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*Social Policy and Welfare
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Welfare state regimes and attitudes towards redistribution in 15 Western European countries: Is it really true that institutional regimes do not matter?

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Abstract.

In this paper we analyse how different welfare state regimes affect popular support for redistribution across 15 Western European countries. We suggest that the main reasons why previous studies have not been able to connect welfare state regimes and popular attitudes towards the welfare state is due to an improper and reductionist operationalisation of welfare state regimes, failure to distinguish empirical country 'cases' from theoretical regime types, and finally improper handling of statistical methodologies. Rather than treating countries as 'perfect' representations of different welfare state regimes, in the paper we assess countries' *degree* of belonging to welfare state regimes along a range of theoretically defined characteristics: level and composition of public social spending, strength of left-wing political power, and degree of neo-corporatism. Utilising data from the European Social Survey and the third wave of the European Values Study, and by means of an ordered mixed probit model with concomitant variables, we find strong evidence that structural characteristics affect mass opinion in a manner consistent with regime theory. For example, public support for redistribution increases with total social expenditure relative to GDP, family benefits, and active labour market policies. Furthermore, we find that institutionalised left-wing political power as measured by left-wing government seats and neo-corporatism are significant predictors of support for redistribution.

Keywords: Attitudes towards redistribution, comparative study, welfare state regimes, mixed probit model, concomitant variables, non-parametric estimation. JEL: C14, C25, I31, O57.

1. Introduction

A *leitmotiv* in the comparative literature on welfare-state legitimacy and public opinion is the notion that institutional differences in welfare-state arrangements, policies, and ideologies shape mass support for the welfare state. This idea has a long formative history, but especially within the institutionalist framework of *welfare-state regimes*, as formulated by Esping-Andersen (1990, 1999), has this idea been explored to a considerable extent in recent years (e.g. Svallfors 1997; Bean & Papadakis 1998; Gelissen 2000; Arts & Gelissen 2001; Blekesaune & Quadagno 2003; Linos & West 2003). The central thrust in this empirical literature has been to identify systematic cross-national variation in public support for welfare-state principles and policies which may be explained by countries' belonging to different welfare-state regimes or models. Unfortunately, so far the existing empirical literature has not been able to provide unambiguous empirical support for the hypothesis that different welfare state regimes create different levels and types of public support. In most studies no systematic attitudinal patterns are found, and in some cases observed cross-national trends in support for major welfare state policies and institutions contradict prior theoretical expectations. For example, Gelissen (2000: 298-299) concludes that "... no evidence was found for the thesis of there being any a relationship between the type of welfare state, as defined by Esping-Andersen, and levels of popular support for the welfare state".

In this paper we challenge the view that welfare state regimes do not produce systematic variation in levels of support for the welfare state across the Western, capitalist societies. We argue that the reason why the empirical literature has failed to demonstrate a connection between variations in welfare-state arrangements and mass opinion is attributable to three overall factors: A reductionist conceptualisation of welfare state regimes, failure to formulate direct tests of *regime* (rather than country) effects on attitudes, and finally inadequate empirical methodologies. First, most empirical studies systematically treat individual countries as *de facto* manifestations of welfare state regimes. This approach fails to recognise the substantive meaning of Esping-Andersen's (1990, 1999) concept of welfare state regimes as denoting *theoretical* and *heuristic ideal types* rather than actual, empirical entities. Thus, by definition empirical country cases cannot be seen as perfect representations of welfare state regimes (Kvist 1999; Bonoli 2000). Second, by treating countries as regimes most comparative studies fail to test *regime effects* on cross-national levels of support for the welfare state. Rather, most studies take an indirect approach and investigate attitudinal cleavages among different social and socioeconomic groupings (social classes, labour market insiders/outside, sectors of employment, etc.) within individual countries which are hypothesised to represent different welfare state regimes (e.g. Svallfors 1997; Andress & Heien 2001; Linos & West 2003). While this literature has generated important insights into socio-economic attitudinal differences in a range of socially heterogeneous countries, then this approach ultimately does not test if welfare state *regimes* induce systematic variation in attitudes towards the welfare state. Finally, while a few recent comparative studies have introduced statistical methods that distinguish between-country variation in attitudes from between-individual variation (see Gelissen 2000; Arts & Gelissen 2001; Blekesaune & Quadagno 2003) – thereby effectively allowing for structural, regime type effects in cross-national attitudinal patterns to be examined – then this literature does not deal with inherent limitations in these methods.

In this paper we investigate the impact of welfare state regime characteristics on attitudes towards redistribution across 15 Western European countries. Rather than assuming that countries are perfect correlates of welfare state regimes, we utilise several structural regime-type characteristics: range and

structure of public social spending, political power configuration, and degree of institutionalised neo-corporatism, to assess countries' resemblance to the theoretical regime types developed by Esping-Andersen and others. These structural variables are then used as explanatory variables in accounting for cross-national variations in attitudes towards redistribution, thereby allowing for a direct test of the effect of welfare state regime characteristics on attitude formation. In terms of methodology, we modify the standard multilevel or random effect model in several key aspects as to ensure consistent estimation of the effect of welfare state regimes on public support for redistribution. Finally, in order to validate our empirical findings, we carry out the analysis on two independent cross-national data sets: the European Social Survey and the European Values Study.

The following section presents the theoretical arguments on how welfare state regimes are hypothesised to influence public opinion, as well as review the results from previous studies. This section also spells out in closer detail why we consider most existing empirical studies to fail in adequately testing for regime effects. Section 3 presents the data sets and variables used in the analysis, as well as describes the methodological approach taken in the study. In section 4, we present the results of the empirical analysis of the effect of welfare state regimes on attitudes towards redistribution in 15 countries. Finally, section 5 discusses the findings and sketches out some possible avenues for future research.

2. Welfare-state regimes and attitude formation

The basic idea that different welfare state architectures generate different levels of public support for their underlying ideological and normative principles was proposed by Esping-Andersen in his *Three Worlds of Welfare Capitalism* (1990). As a consequence of their diverging formative histories: institutionalisation of political conflicts among social classes and groupings, corporatist legacies, and political economies, different welfare state regimes affect the ideological and normative preferences of their citizenry in a systematic fashion. More specifically, it was hypothesised that people living in countries belonging to the *Social democratic regime*, with its comprehensive social security systems, emphasis on universalistic social rights and egalitarian ideological principles, would display the highest level of support for state welfare, redistribution, and equalising policies. The Conservative regime, characterised by social insurance, corporatist arrangements and selective solidarity, would take a middle position, while in the 'residualist', market-driven Liberal regime citizens would exhibit the lowest level of support for publicly organised welfare (cf. Esping-Andersen 1990, 1999; Gelissen 2000: 290; Andress & Heien 2001: 343). Since in this context we deal with the 'old' 15 EU member states, also the 'Southern' or Mediterranean welfare state regime, in many respects resembling the Conservative regime, but with a stronger emphasis on informal welfare provision and family networks (e.g. Ferrera 1996; Bonoli 1997), deserves attention. The expected position of this regime with respect to support for the welfare state is less clear. Gelissen (2000: 291) and Arts & Gelissen (2001: 292) argue that given their status as 'welfare laggards' within Europe, one would expect to find high levels of support for state welfare as to reach the levels of social security coverage found elsewhere in Europe. On the other hand, Bonoli (2000: 434) suggest that, given the strong historical and ideological tradition for family-based social arrangements found in Southern Europe, the opposite scenario is more likely to be the case. Hence, no consensus exists in the literature on the expected attitudinal location of

the Southern welfare state regime relative to the other regimes.¹

Evidence from existing empirical research

Previous studies on support for the welfare state in the Western, capitalist countries find no unambiguous evidence to support the hypothesis that welfare state regimes may be ranked according to their internal level of public support at the aggregate level (Bonoli 2000; Gelissen 2000: 290; Svallfors 2003: 500). In addition, it remains controversial if the observed cross-national variations in attitudes towards welfare and redistribution may actually be interpreted as caused by regimes, or whether or not these differences are due to some other factors (Svallfors 2003: 500). In recent years, the comparative literature has focused on confirmatory rather than descriptive analyses of how welfare state regimes affect public opinion. Two general approaches have been taken in this literature. In this section we review the ideas and findings in both approaches as well as discuss out the theoretical and empirical limitations of these approaches.

The first tradition of comparative research takes an indirect approach to studying the impact of welfare state regimes on attitudes. The leading theme in this literature is how welfare state regimes create attitudinal cleavages among socioeconomic groups with conflicting vested political interests and social risk profiles (e.g. Papadakis & Bean 1993; Peillon 1996; Nordlund 1997; Svallfors 1997, 1999, 2003, 2004; Bean & Papadakis 1998; Kaase & Newton 1998; Taylor-Gooby 1998; Edlund 1999; Bonoli 2000; Andress & Heien 2001; Linos & West 2003). Here, it is argued that social class cleavages are important in the Liberal welfare state regime, that labour market status and notably the opposition between labour market “insiders” and “outsiders” is of particular relevance in the Conservative regime, and finally that one would expect to find significant attitudinal differences between public and private sector employees as well as marked gender differences in the Social democratic regime (Svallfors 2003: 498-99; 2004: 120). Hence, this approach does not directly test the effect of welfare state *regimes* on popular support as such. Rather, these studies investigate similarities in within-country attitudinal cleavages across a set of countries hypothesised to represent different regime types. While this literature finds substantial empirical variation in the total level of support for the welfare state at the aggregate level, then patterns of attitudinal cleavages among different social groupings (social classes, labour market insiders/outsiders, people employed in different sectors, etc.) tend to be largely homogenous across the countries studied (e.g. Svallfors 1997: 295; 2003).²

The second strand of literature groups countries in regime type cluster variables *ex ante* as indicated by regime theory, after which these cluster variables are included as regime-type dummy variables in empirical analysis. Gelissen (2000), in his 11-country study on attitudes towards institutionalised

¹ Results from existing empirical studies are not very helpful in this respect. Gelissen (2000) finds the Mediterranean countries to exhibit lower support for institutionalised state welfare than those countries classified as being in the Liberal regime. The opposite conclusion is reached in Arts & Gelissen (2001). Papadakis & Bean (1993) find Italy to be somewhere in the middle of the field, whereas Evans (1996) and Bean & Papadakis (1998) finds Italians to be comparatively more in favour of redistribution and state responsibility for welfare compared to other Europeans.

² Linos & West (2003), in their re-analysis of Svallfors (1997), do find some evidence of the expected regime-specific attitudinal cleavages when analysing data from Norway, the United States, Germany, and Australia. A similar conclusion is made in Andress & Heien (2001: 352). However, given the fact that both studies only include four countries, their results are mainly indicative and no substantive conclusions as to the effect of welfare state *regimes* on public support for the welfare state are warranted.

solidarity, assigns countries into the Social democratic, Conservative, Liberal, and Southern regime type. A similar approach is taken in Arts & Gelissen (2001), but here the authors also include the ‘radical’ antipodean regime type (see Castles and Mitchell 1993) and a larger sample of 20 countries. Finally, also the Post-communist regime of Central and Eastern Europe (CEE) has been analysed in similar vein by Lipsmeyer & Nordstrom (2003) in which eight CEE countries are merged into a Post-communist regime type. Unlike in the first approach, these studies develop a direct ‘test’ of the effect of welfare-state regimes on attitudes through the inclusion of regime cluster dummy variables. Unfortunately, by and large these studies generally do not find any systematic cross-national patterns in public support for the welfare state, and in some cases the empirical evidence actually contradicts prior theoretical expectations (Gelissen 2000; Arts & Gelissen 2001).

Both approaches to studying how welfare state regimes affect attitudes have significant theoretical and empirical limitations. First, both types of studies impose *ex ante* constraints on regime type membership, thereby treating individual countries as perfect empirical representations of welfare state regimes. This reductionist approach is in opposition to Esping-Andersen’s (1990, 1999) original formulation of welfare state regimes as being theoretical *ideal types*, to which individual countries may bear more or less empirical resemblance. Furthermore, this limitation might also explain why the latter approach of aggregating highly heterogeneous nations into the same regime cluster variable (see Gelissen 2000; Arts & Gelissen 2001) have so far proven unsuccessful in identifying the expected regime type differences in level and composition of support for the welfare state. As noted by Svallfors (2003: 507-508) in his 8 country study of social class differences in support for the welfare state, attitudinal differences *within* welfare state regimes were in fact larger than those *between* the regimes under study.

Second, by reducing the empirical definition of the effect of welfare state regimes to country-cluster dummy variables and single coefficients, one inevitably takes an extremely myopic view of how welfare state regimes affect attitudinal outcomes. Arguably, it is more informative to include as explanatory variables a range of country-level variables relating to theoretically defining aspects of welfare state regimes (countries’ level of social spending, structure of social spending, degree of corporatism, historical left-wing government incumbency, etc.). By doing so one does not force individual countries to act as perfect representations of welfare state regimes, but rather utilise a range of meaningful empirical dimensions to approximate individual countries’ degree of membership of the different regime types. This is the analytical strategy pursued in this paper. A similar approach is taken by Blekesaune & Quadagno (2003), in which national-level variables on level of unemployment and egalitarian ideology in a sample of 24 nations were found to be significant predictors of attitudes towards the unemployed, old, and sick. A drawback of this study in our context is that it does not focus on the effect of welfare state regimes on attitudinal patterns as such, but rather on a small number of nation-level ‘contextual’ characteristics on observed levels of public support.

3. Data, variables, and method

Data

In order to test the effect of welfare state regimes on popular attitudes towards redistribution, we utilise two large-scale cross-national data sources. The first source is the first round of the *European Social Survey* (ESS) fielded in 2002 and 2003. The second source is the third round of the *European Values Study* (EVS), in which data was collected in 1999 and 2000. In this analysis we include 15 Western

European countries, all of which are the ‘old’ (that is, pre-2004) member states of the European Union.³ The countries were chosen as to represent empirical variations with respect to membership of the four welfare state regimes described above. Since the ESS and the EVS are quite similar in design and timing, we replicate the empirical analysis on two data sets as to validate our findings. Since the ESS and EVS include a similar item on respondents’ attitudes towards redistribution, this situation makes combining the two data sources an attractive option. The effective sample sizes used in the analysis are 28,029 respondents in the ESS and 18,185 respondents in the EVS.

Variables

The dependent variables in this study are two similar questions taken from the ESS and EVS respectively relating to respondents’ attitudes towards redistribution. In the ESS respondents were asked to state their level of agreement with the statement: “the government should take measures to reduce differences in income levels”. The ordered response categories are: (1) ‘agree strongly’, (2) ‘agree’, (3) ‘neither agree nor disagree’, (4) ‘disagree’, and (5) ‘strongly disagree’. In the EVS respondents were asked “In order to be considered “just”, what should a society provide ...” with the question “eliminating big inequalities in income between citizens?”. Here, respondents were asked to give their opinion on a 5-point ordinal scale with the extreme values (1) ‘very important’ and (5) ‘Not important at all’. In both cases reverse coding was used as to facilitate an easy interpretation of the items. Although not completely similar in wording, both items tap into respondents’ opinions on the extent to which they feel that the state should redistribute citizens’ incomes. In this respect they reflect roughly the same underlying value judgement expressed by the respondents. Respondents answering ‘don’t know’ to either question were excluded in the analysis.

Independent variables

We include two types of explanatory variables in the analysis: “level-1” control variables relating to respondents, and “level-2” variables relating to various regime type indicators. Descriptive statistics on both types of variables are shown in appendix table 1. At the individual we include three control variables: Gender, age of the respondent, and a dummy variable indicating if the respondent is not active in the labour market as a wage earner or self-employed at the time of the interview (i.e. is retired, disabled, unemployed, etc.). The reason for not including additional level 1-variables is described in footnote 6.

Level-2 variables were selected as to reflect several qualitatively different dimensions of welfare state regimes. First, we include three measures of public social expenditure, all of which are taken from OECD’s Expenditure Database (see OECD 2004). The expenditure data used in the empirical analysis are countries’ expenditure levels as percentage of GDP averaged over the years 1995-2000. Averaging over several years was used as to level out the impact of annual fluctuations. As the first expenditure measure we include countries’ *total public social expenditure*. This variable was included as to test for the effect of countries’ total commitment to public welfare provision; a crucial defining feature of welfare state regimes (Esping-Andersen 1990, 1999). Second, we include countries’ total expenditure on *family benefits*. This measure was included to control for the degree to which countries compensate

³ The 15 countries included are: Austria, Belgium, Germany, France, the Netherlands, Luxembourg, Italy, Spain, Portugal, Greece, Ireland, Great Britain, Finland, Sweden, and Denmark.

the economic burdens of maintaining a family and facilitate women's labour market participation.⁴ Third, we include countries' public expenditure on *Active Labour Market Policy* (ALMP). This variable was included as to reflect variations in countries' political commitment to ensuring full employment as well as state intervention in the labour market more generally. Finally, as contextual control variables we also include countries' *standardised unemployment rate* as well as the *annual GDP growth* relative to the previous year, the former averaged over the period 1995-2000, while with the latter variable we extend the averaging period from 1990-2000. This was done as to reflect the fact that economic growth only translates into change in social security systems (to which respondents may form an opinion) at a comparatively slow pace.

In addition to total level and composition of expenditure on social security, also divergences in political power configurations and institutional legacies are important features of welfare state regimes (Esping-Andersen 1990). First, we include an indicator of *left-wing political power*. More specifically, this variable is taken from the HRS database (Huber et al. 2004) and measures the proportion of left seats as percentage of all government seats, averaged over the period 1995-2000.⁵ This variable is intended to serve as a proxy for the extent to which left-wing parties were in power when respondents were interviewed. Second, we include a measure of *neo-corporatism*. Here, we deploy the widely recognised neo-corporatism index developed by Tarantelli (1986) and later extended by Schneider & Wagner (2001), which on a scale from 1 to 15, among other things, measures the extent of neocooption by trade unions, the centralization of collective bargaining, and the neoregulation of industrial conflict.⁶

The indicators included in the analysis represent a range of significant dimensions that characterise welfare state regimes. They are, however, far from exhaustive in terms of capturing the complexity of welfare state regimes. In particular, we lack indicators measuring the extent and composition of public *social services* in the countries under study. Unfortunately, unlike expenditure data, cross-nationally, comparable measures on social services are not readily available. As a consequence, at present we are not able to investigate the significance of this aspect of welfare state regimes on attitudes towards redistribution.

Methodology

Most empirical studies of popular support for the welfare state rely on standard methods of quantitative analysis. However, in recent years scholars have begun to apply multilevel or random effect models in this type of research (Gelissen 2000; Arts & Gelissen 2001; Blekesaune & Quadagno 2003). Multilevel or random effects models are attractive since they allow for identification of both within-country and

⁴ Expenditure on family benefits may be regarded as serving different ideological functions in the Conservative and Social democratic welfare state regime, respectively. In the Conservative regime family benefits are aimed towards subsidising women for maintaining traditional domestic roles such as childrearing, whereas in the Scandinavian regime family benefits serve primarily universalistic, redistributive purposes.

⁵ The HRS database covers 11 of the 15 countries included in our analysis. In the case of the 4 remaining countries: Spain, Luxembourg, Portugal, and Greece, corresponding figures were calculated by the author. Averaging left-wing power over the period 1990-2000 was also tried out in the empirical analysis, but results were largely identical to those obtained with the 1995-2000 figures.

⁶ Neither Tarantelli (1986) nor Schneider & Wagner (2001) include Luxembourg in their analysis. Here, we assign Luxembourg a score of 14 on the neo-corporatism scale (similar to that of Germany) based on the strong resemblance of its industrial relations systems to that of Germany and the other Continental European countries (cf. Nieminen 1995).

between-country (i.e. ‘regime type’) sources of variation in observed levels of support for the welfare state, as well as explicitly incorporate the notion that the countries analysed constitute an incomplete sub-sample of countries drawn from a larger population of countries to which conclusions are generalised (typically the ‘Western, industrialised countries’). However, multilevel or random effect methods embody two important assumptions which are rarely fulfilled in practical applications (DiPrete & Forristal 1994; Ebbes et al. 2004). In this paper we extend the ordinary random effect model to deal with these problematic assumptions.

The first assumption is that the unobserved random country effect follows a known parametric form; typically the normal distribution. Since nothing is usually known about the nature of the unobserved between-country effect *a priori*, the choice of the normal distribution is entirely arbitrary. In order to avoid imposing this type of parametric assumptions on our empirical model, we utilise the non-parametric finite mixture approach to estimating the random between-country effect on attitude formation. This approach amounts to estimating a latent class model for the joint distribution of the unobservables (see Heckman & Singer 1984; McLachlan & Peel 2000).

The second and more problematic assumption in the multilevel framework is that the random country effect is not correlated with the level-2 covariates. In effect, this assumption entails that country-level explanatory variables included in the model are hypothesised not to be correlated with all aspects of welfare state regimes not included in the model. First, this assumption contradicts the logic implicit in most comparative studies: that we observe some, but not all aspects of welfare state regimes relevant in explaining cross-national patterns in level of public support for the welfare state (cf. the literature on “cultural” factors or “dominant welfare state ideologies”; Andress & Heien 2001; Blekesaune & Quadagno 2003). Second, the assumption of independence is very unlikely to be fulfilled in empirical analysis. Simulation-based evidence (e.g. Shieh & Fauladi 2003; Ebbes et al. 2004; Maas & Hox 2004) indicates that the bias arising from violating this assumption in multilevel applications leads to quite severe bias in the estimates of regression coefficients as well as their standard errors.⁷

Unfortunately, since hierarchical data such as the ESS and EVS are not “true” panel data sets, we cannot apply standard econometric specification tests to test the assumption of no correlation between observed and unobserved parts of the model. In order to circumvent this limitation, in the empirical model we introduce a concomitant variable framework (see Dayton & Macready 1988; Wedel 2002) to explicitly model the dependency between the observed level-2 covariates and the random part of the model. The concomitant variable mixture model may be seen as an extension of the finite mixture model in which the probability of membership of the latent classes describing unobserved between-country or regime effects is influenced by the observed country-level covariates via a logit model. Furthermore, since the dependent variables in our analysis are ordered, categorical indicators, we specify the model as an ordered probit model. Taken together, our empirical model then amounts to the mixed probit model with concomitant variables. The full model specification is described in appendix

⁷ Multilevel models – like standard OLS methods – also assume that no correlation exists between level-1 variables and the level-1 error term. In order to avoid any endogeneity bias arising from not fulfilling this assumption, we only include a relatively small number (3) of level-1 predictors which may reasonably be assumed to be strictly exogenous. This type of bias is especially likely to arise if analysts include attitudinal measures as level-1 explanatory variables. All of the published multilevel papers cited in this paper (Gelissen 2000; Arts & Gelissen 2001; Blekesaune & Quadagno 2003) deploy attitudinal variables as level-1 explanatory variables.

2. Finally, since the level-1 variables primarily act as control variables in this context, we limited the modelling procedure to estimating random country intercepts but not random level-1 coefficients.⁸

4. Results

In this section we present the results of the empirical analysis of the impact of welfare state regime variables on attitudes towards redistribution. Result for different model specifications for the ESS and EVS data sets with 15 countries are shown in table 1.

For model comparison, we estimate four models with either data set. First, results from the standard ordered probit model are displayed. The probit model describes the probability of displaying positive attitudes towards redistribution (i.e. ‘moving up’ on the latent scale of support for redistribution identified via the threshold parameters κ ($\kappa = 1, \dots, 4$)) given the vector of individual-level and country-level explanatory variables, and (in models 2-4) unobserved regime variables captured in the random effect. Second, we estimate the parametric random effect model; third, the finite mixture (FM) model with 2 latent classes; and, finally, the Finite Mixture Concomitant Variable (FM-CV) model.

TABLE 1 HERE

Model log-likelihood values give indications of the fit of the different model specifications. First, both in the ESS and EVS, controlling for unobservable between-country variation yields significant improvements in model fit compared to the basic probit model. Second, we also find that in the ESS, the standard random effect model provides a better fit than both the FM 2-class model and the FM-CV 2-class model, but that this model is inferior to both other model specifications in the EVS data.⁹ Since model fit did not improve further by introducing a third latent class in the EVS model, we restrict ourselves to interpreting 2-class FM and 2-class FM-CV both in the ESS and EVS data sets. Finally, we observe that including concomitant variables in the 2-class FM model yields only slight improvements in model log-likelihood compared to the former model. This finding suggests either that correlations between observed and unobserved regime effects may not be very important here, or, more likely, that given the comparatively small sample of 15 countries there was insufficient information in the data to detect such correlation. In any case, including the concomitant variable framework ensures that the regime type explanatory variables are not ‘contaminated’ by unobserved regime effects.

With respect to the level-1 variables, our results mostly replicate previous findings. We consistently find men to be less in favour of redistribution than women (cf. Svallfors 1997; Linos & West 2003), that people become more positive towards redistribution as they get older, and finally that those not engaged in the labour market have more positive attitudes towards redistribution than those in regular employment (*op cit.*).

Results from level-2 variables are of more interest in this context. First, we find that total public social

⁸ The models, which were estimated with the GLLAMM (Generalized Linear Latent Mixed Models) program for STATA, took 4-8 hours to converge on a 3.0 GHz. Pentium 4 personal computer with 1024 megabytes of RAM. Including random coefficients for the 3 level-1 variables would increase computational complexity considerably.

⁹ When using 3 classes for the mixing distribution in the ESS data (not shown), we get an almost identical fit to the random effect model.

expenditure as percentage of GDP is a significant predictor of positive attitudes towards redistribution in both the ESS and EVS. This result suggests that the probability of displaying positive attitudes towards redistribution increases with countries' total spending on welfare state arrangements; as indicated by regime theory. In order to control for non-linearity and ceiling effects in this relationship, we also included a quadratic effect of total social expenditure in the model. As is also evident from table 1, this effect is strongly significant in both data sets, thereby giving credence to the interpretation that popular support for redistribution increases with the total scope of the welfare state until a 'saturation' point, after which it tends to taper off.

To illustrate this 'ceiling' effect, we simulated the probability of observing a response of 3 or higher on the ordered response variable given the model in both data sets; that is, expressing a non-negative attitude towards redistribution. These probabilities are plotted as a function of total social expenditure in figures 1 and 2. From these figures, it is evident that a ceiling effect with respect to total magnitude of the welfare state and public support for redistribution seems to exist. This trend is somewhat in line with the 'growth to limits' hypothesis (Flora 1986a, 1986b), stating that welfare states tend to grow to the limit of their legitimacy; i.e. to the point where populations no longer condone further expansion of state welfare. Our findings suggest that such a saturation point might have been reached in the highly redistributive Scandinavian welfare states, in which the populations by the time of the ESS and EVS surveys at the end of the 1990s – paradoxically – were among the least supportive of state redistribution in Western Europe.

FIGURE 1 AND 2 HERE

In addition to total spending, also welfare spending profiles are significant predictors of attitudes towards redistribution. First, both in the ESS and EVS we find that family benefit expenditure is positive associated with public support for redistribution. Again, this finding is in accordance with the regime hypothesis claiming that those welfare state regimes that (albeit for different reasons) support families, that is the Social democratic and Conservative regimes, tend to generate higher levels of support for redistribution compared to those which do not, i.e. the Liberal and Southern regimes. With respect to ALMP expenditure results are less clear, since in the ESS a negative effect is found, and in the EVS a positive effect of this type of expenditure. Since high expenditure on ALMP policies is typical in the Social democratic regime, we would expect a positive coefficient in both data sets. We have no immediate explanation of why this effect was found to be negative in the ESS.

Moving on to the political and institutional regime variables, we find strong effects in the expected direction. First, the relative strength of left political power as indicated by left government seats is a highly significant predictor of positive attitudes towards redistribution in both data sets. This relationship supports the hypothesis of political 'socialisation' found in regime theory, that is, that national, hegemonic political actors exert influence on support for redistribution. We also tried to average left government seats over the period 1990-2000 to cover a longer time span in which political 'socialisation' might take place, but this did not alter the results in any substantive manner. With respect to neo-corporatism, we find a negative effect on support for redistribution in the ESS, whereas in the EVS no effect was found in the FM and FM-CV models. This finding is also largely in accordance with theoretical expectations. As noted by Evans (1996: 188), the Conservative regime is characterised by a fairly high degree of decommodification, but a fairly low degree of universal

redistribution. Consequently, this regime type fosters a ‘particularistic’ type of solidarity in which people tend to express support for redistribution among those in similar occupational or social roles as themselves (through social insurance programmes). Since the response variable both in the ESS and EVS deal with redistribution at the societal rather than the particular level, we would expect respondents in countries with a strong corporatist and conservative legacy to show little support for ‘universal’ redistribution, as was implied in the survey question.

With respect to the structural control variables, we find that high economic growth is negatively associated with support for redistribution, whereas a high unemployment rate predicts increasing support for redistribution. With respect to the former effect, we might argue that in economically ‘good times’ support for redistribution decreases since the majority of the population, gaining in income and occupational opportunities from economic prosperity, becomes more unwilling to accept the higher tax levels required in order to bring about more redistribution. In the case of unemployment rates a similar – but reversed – argument might be fielded; that is, when unemployment rates are high public opinion generally becomes more favourable towards redistribution and public social protection since the risk of being affected by unemployment increases for the individual. This is the argument proposed by Blekesaune & Quadagno (2003) to explain a finding similar to that found here.

Finally, while the Concomitant Variable framework did not provide any significant improvements in model fit compared to the FM 2-class model, some noteworthy results do emerge. The FM model in both data sets predicts 2 latent classes of unobserved between-country characteristics: a numerically ‘small’ class (comprising 13 and 25 percent of countries in the ESS and EVS samples respectively) with a negative effect parameter on the probability of observing positive attitudes towards redistribution, and a much larger class of countries with a positive effect parameter (87 and 75 percent, respectively). The ‘negative’ class of countries is bigger in the FM-CV model, but in this case the estimated marginal class sizes have no direct interpretation since these estimates are also influenced by the concomitant variables included in the model. However, as is seen in appendix table 2, countries with characteristics resembling those of the Social democratic welfare state regime: high total public expenditure on social security (not in the EVS), family benefits, and ALMP, as well a high proportion of left-wing government seats, have a high estimated probability of belonging in latent class I (i.e. the class with an additional negative coefficient on support for redistribution). Countries scoring high on neo-corporatism have an estimated negative probability of belonging in this class. Given the small sample of only 15 countries the effects are not statistically significant, but it is interesting that the concomitant variables present the same overall impression in both data sets. Substantively, we might speculate that latent class I captures unobserved characteristics associated with the Social democratic welfare state regime (maybe social services) which add to explaining the comparatively negative attitudes towards redistribution observed in the Scandinavian countries. That is, the latent classes tell us that that model does not adequately explain all aspects of why the ‘high-spending’ Scandinavian countries express negative attitudes towards redistributions, whereas the model also does not capture why the remaining countries have more positive opinion on this political issue (as indicated by the positive effect parameter for latent class II).

5. Conclusion and discussion

Do structural features of welfare states as well as policy legacies across the Western, industrialised countries affect people’s opinions on redistribution and support for welfare state policies more

generally? The evidence from the existing empirical literature on welfare-state attitudes tends to be inconclusive with respect to this question. In this paper we suggested that the main reasons why previous studies have not been able to connect welfare state regimes and popular attitudes towards the welfare state has been due to an improper and reductionist operationalisation of what welfare state regimes are, failure to distinguish country ‘cases’ from theoretical regime types, and finally lack of sensitivity to and proper handling of the assumptions arising from the use of the advanced statistical methods recently taken up in this type of research. In this paper, rather than treating countries as ‘perfect’ examples of the different welfare state regimes, we assess countries’ degree of membership of welfare state regimes along a range of theoretically defined characteristics: level and composition of public social spending, strength of left-wing political power, and degree of neo-corporatism measured through neocooption by trade unions, centralization of collective bargaining, and neoregulation of industrial conflict. This approach has the advantage of offering a theoretically more accurate operationalisation of welfare state regimes than has previously been accomplished, as well as allowing for considerably more cross-national variation to be modelled in empirical analyses.

Our analysis of attitudes towards redistribution across 15 countries confirms that structural characteristics indeed affect mass opinion in a manner consistent with regime theory. Support for redistribution increases with total public spending on welfare state activities, family benefits, and, in one of two data sets, active labour market policies. Interestingly, we also find that support for redistribution increases with total social spending only until a ‘saturation point’, after which it tends to level out or even decrease. Furthermore, we find that left wing power, measured as percentage of total government seats, is a positive predictor of support for redistribution; a finding consistent with the ‘socialisation’ hypothesis advanced in the theoretical literature. Finally, we found a negative effect of increasing neo-corporatism on level of support for ‘universal’ redistribution of incomes. This result is also expected since in the Conservative and corporatist regime economic solidarity is predominantly ‘horizontal’ rather than ‘vertical’, i.e. people express support for redistribution among their social peers but low support for redistribution with other social groups. Our results then indicate that people’s normative perceptions of the extent to which the state should redistribute incomes among citizens are in part shaped by the structural contexts in which they live. Moreover, we find systematic variations in attitudes that are largely in accordance with what one would expect within the different welfare architectures outlined by regime theory.

As always, caution as to the generalizability of empirical findings should be exercised. First, in this analysis we have aimed to include variables as to represent some of the defining features of welfare state regimes. Naturally, several important aspects of welfare state regimes are not considered in this context; and notably the scope of social services. As argued by several scholars (e.g. Lewis 1993; Sainsbury 1999), social services (e.g. child day care, care facilities for the elderly) are instrumental in linking family and working life, and they constitute an important line of demarcation between the Social democratic and the other regime types (Pierson 2001). Unfortunately, consistent cross-nationally comparable data on this aspect of welfare states is not available at present.

Second, in this analysis we only investigate one aspect of attitudes towards the welfare state: redistributive principles. More research is needed as to determine if the empirical patterns obtained in our analysis also apply to attitudes towards e.g. specific welfare state programmes, clientele groups, and other notions of deservingness and entitlement. However, as argued by e.g. Andress & Heien

(2001) and Svallfors (2003), a conflict exists between with ensuring cross-national comparability and investigating attitudes towards detailed aspects of welfare state programmes. If wanting to analyse people's attitudes towards specific welfare state programmes in cross-national research, one inevitably runs the risk of respondents reflecting on national systems and contexts which are not comparable those found in other countries; i.e. comparing apples and oranges. This argument speaks in favour of analysing relatively abstract concepts such as the underlying *principles* of the welfare state.

Finally, while our empirical sample of countries to a reasonable degree approximates the structural characteristics of the welfare state regimes under study, then it is fair to say that the sample does not do justice to the Liberal regime. The two countries coming closest to the Liberal regime, Great Britain and Ireland, are not "pure" institutional examples of this regime type (Arts & Gelissen 2001). However, given the data available it was not possible to include more 'Liberal' type countries in the present analysis.

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TABLES:

Table 1. Results for ordered probit models for public support for redistribution. Parameter estimates with standard errors in parenthesis

	EUROPEAN SOCIAL SURVEY				EUROPEAN VALUES STUDY			
	1	2	3	4	1	2	3	4
Model specification:	Standard	Random effect ^{a)}	FM ^{b)} , 2-class	FM-CV ^{c)} , 2-class	Standard	Random effect ^{a)}	FM ^{b)} , 2-class	FM-CV ^{c)} , 2-class
Level-1 variables								
Gender (= male)	-0.16 (0.01)***	-0.16 (0.01)***	-0.16 (0.01)***	-0.16 (0.01)***	-0.07 (0.02)***	-0.06 (0.02)***	-0.06 (0.02)***	-0.05 (0.01)***
Age ^{d)}	0.02 (0.00)***	0.02 (0.00)***	0.02 (0.00)***	0.02 (0.00)***	0.03 (0.00)***	0.03 (0.00)***	0.03 (0.00)***	0.03 (0.01)***
Not in work force	0.09 (0.01)***	0.08 (0.01)***	0.08 (0.01)***	0.08 (0.01)***	0.11 (0.02)***	0.09 (0.02)***	0.09 (0.02)***	0.09 (0.02)***
Level-2 variables								
Public social expenditure	0.23 (0.02)***	0.23 (0.02)***	0.07 (0.02)**	0.07 (0.02)**	0.09 (0.03)***	0.17 (0.03)***	0.17 (0.03)***	0.17 (0.03)***
Public social expenditure ² _{d)}	-0.05 (0.00)***	-0.05 (0.00)***	-0.03 (0.00)***	-0.03 (0.00)***	-0.04 (0.00)***	-0.05 (0.00)***	-0.07 (0.00)***	-0.07 (0.00)***
Family benefit expenditure	0.12 (0.01)***	0.15 (0.01)***	0.18 (0.01)***	0.18 (0.01)***	0.16 (0.02)***	0.16 (0.02)***	0.39 (0.02)***	0.39 (0.02)***
ALMP expenditure	-0.12 (0.02)***	-0.16 (0.02)***	-0.21 (0.02)***	-0.21 (0.02)***	-0.02 (0.03)	-0.44 (0.03)***	0.49 (0.03)***	0.48 (0.03)***
Left government seats	0.72 (0.05)***	0.78 (0.05)***	0.73 (0.05)***	0.73 (0.05)***	0.57 (0.07)***	0.98 (0.07)***	0.92 (0.07)***	0.92 (0.07)***
Neo-corporatism	-0.01 (0.00)***	-0.02 (0.00)***	-0.02 (0.00)***	-0.02 (0.00)***	-0.01 (0.00)	-0.02 (0.00)***	0.00 (0.00)	0.00 (0.00)
Economic growth	0.05 (0.01)***	0.07 (0.01)***	-0.05 (0.01)***	-0.05 (0.01)***	-0.01 (0.02)	0.08 (0.02)***	-0.18 (0.02)***	-0.18 (0.02)***
Unemployment rate	0.05 (0.00)***	0.05 (0.00)***	0.07 (0.00)***	0.07 (0.00)***	0.05 (0.00)***	0.07 (0.03)***	0.04 (0.00)***	0.04 (0.00)***
Thresholds								
κ_1	1.39 (0.36)***	1.56 (0.36)***	-1.16 (0.38)**	-1.05 (0.38)**	-0.41 (0.43)	1.23 (0.44)**	-0.31 (0.44)	-0.22 (0.55)
κ_2	2.36 (0.36)***	2.55 (0.36)***	-0.18 (0.37)	-0.07 (0.38)	0.14 (0.43)	1.79 (0.44)***	0.25 (0.44)	0.34 (0.55)
κ_3	2.82 (0.36)***	3.00 (0.36)***	0.29 (0.37)	0.40 (0.38)	0.93 (0.43)*	2.60 (0.44)***	1.06 (0.44)*	1.15 (0.55)*
κ_4	4.10 (0.36)***	4.33 (0.36)***	1.60 (0.37)***	1.71 (0.38)***	1.68 (0.43)***	3.37 (0.44)***	1.83 (0.44)***	1.92 (0.55)***
Model Log-Likelihood	-36,366	-35,781	-35,838	-35,836	-25,225	-24,867	-24,850	-24,849
Random variance σ_u^2		0.02 (0.00)***				0.10 (0.01)***		
Latent class parameters ^{e)}								
Class I								
Effect parameter			-0.69 (0.07)***	-0.60 (0.12)***			-0.57 (0.11)***	-0.48 (0.13)***
Size			0.13	0.27			0.25	0.37
Class II								
Effect parameter			0.11 (0.07) [#]	0.22 (0.12)			0.19 (0.11)*	0.28 (0.13)*
Size			0.87	0.73			0.75	0.63

Notes: *** p < 0.001, ** p < 0.01, * p < 0.05, [#] p < 0.10. ^{a)} Model with normal random effect, ^{b)} FM = Finite Mixture model, ^{c)} FM-CV = Finite Mixture Concomitant Variable model, ^{d)} parameter estimate multiplied by 10, ^{e)} Variance of latent class location parameters constrained to be equal for model identification.

Figure 1. Effect of social expenditure on support for redistribution - ESS

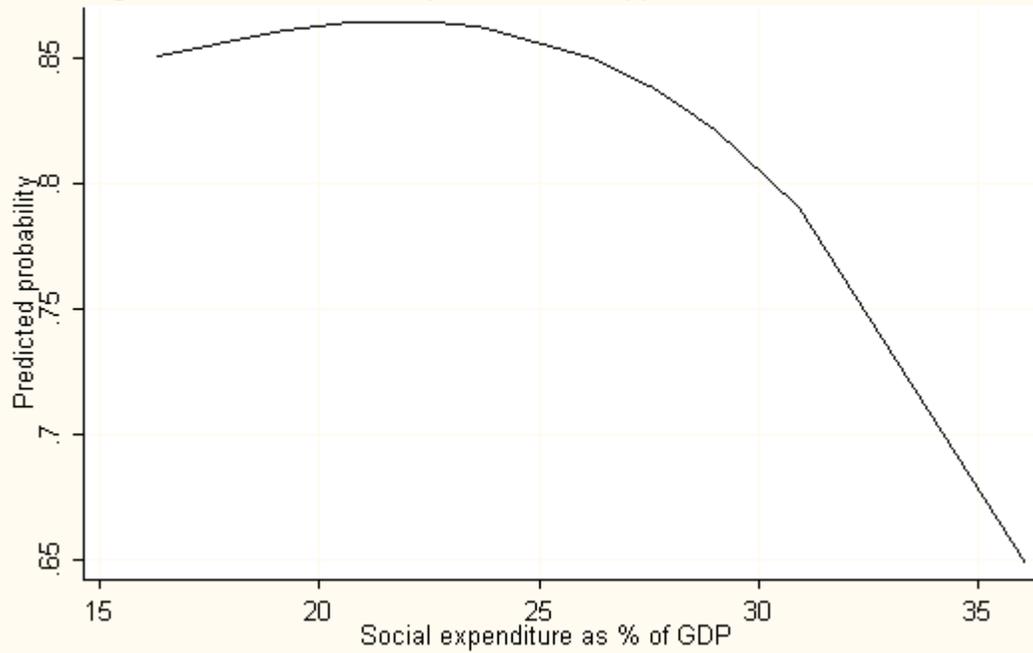
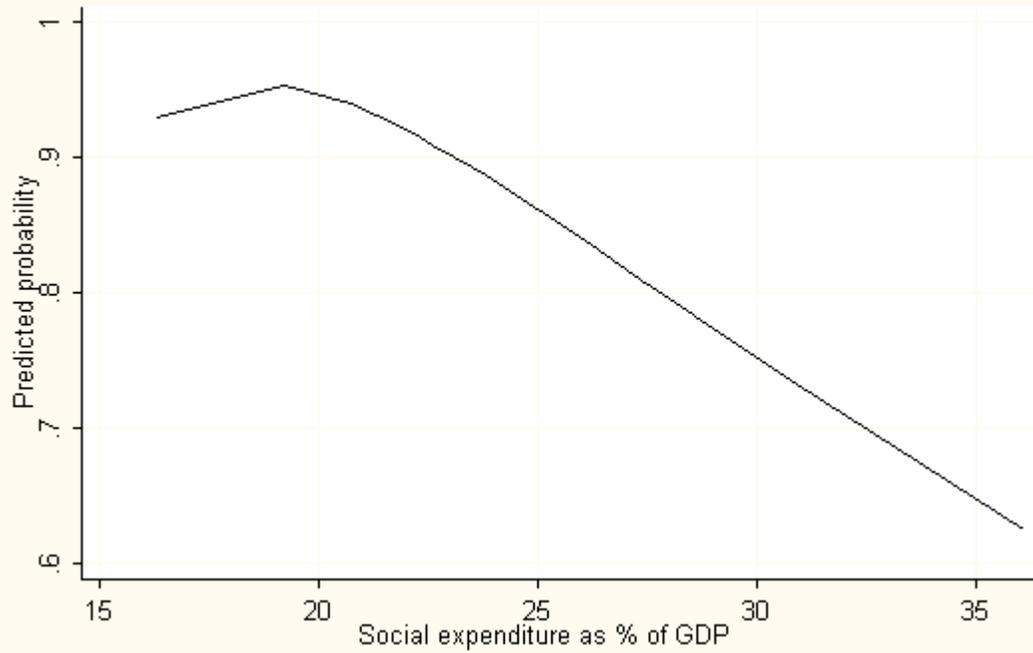


Figure 2. Effect of social expenditure on support for redistribution - EVS



Appendix 1

Appendix table 1. Variable summary statistics.

Response variable:	European Social Survey			European Values Study		
	N	Mean/ percent	SD	N	Mean/ percent	SD
Strongly disagree/Not important at all	796	2.8		1,028	5.6	
Disagree/“2”	3,820	13.6		1,591	8.7	
Neither agree nor disagree/“3”	3,589	12.7		4,226	23.1	
Agree/“4”	12,942	45.9		5,063	27.7	
Strongly agree/very important	7,052	25.0		6,383	34.9	
Total	28,199	100.0		18,291	100.0	
Explanatory variables						
Level-1 variables						
Gender (= male)	28,199	0.47	0.50	18,291	0.46	0.50
Age	28,029	46.37	18.10	18,185	44.83	17.17
Not in work force	28,199	0.46	0.50	18,291	0.46	0.50
Level-2 variables						
Public social expenditure	28,199	25.00	4.59	18,291	25.21	4.49
Family benefit expenditure	28,199	2.25	0.99	18,291	2.23	1.05
ALMP expenditure	28,199	1.00	0.55	18,291	0.97	0.55
Left government seats	28,199	0.54	0.22	18,291	0.54	0.21
Neo-corporatism	28,199	9.20	3.70	18,291	8.77	3.74
Economic growth	28,199	3.23	1.00	18,291	3.18	1.03
Unemployment rate	28,199	8.86	3.47	18,291	9.18	3.59

Appendix table 2. Results for Concomitant Variable model. Estimates with standard errors in parenthesis.

	ESS	EVS
Constant	-0.98 (0.61)	-0.48 (0.33)
Public social expenditure	0.13 (0.23)	-0.21 (0.20)
Family benefit expenditure	0.88 (2.78)	0.46 (0.94)
ALMP expenditure	2.16 (6.79)	1.22 (1.53)
Left government seats	7.65 (19.73)	3.28 (3.47)
Neo-corporatism	-2.03 (4.27)	-0.55 (1.90)

Notes: Model is a binary logit model describing the probability of belonging in latent class I given welfare state regimes characteristics. Latent class II is reference category. The quadratic public social expenditure variable was not included as a Concomitant Variable because this aspect of welfare state regimes was covered with the public social expenditure variable and because the former variable caused problems with model convergence.

Appendix 2: The statistical model

The statistical probability model deployed in the paper has the following latent response formulation

$$(1) y_{it}^* = \beta' x_{it} + \lambda' z_t + u_t + \varepsilon_{it},$$

where y_{it}^* is the latent continuous response for individual i ($1, \dots, N$) in country t ($1, \dots, 15$), x_{it} and z_t are level 1 (individual) and 2 (country) covariate vectors with coefficient vectors β' and λ' , u_t is a random effect capturing unobserved between-country heterogeneity, and ε_{it} is a stochastic error term.

The observed ordinal, categorical outcome y_{it} with S response categories a_s ($s = 1, \dots, S$) is linked to the latent variable by applying thresholds κ_s ($s = 1, \dots, S-1$) such that:

$$(2) y_{it} = \begin{cases} a_1 & \text{if } y_{it}^* \leq \kappa_1 \\ a_2 & \text{if } \kappa_1 < y_{it}^* \leq \kappa_2 \\ a_3 & \text{if } \kappa_2 < y_{it}^* \leq \kappa_3 \\ a_4 & \text{if } \kappa_3 < y_{it}^* \leq \kappa_4 \end{cases},$$

where the thresholds κ_s do not vary among subjects. The cumulative density function for the error term ε_{it} is assumed to follow the standard normal distribution $\Phi(\cdot)$.

The country-level random component u_t may be dealt with in several ways. In the standard ordered probit model between-country variation is not modelled, and u_t is omitted from (1). In the parametric random effect or multilevel random intercept model u_t is assumed to be $N(0, \sigma_u^2)$ and orthogonal to the x and z vectors.

In the Finite Mixture approach u has no known parametric distribution but is approximated with a discrete distribution taking c different values (Lindsay 1983a, 1983b). This in effect then is the latent class model

$$(3) P(U = u_j) = P_j; u = 1, \dots, c,$$

where c is the number of latent classes used to approximate the unknown distribution of the unobservables.

Finally, in the concomitant variable framework (Dayton & Macready 1988; Wedel 2002) we extend the finite mixture model (3) by allowing the probability of membership of latent class j to be conditional upon the values of z covariates through the logit model

$$(4) \quad P_j = \frac{\exp(\alpha_j + \delta' z_j)}{1 + \sum \exp(\alpha_k + \delta' z_k)}, j = 1, \dots, c-1,$$

$$P_c = 1 - \sum_{j=1}^{j=c} P_j.$$

By doing so, we explicitly allow for the z variables to be correlated with the unobserved between-country heterogeneity, as approximated with the latent class model.