Analyzing the Cross-National Comparability of Party Positions on the Social and EU Dimensions in Europe

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Abstract

Using survey vignettes and scaling techniques, we estimate common socio-cultural and European integration dimensions for political parties across the member states of the European Union. Previous research shows that economic left/right travels well across the EU, meaning that the placements of parties on that dimension are cross-nationally comparable; however, the social dimension is more complex, with different issues forming the core of the social dimension in different countries. The 2014 wave of the Chapel Hill Expert Survey includes anchoring vignettes which we use as “bridge votes” to place parties from different countries on a common social liberal/authoritarian dimension and a separate common scale for European integration. We estimate the dimensions using the Bayesian Aldrich-McKelvey technique. The resulting scales offer cross-nationally comparable interval-level measures of a party’s social and EU ideological positions.
Expert surveys are an increasingly common tool for measuring latent concepts in the comparative social sciences (Norris, Frank, and Martínez i Coma 2014; Lindberg et al. 2014; Teorell, Dahlström, and Dahlberg 2011). One of the most prominent uses of expert surveys has been to obtain information on the policy positions of political parties in contemporary democracies (Benoit and Laver 2006; Hooghe et al. 2010; McElroy and Benoit 2010; Rohrschneider and Whitefield 2012; Bakker et al. 2015; Polk et al. 2017).

A central concern about the expert survey approach to estimating party positions pertains to the cross-national comparability of respondent placements (Budge 2000; McDonald, Mendes, and Kim 2007). If experts for each country place only the parties within a single party system, can we be sure that respondents for France conceive of and use a particular scale in the same way as their colleagues that complete a survey for the parties of Lithuania? At a time when party government faces representational challenges from both populism and technocratic management (Caramani 2017) and other analysts speak of a crisis of party democracy (Invernizzi-Accetti and Wolkenstein 2017), it becomes all the more pressing to understand the comparability of fundamental measures in widely used data on party politics.

Prior research combined ‘blackbox’ scaling techniques (Poole 1998) with a series of anchoring vignettes (King et al. 2004; King and Wand 2007) embedded within the 2010 Chapel Hill Expert Survey to show that expert placements of political parties on the economic left-right dimension are cross-nationally comparable across Europe (citation withheld). Yet, we also know that politics in many contemporary European democracies is multidimensional, and that a “second” dimension is an important determinant of public opinion and party competition on issues such as immigration and European integration (Hooghe and Marks 2009; Bornschier 2010; de Vries and Hobolt 2012; Kriesi et al. 2012; Rovny 2014; Häusermann and Kriesi 2015; Hobolt and de Vries 2015). As challenger parties that emphasize this cultural dimension become more prominent across the continent (Hobolt and Tilley 2016), we require a deeper understanding of the cross-national comparability of this more complex dimension.
in today’s politics.

In addition to the social dimension, European integration has taken on increasing political importance, as the financial crisis and migration challenges have made clear (Bechtel, Hain-mueller, and Margalit 2014; Copelovitch, Frieden, and Walter 2016). And although recent scholarship suggests that citizens perceive party shifts on European integration (Adams, Ezrow, and Somer-Topcu 2014), we still know less about the cross-national comparability of the European integration dimension. In short, while there is growing evidence that the left-right dimension “travels well” for expert survey respondents (citation withheld), it remains unclear if this is the case for other prominent dimensions of political competition in contemporary European societies.

We argue that this cross-national comparability of party positions on the prominent dimensions is of increasing importance for social scientists. A transnational model of European party competition is currently underdeveloped, but several features of European politics point in this direction. First, there is strong evidence that party policy diffuses across national borders, with parties learning from and adapting to successful strategies in neighboring countries (Böhmelt et al. 2016). Second, after the 2014 European Parliament (EP) elections, the Spitzenkandidat—“lead candidate” of the EP group—receiving the plurality of the vote was elected as the President of the European Commission (Schmitt, Hobolt, and Popa 2015). And although the effect of this new method of selecting the leader of the Commission may have been limited and somewhat polarizing, this form of transnational party competition will likely remain a feature of subsequent EP elections (Hobolt 2014; Popa, Rohrschneider, and Schmitt 2016). Third, the organization of EP groups and switching between groups is largely driven by questions of policy congruence between the national and transnational levels (McElroy and Benoit 2010). Finally, there is growing discussion of replacing the British seats in the European Parliament with a transnational list after the United Kingdom leaves the European Union, which would substantially advance forms of political competition that
require additional information about the cross-national comparability of party positions.

This paper addresses questions of cross-national comparability for social left-right and European integration by combining anchoring vignettes embedded in the 2014 Chapel Hill Expert Survey (CHES) on party positions in Europe with Bayesian scaling techniques based on the work of Aldrich and McKelvey (Aldrich and McKelvey 1977; Hare et al. 2015). Comparing the rank orderings of political parties in the raw and adjusted data, we demonstrate that, on the whole, there are few significant changes in ordering. This finding suggests that all three dimensions as measured by expert surveys are cross-nationally comparable. Using both the raw and rescaled measures, we replicate a prominent study on the relationship between economic left-right, social left-right, and party positions on European integration (Marks et al. 2006). We report that the central findings of that article hold when using either the raw or rescaled data from 12 years later, lending confidence to both those original findings and also the 2014 CHES data on party positions.

1 CHES meets Bayesian Aldrich McKelvey

The 2014 Chapel Hill Expert Survey on party positions in Europe is the most recent wave in an ongoing research project designed to measure the positions of political party leadership on dimensions and policies related to the economy, socio-cultural matters, and European integration (Hooghe et al. 2010; Bakker et al. 2015; Polk et al. 2017). 337 political scientists that study political parties and/or European integration completed the survey, and all 28 EU members, plus Norway, Switzerland, and Turkey, were included in the 2014 round. This produced information for a total of 268 political parties in Europe.

Each expert respondent placed the parties of only one party system, which creates some uncertainty as to whether or not the expert respondents use the various policy scales in comparable ways across countries. In order to address this concern, the survey included a
series of anchoring vignettes (King et al. 2004; King and Wand 2007; citation withheld). This vignette section described the positions of three hypothetical parties for three dimensions: economic left-right, social left-right, and European integration. Unlike the majority of the survey, every CHES respondent had the opportunity to place these hypothetical parties on the same three scales, and these placements can then be used as bridging information to facilitate comparison of the respondents’ other placements.

When survey respondents in different contexts answer the same survey questions, there is the potential that these respondents have different interpretations of the response categories. This is especially true when the response categories represent relative positions on a latent scale, such as left-right ideology. Differential-item functioning (DIF) occurs when the underlying scale is interpreted differently across a range of respondents. DIF can lead to a distortion of the placements of stimuli (i.e., political parties) on a given scale. For example, a British party expert and a Greek party expert may view the end points of a pro/anti EU integration scale in different ways, confounding the ability to compare parties’ positions across countries.

In the late 1970s, Aldrich and McKelvey (1977) developed an estimation technique aimed at correcting DIF in perception/placement scales. Their solution, Aldrich-McKelvey scaling (henceforth A-M), assumes that there exists a true placement for a given stimuli (i.e. party) and that any individual placement of a stimuli is actually a linear distortion of this true placement. The A-M solution allows each survey respondent to have her own ‘distortion’ parameters, while treating the true placement of a stimuli as fixed across all respondents. The distortion parameters act in such a way as to allow different respondents to shift the true placement to the left or right and/or to expand or contract distances between placements on the underlying scale.

A-M takes advantage of the fact that survey respondents in their data all place the same set

1Online Appendix A provides the wording of the vignettes.
of stimuli as well as placing themselves on an ideological left-right scale. This combination of information allows for estimation of the individual distortion parameters and results in a scale in which the placements of the respondents and stimuli are meaningfully comparable. We take advantage of this insight and employ a Bayesian version of this estimator to compare placements of political parties in different countries, where the placements are derived from country-specific respondents. As long as all of the respondents place at least one common stimuli, the solution to this problem is relatively straightforward.

As much of an innovation as A-M scaling represents in terms of overcoming problems with DIF, there are some serious limitations. Most notably for our purposes, A-M scaling does not allow for missing data when deriving a cross-contextually comparable scale. This is quite problematic as the CHES asks country-specific experts to place parties on a variety of dimensions, but only in the a single country. That is, British experts place only British parties and Greek experts place only Greek parties. When all of these country-specific data are combined, the resulting data matrix contains huge amounts of missing data, as British experts do not place Greek parties, etc. With this structure to our data, classic A-M scaling is not an option. A second limitation is that classic A-M scaling does not yield estimates of uncertainty for the estimated stimuli positions, which makes it impossible to discern whether or not two different candidates/parties are statistically distinguishable from one another on some dimension.

In order to overcome these limitations, we use the Bayesian Aldrich-McKelvey (BAM) scaling procedure developed in Hare et al. (2015). In that paper, the authors place senators, candidates for the Senate, and survey respondents on a common ideological scale. Their data are strikingly similar to ours in that only respondents from a senator’s/candidate’s state place that senator/candidate, which leads to an abundance of missingness in the final data set. The survey used by Hare et al. (2015) also asked respondents to place President Obama, the Democratic and Republican parties, and the Tea Party on the same ideological
scale that they were placing their state-specific Senate candidates. So, while respondents in two different states placed different senators/candidates from one another, all respondents placed the president and the parties. These common stimuli act as ‘bridging’ votes and are the key to developing a cross-contextually comparable scale.

As described above, the 2014 wave of the CHES includes anchoring vignettes that we use as bridge votes to construct a cross-nationally comparable scale. The Bayesian implementation of A-M scaling easily handles the missing data in our model as missing values are automatically imputed via Markov chain Monte Carlo (MCMC). MCMC also directly produces measures of uncertainty that reflect both variance in the observed placements of parties as well as the degree of missingness for a given party. This yields larger standard errors for parties with fewer observed placements.

The BAM model closely resembles a Bayesian factor model, with the primary distinction being how the parameters and the latent variable are indexed. The factor model assumes that there is some latent variable, $X$, that is specific to a given respondent and that this latent variable is related to observable indicators through parameters (often called factor loadings) that are indexed by the observed indicators. In the BAM model, this indexing is reversed. This means that the the latent variable $X$ is indexed by the observable indicator and the parameters in the mode by respondent. For our data, this translates to the position of a party on a specific dimension $X_j$, where $j$ indexes party, being related to an expert’s placement of that party $y_{ij}$, where $i$ indexes expert, through parameters $\alpha_i$ and $\beta_i$. Following the above discussion $\alpha$ and $\beta$ are the distortion parameters that map the expert’s perception of a party’s placement onto the ‘true’ position of that party.

To be Bayesian, we must specify distributional assumptions for the unknown quantities in the model. We must also specify the distribution of the dependent variables, in this case the expert placements of the parties, $y_{ij}$. As these placements are 11 point scales, we assume them to be normally distributed with an estimated mean and variance. We then set the
mean position of expert $i$'s placement of party $j$ to be equal to the the true position of party $j$, $X_j$, as well as the parameters $\alpha_i$ and $\beta_i$. Formally, the model is:

$$ y_{ij} \sim N(\mu_{ij}, \tau_{ij}) $$
$$ \mu_{ij} = \alpha_i + \beta_i X_j $$

The unknown quantities, $\alpha$, $\beta$, and $X$ require prior distributions in the Bayesian setup. For this model, we specify uniform priors for $\alpha$ and $\beta$ and a standard Normal prior for $X$. Following Hare et al. (2015), we allow the variance of the expert placements to be a function of both expert and party, $\tau_i$ and $\tau_j$, with the total variance in $y_{ij}$ being the product of these 2 terms. Both the expert and the party variance terms are drawn from diffuse conjugate Gamma distributions. Formally:

$$ \alpha_i \sim Uniform(-100, 100) $$
$$ \beta_i \sim Uniform(0, 100) $$
$$ X_j \sim N(0, 1) $$
$$ \tau_{ij} = \tau_i \tau_j $$
$$ \tau_j \sim Gamma(1,.1) $$
$$ \tau_i \sim Gamma(\nu, \omega) $$
$$ \nu \sim Gamma(0.1, 0.1) $$
$$ \omega \sim Gamma(0.1, 0.1) $$

In order to identify the model and to set the scale of the latent variable, we constrain the $\beta$s to be positive. This assures that higher values of the latent variable, $X$, are associated with higher values of the expert placements. Substantively, this means for the economic and social left-right dimensions, higher values of the latent variable indicate more right-wing positions whereas for the EU dimension, higher values of the latent variable represent a more pro-EU position. As an additional identification constraint, we specified prior positions for the
vignette party placements that respects the intended ordering of the vignette placements. This is what King et al. (2004) refer to as vignette equivalence and is a requirement of anchoring vignette-based scaling. That is, in order to be included in the model, experts must correctly perceive the ordering of the vignette parties. We require that each party be placed by at least 3 experts in order to be included in the estimation. With these restrictions, we are able to produce a cross-nationally comparable scale for the economic left-right, social left-right, and pro/anti-EU integration dimension for 249 parties based on the input of 337 experts. We estimated the model using JAGS via the \texttt{R} package \texttt{rjags}. For each dimension, we ran two chains for 20,000 iterations, discarding the first 5,000 as a burn-in. The chains show strong evidence of convergence across a variety of diagnostics.

After running the BAM procedure for each of the three dimensions for which we have vignette placements, we then sample 1,000 draws from the posterior distribution of each party’s placement on each dimension. Figures 1 and 2 summarize these distributions graphically by plotting the mean and 95% credible interval of each party’s distribution for the social dimension, separating the dimension into two graphs in order to make reading the y-axis labels easier.\footnote{The party names and abbreviations in Figures 1 and 2 can be found online at chesdata.eu in the 2014 codebook. In Online Appendix B, Figures B1 and B2 plot the left-leaning and right-leaning parties in terms of economic positions while Figures B3 and B4 display the distributions of parties on the European dimension.}

2
Party Placements with 95% Credible Intervals

Social Left–Right: left parties

Figure 1: Social left-right
Figure 2: Social left-right
As Figures 1–2 illustrate, there is a great deal of variation across these parties in terms of their positions on the social dimension. Yet, it is obviously important to examine the rescaled data more carefully and test their performance in analysis, to which we now turn.

2 BAM vs. Raw

What meaningful differences, if any, exist between the raw and adjusted data? The correlations between the raw and rescaled measures are very high, between 0.97 and 0.99. But to explore this further, we sorted the data based on their rank orders on the two scales and plotted these against each other. Thus, we created 2 new variables for each dimension that range from 1 to 249, representing the lowest to highest values on each dimension. Next, we plot these two sets of rank orders against each other. If there were no differences in the rank orders between the BAM solution and the unscaled expert placements, the points would fall in a straight 45 degree line. To the extent that the rank orders differ, the points diverge from the ‘perfect’ fit. Figure 3 displays these comparisons for the social dimension.

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3 Parties with particularly large credible intervals tend to be those that were placed by smaller numbers of experts.

4 Figures C1 and C2 in Online Appendix C display these comparisons for economic left-right and the European integration.
Figure 3: Comparison of Social left-right rank orders
In this plot, we highlight (with diamonds) parties that differ in rank ordering between the two scales by at least two standard deviations. These plots show that while there are some differences in the rank ordering of the parties across the two scales, for a majority of the parties in the data, these differences are not very large. It is particularly remarkable that the difference between the raw and adjusted data is so small for the social dimension, which contradicts our expectations given the complexity of this dimension relative to economic left-right and variation in its content from country to country. Yet, perhaps the small difference between the raw and rescaled social dimension reflects the growing importance of questions surrounding immigration, a core issue for this dimension in most if not all countries, and the clarity of party messages on migration.

As an additional test of the raw vs. rescaled measures, we replicated a prominent paper (Marks et al. 2006), which models support for European integration in 2002 using the economic and social dimensions. In online Appendix D, we used the rescaled dimensionality measures created in this paper to replicate and extend this earlier study of party-based Euroskepticism. This replication supports the key finding in that paper, namely that ideological extremism is still a crucial factor to consider. It is also striking that the raw and rescaled data perform rather similarly in these models, which lends confidence to users of the raw CHES scores.

3 Discussion

In this paper, we combined a series of anchoring vignettes that depicted hypothetical political parties with Bayesian scaling techniques to produce cross-nationally comparable economic left-right, social left-right, and European integration positions for a wide range of political parties in Europe. There was already growing theoretical and empirical evidence that the economic left-right dimension travelled well across Europe. The findings we report in this
paper indicate that party positions on social left-right and European integration also show a strikingly high degree of pan-European comparability. That is, the Bayesian Aldrich-McKelvey scaling solution produces a cross-contextually comparable measure and given that the raw expert party positions are so closely related to the rescaled party positions, we are ever more confident in the cross-national comparability of our experts placements. This is important information, both because these dimensions makes up an increasingly prominent aspect of party competition in Europe, and because it suggests that the items included in the Chapel Hill Expert Surveys measure these dimensions effectively. For users of the Chapel Hill Expert Survey data, these results provide more confidence in the cross-national comparability and validity of the CHES party positions.

Our replication of a well-known study on the relationship between economic and social ideology and European integration (Marks et al. 2006) further illustrates this point. Although the research we replicated used unscaled party positions from 2002, we find a similar structure to party positions on European integration in the 2014 raw and rescaled data. Party positions on European integration are structured and are systematically related to ideology on the economic and social left-right dimensions. In sum, the work that we present here supports the cross-national comparability of key concepts for party competition in contemporary European societies.
References


Schmitt, Hermann, Sara B. Hobolt, and Sebastian A. Popa. 2015. “Does personalization in-