

Estimating Uncertainty in Party Policy Positions Using the Confrontational Approach

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Abstract

This research note extends the confrontational approach to estimating party policy positions by providing a way to estimate uncertainty associated with the measurements. The confrontational approach is a flexible method of determining party policy positions which is ideally suited to measure parties' positions on issues that are specific to a country or period in time. We introduce a method of estimating the uncertainty of confrontational estimates by restating the approach as a special case of an Item Response Theory (IRT), opening up the possibility of using the confrontational approach not only as a descriptive tool, but also as a means of testing hypotheses on party policy preferences. We illustrate our model using analysis of the 2010 Dutch parliamentary election and the 2009 European elections.

Keywords

party positions; confrontational approach; manifestos; uncertainty estimates; the Netherlands

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1. Introduction

While a large variety of methods to estimate party policy positions exist, there is a need for a flexible, tailored approach to estimating party positions in cases where information is scarce or country-specific sources of differences in party policy play a role. A confrontational approach to the measurement of party positions, which focuses on a limited number of specific policy items that capture the policy differences between parties on an issue dimension, has been shown to provide such measurements (Pellikaan *et al.* 2003, 2007; Gemenis and Dinas, 2010). Thus far, however, analyses using the confrontational approach have not included an estimate of uncertainty of party positions (Pellikaan *et al.* 2003, 2007; Gemenis and Dinas, 2010). We address this problem by restating the confrontational approach as an ordinal Item Response Theory (IRT) model. This provides researchers with estimates based on a properly specified model of party positions and the uncertainty that is associated with the party position estimates.

We will first shortly discuss the theory behind the confrontational approach, to outline its use in addition to existing methods of estimating party positions. Next, we reformulate the scaling method as a Bayesian Item Response Theory model, which provides us with uncertainty estimates. We illustrate the use of these estimates with data from Dutch election manifestos and European election manifestos in France, Ireland and the Netherlands.

2. The confrontational approach

The confrontational approach offers a tailored method of analysing party manifestos. Its aim is to provide valid measurements of party policy positions in particular settings, rather than comparing party positions across many countries and years. The method is

complementary to alternative ways to measure party policy positions, such as expert surveys (Laver and Hunt, 1992; Bakker et al. 2012; Benoit and Laver, 2006; Rohrschneider and Whitefield 2012) and content analysis techniques that are aiming to provide comparative measurements, such as the Comparative Manifesto Project (CMP) (Budge et al. 2001; Klingemann et al. 2006). This comparative approach usually comes at a cost in terms of measurement validity for particular settings.

The confrontational approach is a straightforward method that relies on hand coding of party positions on a limited number of relevant policy items. The basic assumption of the method is that it is possible to capture policy positions of political parties by determining their positions on a small number of specific policy items on which, in principle, divergent positions can be taken. This assumption is best understood when contrasting it with the saliency theory of political competition, which states that parties on many issues take relatively similar issue positions; they compete rather by selectively emphasizing certain issues over others (Budge et al. 2001). For example, very few parties would argue that the preservation of environmental beauty is a bad thing, but some find it more important than others. Similarly, (almost) everyone favours economic growth, but some find it more important than, for example, social welfare, while others do not.

It has been pointed out before that the saliency approach conflates issue position and issue saliency: in terms of the saliency theory these are not separate, but (left-right) positions can be derived from measuring parties attention to 'leftist' and 'rightist' issues (cf. Benoit and Laver 2006: 66). We agree with Kriesi et al. (2006: 930-931) that it is better to separate parties' policy position on an issue and the saliency they attach to it. Whether or not saliency and position are related is an empirical question. According to a

recent study by Dolezal et al. (2014: 57) the ‘core assertion [of the saliency theory] (...) fails to materialise in the majority of cases’.

The confrontational approach is concerned with parties’ policy positions rather than issue saliency. It stems from the observation that the electoral competition between political parties can be summarized very well by looking at specific issues on which they disagree (Kriesi et al. 2006: 931). For virtually each policy dimension there are specific items of disagreement between parties. For example, parties’ positions on the well-known ‘Taxes versus Spending’ dimensions may in a particular country at a particular time be captured very well by looking at debates on cutting pensions, increasing tax levels for the rich, or increasing the fuel allowance. As the confrontational method is related to item response theory, as we will outline below, we call these specific issues *items*. By coding party positions on a number of items that represent the policy dimension correctly, we can establish party policy positions on virtually any dimension that is of interest to the researcher. The main requirement is that documentary sources, such as election manifestos or parliamentary debates, provide enough material to establish parties’ positions on items relating to the policy dimension.

Party positions on items can be expressed in terms of a three-or-higher-point scale. We prefer a three-point scale (agree, neutral, or disagree with a specific item) over a five-point scale, because it is generally easier to determine the direction of the position of a party (does it agree or disagree with a specific item?) than to capture the intensity of this position (does the party fully agree or agree?). Selecting multiple items per dimension enables us to sufficiently discriminate between extreme and moderate parties.

It will usually be impossible to score party positions on all selected items: not all parties comment on all items. The question is how to deal with this missing information. We argue that, in line with what earlier applications of confrontational theory have done (Pelikaan et al. 2003), it is reasonable to assign a neutral score to these ‘non-positions’. After all, parties are free to take positions on any issue they wish and they are, certainly in the context of election manifestos, not bound by restrictions of length since the manifestos are no longer printed but placed on the websites of parties.

The manifestos are an integral part of the political competition between parties. Parties must choose among conflicts and “the reduction of the number of conflicts is an essential part of politics” (Schattschneider 1960: 64). The choice of having a position of pro and contra on some issue is the choice of conflicts a party wants to compete. Take, for example, the legalization of euthanasia in the Netherlands in 2001. In all subsequent elections, the orthodox Christian parties (CU and SGP) stated that they are against legalizing euthanasia and want to abolish this legislation. Contrarily, the social liberals (D66) want to extent the grounds for euthanasia and have included this in their manifestos since 2002. All other parties have no desire to change the status quo of 2001 concerning the law that legalizes euthanasia and therefore keep quiet on the issue in their manifesto. Our three-point scale measures policy change in two opposite directions (restricting versus broadening euthanasia); the middle position represents the status quo. If a party has no desire to change the status quo – for whatever reason – then it gets a zero score. We will discuss this assumption in greater detail below and show how researchers who do not want to make the assumption that keeping quiet means support for the status quo can treat these non-positions as missing data.

Existing applications for the confrontational approach have used a simple additive model to aggregate parties' positions on specific items into an estimate of their position on a policy dimension (Pellikaan et al. 2003, 2007; Gemenis and Dinas, 2010). For example, if a party scored -1 on 5 items, 0 on 3 items and +1 on 2 items, its position on the dimension would be calculated as $-5 + 2 = -3$. Unlike other methods of estimating party positions, users of the confrontational approach have not yet provided confidence intervals for their estimates.

3. The confrontational approach as an IRT model

Our goal is to provide estimates of the uncertainty associated with confrontational estimates of party positions. For example, if a party is located one point to the left of another party, how sure can we be that this party is really more left-wing than its competitor? It may very well be that the situation might be reversed with a different selection of items, even if the items are carefully selected. Many research questions require an uncertainty estimate of party positions in order to be answered. For example, if one wants to make the claim that one party is to the left of another party or that a party has changed its position over time it is necessary to have an estimate of uncertainty.

Uncertainty estimates can be obtained by restating the confrontational approach as a special case of an Item Response Theory (IRT) model. These models have been applied successfully to estimate legislator's ideal points based on roll call voting behaviour (Clinton, Jackman and Rivers, 2004). The items used in a confrontational analysis are, in many ways, very similar to roll calls in that a party either supports or

rejects a particular proposal. Just as with roll call datasets, a confrontational approach data matrix contains mainly ‘plusses’ and ‘minuses’.

The estimation of these roll call vote models relies on Bayesian methods, which allows estimation of the model through Markov Chain Monte Carlo (MCMC) simulation. Additionally, the Bayesian approach allows researchers to take into account prior beliefs about parties’ positions (if available).

There is one important difference between the confrontational approach and the analysis of roll call votes. The dataset of a confrontational-style study generally contains a substantial number of ‘zero-scores’: instances at which a party took neither a ‘pro’ nor ‘contra’ stance on an item. A party may be ambiguous about a particular item or may simply not mention it in an effort to maintain the status quo. In the standard roll-call model, these positions would be treated as (randomly) missing data. However in this case, the data is not really ‘missing’: a zero-score is substantively meaningful, as we argue above (Rosas, Shomer and Haptonstahl, 2014). Therefore, we estimate parties’ positions using an ordinal item-response model, which differentiates between ‘pro’, ‘neutral’ and ‘contra’ positions on items (Treier and Jackman, 2008; Rosas, Shomer and Haptonstahl, 2014).¹ In our empirical illustration we will explore the differences between our approach and treating zero-scores as missing. Eventually, researchers applying the confrontational method will have to decide if they are willing to make the assumption that a zero-score implies support for the status quo. In contrast to the existing additive scale, the IRT model is easily adapted to either situation.

The model is specified as follows. Let the party positions on a specific item be measured on a three-point scale, 1 (contra), 2 (neutral) or 3 (pro). Then the probability:

¹ This model is similar to an ordered probit model with unobserved values on the independent variables (Rosas, Shomer and Haptonstahl, 2014). We use item-specific cut points (Treier and Jackman, 2008).

$$\Pr(y_{ij} = 1) = F(\tau_{j1} - x_i\beta_j)$$

$$\Pr(y_{ij} = 2) = F(\tau_{j2} - x_i\beta_j) - F(\tau_{j1} - x_i\beta_j)$$

$$\Pr(y_{ij} = 3) = 1 - F(\tau_{j2} - x_i\beta_j)$$

Where y_{ij} is the score of party $i \in I$ on item $j \in J$, τ_j is a vector of length two containing the cut-points for item j , x_i is the unobserved party position of party i and β_j is the item discrimination parameter. $F(\cdot)$ is the normal cumulative density function (a probit link).

For the x_i we use standard normal priors and for the β_j parameters we employ normal priors with a mean of 0 and variance 4. For the threshold parameters τ_{j1} and τ_{j2} we use an ordering constraint to make sure that the first cut point has a lower value than the second. The first cut point follows a normal prior with mean zero and variance $6^2/3$. The second cut point equals the sum of the value of the first cut point and δ_j which is assigned an exponential prior with mean 0.5 (Treier and Jackman, 2008). The model is identified by excluding an intercept β_0 from the model and setting the scale of the error density σ to 1. The values of x_i are constrained to have mean zero and variance one².

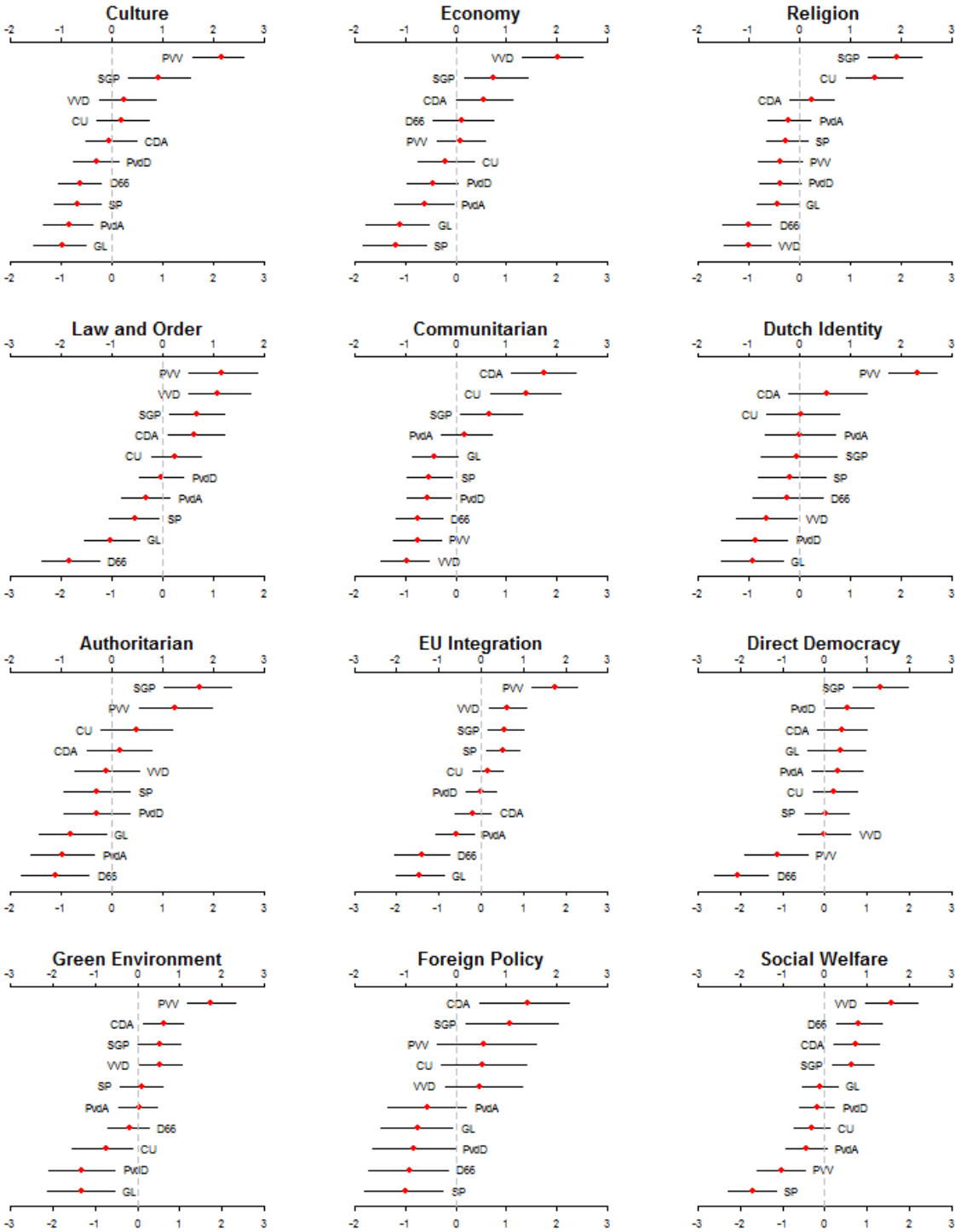
The model was estimated using an MCMC algorithm in JAGS 3.4, using code based on Rosas et al.'s (2009). We provide R code that makes it possible to run this model without knowledge of JAGS/BUGS; this should enable applied researchers to use this procedure for their own data.

² This latter transformation is done after the analysis, which results in a much quicker mixing of the Markov chain (Jackman 2010: 270). Of course, the other parameters have to be transformed accordingly. If the transformed $x^* = (x-c)/m$, where c is the mean and m is the standard deviation of x , then $\beta^* = \beta m$ and $\tau^* = \tau - \beta c$.

Table 1: Characteristics of the data on party policy positions on twelve issue dimensions (Netherlands, 2010)

Dimension	Parties	Items	Contra positions	Neutral Positions	Pro positions
Culture	10	10	18	58	24
Economy	10	10	31	35	34
Religion	10	10	34	44	22
Law and Order	10	10	19	56	25
Communitarian	10	10	4	66	30
Dutch Identity	10	10	2	70	28
Authoritarian	10	10	7	74	19
EU Integration	10	10	37	31	32
Direct Democracy	10	10	27	57	16
Green Environment	10	10	53	33	14
Foreign Policy	10	10	27	36	37
Social Welfare	10	10	36	29	35

Figure 1: Confrontational estimates of party policy positions with uncertainty estimates



Note: Point estimates with 95% credible intervals. For party abbreviations refer to appendix A.

4. Empirical illustration

We illustrate the approach using twelve policy dimensions for the Dutch national elections of 2010. The data, derived from parties' election manifestos, was collected by the second author and contains 10 items for each policy dimension (see Table 1). Parties' ideal point estimates are displayed in Figure 1.³ The religious dimension illustrates the classic Dutch antithesis between the religious parties (SGP, CU and CDA) on the one hand and the secular parties on the other hand and with the Liberal Party (VVD) and the Social Liberals (D66) at the other end of the dimension. The economic dimension shows the distinction between the economic rightist parties (VVD, SGP and CDA) and the leftist parties (SP, GL and PvdA). The religious and economic dimension are frequently used to describe the Dutch political space (Lijphart 1982; Schofield 2008: 139). The social movement of the 1960's has made new dimensions salient, such as direct democracy, green environment, social welfare and the authoritarian dimension which show a different ranking of parties. The globalization of West European politics (Kriesi et al 2008) has made other new dimensions salient, like the cultural dimension, Dutch identity and EU integration. These dimensions can shed some new light on the positions of parties in the political competition. For example, the PVV is often referred to as a radical right-wing populist party, and this label suggest that the PVV would be on the right side of most dimensions. The PVV has radical right-wing position on the law and order dimension and the cultural dimension, which includes the issues of the multicultural society and integration of foreigners. Also on the EU integration has the PVV an extreme view. However, if we take a closer look at the social welfare dimension

³ The point estimates correlate very highly with scores obtained by simply adding up the item scores ($0.96 < r < 0.99$ and $0.81 < \tau < 0.99$). We do find somewhat lower correlations for the direct democracy and foreign affairs dimensions, which can be related to the fact that for these dimensions lower levels of scalability can be observed.

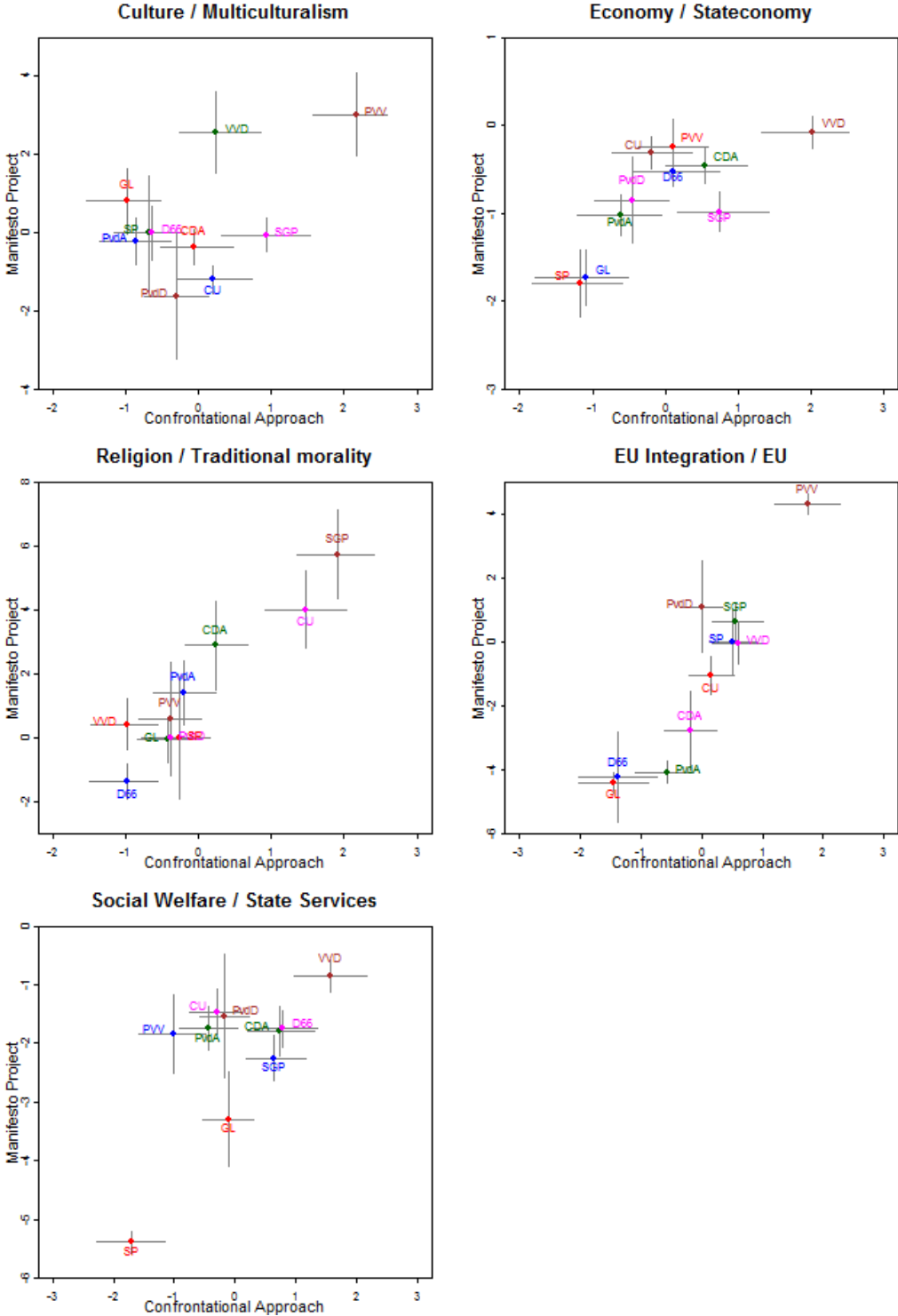
we see that the PVV is close to the SP and the PvdA on this issue and on the direct democracy dimension is the PVV with D66 supporter of a more decentralized and more democratic form of government. These examples show that we need a high number of policy dimensions to understand the political competition in some party system. According to Schattschneider there are many potential conflicts and each new political conflict produces a new allocation of power, “but *only a few become significant*” (Schattschneider 1960: 64). With the confrontational approach is it possible to construct tailor-made policy dimensions to analyze a specific political competition. Furthermore, it possible to go back in time and analyze party manifestos from earlier elections to examine the roots of a political conflict. We can show how established parties freeze the political conflict of the multicultural society and how the new parties exploit this political conflict.

Figure 1 displays 95% Bayesian credibility intervals, which indicate that we can be 95% sure that the (unobserved) ideal point of a party lies within this interval. To some researchers these credibility intervals might seem relatively wide. However, the uncertainty associated with the confrontational estimates is comparable to the uncertainty inherent in other manual content analysis techniques. To illustrate this, we compare the uncertainty of our confrontational estimates to the uncertainty of estimates derived from the Comparative Manifestos Project (CMP) for similar issue dimensions. Figure 2 provides the confrontational and CMP estimates for five comparable policy dimensions.⁴ For those dimensions about which parties write a lot in their manifesto, the CMP estimates are more certain, but the confrontational credible intervals are smaller for issues on which parties talk less, such as Religion, EU Integration and Culture

⁴ We use Lowe et al.’s (2011) scales because they provide 95% confidence intervals for these estimates.

for some parties. This indicates that the confrontational approach works particularly well when dealing with short manifestos and less discussed issues.

Figure 2: Comparing confidence/credible intervals for confrontational and manifesto project estimates



Note: Figure includes point estimates and 95% credible/confidence intervals. For party abbreviations refer to appendix A.

Particular research questions may need more certain party ideal point estimates than the ones produced here. In those cases, the most straightforward course of action would be to increase the number of items. By including more items, one can learn more about parties' ideal points. This would be a particularly appropriate strategy when dealing with very salient issues or longer party manifestos, i.e. in those cases in which more items can easily be found. Another means of reducing uncertainty is to include informative prior beliefs about parties' positions in the analysis. For example, we could use mass survey or expert survey estimates of party positions as 'prior beliefs'. This would lead to more certain estimates of parties' ideal points. If we use the Chapel Hill Expert Survey estimates as priors in our analysis, taking into account the variance in expert estimates, we are able to reduce the width of the confidence intervals by 25 to 42 per cent, while the point estimates remain largely the same as in the models with flat priors ($0.82 < r < 0.98$ and $0.60 < \tau < 0.96$). In general, the reduction of the width of the credible interval is larger when the CHES and Confrontational estimates were more alike: in those cases all information regarding parties' positions points in the same direction, which strengthens our posterior beliefs about them. If the priors correspond to the data, the party position estimates are likely to be similar to the model without the addition of information on prior beliefs, but more certain. The use of prior information is, therefore, likely to provide more efficient estimates of parties' positions.

We have argued that for our manifesto data, it makes sense to treat parties being silent on an item as support for the status quo. What would happen to our estimates if we would not be willing to make this assumption? Figure 3 displays estimates according to three methods of dealing with missing scores: (a) treating missing scores as zero-scores, support for the status quo, (b) treating missing scores as randomly missing, not

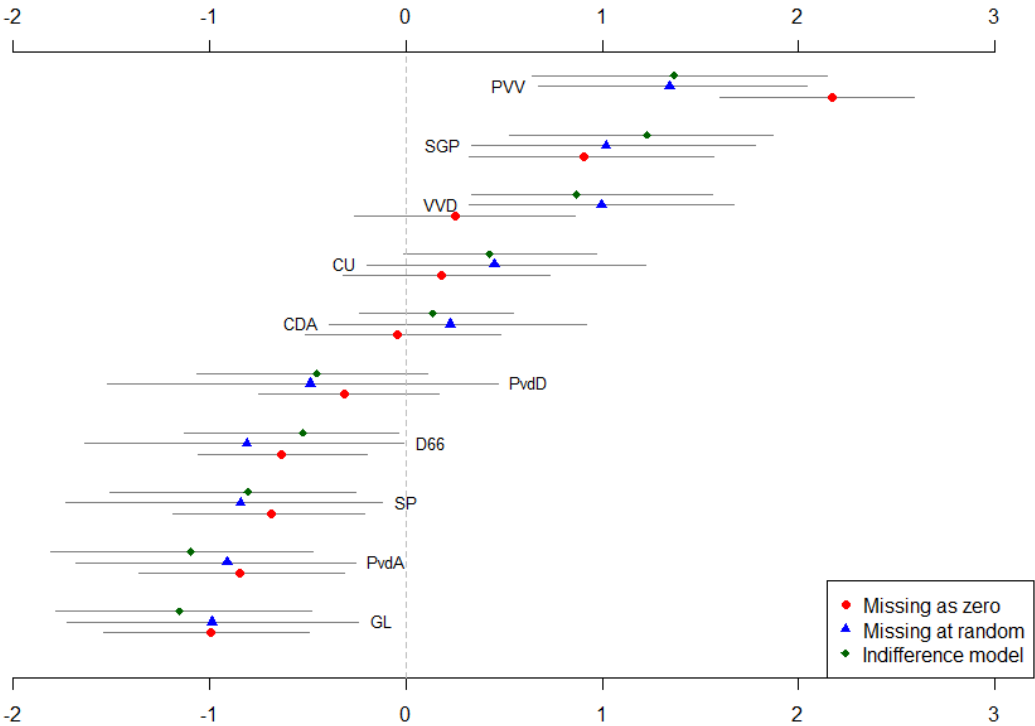
providing any information on a party's position on the dimension and (c) by applying an indifference model (Rosas, Shomer and Haptonstahl 2014), stating that parties that are likely not to mention an item if it is close to the status quo.⁵ We use the *cultural* dimension, which is particularly instructive, for one party supports all items, while other parties support or reject only a few. While the ordering of parties is very similar for each method, the 'missing as zero' approach estimates the PVV to be much more extreme than in the other two approaches. The reason is that the PVV supports all items on this dimensions, while SGP and VVD, support only 6 and 3 respectively. None of these parties explicitly rejects any proposal. If we assume that the silence of the VVD on many issues is informative of their position (they might think that some of the proposals are so extreme that they would not even merit them with a rejection), it makes sense to estimate the PVV as far more extreme than the VVD. If we, however, make the *missing at random* assumption, it might very well be that the VVD is equally monocultural as the PVV, but just fails to mention a number of items in the manifesto. Therefore, the two parties are estimated to take a similar position according to the missing at random approach.

For the other parties, the point estimates are quite similar between the different approaches to missingness. The credible intervals for the 'missing at random' approach are generally wider, reflecting the assumption that we cannot derive any information from a party's missing stance on an item. This effect is stronger for parties in the centre, which generally mention only a few items. The indifference model yields a compromise between the other two, both in terms of the point estimate and credible intervals.

⁵ This model employs actor-specific cut-points rather than item-specific cut-points. This way if a proposal is closer to the status quo than the particular actor-specific cut-point, we expect that party not to mention the item at all, because it would feel it is inconsequential.

We would argue that for this example of manifesto data, the estimates of the ‘missing as zero’ yields more valid estimates. However, if one would estimate policy positions by analysing other sources, like newspapers or editorials in newspapers (Kriesi et al. 2008), the missing at random approach can be appropriate.

Figure 3: Different approaches to missing data (Culture dimension)

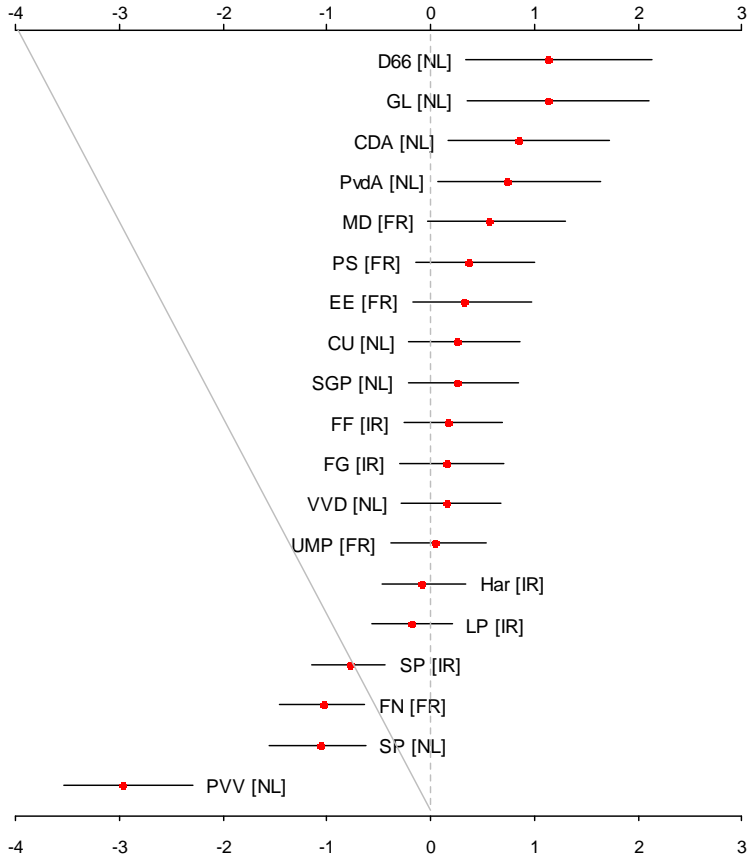


Note: Point estimates with 95% credible intervals. For party abbreviations refer to appendix A.

An analysis in the confrontational fashion need not be limited to a single election in a single country. As long as one can find items that are comparable over time or across space, it is possible to apply the confrontational method. We take the 2009 European election manifestos in the Netherlands, France and Ireland as an example. These countries have rejected the European Constitution or the Lisbon Treaty in a referendum,

which poses the question whether these countries differ in terms of parties' positions regarding European integration. We identified 20 items regarding both 'economic' and 'political' integration. These items combine very well into a single European integration dimension (Loevinger's coefficient of homogeneity = 0.51). We analysed this data set using the item response theory specification of the confrontational approach presented above. This yields the party position estimates displayed in Figure 4.

Figure 4: Estimated party ideal points on European Integration dimension

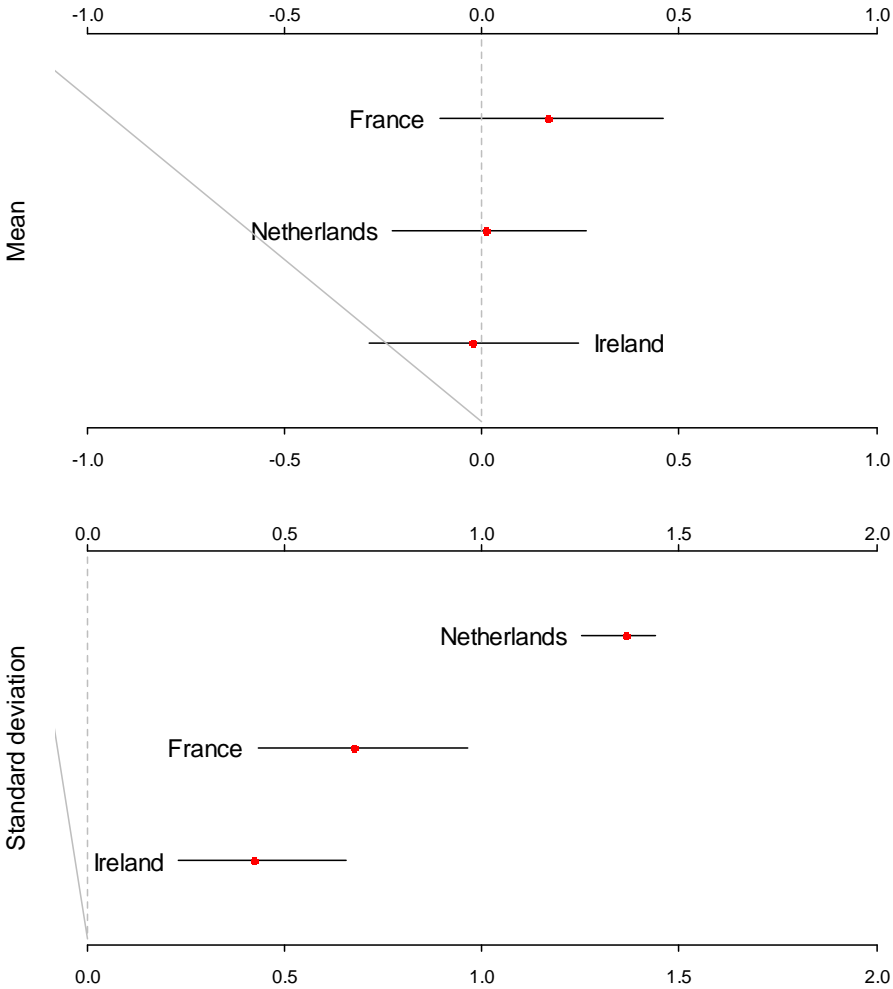


Note: Lines indicate 95% credible intervals. Figures are based on a single MCMC run with 50,000 iterations (after discarding the first 5,000 as burn-in). For party abbreviations refer to appendix A.

The most pro-European party is the Dutch social liberal party (D66), which campaigned with a clearly pro-European program. The populist right party Party for Freedom (PVV) from the Netherlands is most clearly opposed to European cooperation: it basically wants to limit the extent of European cooperation to the free market. A number of other parties also oppose further Europeanization, but they do not reject each and every item outright (the French Front National, the Irish Socialist Party and the Dutch Socialist Party).

Using the uncertainty estimates associated with the confrontational position estimates, we can examine whether Dutch, French and Irish parties took different positions on European integration. The top panel of figure 5 shows that in fact the mean position of political parties (weighted by the number of seats) is rather similar in each country. None of the differences between countries is statistically significant, as can be directly analysed from the posterior distribution ($p > 0.05$). Despite a lack of variation in the mean position of parties, there is a large and significant difference in the standard deviation of party positions per country. We can be very confident that there is a large standard deviation in the scores of the Dutch parties, which is exemplified by the fact that both the most pro-European and the most anti-European party are Dutch. The standard deviation of Dutch party positions is significantly larger than the standard deviation in France ($p < 0.01$), which is in turn larger than the standard deviation in Ireland, but this difference just falls outside of conventional levels of significance ($p = 0.06$). The average position of parties is similar between countries, but there is significant variation in the degree of polarization.

Figure 5: Estimates of party positions on EU integration per country



Note: The mean scores for parties are weighted by the number of seats parties have in the European Parliament. Lines indicate 95% credible intervals.

The above analysis illustrates that the confrontational approach is suitable for single-case as well as comparative research. The advantage of the confrontational approach lies primarily in its flexibility. It allows researchers to estimate parties' positions on specific aspects of European integration, such as common defence policy or common agricultural policy, which are not available from expert surveys or pre-defined manifesto coding schemes.

5. Conclusion

The confrontational approach provides a tailored way to estimate party policy positions. Previous analyses have applied the approach by creating additive scales of specific issues which together formed policy dimensions. While this is generally a straightforward and valid method, it lacks a method to estimate the uncertainty associated with the point estimates obtained. Noting the similarity between estimates of roll call behaviour and party positions as measured by the confrontational approach, we have provided a way to redefine the confrontational approach as an item response model (IRT) (Rosas, Shomer and Haptonshal, 2014).

The ability to estimate the uncertainty of party position estimates is central to the ‘value of a dataset as a scientific resource’ (Benoit et al., 2009). It allows researchers to distinguish between differences between parties that might be the result of measurement error and ‘real’ differences. This is especially important when looking at party position differences in subsequent elections: are (relative) changes in party positions beyond statistical margins of error? By restating the confrontational approach as a Bayesian IRT model, we have increased its capacity from heuristic tool to a means of testing hypotheses on party positions.

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Appendix A. Abbreviations of party names

Netherlands (NL)

CDA	<i>Christen Democratisch Appèl</i>	Christian Democratic Party
CU	<i>ChristenUnie</i>	Orthodox Protestant Party
D66	<i>Democraten 66</i>	Social Liberal Party
GL	<i>GroenLinks</i>	Green Party
PvdA	<i>Partij van de Arbeid</i>	Labour Party
PvdD	<i>Partij voor de Dieren</i>	Animal Welfare Party
PVV	<i>Partij voor de Vrijheid</i>	Populist Right Party
SGP	<i>Staatkundig Gereformeerde Partij</i>	Orthodox Calvinist Party
SP	<i>Socialistische Partij</i>	Socialist Party
VVD	<i>Volkspartij Voor Vrijheid en Democratie</i>	Liberal Party

France (FR)

EE	<i>Europe Écologie</i>	Europe Ecology
FN	<i>Front National</i>	National Front
MD	<i>Mouvement démocrate</i>	Democratic Movement
PS	<i>Parti Socialiste</i>	Socialist Party
UMP	<i>Union pour un Mouvement Populaire</i>	Union for a Popular Movement

Ireland (IR)

FF	<i>Fianna Fáil, The Republican Party</i>	Soldiers of Destiny
FG	<i>Fine Gael</i>	Family of the Irish
Har	<i>Marian Harkin</i>	Independent politician
LP	<i>Labour Party</i>	Labour Party
SP	<i>Socialist Party</i>	Socialist Party