast for an opposition party, 1 = vote for the governing party). As with the first two hypotheses, variables for left-right distance and EU integration distance were included in the model, although the proximity measures were changed to the absolute distance between the individual's self-placement and the placement of the governing party (Labour) on a 0 to 10 scale. The information treatment predictor variable is exposure to negative government performance information.

## 6. Results

In model 1 (Table 1), we test the sincere voting hypotheses (H1), namely whether the distance between



**Fig. 4.** Predicted probabilities of vote choice by EU integration information and distance. *Note:* Based on estimates from McFadden's choice models of EP vote choice by left-right and EU distance, including interactions with the left-right information treatment indicator and the EU integration information treatment (see Table 1, Model 2 and 3).

**Table 2**

A Binary logit model of individual vote choice in the European Parliament election.

	Model 1	Model 2
	Labour vote	Labour vote
Negative information	-1.27*** (0.48)	-1.16** (0.51)
Left-Right distance		-0.38** (0.18)
EU distance		-0.12 (0.18)
Constant	-0.76*** (0.26)	0.21 (0.47)
N	129	115
Chi-square	0.005	0.0034
Pseudo R sq	0.06	0.11
Log likelihood	-64.80	-54.64

*Note:* The dependent variable is vote choice for the governing party (Labour). Standard errors reported in parentheses. \* $p < .10$  \*\* $p < .05$  \*\*\* $p < .01$ .

the voter's preferences on the left-right and the EU policy dimensions and the positions of the party result in a greater likelihood that the voter will choose that party. The expectation is that the likelihood of selecting a particular party decreases the larger the distance becomes between the voter's placement and the party's position. We expect this to hold for both the left-right dimension and the European integration dimension, all else being equal, and the results in Table 1 are indicative of this relationship. Both the left-right and EU integration dimensions have a statistically significant effect on the vote choice, and this supports the sincere voting hypothesis. To illustrate the effect of ideological distance, the predicted probabilities are plotted in Fig. 3 of voting for a particular party by distance from that party on left-right and European integration dimensions. As the graph illustrates, the probability of selecting a particular party decreases the further away the voter is from that party on both the left-right and European integration dimension, and this effect is more pronounced for the left-right dimension, thus indicating that left-right proximity has a greater effect on vote choice than proximity on the European integration dimension.

In model 2, we test the mediating effect of information hypothesis (H2). The expectation is that provision of information about party positions on European integration will result in the ideological proximity on the EU dimension to matter more to vote choice. To test for this, we introduce a dichotomous indicator (i.e., 1 = European integration information group, 0 = control group) for the experimental treatment and an interaction term (i.e., European integration distance  $\times$  European integration information). The results of the second model are reported in Table 1.<sup>12</sup> The interaction term is statistically significant and in the expected direction, which lends support to the mediating effect of information hypothesis. As a check, we run the same analysis for whether the interaction with left-right information influences vote choice in Model 3 (Table 1), and we find no statistical support

<sup>12</sup> The alternative-specific variables (i.e., left-right and EU integration distance and the interaction with the treatment effect) are reported in Table 1. The dummy variables for the left-right and EU integration treatment effects are case-specific variables that do not vary across the alternatives for party choice, and these are also included in the models. However, since these case-specific variables are not statistically significant, they are not reported in Table 1.

**Table 3**

Marginal effects of voting for Labour by government performance information, left-right distance and EU integration distance.

Treatment groups	First differences
<i>Negative information</i>	
Left-Right distance	-0.17 (-0.31, -0.02)
EU integration distance	-0.22 (-0.45, -0.02)
<i>No information</i>	
Left-Right distance	-0.06 (-0.29, 0.28)
EU integration distance	
<i>No information</i>	
Left-Right distance	-0.43 (-0.70, -0.05)
EU integration distance	-0.13 (-0.48, 0.41)

Note: Marginal effects are based on Model 2 in Table 2. First differences (change in the probability of voting for Labour) are calculated by increasing the independent variable from minimum to maximum, keeping the other distance variable at its mean. 95% confidence intervals reported in parentheses.

for a mediating effect of left-right information on vote choice. To illustrate this, Fig. 4 plots the predicted probabilities of voting for a particular party by distance from the party on left-right and European integration dimensions, with the interaction between European information and the European integration dimension. As Fig. 4 demonstrates, when participants were given more information about the party positions on the issue of European integration, they used this information to vote for a party closer to them on this dimension. In comparison, when participants are exposed to more information about party placement on the left-right dimension in a similar fashion, this makes no discernible difference to their vote choice.

The strategic voting hypothesis (H3) considers whether greater dissatisfaction with the national government's performance increases the likelihood that the voter will select a party that does not belong to the national government. The expectation is that voters given evidence of poor performance will punish the national government during European Parliament elections by casting a vote against them. In the experiment, poor performance was conveyed through newspaper reports about the government's handling of the economic crisis.<sup>13</sup> The results for the strategic voting hypothesis (Model 1, Table 2) indicate that this is indeed the case. When voters receive negative information about government performance, they are less likely to vote for governing parties, all things being equal, and this result is statistically significant at the 99% level. The marginal effect of receiving information on poor government performance is a 20 points reduction in the likelihood of voting for the governing party, Labour.

In model 2 of Table 2, we control for distance on the left-right and European integration dimensions. The results show that those who received negative information about the government's performance are less likely to vote for Labour, even controlling for proximity measures, but they are also likely to cast a Labour vote as the distance between the voter and party increased on the left-right dimension. In contrast, proximity on the European integration dimension has no statistically significant effect in this model, suggestion that voters do not base their choice between government and opposition parties on their EU preferences.

<sup>13</sup> We also tested for the impact of positive information regarding government performance, but the results were not statistically significant.

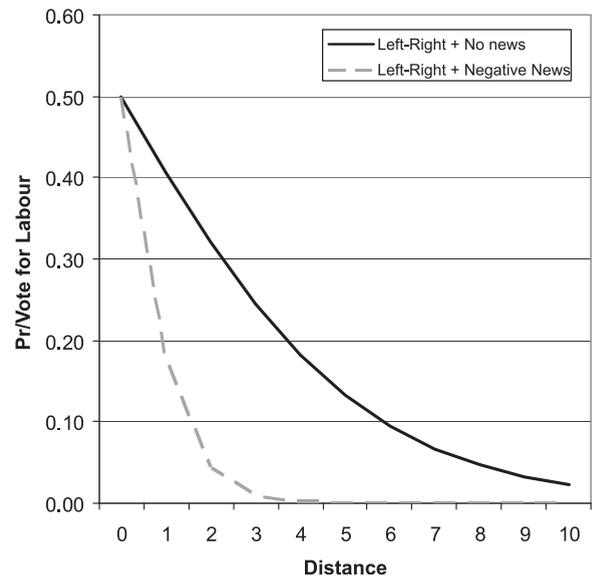


Fig. 5. Predicted probabilities of vote choice by Left-Right distance and negative information Note: Based on estimates from Model 2, Table 2.

Table 3 shows the marginal effects of performance information and ideological distance on Labour vote. When holding left-right and EU integration distance at their means, as in Model 2, the probability of a vote cast for Labour decreases by 17 percentage points for those exposed to negative government information. When evaluating the impact of left-right distance, the marginal effect of changing the distance from its minimum to its maximum is a very sizeable 43 percentage point decrease in the probability of a vote for Labour when the participant was in the no information group, compared to only 22 points for participants who received information about government performance. To illustrate this contrast, Fig. 5 plots the predicted probabilities of voting for Labour by distance from the party on left-right dimension and exposure to the negative news treatment. Fig. 5 clearly demonstrates that when participants are exposed to information about government performance, only those who are very ideologically close to the Labour party on a left-right dimension still consider voting for the party. This indicates that when voters are exposed to information about national government performance, they tend to base their vote choice in EP elections on “second-order” factors, even if these elections are ostensibly not about the national government's handling of the economy. These findings thus suggest that ‘sincere voting’ on the left-right dimension is much less pronounced when voters are given incentives to vote strategically on the basis of government performance.

## 7. Conclusion

Unlike most of the existing second-order election literature on voting behaviour in EP elections, this paper presents an explicit individual-level model of vote choice in EP elections, based on Reif and Schmitt's seminal conceptual framework (1980). This spatial model is based on the key

assumption that European voters behave sincerely in that they vote for the candidate or party with the issue position closest to their own. We model the voter's utility for a particular party as a function of proximity of two dimensions: left-right and European integration. Moreover, we incorporate information about the national government's performance in the voting equation to capture strategic 'first-order' considerations. If these elections encourage voting on the basis of domestic (first-order) considerations, as the SOE model posits, we would expect more strategic behaviour and proximity on the EU dimension to matter less to voters. As an important extension to the model, we hypothesize that if additional information about European issues (i.e., second-order factors) is provided to voters, then this information would increase the importance of the European dimension in the vote calculus. To test the hypotheses derived from this model, we present the first experimental approach to examining vote choices in EP elections. While this approach has limitations in terms of external validity, it is ideally suited to test the micro-foundations of an individual-level model of decision-making, and particularly to examine the mediating effect of additional information (see also de Vries et al., 2011).

Our results demonstrate the importance of first-order (national) considerations to vote choice. First, they clearly show that proximity to a party on the left-right dimension has a considerable effect on the likelihood of a voter choosing a particular party, and this effect is far stronger than the impact of proximity on the European integration dimension. This suggests that voters are likely to base their EP vote choices on sincere preferences relating to the dominant dimension of contestation in national politics. Second, our experiment demonstrates that negative information about government performance has a considerable impact on vote choice, even though this information is not directly relevant to the European arena. This suggests that many voters are likely to base their vote choices on strategic considerations concerning the national government's performance, even in European elections. These findings are thus broadly supportive of the existing SOE literature that has found evidence of both sincere and strategic 'second-order' voting, using aggregate-level data. The contribution of this paper is to unpack some of the micro-foundations of such patterns and to test them in a controlled setting.

Moreover, our paper also introduces an extension to the classic SOE model, namely the role of information. We posit that more information about the EU will lead to a greater impact of EU attitudes on EP vote choice. Our findings corroborate this hypothesis: when participants were given more information about party placements on the EU dimension, they were more likely to vote on the basis of their EU attitudes. In comparison, additional information about party placement on the left-right dimension had no effect on vote choices. This has potentially important implications for our understanding of political behaviour in EP elections, since it suggests that voters may be less likely to vote on the basis of 'first-order' sincere and strategic considerations, if they were given more information about party stances on the European integration information.

Of course, there are several limitations to the experimental approach, primarily related to the external validity of such findings. Moreover, we are not able to test the effect of contextual variables, such as the electoral cycle, or to compare vote choices in national and EP elections. But importantly, this paper has generated several hypotheses which can be cross-validated using individual-level observational data. A valuable question for further research would be whether voters behave differently in electoral contexts where more information is provided about party positions on EU matters, for example, due to greater party polarization on EU issues or a more intense campaign environment.

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## Appendix. Supplementary information

Supplementary information associated with this article can be found in online version at [doi:10.1016/j.electstud.2010.09.020](https://doi.org/10.1016/j.electstud.2010.09.020).

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