# Web Appendix to: Social Divisions, Party Positions, and Electoral Behaviour 

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## A Reconstruction of parties' policy positions

The reconstruction of parties' political positions used in the paper rests on data from the Comparative Manifestos Project (CMP) (Budge et al., 2001). These data consist of percentages of quasisentences that refer to each of 57 more or less general "policy goals." The percentage of quasisentences that mention a policy goal favourably or unfavourably are interpreted as its (positive or negative) emphasis within a specific manifesto. Typical approaches to reconstructing general left/right political positions from CMP data operate directly on these emphases (e.g. Gabel and Huber, 2000). However, Laver and Garry (2000) distinguish between at least two political dimensions. They group policy goals in two main policy areas and analyse the relative emphases of policy goals within these areas, and reconstruct their two left/right dimensions, one economic, one social, on the base of these two policy areas. The approach to reconstructing parties' political positions pursued in the paper is similar to Laver and Garry's approach in this respect. But instead of constructing additive/subtractive scores from relative emphases, I use multidimensional unfolding of transformed relative emphases, a procedure motivated from a spatial model of party manifestos.

In this spatial model, each policy domain can be represented by a one- or $D$-dimensional Euclidean space. Every party takes up a position $\boldsymbol{x}_{j}$ in each of these policy spaces, whereas each policy goal considered in the CMP data corresponds to a position $\boldsymbol{p}_{i}$ in exactly one policy space, but a policy space can contain several policy goals. The relative emphasis of a policy goal within
a policy domain, that is, its emphasis divided by the emphases of all other goals from the same policy domain, then is a function of the distance $d_{i j}:=\left\|\boldsymbol{p}_{i}-\boldsymbol{x}_{j}\right\|$ between the position $\boldsymbol{p}_{i}$ of policy goal $i$ and the position $\boldsymbol{x}_{j}$ that a party takes in policy space $\mathcal{D}$ by the formulation of manifesto $j$. The relation between the distance $d_{i j}$ between the position of policy goal $i$ and the position that a party takes in its electoral platform $j$ is assumed to be of the form:

$$
\begin{equation*}
r_{i j}=\frac{e^{-\left(\boldsymbol{p}_{i}-\boldsymbol{x}_{j}\right)^{2}}}{\sum_{i \in \mathcal{D}} e^{-\left(\boldsymbol{p}_{i}-\boldsymbol{x}_{j}\right)^{2}}} \tag{1}
\end{equation*}
$$

Thus, the relation between the relative emphasis $r_{i j}$ and the distance $d_{i j}$ can be approximated by $\hat{d}_{i j}:=\sqrt{-\ln \left(r_{i j}+\epsilon_{i j}\right)}$, where $\epsilon_{i j}$ is a small constant added if $r_{i j}$ is zero. Once these approximate distances are computed, Schönemann's (1970) algorithm is used to obtain coordinates for the positions of the policy goals and for the party manifestos. Since unfolding solutions are invariant to rotations of the coordinate system, a Procrustes rotation is then applied that allows for a straightforward interpretation of the main coordinate axes in terms of political dimensions.

Since for the space of economic policy a one-dimensional solution is used, no such rotation is necessary. For the space of non-economic domestic policy, however, a multidimensional unfolding solution is used. The criterion for its rotation is such that the coordinate values of policy goals "National way of life positive" and "Law and order" are as close as possible to 1 and coordinate values of policy goals "National way of life negative" and "Democracy" are as close as possible to -1 on the first coordinate axis, the authoritarian/liberal dimension, and such that the coordinate values of "Traditional morals positive" and "Traditional morals negative" are as close as possible to 1 and -1 respectively on the second axis, the traditionalist/modern dimension. The unfolding solution of the non-economic domestic policy space contains four further "noise" dimensions. No special structure for these further coordinate axes is required by the rotation criterion in use.

After rotation, the reconstructed positions of party manifestos on the economic left/right, libertarian/authoritarian, and modernist/traditionalist dimensions are standardised to a mean of zero and a standard deviation of one. This standardisation is used to enable a better comparability of effects of parties' policy positions on different political dimensions.

For the reconstruction of the policy positions only a subset of the countries covered by the CMP are considered, for which it is expected that the political dimensions that characterise party
competion in major established democracies are present. These countries are: Australia, Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, United Kingdom (without Northern Ireland), Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United States.

## B Some results on parties' policy positions

The new edition of the Comparative Manifestos Project data set contains "tentative" classifications of parties into party families. These classifications are used in the following to present and discuss mean policy positions of party families. ${ }^{1}$ Although there does not yet exist a complete consensus about the classification of parties in these terms-there are different schemata of classification and the classification especially of smaller parties diverges between different authors (e.g. Mair and Mudde, 1998; Humphreys and Steed, 1988; Mair, 1991; Smith, 1989; Ware, 1996; von Beyme, 1985) - the classification used in the CMP data nevertheless may help understanding some of the result of the main part of the paper.

Figure $A$ shows a scatterplot of party families' mean positions along the economic left/right and libertarian/authoritarian dimensions. These mean positions are computed from the standardised positions of parties' manifestos on these dimensions resulting from the unfolding procedure described in the previous section by taking the sample means for each party family. The mean positions of the party families cluster along the diagonal of the scatterplot shown in the figure suggesting that positions along the two dimensions are correlated. But the correlation is obviously not perfect and there are at least two party families that are characterised by an extreme position on only one of the two policy dimensions: The family of communist parties is the most leftist party in economic policy terms, but not the most libertarian party family, and the family of nationalist parties is the most authoritarian party family, but not the most rightist party family in terms of economic policy. This is quite in line with expectations connected with such labels as communist or nationalist, as are the mean positions of other party families (e.g. Mair and Mudde, 1998; Ware, 1996; von Beyme, 1985): The family of green parties is the most

[^0]Figure $A$ : Mean standardised policy positions of party families on the economic left/right and libertarian/authoritarian dimension, 1945-2003

libertarian party family. The social democratic family is left from the centre but right from the communist in economic policy terms, whereas the liberal and conservative families are on the right side on this dimension. The latter two families seem to be more distinct in terms of their position on the libertarian/authoritarian dimension than on the economic left/right dimension, which may be seen as reflecting the historical origin of the division between these parties.

Figure $B$ plots the party families' mean positions on the libertarian/authoritarian dimension against their mean positions on the modernist/traditionalist dimension. Again, the party families' mean positions cluster around the diagonal of the scatterplot, but more so in the bottom-left quadrant than in the top-right quadrant. Here, the Christian democratic family stands out with their position at the modernist/traditionalist dimension, who has relatively centrist positions on the economic left/right and on the libertarian/authoritarian dimension. The conservative party family family, however, is somewhat more authoritarian than the Christian democratic family but more centrist on the modernist/traditionalist dimension. Only the nationalist party fam-

Figure B: Mean policy positions of party families on the libertarian/authoritarian and modernist/traditionalist dimension, 1945-2003

ily takes a similarly radical position on this dimension, but also on the libertarian/authoritarian dimension.

The change of parties' positions is pertinent to the interpretation of the result of the main part of the paper. Examining them may help to decide whether voters truly change policy preferences or just follow "their parties," if the patterns of their reactions to parties' policy positions change over time. Changes in the mean positions of the party families in the countries considered in the paper during the period of observation are therefore shown in Figures $C, D$, and $E$.

Figure $C$ shows how party families' mean positions change in the area of economic policy. Obviously, the general pattern of change is that of convergence to the centre-right. This is especially obvious with regards to the positions of the communist and conservative families. The centrist movement of communist parties may be a reflection of an ideological moderation of parties such as the Communist Party of Italy which, breaking with orthodox Marxism, later changed itself into the Party of the Democratic Left. But also the social democratic and liberal families show a

Figure $C$ : Change in mean policy positions of party families on the economic left/right dimension in Belgium, Denmark, France, Germany, Great Britain, Italy and the Netherlands from the period of 1975-1989 to the period of 1990-2003.

convergence to the centre-right. This finding makes clear that there is no contradiction between the finding reported the paper that classes do not converge in their reactions to parties' economic left/right positions and the moderate reduction of class differences with regards to the support for left parties or labour parties found e.g. by Elff (2007). Rather, this reduction seems accountable for by the parties' convergence on the economic left/right dimension.

From Figure $D$ it becomes obvious that there is more movement of the party families on the libertarian/authoritarian dimension than on the economic left/right dimension. This movement generally is in the direction of the authoritarian pole of the former dimension. There is one exception to this trend, the family of green parties, which heads in a libertarian direction. In the paper it appears that classes and groups distinguished by church-attendance exhibited changes in their reaction to parties' positions on this dimension, some of them quite substantial. Given the movement of the party families revealed in Figure $D$ it is possible that the change is not a substantial one of voting patterns, but rather a reflection of voters from different groups following

Figure $D$ : Change in mean policy positions of party families on the libertarian/authoritarian dimension in Belgium, Denmark, France, Germany, Great Britain, Italy and the Netherlands from the period of 1975-1989 to the period of 1990-2003.

"their" parties in their changes on this dimension. Of course, a more detailed analysis would be needed to establish this, but this would go beyond the scope of the paper.

As Figure $E$ reveals, party families' positions on the modernist/traditional dimension are more stable than their positions on the economic left/right and on the libertarian/authoritarian dimension. There is some limited movement among social democrat, communist, and liberal parties and some more movement among ethnic/regional and nationalist parties, but conservative parties and christian democrat parties seem to almost stay put. The relative stability of party families' polarisation along the modernist/traditionalist dimension together with the relative stability of voters reactions to parties' positions on this dimension may serve to explain the relative stability of religious/secular cleavages (as compared to class cleavages) found by Elff (2007).

Figure E: Change in mean standardised policy positions of party families on the modernist/traditionalist dimension in Belgium, Denmark, France, Germany, Great Britain, Italy and the Netherlands from the period of 1975-1989 to the period of 1990-2003.


## C Survey Data and details of operationalisation of social cleav-

## ages

Eurobarometer surveys have been conducted on behalf of the Commission of the European Commission/European Union since 1973. In the paper, I make use of data from only those surveys that include questions on the respondent's occupation, church attendance, and vote intention. Whereas questions on respondents' occupations are included up to the newest waves of the Eurobarometer, church-attendance is covered only occasionally in these surveys. Table $A$ lists those surveys in which the variables of interest are included.

Occupation is the key indicator on which the operationalisation of social class in the paper is based. The number of categories, in which respondents or household main breadwinners' occupations are recorded, varies over time. The newer Eurobarometer surveys use a more detailed scheme of occupational categories than the older ones. In order to attain over-time consistency,
however, the categories of the class schema used in this paper are limited by the less detailed occupational category schemes used in the earlier Eurobarometer surveys. Table $B$ shows these occupational schemes used in the surveys and how they are translated into the class schema of the paper.

Based on results of de Graaf and Heath (1992), assignment of respondents to social classes is done on household basis, following the class dominance principle (see also Erikson, 1984; Erikson and Goldthorpe, 1992): Respondents are assigned a household class position based on their own occupation unless they are married and their spouse's occupation belongs to a higher class position. Table $C$ shows how respondents' and spouses' class positions are combined into household class positions in these cases. Where available, respondents' reports on their last occupation or of the main breadwinners' last occupations are used to assign class position to retired or unemployed respondents.

Table A: Eurobarometer opinion surveys on which estimates in Table 2 and 3 of the paper are based

| EB-Nr. | Survey date | EB-Nr. | Survey date |
| :---: | :---: | :---: | :---: |
| 3 * | May 1975 | 30 | October-November 1988 |
| 4 | October-November 1975 | 31 | March-April 1989 |
| 5 | May-June 1976 | 31a | June-July 1989 |
| 6 | November 1976 | 32 | October-November 1989 |
| 7 | April-May 1977 | 33 | Spring 1990 |
| 8 | October-November 1977 | 34.0 | October-November 1990 |
| 9 | May-June 1978 | 35.0 | Spring 1991 |
| 10 | October-November 1978 | 36 | October-November 1991 |
| $10 a^{*}$ | October-November 1978 | 37.0 | March-April 1992 |
| $11^{*}$ | April 1979 | 38.0 | September-October 1992 |
| $12^{*}$ | October 1979 | 39.0 | March-April 1993 |
| 13 | April 1980 | 40 | October-November 1993 |
| $14 *$ | October-November 1980 | 41.0 | March-May 1994 |
| $15 *$ | April 1981 | 41.1 | June-July 1994 |
| 16 | October-November 1981 | 42 | November-December 1994 |
| $17 *$ | March-April 1982 | 43.1* | April-May 1995 |
| $18 *$ | October 1982 | 44.0* | October-November 1995 |
| $19^{*}$ | March-April 1983 | 44.1* | November-December 1995 |
| $20^{*}$ | October 1983 | 44.2* | January-March 1996 |
| $21^{*}$ | April 1984 | 46.0 * | October-November 1996 |
| $22^{*}$ | October 1984 | 48.0* | October-November 1997 |
| 23 | April 1985 | 49* | April-May 1998 |
| $24^{*}$ | October 1985 | 51.0* | March-April 1999 |
| 25* | April 1986 | 52.0 * | October-November 1999 |
| $26^{*}$ | November 1986 | $53^{*}$ | April-May 2000 |
| $27 *$ | March-May 1987 | 54.1 * | November-December 2000 |
| $28^{*}$ | November 1987 | 56.3* | January-February 2002 |
| 29* | March-April 1988 |  |  |

Notes: Eurobarometer surveys marked with an asterisk are used only in Table 3 and Figure 3 of the paper, since they contain no data on church-attendance.

Table B: Assignment of Eurobarometer occupational categories to social classes

| Assigned class position | Eurobarometer occupational category |  |  |
| :---: | :---: | :---: | :---: |
|  | EB 3-29 | EB 30-36 | EB 37-42 |
| Manual worker | "Manual worker" | "Other manual worker" | "Other, unskilled manual worker" |
|  |  | "Skilled manual worker" | "Skilled manual worker" |
|  |  | "Supervisors" | "Supervisors" |
| Intermediate (routine nonmanual and lower service class) | "White collar, office worker" | "Non office employees, non manual work, service sector, shop assistant" | "Employed position, not at the desk but in service : hospital, restaurant, police, fireman" |
|  |  |  | "Employed position, not at the desk but travelling, sales manager" |
|  |  | "Other office employees" | "Employed position, working mainly on the desk" |
|  |  | "Middle management" | "Middle management, other management, department head, junior manager, teacher, technician" |
| Service class proper | "Executive, top management, director" | "General management" | "General management, top management, director" |
|  |  | "Employed professional, employed lawyer, practitioner, accountant etc." | "Employed professional, doctor accountant, architect" |
| Self-employed | (Self-employed) "Professional - lawyer, accountants etc." | (Self-employed) "Professional, lawyer, practitioner, accountant etc." | (Self-employed) "Professional lawyer, medical practitioner, accountant, architect" |
|  | "Business - owner of shops, craftsman, proprietor" | "Owner of shops or companies, craftsman, proprietors" | "Owner of a shop, craftsman, other self-employed person" |
| Farmer, etc. | "Farmer, fisherman, skipper" | "Farmer" | "Farmer" |
|  |  | "Fisherman" | "Fisherman" |

Table C: Conversion of respondent's and spouse's occupational class into household class

| Respondent's | Spouse's occupational class |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | Manual worker | Intermediate | Service class | Self-employed | Farmer |
| Manual worker | Manual worker | Intermediate | Service class | Self-employed | Farmer |
| Intermediate | Intermediate | Intermediate | Service class | Self-employed | Farmer |
| Service class | Service class | Service class | Service class | Self-employed | Farmer |
| Self-employed | Self-employed | Self-employed | Self-employed | Self-employed | Farmer |
| Farmer | Farmer | Farmer | Farmer | Farmer | Farmer |

## D Reducing choice data to minimal sufficient statistics

Each of the independent variables of the models in the paper obtain only a finite number of distinct values. Class can obtain at most five (or when farmers are excluded four) distinct values, church-attendance can obtain at most three distinct values, time can obtain at most 28 distinct values (if the period of observation ranges from 1975 to 2002). Further, within each country sample of a specific Eurobarometer survey, the number of available party alternatives is fixed, as are the policy positions of the parties. Consequently, the number of distinct combinations of independent variables is also limited. The choices of individuals thus can be grouped into covariate classes, sets of individuals that share the same values of the independent variables and the same choice sets.

Now let $\boldsymbol{x}_{i j}$ denote the vector of independent variables and $\boldsymbol{u}_{i j}$ the vector of random effects for individual $i$ and alternative $j$ in individual $i$ 's choice set $\mathcal{S}_{i}$ and $\boldsymbol{\beta}$ the coefficient vector of the model. Suppose that each individual is member of a covariate class indexed by $k$, where membership is denoted by $i \in k$, so that $\mathcal{S}_{i}=\mathcal{S}_{k}, \boldsymbol{x}_{i j}=\boldsymbol{x}_{k j}, \boldsymbol{u}_{i j}=\boldsymbol{u}_{k j}$ and consequently

$$
\eta_{i j}=\boldsymbol{\beta} \boldsymbol{x}_{i j}+\boldsymbol{u}_{i j}=\boldsymbol{\beta} \boldsymbol{x}_{k j}+\boldsymbol{u}_{k j}=\eta_{k j} .
$$

Then, the conditional log-likelihood of the mixed conditional logit model (conditional on the values of the random effects) can be expressed as

$$
\begin{aligned}
\ell & =\sum_{i} \sum_{j \in \mathcal{S}_{i}} y_{i j} \ln \pi_{i j} \\
& =\sum_{i}\left[\sum_{j \in \mathcal{S}_{i}} y_{i j} \eta_{i j}-\log \sum_{j \in \mathcal{S}_{i}} \exp \left(\eta_{i j}\right)\right] \\
& =\sum_{k} \sum_{i \in k}\left[\sum_{j \in \mathcal{S}_{k}} y_{i j} \eta_{k j}-\log \sum_{j \in \mathcal{S}_{k}} \exp \left(\eta_{k j}\right)\right] \\
& =\sum_{k}\left[\sum_{j \in \mathcal{S}_{k}} m_{k j} \eta_{k j}-n_{k} \log \sum_{j \in \mathcal{S}_{k}} \exp \left(\eta_{k j}\right)\right]
\end{aligned}
$$

where $n_{k}$ is the number of individuals in covariate class $k$ and $m_{k j}$ is the number of instances in
which individuals from covariate class $k$ choose alternative $j$ from choice set $\mathcal{S}_{k}$, that is, $\sum_{k \in i} y_{i j}=$ $m_{k j}$ and $\sum_{j} m_{k j}=n_{k}$. The counts $m_{k j}$ are thus minimal sufficient statistics (e.g. Casella and Berger, 2002; Cox, 2006) for the choices $y_{i j}$.

When applied to the Eurobarometer, the number of individuals to consider is either 89242 or 202079. When reduced to minimal sufficient statistics, the computational cost is reduced to that of 12005 and 8788 observations, respectively. This reduction of computational cost does not appear to impressive at first glance. But it should be noted that the computational cost of fitting models like the mixed conditional logit models does not increase linearly with the number $n$ of observations but rather in the order of $n^{2}$ or $n^{3}$. Also, the cost of storing the random-effects design matrices have to be taken into account. Only after reduction to minimal sufficient statistics as just explained was it feasible to compute estimates for Table 2 and 3 in the paper on a machine with 2GB of memory.

## E Illustration of first-order interactions in the model of the paper

In the main paper I estimate a discrete choice model that contains first-order effects of class and church-attendance with parties' policy positions and second-order interaction effects churchattendance with parties' policy positions and time. As already noted there, interaction effects in such complex models are not easy to interpret. This is even aggravated if some of the variables that factor into the interaction effects are categorical, since in such cases the interpretation of numerical estimates of interaction effects (as would the interpretation of main effects) depend on the baseline category of the transformation of the categorical variables into dummies.

The main part of the paper contains a graphical illustration of the second-order interaction effects since these are central to the paper's argument. For reasons of saving space, a graphical illustration of the first-order interaction effects is deferred to this appendix. A graphical illustration of the latter may serve to complement the interpretation of the results of the paper.

The interaction effects could be plotted on the scale of the log-odds, that is on the scale of the linear part of the model (formalised in the paper as $\eta$ ). In the context of linear models with only
continuous dependent and independent variables, such a plot would lead to a straightforward interpretation of interaction effects. Plotted lines would correspond to conditional changes of the dependent variable. However, the model used in the paper is in several respects more complex than a linear regression model. First, the dependent variable is non-metric, it consists of individuals' choices from a set of available alternatives, or rather, as explained above, of counts of such choices. Second, at least one of the independent variables is categorical, represented by dummy variables. Therefore another strategy of illustrating the effects of the independent variables has to be used.

In the main part of the paper, second-order interaction effects are illustrated by plotting choice probabilities of a hypothetical party against time for different classes and rates of churchattendance. Such a strategy to illustrate model predictions is necessary since the dependent variable is not as simple as in linear or logistic regression models. In such more simpler models, one could plot predicted values for each observed individual and even add residuals to such plotted predicted values. In a discrete-choice model, there is not just one value for each observed value, but several observations. For each individual there is one observation for each of the available alternatives, namely, whether the individual has chosen the alternative or not. The flexibility of the discrete-choice model to allow varying sets of alternatives for different individuals, which is an asset for its generality and applicability to varying context, becomes a liability when it comes to illustrating the effect of independent variables on individuals' choices. Since the attributes of all alternatives in a choice set are consequential for the probability of each alternative to be chosen, and since the sets of attributes vary across individuals, it is impossible to plot the choice probability of just one empirical alternative. Instead, in Figures 1 through 3 in the main paper used a scenario with two parties (the choice alternatives) with specific policy positions (that is, specific values of the attribute variables) in order to highlight what implications the estimated third-order interactions have for changes in the pattern of party choice in Western Europe.

In Figures $F, G$, and $H$ a similar strategy is used. Again the base is a hypothetical scenario with two parties. However, to illustrate the first-order interaction effects of class and of churchattendance with parties' policy positions, the time variable is held at zero and for generating the predictions, the policy positions of one of the parties, $A$, are varied along one of the political dimensions, while the policy position of the other party, $B$, is held constant at zero. Based on this
setup, the probability that the party $A$, whose policy positions vary, is chosen by a members of different classes or individuals with different levels of church-attendance is plotted against these varying policy positions. That is, Figures $F, G$, and $H$ illustrate how the policy positions of this party affect its support among several social groups if the policy preferences of the voters are constant.

In Figure $F$, each panels corresponds to a specific combination of class and frequency of church-attendance. The lines in each of the panels show how party A's position on the economic left/right dimension, libertarian/authoritarian, or modernist/traditionalist dimension affects the probability that members of the group corresponding a specific panel in the plot choose party $A$ over party $B$. Most notably, each point on one of the lines corresponds to the situation where party $A$ has a non-centrist position only on the dimension that is indicated by the shape of the plotted line. The grey areas that surround the lines are 95 percent confidence intervals.

The top-left panel of Figure $F$ shows that the more leftist party $A$ is relative to party $B$, the higher its support among manual workers who state never to attend church, and the more rightist party $A$ the lower its support. Similarly, the support for party $A$ will increase in this group the more libertarian or modernist positions it takes. However, positions on the other two policy dimension are not as consequential as positions on the economic left/right dimension. The bottom-right panel shows an almost reverse pattern. Among self-employed who attend church regularly, the support for party $A$ will increase either if it is more economically rightist, more authoritarian or traditionalist. The top-right panel of the figure demonstrates an instructive case of cross-pressure. It corresponds to the manual workers that attend church at least once a week. In this group, party $A$ will gain votes if it moves to the left on the economic left/right dimension but will lose votes if it moves to the modernist dimension, that is to the "left" direction of this dimension. Also, losses by the latter movement would be larger than the gains caused by the former. In so far one could state that the modernist/traditional dimension has a stronger effect on the choices of this group's members than the economic left/right dimension. A converse pattern is exhibited by another cross-pressured group, the self-employed that do not attend church. In this group, party $A$ would gain votes if it moved to the economic right but lose if it moved into the "rightist" direction of the modernist/traditional dimension. Here however, it seems that gains by the former type of movement and losses by the latter type of movement are comparable in size.

Figure $F$ : Effect of the position taken by party $A$ on the probability to be chosen by voters with various social characteristics if party $B$ 's position is centrist on all three policy dimensions.


The interaction effects of parties policy positions with individuals' social characteristics on their vote intentions or party choices, however, are manifest in differences between the slopes across rows and columns of Figure $F$. The interactions of parties' policy positions with class are expressed in the differences between the slopes in different rows, while the interactions with church-attendance are expressed in the differences between columns of Figure F. It appears that positions on the economic left/right dimension primarily interact with class, since the slopes of the corresponding curves change their direction if one compares the rows, but hardly do so if one compares the columns of Figure $F$. Although the structure of Figure $F$ is more faithful to the structure of the model in so far as different rows and columns of panels represent individuals characteristics while superimposed curves represent different attributes of alternatives, a rearrangement of a subset of the model predictions as in Figures $G$ and $H$ makes interaction effects more perspicuous.

In Figure $G$ the panels represent the three dimensions of parties' policy positions, while the curves represent the effect of these policy positions on the probability to choose party $A$ among the manual workers, the intermediate class, the service class and the self-employed who attend church a few times a week. It becomes immediately clear that classes differ the most in terms of how they react to parties' policy positions on the economic left/right dimension. Figure $H$ presents, in a similar manner, how church-attendance interacts with parties' policy positions in influencing individuals' choices. Here the curves represent the influence of parties' positions on choice probabilities among individuals from the intermediate class with different frequencies of church-attendance and it becomes clear that church-attendance interacts the strongest with parties' positions on the modernist/traditionalist dimension.

Figure G: Effect of the position taken by party $A$ on the probability to be chosen by occasional churchgoers from different occupational classes if party $B$ 's position is centrist on all three policy dimensions.


Figure $H$ : Effect of the position taken by party $A$ on the probability to be chosen by members from the intermediate class with various frequencies of church-attendance if party $B$ 's position is centrist on all three policy dimensions.


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[^0]:    ${ }^{1}$ The group of single-issue parties is excluded in the following analyses, since they are no party family in the usual sense, because they do not have commonalities in terms of origin or ideology, but as the label given to this group suggests, are rather heterogeneous.

