

# **The role of party identification in spatial models of voting choice**

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## Introduction

Spatial models of electoral competition offer a framework to explain both citizens' voting choices and parties' electoral strategies. They are based on the fundamental premise that voters' preferences on political issues influence their voting choice, with voters tending to support a party or candidate whose programme is congruent with their own preferences. This focus on political issues corresponds closely to normative theories of representation, which stress the importance of the ideological congruence between citizens and their representatives (Thomassen and Schmitt 1997; Powell 2004).

The central element of these models is the definition of a political space, characterized by one or several issue or ideological dimensions, in which voters and parties can be located. Most models assume further that citizens are more likely to support a party that is closer to them in this space, and that parties seek to adopt a position that maximizes their expected vote share. While the simplicity of this baseline model is appealing, it leads to predictions about party behaviour that are at odds with empirical observations. In particular, such models typically lead to the expectation that parties should converge towards the centre in order to maximize their vote returns. In an effort to produce more realistic hypotheses, spatial models have been extended on three fronts: by introducing additional determinants of voting choices (e.g., Erikson and Romero 1990; Adams 2001a), by changing the incentives to which parties respond (e.g., Schofield and Sened 2005), and by considering more sophisticated ways in which voters may evaluate the impact of their choice on the government policy (e.g., Adams et al. 2005; Kedar 2005).

In this paper, I concentrate on the first of these possible extensions. From this point of view, a significant development has been the introduction of models combining two types of individual-level determinants of the vote: spatial or policy factors, on the one hand, and 'behavioural' factors, on the other, in particular party identification (Adams 2001b; Adams et al. 2005). This offers a synthesis of two research traditions. Rational-choice scholars have focused on policy factors while 'behaviouralists', working on the basis of survey data, have emphasized the importance of traditional loyalties in explaining party or candidate choice. The combination of these two sets of factors has resulted in more powerful models, which offer a better explanation of voting choices and which produce more realistic predictions about optimal party positions.

While the development of such 'unified' models must be welcomed, I argue here that their depiction of the interplay between behavioural and spatial factors is unsatisfactory. Virtually

all applications of such unified models assume that the two set of factors have *additive* effects. In other words, they assume that all voters respond to spatial factors in the same way, whatever the party they identify with and whether they identify with a party at all. Party identification only affects voting choices by providing a fixed advantage to a given party in the voters' comparative evaluation of the candidates. Party identifiers are thus biased in favour of one of the parties, but they otherwise respond to spatial factors in the same way as citizens identifying with another party or citizens who do not have such a traditional loyalty. I propose here a different interpretation of the effects of traditional loyalties, which, I argue, is more in line with the theoretical concept of party identification. Party identification not only increases the chances of supporting one's 'own' party, I suggest, it also reduces voters' responsiveness to spatial factors. Furthermore, I argue that this interactive effect of party identification fits with the two opposite views of this concept, as an identification to a group or as a summary evaluation of parties.

This paper is structured as follows. In the next section I present the standard specification for the 'unified' model of voting choice and I suggest two modifications, in order to account for the interactive effect of party identification. Section 3 discusses two alternative theoretical conceptualizations of party identification, concluding that both of them lead to the expectation of an interactive effect of identification and issue distances. Then, I review shortly some of the controversies on the proper specification of spatial models and I suggest to test a series of alternative specifications, in order to improve the confidence in my findings. Section 5 introduces the data used and discusses the operationalization of the variables. Following this, I present the results of my analyses.

### **A model of voting choice with issue proximities and party identification**

A spatial model including party identification is typically defined as follows:

$$U_i(k) = \sum_j a_j (x_{ij} - s_{kj})^2 + bt_{ik} + X_{ik} \quad (1)$$

Where  $U_i(k)$  is the utility of voter  $i$  for party  $k$ ,  $x_{ij}$  and  $s_{kj}$  are the positions on issue  $j$  of voter  $i$  and party  $k$ , respectively,  $a_j$  is a salience parameter for issue  $j$ ,  $t_{ik}$  is a dummy variable indicating whether voter  $i$  identifies with party  $k$ ,  $b$  is a salience parameter for party

identification, and where  $X_{ik}$  is a random error term. This is similar to the model specified for example by Adams et al. (2005: 22), and it is based on the same notation.<sup>1</sup>

The model I propose here differs on two points:

$$U_i(k) = \sum_j a_j (x_{ij} - s_{kj})^2 + \sum_{l=1}^2 b_l t_{ikl} + \sum_{l=1}^2 \sum_j c_{jl} t_{ikl} (x_{ij} - s_{kj})^2 + X_{ik} \quad (2)$$

First, I include two party identification dummies instead of one. I thus add a subscript  $l$ , taking the values 1 or 2, to the party identification variable and to the parameter  $b$  that captures its (main) effect. The reason for using this specification is that the inclusion of party identification leads to three types of voter  $\times$  party relationships: the utility of party identifiers for their preferred party, their utilities for other parties, and the utilities of non-identifiers (for any party). When a single dummy is used, the last two types of relationships are merged into a single category. This involves the implicit assumption that party identifiers evaluate the parties they do not identify with in the same way as non-identifiers evaluate parties. This is a very strong assumption to make, which does not appear to be supported empirically (Lachat 2006, forthcoming).<sup>2</sup>

Second, I add interactions between spatial proximities and each of the party identification dummies. The effects of these interaction terms on voters' utilities are captured by the parameters  $c_{jl}$ . In this way, I let the effect of issue proximities on electoral utilities vary across the three types of voter  $\times$  party relationships specified above. This is necessary to test my hypothesis that the strength of the relationship between issue proximities and electoral utility depends on party identification. Before presenting and justifying this hypothesis in more detail, however, it is first necessary to define more precisely the concept of party identification.

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<sup>1</sup> Equation 1 is a simplified version of the model of Adams et al. (2005), who also include additional non-policy factors, such as class or religion. Another minor difference is that I do not multiply the summation of policy distances by  $-1$ . In the model of Equation 1, the values of the parameters  $a_j$  should thus be negative.

<sup>2</sup> This problem is specific to spatial models in *multiparty systems*. In the US two-party system, by contrast, party identification is most often measured as a scale. It corresponds then to the voter-party distance on the traditional 7-point identification scale, with the two parties located at the extremes (e.g., Merrill and Grofman 1999: 84, note 5). This involves a different assumption, i.e., that the three types of party identification 'status' can be ordered on a scale, with non-identifiers being located in the middle.

## Two models of party identification

As mentioned in the introduction, there are two major conceptualizations of party identification (e.g., Johnston 2006). The *traditional model* of party identification corresponds to the original concept developed in the ‘Michigan model’ of voting choice (Campbell et al. 1960). Party identification is a psychological tie to one of the parties, acquired during socialisation and constantly reinforced by political experience. It represents a voter’s identification with a social group, and is much more stable than other political attitudes. In this tradition, several authors have drawn a parallel between a party identification and a religious identification. Following Miller and Shanks, a party identification provides voters with an ideology, which is to politics what theology is to religion: ‘to provide structure, organization, and coherence to one’s thinking’ (1996: 121). It is not the simple expression of a preference for a given political party. It is a deep psychological tie, ‘an extension of one’s ego to include feeling a part of a group’ (Miller and Shanks 1996: 120). A similar view is advocated by Green, Palmquist, and Schickler, for whom ‘partisan identities are enduring features of citizens’ self-conceptions’ (2002: 4). They also make an analogy between parties and religions, to emphasise the centrality of party identification and the strong differences existing between these identifications and standard political attitudes. They note that party identification shares the same degree of persistence than other social identities, like ethnicity or social class (Green et al. 2002: 75).

The *revisionist model* of party identification, by contrast, comes from the rational-choice tradition. It is most directly linked with the work of Downs (1957) and Fiorina (1981). Rather than being a defining feature of voters’ social and political identity, party identification represents here a much more limited concept. It represents a summary evaluation of parties, which is continuously updated as voters receive and process new political information. From this point of view, Fiorina (1981: 84) describes party identification as a ‘running tally of retrospective evaluations of party promises and performance’. This conceptualization of party identification is thus similar to that of an evaluation resulting from the on-line processing of information about parties (Lodge et al. 1989; Lodge and Stroh 1993).

This theoretical debate is important, and it has significant implications for understanding the role and stability of party identification. However, I do not aim with this paper to test the respective merits of these two conceptualizations. This is not necessary from the point of view of the hypothesis to be tested here, as it fits with both conceptualizations. Whether party identification is conceived as a group identity or as a summary evaluation, it should moderate

the strength of the relationship between spatial proximities and electoral utilities. In both cases, party identification represents a predisposition to support one of the parties – whether it corresponds to a relatively stable group identity or to a constantly updated summary evaluation. Party identification should be central in voters’ decision process and in the way in which they process information. This partisan identification or attitude should be salient and easily accessible in a voter’s memory. It is likely to function as a shortcut or ‘heuristic’ for decision-making. Much research on political cognition shows that citizens do not process all available information in a systematic manner. Instead, they rely on simple decision rules or ‘heuristics’, which allow them to reach a decision at a lower cognitive cost (Chaiken 1980; Fiske and Neuberg 1990; Fiske and Taylor 1991; Eagly and Chaiken 1993). When voters rely on the partisan heuristic, the impact of issue proximities should be reduced. *Compared to non-identifiers*, then, spatial factors should stand in a weaker relationship with electoral utilities. With respect to the model specified in Equation 2, this means that the parameters  $a_j$  and  $c_{ji}$  should be of opposite signs. The parameters  $a_j$  should be negative, indicating that electoral utilities become smaller as the issue distances between voter and party grows larger. The two  $c_{ji}$  parameters, by contrast, should have positive values, reducing the total impact of issue distances among party identifiers, as compared to non-identifiers.

### **Alternative specifications of the voting choice model**

While the model of Equation 1, from which I started, is a fairly standard specification for a unified model of voting choice, several alternatives have been suggested. In order to increase the confidence in my findings, it is important to show that they are consistent across various model specifications. To this end, I will estimate a series of alternative models, the results of which will be described after those of the main specification.

The first aspect which is disputed is the function linking voter utilities and the relative policy preferences of parties and voters. In the above equations, I rely on squared distances. This specification is the most usual one in this literature, but *linear* distances are sometimes used instead (see for example the discussion of this point in Merrill and Grofman 1999: 173f.; Adams et al. 2005: 17). Another point of debate is how to measure party positions when computing the voter-party distances. While most applications of the proximity model rely on individual perceptions, some have suggested that average perceived positions are closer to the underlying theory, and that they avoid projection effects, where voters’ perceptions are biased by their own preferences (Rabinowitz and Macdonald 1989; Macdonald et al. 1991; but see

Pierce 1997; Grynaviski and Corrigan 2006). Here, I will consider individual perceptions in the main series of analyses, and turn to average perceptions for the robustness tests.

Finally, some authors modify Equation 1 by adding party specific constants. These can be interpreted as a ‘valence’ term, capturing differences between the average evaluations of parties which are independent of their policy positions (Schofield 2004; Schofield and Sened 2005, 2006). By adding additional parameters, this specification necessarily improves the model fit. While I do not include such valence term in the ‘preferred’ specification, so as to keep a more parsimonious model, I will include them for one of the replications.

### **Data and operationalization**

To analyze the interplay between spatial factors and party identification, I focus on three recent Dutch elections, from 1994 to 2002. The Netherlands offer a multiparty system with several important issue dimensions. This multiplies the number of observable implications of my hypothesis. It is also important as the literature on electoral competition and spatial modelling has focused increasingly on multiparty systems. And most important, data from these Dutch election studies include a large number of questions on voters’ issue positions and on their perceptions of party positions.

An additional reason for investigating the Dutch case is linked with the measurement of the dependent variable, electoral utilities. Such measures are available in a large number of national election studies, in various forms: like/dislike scales, questions on the degree of sympathy, thermometer ratings, or probabilities of future vote. While all of these question formats measure the ‘attractiveness’ of parties, they are not equivalent to one another. As van der Eijk and Marsh (2007) have shown, the probabilities of future vote fare better than alternative measures on several central criteria (see also van der Eijk et al. 2006; Tillie 1995). In particular, probabilities of future vote display a stronger relationship with actual vote choice (van der Eijk and Marsh 2007: 11-14). This aspect is central, as I expect the electoral utilities to be the basis on which the actual voting choice is made.

Probabilities of future vote are measured in Dutch electoral studies with the following set of questions:

*Some people are quite certain that they will always vote for the same party.*

*Others reconsider each time to which party they will give their vote. I will mention a number of parties. Would you indicate for each party how probable*

*it is that you will ever vote for that party? Tell me the number that applies to the party. If you do not know a party or if you do not know the answer, do not hesitate to say so and we will continue with the next party.*

*The PvdA?*

*Etc.*<sup>3</sup>

Respondents give their answers using a ten-point scale, ranging from ‘certainly never’ to ‘sometime certainly’. For the present purpose, these scales were recoded to the 0–1 range. Probabilities of future vote were measured for nine parties in 1994 and for eleven in 1998 and 2002 – though I can use only part of these in my analyses, as questions on the perceived issue positions were asked for a smaller number of parties.

The other variables necessary to specify the model are party identification, voters’ issue preferences, and their perceptions of party positions on the corresponding dimensions. Voters’ and parties’ positions were measured on six or seven of the following eight issue dimensions:

- Euthanasia: ‘Euthanasia should be forbidden’ vs. ‘euthanasia should always be allowed to end a life upon a patient’s request’
- Crime (not in 1998):<sup>4</sup> ‘The government should be much tougher on crime’ vs. ‘the government is currently acting tough enough on crime’
- Income differences: ‘Differences in income should be increased’ vs. ‘differences in income should be decreased’
- Nuclear plants: ‘Additional nuclear plants should be built’ vs. ‘no new nuclear plants should be built’
- Ethnic minorities: ‘Foreign workers and ethnic minorities should be able to live in the Netherlands while preserving all customs of their own culture’ vs. ‘these people should adjust themselves fully to Dutch culture’
- European unification:<sup>5</sup> ‘European unification is going too fast’ vs. ‘European unification should be completed as fast as possible’
- Asylum seekers (not in 1994): ‘Allow more asylum seekers to enter’ vs. ‘send back as many asylum seekers as possible’

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<sup>3</sup> The order in which the parties are listed is randomized.

<sup>4</sup> The labels for the ends of the scale were different in 2002: ‘The government should act tougher on crime’ vs. ‘the government is acting too tough on crime’.

<sup>5</sup> In 1998 and 2002, the corresponding labels were: ‘European unification should go further’ and ‘European unification has already gone too far’.

- Social benefits (only in 1998): ‘Social benefits are too low’ vs. ‘social benefits are too high’

On all of these dimensions, respondents’ positions and their perception of party positions were measured with seven-point scales, recoded here to the 0–1 range. There are from four to six parties for which both electoral utilities and perceived positions can be measured. They are the PvdA, the VVD, D66, the CDA, GroenLinks (only in 1998), the GPV (only in 1998) and the LPF (only in 2002).

Party identification, finally, is based on the following question:<sup>6</sup>

*Many people think of themselves as adherents to a particular political party, but there are also people who do not think of themselves as an adherent to a political party. Do you think of yourself as an adherent or not as an adherent to a political party?*

Respondents declaring themselves an adherent to a particular party were then asked ‘To which party?’

The dependent variable being a scale, I will estimate the model of Equation 2 with OLS regressions.<sup>7</sup> The structure of the dataset is ‘stacked’, meaning that there are several observations for each respondent. The observations correspond to voter  $\times$  party relationships, rather than to individuals. This implies a multiplication of the number of observations. It also means that the number of available observations may vary across respondents, as the dependent variable or the perceived party positions may be missing for some voter  $\times$  party combinations. In order to reflect the true number of persons interviewed, the observations for each respondent were weighted by the inverse of the number of available voter  $\times$  party relationships for that person. The stacking procedure also implies that the observations corresponding to a given respondent may not be independent from one another. To avoid a possible bias, I have computed clustered standard errors.

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<sup>6</sup> In 1998, up to three parties were coded, and in 2002, up to four. For voters indicating multiple identifications, the direction of their ‘main’ identification was assessed by asking ‘Which of these parties do you feel most attracted to?’.

<sup>7</sup> Estimation by OLS may be problematic for two reasons: the dependent variable is bounded to the 0–1 range and it may be ordinal, rather than metric. In other words, it is possible that the intervals between the answer categories of the ‘probability to vote’ questions are not equidistant. As a consequence, I have also estimated this model with an ordered logit regression. I will comment on the corresponding results in the following section.

## Results

Table 1 presents the estimated parameters for all three elections. Looking first at the constant and at the main effects of the two party identification dummies, we observe similar results in each election. The constant indicates the electoral utility of a hypothetical voter who has no party identification and who has the same issue positions as a given party on all issues. This baseline electoral utility is about 0.7 on the 0–1 scale, in all three elections. Party identification, however, has the double effect of increasing this baseline value for the party a citizen feels close to, and to decrease the electoral utility for the other parties. This is shown by the positive values of the coefficients for the dummy variable specifying relationships between identifiers and their ‘own’ party, and by the negative value of the other identification dummy. This gap in the electoral utilities of party identifiers, between their preferred party and its competitors, is about 37 to 48 percentage points, depending on the election.

While a direct effect of party identification on voters’ electoral utilities is not surprising, the results in Table 1 offer also strong support for the model specification advocated above. It is necessary to use not 1, but 2 two dummy variables in order to capture the effect of traditional loyalties *and* the difference between identifiers and non-identifiers. In the model specification most often encountered in the analysis of spatial models, a single party identification dummy is used, to single out the relationships between identifiers and their preferred party, in contrast to all other voter  $\times$  party relationships. This is similar to assuming that the dummy variable ‘PID other’ is equal to 0, which the results presented here clearly show not to be the case.

[Table 1 about here]

Turning now to the effects of policy preferences, I first consider the case of citizens who have no party identification. For these voters, the effects of issue distances correspond to the parameters of the main effect of the issue variables. On most issue dimensions, these distances have a negative impact on voters’ electoral utilities. In 1994, for instance, their electoral utility decreases with a growing distance on the issues of euthanasia, income differences, nuclear plants, ethnic minorities, and European unification. Only the issue of crime has no significant impact on the utilities of non-identifiers. In 1998 and 2002, we also find that the party preferences of most non-identifiers depend on a large number of issues. Central to my hypotheses are the differences between identifiers and non-identifiers in the impact of issue proximities. The size of these differences is indicated by the parameters of the

interaction terms between party identification dummies and issue variables. Let us consider for example the issue of euthanasia in the 1994 election. Among non-identifiers, the estimated parameter of  $-0.26$  is significant and indicates a substantially large effect. Other things being equal, the electoral utility of a non-identifier decreases by a value  $0.26$  (on the  $0-1$  scale) as the voter-party distance changes from  $0$  to the maximum value of  $1$ . Among party identifiers, by contrast, the effect of the preferences on the euthanasia issue varies across parties. For parties they do *not* feel attached to, the effect of this issue preference is similar to that among non-identifiers. With respect to their preferred party, however, the relative issue preferences have a much smaller impact, corresponding to the sum of the direct effect ( $-0.26$ ) and of the first interaction term ( $+0.33$ ). The resulting coefficient is slightly larger than  $0$ , but not significantly so.

These variations in the effect of the voter-party proximities on the issue of euthanasia are illustrated in Figure 1. Each panel corresponds to one of the three voter  $\times$  party relationships, that is, non-identifiers with respect to any party on the left-hand panel, party identifiers with respect to their 'own' party in the middle panel, and, on the right, party identifiers with respect to other parties. Each panel shows the predicted electoral utility, on the y-axis, as a function of the voter-party distance on the issue of euthanasia. The 95 percent confidence intervals are indicated by dashed lines. On the left-hand panel, we see clearly how non-identifiers' predicted electoral utility decreases with growing distance on this issue. This corresponds to the strong negative effect we found in Table 1. In the middle panel, by contrast, there is no such effect of issue distance. The electoral utility of party identifiers for their 'own' party is independent of its relative location on this issue. Actually, the point estimates in Figure 1 show a tendency toward a *positive* relationship between issue distance and utility. This effect of issue distance, however, is here not significant. In the right-hand panel, finally, the results are quite similar to those of the left-hand panel. But the effect of issue distances is weaker here, as shown by the flatter regression line.

[Figure 1 about here]

As far as the issue of euthanasia in the 1994 election is concerned, then, it is very clear that the effect of issue proximity is not the same for all voter  $\times$  party relationships. As expected, this effect is conditioned by party identification status. While the voter-party distance on euthanasia matters for explaining the electoral utilities of non-identifiers, they are irrelevant for explaining the utility of party identifiers for their preferred party. Contrary to my

hypothesis, however, this effect of party identification on issue voting is strong only for one's 'own' party. The utilities of identifiers for the competitors of their 'own' party are also influenced by their ideological proximity on the issue of euthanasia. The effect is somewhat weaker than among non-identifiers, but it is clearly significant.

Looking at the results of Table 1 for the other issues and elections, we can see that the above pattern of results is quite frequent. On most issue dimensions, issue distances have a negative impact on the electoral utilities of non-identifiers. Among party identifiers, the effect is similar, though often weaker, but only with respect to the parties they do not identify with. For identifiers' preferred party, by contrast, issue distances have no impact at all. Altogether, out of 20 observations (issues by year combinations), the above pattern is found in 13 cases. And in two additional ones, issue distances have a significant impact among non-identifiers, but not at all among identifiers (with respect to both types of parties). The hypothesis which is implicitly made in virtually all 'unified' models, that is, that the impact of issue distances does not depend on party identification, is not confirmed for a single issue.<sup>8</sup>

As mentioned above, I have also replicated this analysis with alternative model specifications, as some aspects of the model are debated in the literature. I have performed four new series of analyses, by changing at a time one of the following aspects of the model: using linear voter-party distances, measuring party positions as the average perceived positions, introducing a party-specific valence term, estimating the model with an ordered logit regression. The corresponding results (not presented here) clearly point to the same overall conclusion. With each of these alternative model specifications, the dominant pattern is the same: Issue distances have no significant impact on party identifiers' utility for their 'own' party, but they have a significant and negative impact on the other electoral utilities. Furthermore, observations supporting the standard assumption of spatial models, that party identification does not interact with issue distances, are found only for one issue, euthanasia in 2002, and only in two of the replications (based on linear distances or including valence terms). These are the only cases out of 100 (i.e., issue by year by specification) where issue distances have a negative impact across all three groups of voter  $\times$  party relationships.

## **Conclusion**

In this paper, I have analyzed the role of party identification in models of voting choice that combine 'spatial' and 'behavioural' factors. I started from the observation that most models

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<sup>8</sup> Though, in the case of European unification in 1998, issue distances have no significant impact at all, in any of the three types of voter  $\times$  party relationships.

based on this framework make the implicit assumption that the effects of party identification and spatial utilities are additive. All voters, whether they identify with a party or not, are expected to respond similarly to changes in the relative issue positions of parties. I have suggested an alternative hypothesis: that party identifiers respond less strongly to issue factors than non-identifiers. This hypothesis is in line with the idea that party identification functions as a heuristic, allowing party identifiers to make their voting choice at a lower ‘cognitive cost’, without treating all information in a systematic way. This hypothesis should lead to a pattern of electoral utilities where identifiers have a high utility for their preferred party, lower utilities for all other competitors, and where these utilities are only weakly affected by parties’ spatial locations.

In order to test this hypothesis, I relied on data from the 1994, 1998, and 2002 Dutch election studies. These data allow analyzing the determinants of voters’ electoral utilities in a multiparty system, with a large number of issue dimensions. The results I have found are largely consistent across these three elections, but they fit only partially with my hypothesis. I found very clear support for the idea that party identification affects the relationship between issue distances and electoral utilities. It is evident on the basis of the results presented here that the effects of these two sets of variables are conditional on one another. However, contrary to what I expected, party identification does not simply lead to a weaker relationship between spatial proximities and *all* electoral utilities. Rather, among party identifiers, the impact of issue distances varies across parties. While their electoral utility for their preferred party is not affected at all by issue distances, party identifiers’ utilities for other parties are sensitive to issue proximities – as sensitive as they are among non-identifiers.

This pattern is dominant in the results I have presented here. Furthermore, it seems to be quite robust as it holds across various alternative specifications of the model, using linear or quadratic distances, individual or average perceptions of party positions, including or not a valence term, and estimating the model with OLS or ordered logit regression.

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Table 1. Impact of spatial utilities and of party identification on electoral utilities. Coefficients and robust standard errors from OLS regressions.

	1994		1998		2002	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Constant	0.71***	0.02	0.73***	0.01	0.67***	0.01
PID own	0.19***	0.02	0.22***	0.01	0.27***	0.02
PID other	-0.18***	0.03	-0.15***	0.02	-0.21***	0.02
Euthanasia	-0.26***	0.05	-0.38***	0.03	-0.17***	0.03
Euthanasia × PID own	0.33***	0.07	0.35***	0.06	0.09	0.06
Euthanasia × PID other	0.07	0.07	0.03	0.04	-0.03	0.04
Crime	-0.01	0.05	–	–	-0.12*	0.05
Crime × PID own	0.03	0.09	–	–	-0.14	0.14
Crime × PID other	-0.11	0.08	–	–	0.04	0.07
Income differences	-0.34***	0.05	-0.26***	0.05	-0.22***	0.03
Income differences × PID own	0.20	0.12	0.25***	0.06	0.27*	0.11
Income differences × PID other	0.20**	0.07	0.11 <sup>†</sup>	0.07	0.13**	0.05
Nuclear plants	-0.15***	0.05	-0.28***	0.05	-0.29***	0.02
Nuclear plants × PID own	0.16*	0.07	0.26***	0.07	0.23***	0.06
Nuclear plants × PID other	-0.06	0.07	0.08	0.07	0.11**	0.04
Ethnic minorities	-0.12*	0.06	-0.08	0.05	-0.24***	0.04
Ethnic minorities × PID own	-0.01	0.12	0.09	0.08	0.29***	0.09
Ethnic minorities × PID other	0.07	0.09	-0.03	0.07	0.04	0.06
European unification	-0.15*	0.06	-0.01	0.05	-0.11**	0.04
European unification × PID own	0.32***	0.08	0.00	0.07	0.08	0.08
European unification × PID other	0.09	0.10	0.07	0.07	0.07	0.06
Asylum seekers	–	–	-0.10*	0.05	-0.21***	0.04
Asylum seekers × PID own	–	–	0.08	0.06	0.13	0.15
Asylum seekers × PID other	–	–	-0.03	0.07	0.03	0.06
Social benefits	–	–	-0.18*	0.07	–	–
Social benefits × PID own	–	–	0.13	0.11	–	–
Social benefits × PID other	–	–	-0.08	0.10	–	–
N		685		1056		1206
R2		0.36		0.35		0.39

<sup>†</sup> p<0.1; \* p<0.05; \*\* p<0.01; \*\*\* p<0.001

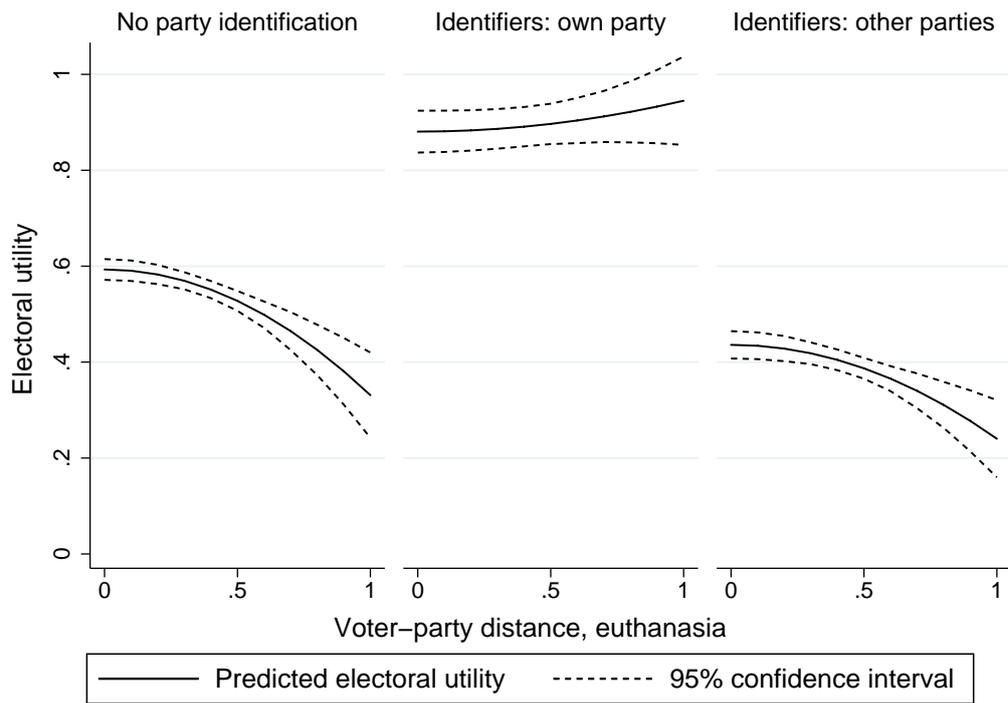


Figure 1. Effects of distances on the issue of euthanasia on electoral utilities in 1994, by type of voter  $\times$  party relationship