Luxembourg Income Study Working Paper Series

Working Paper No. 487

Putting Poverty in Political Context: A Multi-Level Analysis of Working-Aged Poverty Across 18 Affluent Democracies

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July 2008

Luxembourg Income Study (LIS), asbl

PUTTING POVERTY IN POLITICAL CONTEXT: A MULTI-LEVEL ANALYSIS OF WORKING-AGED POVERTY ACROSS 18 AFFLUENT DEMOCRACIES*

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Forthcoming in *Social Forces*
Running Head: Multilevel Analysis of Poverty

June 30, 2008

Word Count: 10,567 (excluding Tables & Appendices)

* We thank the *Social Forces* reviewers and Editor, Tom DiPrete, Thomas Hirschl, Matt Hunt, Denise Kall, Nan Lin and David Reimer for suggestions. We are grateful to Bob Jackson and Emilia Niskanen for extraordinary assistance with the LIS and SAS. An earlier version of this paper was presented at the 2007 American Sociological Association meetings in New York, NY.
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ABSTRACT

Our study analyzes how political context, embodied by the welfare state and Leftist political actors, shapes individual poverty. Using the Luxembourg Income Study, we conduct a multi-level analysis of working-aged adult poverty across 18 affluent Western democracies. Our index of welfare generosity has a negative effect on poverty net of individual characteristics and structural context. For each standard deviation increase in welfare generosity, the odds of poverty decline by a factor of 2.3. The odds of poverty in the U.S. (the least generous welfare state) are greater by a factor of 16.6 than a person with identical characteristics in Denmark (the most generous welfare state). Significant interaction effects suggest that welfare generosity reduces the extent to which low education and the number of children increase poverty. Also, welfare generosity reduces poverty among those with low education, single mother households, and young households. We show that Leftist parties and union density reduce the odds of poverty, however their effects channel through the welfare state. Ultimately, poverty is shaped both by individual characteristics and the political context in which that individual resides.

PUTTING POVERTY IN POLITICAL CONTEXT: A MULTI-LEVEL ANALYSIS OF WORKING-AGED POVERTY ACROSS 18 AFFLUENT DEMOCRACIES

Deep in American ideology is a belief that poverty is largely due to the individual characteristics of poor people (Hunt 1996; Kluegel and Smith 1986). Reflecting a profound individualism with regards to economics and class, Americans tend to explain poverty as a result of the behaviors and attributes of the poor. While broader American ideology is not simply mirrored in the social sciences, there has always been a strong undercurrent of individualism in poverty research as well (O'Connor 2001; Rank 2005). For example, Sawhill recently offered a "behavioral theory" of poverty that stressed the characteristics of poor households and traits of poor individuals. Sawhill (2003:83) emphasizes three behaviors: "Those who graduate from high school, wait until marriage to have children, limit the size of their families, and work full-time will not be poor." Sawhill's theory exemplifies this enduring focus on individual characteristics within the social science of poverty, especially within the U.S.[1]

At least since Blau and Duncan (1967), sociologists have similarly sought to identify the individual characteristics that explain one's status attainment and mobility (Goldthorpe 2000; Pease et al. 1970). Partly in response to this tradition, a recent call has been made to contextualize stratification within the institutional contexts and social relations that generate inequality (e.g. Hout et al. 1996; Kerckhoff 1995). As Tilly (1998:34) remarks, "Instead of reducing social behavior to individual decision-making, social scientists urgently need to study the relational constraints within which all individual action takes place."[2] Echoing Mills' (1959) classic anchoring of the personal troubles of the milieu (biography) in the public issues of social structure (history), it is incomplete to study inequality as if individuals floated in a vacuum with

characteristics and traits predicting their attainment – and without being influenced by social relations, politics, states and education and labor market institutions.

This call for contextualization in the study of inequality has been well-received as is indicated by the multi-level literature on schools and neighborhoods. Indeed, poverty research has productively highlighted how concentrated disadvantage and segregation affect the life chances of the poor. Despite the clear contributions of the neighborhood effects literature, however, we suggest that the contextualization of individual poverty remains incompletely realized. Specifically, most poverty research concentrates exclusively on the U.S.[3] As Smeeding and colleagues (2001:62) explain, U.S. poverty research is limited because "[I]t rests on an inherently parochial foundation, for it is based on the experiences of only one nation." Because of this concentration on the U.S., we tend to underappreciate how distinctive the U.S. context is and how and why other national contexts may change our understanding of poverty.

Our study aims to call greater attention to this national context, advance the contextualization of inequality, and counter the tendency to treat poverty as attributable solely to individual characteristics. Specifically, we analyze how the political context, embodied by the welfare state and Leftist political actors, shapes individual poverty. We empirically explore how political context shapes poverty by conducting a multi-level analysis of working-aged adults in 18 affluent Western democracies. To our knowledge, our study is among the first to estimate a multi-level model of poverty across affluent democracies (Wiepking and Maas 2005).

PAST RESEARCH

Despite far more research on the U.S. exclusively, there has been a cluster of cross-national research on the relationship between the welfare state and poverty (e.g. Alesina and

Glaeser 2004; Misra et al. 2007). The literature, however, has been divided between two distinct approaches. On one hand, scholars have conducted micro-level analyses of individual poverty or income across different countries. Several analysts have used the Luxembourg Income Study (LIS) to gauge poverty before and after taxes and transfers for different demographic groups. Based on significantly different means between poverty before and after taxes and transfers, scholars infer that the welfare state reduces poverty among women, children, the elderly, and the population (DeFina and Thanawala 2001; Smeeding et al. 2001). The difference between what poverty would be before taxes and transfers and after is claimed to demonstrate the extent of redistribution and the impact of taxes and transfers on reducing poverty (Alesina and Glaeser 2004). Some go a step further and estimate poverty across family structures and simulate the impact of, for example, two-parent versus single mother families and how generous welfare programs can alleviate this disadvantage (Rainwater and Smeeding 2004).

On the other hand, several macro-level studies demonstrate a negative association between welfare state generosity and poverty. Most focus on the U.S. history of social policy and poverty trends, and demonstrate that during periods of welfare expansion, poverty declined (Blank 1997; Page and Simmons 2000). A few analyze a cross-section of affluent democracies and show a negative correlation between welfare state generosity and poverty (Korpi and Palme 1998; Smeeding et al. 2001). Recently, scholars have incorporated cross-national and historical variation and demonstrate a robust negative effect of welfare state generosity on poverty (Brady 2005; Brady and Kall 2008; Moller et al. 2003). As well, some link Leftist politics, partly mediated by the welfare state, with reduced poverty (Brady 2003b; Scruggs and Allan 2006).

Both approaches have clear strengths. The micro-level approach effectively scrutinizes the precise mechanisms of individual poverty. Because it allows for sophisticated statistical

analyses with a large number of cases, micro-level studies are consistent with and legible to mainstream stratification readers (Goldthorpe 2000). The macro-level approach advantageously embraces greater cross-national and historical variation, and concentrates the analysis on a comparison of this variation, where many believe the theoretically paramount differences exist. Moreover, it integrates advances in welfare state studies by highlighting country-level data on social policies, structural contexts, and political-historical regimes.

Both approaches also have weaknesses. The micro-level approach rests on debatable assumptions about simulating poverty before ("pre-fisc") and after ("post-fisc") taxes and transfers (Bergh 2005; Esping-Andersen 2003; Wright 2004). If those assumptions are flawed, it may be unrealistic to simulate what poverty would be as if no welfare state existed.[4] Usually, only a relatively small number of countries are compared in micro-studies, so it is difficult to infer the bases of cross-national differences (i.e. there is insufficient information to sort out different macro-level influences). For example, DiPrete and McManus (2000) compare Germany and the U.S., and as a result, cannot deduce fully which macro-level factors explain the cross-national differences. In many micro-level studies, there is *no* information on macro-level characteristics. So, unless such macro-level differences manifest at the individual-level, the macro-level context remains unobserved.

The macro-level approach also has limitations. Often cited, macro-level studies may suffer from a black-box problem of causal inference because micro-level mechanisms are unobserved (Goldthorpe 2000). Moreover, macro-level studies can only control for individual characteristics like family structure at the aggregate level (e.g. the rate of single motherhood). Even though macro-level studies have made progress by pooling historical and cross-national variation, this introduces thorny modeling challenges. The analyst can focus on cross-national

differences, but then faces the same small-N problems as micro-level studies. The analyst can focus on historical variation, but this disposes of the vast cross-national differences that theoretically motivated the study. Efforts to combine the two are regarded by some as questionable.

Given these considerations, there is a clear need for research that combines micro- and macro-levels. Fortunately, this analytical strategy has made great progress in recent years and a rich literature exists on multi-level modeling. Previously, data access and computational limitations of the LIS had prevented such multi-level models, especially for categorical outcomes like poverty. Yet, very recently, a few innovative studies have established routines for estimating multi-level models with international data (e.g. Gangl 2006; Mandel and Semyonov 2005; Pettit and Hook 2005). While we use a different estimation technique and have a different dependent variable, we follow their lead in aiming to integrate the micro- and macro-level studies of the welfare state and poverty.

HOW POLITICAL CONTEXT INFLUENCES POVERTY

For our purposes, the political context for poverty includes the welfare state and Leftist political actors (Brady 2003b; Moller et al. 2003). Political context may have both proximate and fundamental causal effects on poverty. The proximate influence is the welfare state and the fundamental causal influence involves the power resources of Leftist political actors.

The Welfare State

Generous welfare states may reduce poverty because of two central roles played by social policies and taxation: managing risk and organizing the distribution of economic resources (Esping-Andersen 1999). In minimalist welfare states, poverty is more common because citizens

are less protected against risk, and the distribution of economic resources is less favorable to the poor. In such a context, working-aged adults depend more exclusively on labor market earnings to evade poverty. Hence, the poor are those that are more vulnerable to the occurrence of and more harmed by the consequences of disadvantaged statuses.

Elaborating on the first role, welfare states manage against risk (Esping-Andersen 1999). Welfare states are collective insurance programs that protect people who have experienced a loss (Rank 2005). For example, welfare states provide economic resources for the unemployed. Since unemployment is a fairly systemic feature of advanced capitalism, welfare states prepare for the chance that a worker will lose her or his job and facilitate the saving of money to protect against this risk. As well, welfare states alleviate the long-term costs or "scar effects" of unemployment (Gangl 2006). Other events often considered "risks" include becoming a mother – particularly a single mother – growing old, being disabled, or experiencing a family transition like divorce (DiPrete and McManus 2000).

On the second role, welfare states organize the distribution of economic resources, shaping how much income households receive (Esping-Andersen 1990). Through governing the rules of exchange, regulating currencies and business, providing public goods like education and health care, facilitating transportation and communication, or even simply creating jobs, the welfare state is involved in all aspects of the distribution of economic resources (Fligstein 2001). Normally, this mechanism is understood as *re*distribution. But, this framing may problematically neglect how welfare states, or states more generally, govern the accumulation of profits and income for the affluent as well as the poor (Korpi 1983:188). The imagery of redistribution insinuates that there is a two-step process, where markets naturally distribute income and states subsequently redistribute that income. But, imagery of such a two-step

process might be artificial (Bergh 2005; Esping-Andersen 2003; Wright 2004). States are always involved in the allocation of income to workers, owners, and managers. States do not simply respond to what markets have initiated; states define and constitute markets (Fligstein 2001). As Wright (2004:3-4) argues, "The state plays a pivotal role in establishing the very possibility of markets through the coercive enforcement of property rights that directly impact on the nature of market-generated distributions. . .In all sorts of ways the state is involved in regulating aspects of market exchanges and production – from health and safety rules, to credentialing requirements in many labor markets, to labor laws – that impact on the income distribution process." So, rather than framing welfare states as only *re*distributing, we contend the welfare state organizes distribution.[5]

In order to fully appreciate the welfare state's potential effects on poverty, it is essential to define the welfare state comprehensively, encompassing spending, transfers, and services (Korpi 1983). The welfare state does more than directly provide assistance in times of need, and welfare services may be even more important than transfers (Huber and Stephens 2001). For example, because state-sponsored health care is expensive, it de facto requires larger government budgets and higher taxes on households above the median. The higher taxes and large government budgets end up redistributing resources downward in the income distribution because the poor disproportionately collect more services and pay fewer taxes (Blank 1997:165; Korpi and Palme 1998). Although transfers are often contingent on previous employment, welfare services are granted universally as a citizenship right in generous welfare states. Such citizenship benefits like public healthcare minimize the costs of unfortunate events like sickness. As a result, welfare services enhance the earning power and financial stability of working-aged adults and, thus may reduce poverty.

In the event of significant effects of the welfare state, at least four specific issues deserve scrutiny. First, rather than aggregate poverty, a multi-level analysis can test the welfare state's effect on an individual's odds of poverty. Specifically, we can assess if the welfare state has an effect even after controlling for salient individual- and household-level predictors of poverty. Second, upon controlling for individual and household characteristics, it would be valuable to compare how large the effect of the welfare state is relative to such micro-level characteristics.

Third, an even more rigorous test of the welfare state's effects would control for the country-level structural context. In particular, past research links economic performance and labor market structure with poverty (Blank 2000; Freeman 2001; Gundersen and Ziliak 2004; Tomaskovic-Devey 1991; Wilson 1996). Structural context could influence poverty by shaping the opportunities and rewards for employment, which could influence poverty, even net of individual employment. If indeed the welfare state significantly influences poverty, this finding should be robust even controlling for structural context. Also interesting is how large the effects of the welfare state are relative to the effects of structural context. It is commonplace to claim that economic performance is a very (or even the most) powerful influence on poverty (Blank 2000; Freeman 2001; Gundersen and Ziliak 2004), even though few actually compare structural effects against welfare state effects (Tomaskovic-Devey 1991).

Finally, one should go beyond simply examining the effect of the welfare state net of controls. Because the welfare state is supposed to reduce the costs of unfortunate life events and risks, the welfare state should have an interactive effect with key individual and household characteristics.[6] This follows Korpi's (1983:189) distinction that the welfare state involves both: "the extent to which various measures prevent problems and needs from arising. . .[and] alleviate problems and needs once they are manifest." One of the most important critiques of the welfare

state is that it presumes a male breadwinner and thus fails to as effectively reduce poverty for particular vulnerable groups like single mothers and women (Orloff 1993). Also, there is concern that the welfare state was not built to manage new risks like high unemployment and the labor market entries of young adults (Esping-Andersen 1999). An inspection of possible cross-level interactions between the welfare state and micro-level variables could address these concerns. Similarly, one should examine the welfare state's effect on sub-samples that are particularly vulnerable to poverty because of such individual characteristics.

Leftist Political Actors

In addition to the proximate effect of the welfare state on poverty, the political context matters as a fundamental cause through the power resources of Leftist political actors (Lieberson 1985; Link and Phelan 1995). By fundamental cause, we mean that politics: embodies the power relations that influence welfare generosity; and, affects poverty through multiple mechanisms including some beyond the welfare state. Our explanation here builds explicitly on power resources theory. Though power resources theory was designed to explain the welfare state, it also offers a general account of the process of economic distribution in affluent democracies (Hicks 1999; Huber and Stephens 2001; Korpi 1983).[7]

Power resources theory begins with the realistic premise that political power is very unequally distributed in a capitalist democracy (Korpi 1983). Business, owners, and managers have far more power because they control the means of production and thus the delivery of economic resources to the population. Ultimately, the default organization of markets becomes favorable for business, which triggers the exploitation of workers and subsequent economic insecurity of the broader population. Business has an interest in maintaining this default

organization, and so exerts its influence to maintain a minimalist welfare state. In this default position, the working-class and the poor have very little political power.

To alter power relations, the working-class and poor must bond together and attract some of the middle class (Hicks 1999). Then, organized class-based political action in the workplace and elections can result (Korpi 1983). Workers can strike and interrupt the ability of business to make profits. More effectively, the working-class and poor, allied with parts of the middle-class, can support Leftist political parties (Huber and Stephens 2001). When in office, these parties can push for an expansion of the welfare state to protect workers and the poor and guard against the economic insecurity that is inherent in capitalism. Thus, Leftist political actors representing the working-class and poor may influence the state in order to institutionalize egalitarianism. Given these foundations, power resources theory suggests two relationships between Leftist political actors and poverty: *channeled* and *combined* (Brady 2003b; see esp. Korpi 1983:187, Figure 9.1). Both imply Leftist politics are interrelated with the welfare state.

One possible relationship between Leftist political actors and poverty is that such actors trigger welfare state expansion, which subsequently reduces poverty. In this causal chain, the effects of Leftist political actors are *channeled* entirely through the welfare state to alleviate poverty. This relationship would be demonstrated if Leftist political actors had an effect on poverty, but this effect attenuated to non-significance when welfare state generosity was included in the model. We should observe that the welfare state fully mediates the effect of Leftist politics on poverty, which suggests the effect of Leftist politics operates indirectly through the welfare state. Part of this causal chain is already well-established. Many studies demonstrate that Leftist political actors, like unions and Leftist parties in government, are

positively associated with welfare state generosity (Hicks 1999; Huber and Stephens 2001). In general, Leftist political actors support legislation involving more generous welfare programs.

Another possible relationship between Leftist political actors and poverty is that Leftist political actors and the welfare state have *combined* effects on poverty (Korpi 1983). If Leftist political actors and welfare generosity both significantly reduce poverty in the same model, and the effects do not entirely mediate each other, an explanation of combined effects is valid (Moller et al. 2003). This account rests on a social democratic model that integrates labor market institutions, encompassing social policies, and historically strong Leftist parties. In this explanation, equality rests on the interconnections of these various facets of social democracy. Consistent with the combined account, many welfare state scholars argue that Leftist politics and the welfare state have mutually beneficial feedback effects on each other (Korpi and Palme 1998). Generous welfare policy legacies encourage Leftist mobilization and both work in concert to reduce social inequality and poverty.[8] For example, Huber and Stephens (2001) claim that poverty is lowest when coordinated market economies with strong labor market institutions combine with social democratic welfare states. Hence, Leftist parties and unions could have effects on poverty that are independent of and combine with the welfare state.

* * *

In order to examine the influence of political context on poverty, our analyses test: 1) the welfare state's effect on poverty net of individual and household characteristics as well as controlling for structural context; 2) the welfare state's interactive effect with key individual and household characteristics and the welfare state's effect on sub-samples particularly vulnerable to poverty; and 3) the effects of Leftist political actors and how much Leftist political actors' effects are channeled or combined with the welfare state.

METHODS

Individual-Level Data

The Luxembourg Income Study (LIS) provides the micro-level data, and the unit of analysis is the individual. The LIS includes cross-nationally and historically harmonized and nationally representative individual-level datasets with standardized measures of key variables (Rainwater and Smeeding 2004). We conducted original analyses with a recent dataset for 18 affluent Western democracies.[9] Our analyses are confined to working-aged adults, defined as those 18 to 65 years old. Partly, this is because some claim that working-aged adults are a more stringent test of the effects of the welfare state (see Moller et al. 2003). Purportedly, the welfare state only redistributes between generations, with workers paying for the non-poverty of the elderly. In addition, concentrating on the working-aged allows us to hold constant some of the life cycle dynamics that increase the odds of being out of the labor force.

The analyses pool the data from these 18 countries into one merged file containing 336,066 working-aged individuals. The descriptive statistics for all variables are displayed in Table 1. A correlation matrix is included in the Appendix.

[TABLE 1 ABOUT HERE]

The dependent variable is *Poverty*. We follow the vast majority of cross-national poverty studies and use the relative headcount measure of poverty (Brady 2003a; DeFina and Thanawala 2001; Moller et al. 2003; Osberg and Xu 2000; Rainwater and Smeeding 2004; Smeeding et al. 2001). An individual is defined as poor = 1 (reference non-poor = 0) if they reside in a household with less than 50% of the median household income. In analyses available upon request and noted below, we experimented with poverty thresholds of 40% and 60% of the

median income. The main conclusions were fully consistent with these alternative thresholds. We calculate household income after taxes and transfers using the standardized LIS variable "DPI."[10] To adjust for household size, DPI is divided by the square root of household members. The calculation of this threshold is done in the same LIS survey in each country and year, and includes all individuals and households regardless of age.

At the individual-level, we consider several independent variables that are likely to affect poverty. To embrace the reality that household income is a function of multiple members of the household and involves pooling of resources and expenses, several individual characteristics are measured at the household-level.[11] First, we include four measures of household labor market standing. We specified binary variables for *No One Employed* in the household and *Multiple Earners* in the household (reference = one earner). Using the LIS standardized measures of education, we include binary measures of *Head Low Education* and *Head High Education* (reference = medium education).[12] Second, we include six measures of family structure. Using two-adult couples as the reference, we constructed binary measures of *Single Mother Household, Female-Head No Children Household, Single Father Household, and Male-Head No Children Household*.[13] With 30-64 year old heads as the reference, we include binary measures of *Head Under-30* and *Head 65 and Over*.[14] Third, we measure the presence of non-working-aged people in the household with *# Over 65* year olds in the household, a binary variable for *Child Under 5* in the household, and *# of Children* in the household. Last, to assess women's greater odds of poverty, a binary variable for *Female* is included.

Country-Level Data

A variety of archival sources was used for the country-level indicators. The proximate source for many variables was Huber et al. (2004). The values of these country-level variables

and details on the LIS and poverty are included in Table 2. As well, the descriptive statistics for the country-level variables are included in Table 1. All country-level variables are measured in the same year as the LIS survey.

[TABLE 2 ABOUT HERE]

Most importantly, we include a *Welfare State Index* as a comprehensive measure of welfare generosity and effort. This variable is a standardized score (mean=0, s.d.=1 across the 18 countries) of four indicators: social welfare expenditures (OECDd), social security transfers and government expenditures as a percent of GDP (OECDa), and public health spending as a percent of total health spending (OECDc 2005) (alpha=.87). In analyses available upon request, we estimated the effect of each of these four components. The conclusions were consistent with our summary index, though the index had larger and more significant effects.[15]

Next, we include three measures of structural context. *Economic Growth* is the three-year average (t, t-1, t-2) of the annual rate of change in gross domestic product (GDP) of purchasing power parity (PPP) dollars (OECDb). *Unemployment* is the percent of the labor force without employment (OECDa). *Manufacturing Employment* is the percent of industrial employees in the labor force (OECDa).

Last, we assess two Leftist political actors. *Union Density* is employed union members as a percent of total civilian employees (Ebbinghaus and Visser 2000; Golden et al. 2006). *Cumulative Left Party Power*, what Huber and Stephens (2001) call "Cabinet," gauges the long-term control of government by tabulating Left seats as a proportion of seats held by all government parties in each year and then summing these proportions for all years since 1946.[16]

Multi-Level Modeling Technique

The logistic regression model is typically utilized in order to examine binary dependent variables (e.g., whether or not poor). However, due to the clustering of individuals within countries and the inclusion of country-level variables, the standard logistic regression model violates the assumption of the independence of errors. Therefore, we utilize a generalized estimating equation (GEE) model with a logit link, which is an extension of the generalized linear model (GLM) for correlated data (Liang and Zeger 1986). In GEE, as in GLM, the expectation of Y is related to the set of independent variables through the following equation:

$$\boldsymbol{\mu}_i = h(\mathbf{x}_i\boldsymbol{\beta}) \tag{1}$$

where $\boldsymbol{\mu}_i$ is the expectation of $\mathbf{Y}$, or $E(\mathbf{Y}_i)$, the inverse of h is the link function, $\mathbf{x}_i$ is a vector of independent variables, and $\boldsymbol{\beta}$ is a vector of coefficients (Zeger and Liang 1986:123). The equation for the covariance matrix for $\mathbf{y}_i$ is more complicated in GEE than in GLM. In order to adjust for the clustering of data within groups (e.g., countries), GEE estimates a working correlation matrix that it uses to correct the standard errors (Hu et al. 1998). GEE allows for several different types of working correlation structures. We use an "exchangeable" correlation matrix, which assumes that Y_i covaries equally across all cases within a cluster (Zorn 2001:473). The equation for the covariance of $\mathbf{y}_i$ is:

$$\mathbf{V}_i = \mathbf{A}_i^{1/2}\mathbf{R}_i(\alpha)\,\mathbf{A}_i^{1/2}/\boldsymbol{\varphi} \tag{2}$$

where $\mathbf{A}_i$ is a diagonal matrix with a function, g, of the expectation constituting the diagonal elements, $\mathbf{R}_i(\alpha)$ is the working correlation matrix, and $\boldsymbol{\varphi}$ is a scale parameter (Zeger and Liang 1986:124). If one assumes an independent working correlation matrix, then GEE is equivalent to

GLM. GEE estimates the model parameters using a quasi-likelihood procedure to solve the following score equation (Zeger and Liang 1986:123):

$$\mathbf{S}_k(\boldsymbol{\beta}) = \sum_{i=1}^{K} (\partial\boldsymbol{\mu}_i/\partial\boldsymbol{\beta})\mathbf{V}_i^{-1}(\mathbf{y}_i - \boldsymbol{\mu}_i) = 0. \quad (3)$$

While GEEs are most often applied to longitudinal data (e.g. Alderson and Nielsen 2002), they apply to non-temporal forms of correlation as well (e.g., spatial correlation). GEE is a flexible tool for analyzing clustered data regardless of the type of correlation or the nature of the dependent variable (Zorn 2001). Unlike some models for correlated data, GEE is applicable for continuous as well as categorical dependent variables. GEE also produces substantively similar results to regression models with robust standard errors (Zorn 2006). Another advantage of GEE is that even if the working correlation structure is incorrectly specified, the results will be asymptotically unbiased (Ziegler, Kastner, and Blettner 1998). Finally, it is worth mentioning that GEE is a "population-averaged" rather than "unit-specific" approach, which means that the effects of individual-level variables do not vary by country (unlike in random coefficients and conditional models) and clustering within groups is treated as a nuisance parameter.[17]

RESULTS

Base Models

Table 3 displays the odds ratios for the first set of models. Model 1 includes the individual-level variables, but no country-level variables. This model shows that living in a household with the following characteristics increases one's odds of being poor: no one is employed, the head has low education, single mother household, female-head no child

household, male-head no child household, head under-30, and a greater number of children. According to the odds ratios, the greatest impacts are no one employed and having a young head. Living in households where no one is employed increases the odds of being poor by a factor of 3.2 relative to those in households with one earner. Living in households headed by someone under 30 increases the odds of poverty by a factor of 2.3 relative to those living in households headed by someone 30-65. Other variables have more moderate effects. With a low-education head, the odds of poverty increase by a factor of 1.58. With a single-mother, female-head no child, or male-head no child household, the odds of poverty increase 1.9, 1.7 or 1.35. For each child in the household, the odds of poverty increase by a factor of 1.33.

[TABLE 3 ABOUT HERE]

Several characteristics reduce the odds of individual poverty: multiple earners in the household, head high-education, more elderly in the household (over 65 years old), and uenxpectedly, being female. Like the poverty-increasing characteristics, the greatest influence regards employment. Having multiple earners in the household reduces the odds of poverty by a factor of 3.76 (or 1/0.266). If the head has high education or with each additional person over 65 in the household, the odds of poverty decline by a factor of 1.68 or 1.75. Surprisingly, being female reduces the odds of poverty by a factor of 1.03. Given that poverty is widely known to be feminized (Brady and Kall 2008), it is important to emphasize that this is net of demographic and labor market characteristics. Net of the family and age structure of the household and education and employment of the head, the odds of being poor are actually less for women. In analyses available upon request, we estimated a reduced form model – omitting the four family structure variables – and the odds of being poor were significantly greater for women (z=3.02).[18] So,

poverty is feminized. But, perhaps unsurprisingly, the feminization of poverty can be accounted for by the demographic and labor market characteristics included in the model.

Given the large sample, the odds ratios and significance levels are fairly stable across models in Table 1, with some exceptions explained below. Interestingly, some insignificant effects are worth noting. The odds of being poor are not significantly greater in single father households than in couple households. Having an elderly head and having young children in the household (under 5) do not significantly influence the odds of poverty.

In model 2, we add the welfare state index. This model shows that welfare state generosity significantly reduces the odds of poverty even net of a variety of individual characteristics (z=-3.9).[19] More importantly, the effect is substantively significant, as a one standard deviation difference in the welfare state index is larger than all poverty-reducing characteristics except having multiple earners in the household. The absolute value of the effect of welfare generosity is greater than most individual characteristics, with the exception of no one employed and head under-30. Specifically, the odds of being poor are reduced by a factor of 2.58 for a one-unit increase in welfare state generosity. This variable was created with a mean zero and a standard deviation of one, but given that some countries contribute more cases to the overall sample, the actual standard deviation is 0.9. With each standard deviation increase in welfare generosity, the odds of poverty decline by a factor of 2.3.

Multiplying the logit coefficient by differences in welfare generosity between countries (see Table 2) and then converting to odds ratios, one can estimate the differential odds of poverty between countries (net of individual characteristics). For example, the odds of poverty for an identical person in Sweden as opposed to Italy are less by a factor of 2.76. The odds of poverty for a person in the U.K. are less by a factor of 3.50 than a person with identical characteristics in

Ireland. The odds of poverty for a working-aged adult in the U.S. (the least generous welfare state) are greater by a factor of 16.6 than a person with identical characteristics in Denmark (the most generous welfare state). If the U.S. had even the mean level of welfare generosity (-.391), the odds of poverty for the average person would decline by a factor of 2.94. While individual-level characteristics clearly influence poverty, the welfare state has an exogenous impact on top of these characteristics. When the welfare state index is added to the model, the significant effects of all individual-level variables grow.

In model 3, we add three other country-level variables to test the robustness of the welfare state's effects. When economic growth, unemployment, and manufacturing employment are added, the welfare state index remains significant and none of those variables is significant. Thus, increased economic growth, unemployment, and manufacturing employment have no contextual effect on the odds an individual is poor, net of the individual-level characteristics.[20] It is important to acknowledge that having multiple earners or no one employed certainly influence poverty, and those variables are likely shaped by the structural context. Although these country-level variables do not have a direct contextual effect net of an individual employment, they probably indirectly influence poverty. The welfare state index actually has a slightly larger effect in model 3 than in model 2 (the odds ratio increases from .39 to .33).[21] The individual-level variables are relatively stable with minor fluctuations.[22]

Cross-Level Interactions and Sub-Samples Analyses

Building from model 2 in Table 3, Table 4 begins with cross-level interactions between the welfare state and individual characteristics that increase working-aged poverty. In particular, we test interactions of the welfare state index with no one employed in the household, low education, single mother household, female-head no children household, head under-30, the

number of children in the household, and the female dummy (even though its effect is negative). These results test the main effects of the welfare state index and these poverty-enhancing characteristics, while also testing if the welfare state has an effect on the slopes of these characteristics. Hence, these models assess whether and how much the welfare state reduces (or increases) the costs of these individual characteristics. Because in logistic regression the interpretation of interaction effects and effects across sub-samples is complicated (Allison 1999), we only report the coefficients (not odds ratios) and concentrate on significance and direction.[23]

[TABLE 4 ABOUT HERE]

Compared to the second model in Table 3, we find broadly consistent results for the individual-level variables (only single father household, head 65 and over, and child under 5 are insignificant). The welfare state index still has a significant negative main effect. As well, the welfare state index interacts significantly with three individual characteristics. The welfare state reduces the harm caused by the poverty-enhancing characteristic of low education, as those with low education are less likely to be poor in generous welfare states. Also, the welfare state alleviates the costs of having more children in the household. The welfare state and female has a near significant negative effect, suggesting at least, that the welfare state does not worsen gender inequalities. Perhaps surprisingly, the interaction effects are mostly insignificant for the remaining poverty-enhancing characteristics. The exception is that the interaction with young household heads is significantly positive. Generous welfare states reduce poverty, but this suggests the odds of poverty may be greater for households headed by someone under 30 in more generous welfare states.

The next four models estimate the log odds of poverty among demographic sub-samples that are more likely to be poor: the unemployed, those with low education, single mother

households, and young households. Given the nature of these demographic sub-samples, we omit several irrelevant individual-level variables in each model. Like the cross-level interactions, these models scrutinize the welfare state's effect on vulnerable populations.

Welfare generosity significantly reduces poverty among those with low education, among single mother households, and among those living in a household headed by someone under 30. Thus, the welfare state effectively reduces poverty among these three groups who typically have a greater propensity to be poor. Even though these individual characteristics increase one's odds of poverty, it is better to reside in a generous welfare state if one's household head has low education, is a single mother, or is under 30 years old. Because the welfare state significantly reduces poverty within the sub-sample of young households, this should partially alleviate the concern with the related significant positive interaction in model 1.

Welfare generosity does not significantly affect poverty among the unemployed. Coupled with the finding that the welfare state index does not significantly interact with no one employed in the household (model 1), it appears that the welfare state is less effective in reducing jobless poverty. Given that this individual characteristic has the largest positive effect in Table 1, the tight link between unemployment and poverty represents a daunting challenge even for the most generous welfare states.

Leftist Politics Models

In Table 5, we seek to untangle the relationship between Leftist political actors, the welfare state, and poverty. As discussed above, Leftist politics might significantly influence poverty, and these effects could be channeled through or combine with the welfare state. The models in Table 5 include all individual-level variables, but they are not displayed (available

upon request). Like Table 3, we report odds ratios. Models 1-2 exclude the welfare state index, but include union density and cumulative Left party power.[24]

Model 1 shows that union density has a significant negative effect on working-aged poverty. For each percent unionized, the odds of poverty decline by a factor of 1.02. This translates into a sizable effect, as the standard deviation for union density is 20.43 (see Table 1). For each standard deviation increase in union density, the odds of poverty decline a factor of 1.65. If the U.S. had either average or the highest level of union density (i.e. Sweden, see Table 2), the odds of poverty would decline by a factor of either 1.61 or 4.65.

Model 2 demonstrates that cumulative Left party power has a significant negative effect on poverty. For each year that a Left party has been in control of the government since 1946, the odds of poverty decline by a factor of 1.06. With each standard deviation increase in cumulative Left party power, the odds of poverty should decline by a factor of 2.24. If the U.S. had average Leftist party power or the highest level (i.e. Sweden, see Table 2), the odds of poverty would decline by a factor of 2.25 or 12.96.

Models 3-4 assess if the effects of these Leftist political variables are channeled through the welfare state or if the effects combine with the welfare state. In model 3, union density becomes insignificant, although it continues to be negatively signed. In model 4, cumulative Left party power is also insignificant and negatively signed. In both models, the welfare state index is significantly negative, although the size of its effect is smaller than in Table 3. These models suggest that all of the effects of union density and cumulative Left party power are channeled indirectly through the welfare state to reduce poverty. Comparing models 3 versus 1, about 75 percent of the effect of union density is channeled through the welfare state (and the remaining effect is insignificant). Comparing models 2 versus 4, about 45 percent of the effect

of cumulative Left party power is channeled through the welfare state (and the remaining effect is insignificant). Thus, these results demonstrate that Leftist political actors channel their influence through the welfare state to reduce poverty. Leftist political actors do have a negative effect on working-aged poverty, but the effect is indirect.

CONCLUSION

Social scientists have tended to share much of the individualism of American society and have emphasized individual characteristics to explain attainment and poverty (Pease et al. 1970; Rank 2005). In recent years, there has been a call to contextualize attainment and inequality within institutions and social relations. This study answers that call by examining how the political context of affluent democracies shapes the odds that working-age adults are poor. We offer one of only a few multi-level analyses of individual poverty across affluent democracies (Wiepking and Maas 2005). Our study yields several conclusions that should be salient to scholars of poverty, inequality, the welfare state, and politics. Moreover, our study aims to advance research on the welfare state and poverty by uniting the previously disconnected micro- and macro-level research. By uniting these approaches in multi-level models, we hope to address the weaknesses of each while benefiting from their strengths.[25]

While several individual characteristics have expected associations with poverty, probably the most consequential of these is no one employed in the household. The welfare state index has a negative effect that is comparable to the effects of most individual characteristics. Also, the welfare state's effect is significant net of individual characteristics and structural context. For each standard deviation increase in welfare generosity, the odds of poverty decline by a factor of 2.3. As mentioned above, the odds of poverty for a working-aged adult in the U.S.

(the least generous welfare state) are greater by a factor of 16.6 than a person with identical characteristics in Denmark (the most generous welfare state). Plausibly, the welfare state's powerful effects are due to both organizing the distribution of economic resources in a more egalitarian direction and managing risks and insecurities. The welfare state provides insurance against sickness, unemployment, divorce and other disadvantageous life course transitions and distributes economic resources downwards in the income distribution.

Not only does the welfare state have a significant effect on individual poverty, but it also constrains the harm caused by poverty-enhancing characteristics. The welfare state interacts significantly with individual characteristics and, in particular, reduces the impact on poverty of low education and the number of children. The welfare state is not a panacea, as there is mixed evidence that generous welfare states might worsen the standing of young households. Nevertheless, in addition to the main effect of the welfare state net of individual characteristics, the welfare state dampens the effects of poverty-enhancing characteristics such that those attributes are less harmful in generous welfare states. Moreover, our analyses show that the welfare state index significantly reduces poverty among households where the head has low education, is a single mother, and is under 30 years old. The one notably intractable dimension of poverty is among those households where no one is employed.

While the welfare state is the proximate influence on how political context shapes poverty, the political context also matters through the fundamental causal influence of Leftist political actors. We show that union density and the cumulative years a Left party has controlled government significantly reduce the odds of poverty. All of the effects of these Leftist political actors channels through the welfare state. Thus, union density and cumulative Left party power reduce poverty, but their effects are indirect through the welfare state.

Partly to address the limitations of this study, we encourage future research in two directions. First, it would be valuable to decompose the welfare state's effects on poverty to explore the two mechanisms of organizing distribution and managing risk. Our results suggest that there is evidence for both. Specifically, we show that the welfare state interacts significantly with low education, and significantly reduces poverty among those households headed by someone with low education. Plausibly, these effects are due to the more egalitarian distribution within generous welfare states. Likewise, the significant interaction between the number of children and the welfare state, and the effects of the welfare state on the sub-samples of single mother and young households provide evidence of the welfare state's social insurance and risk management roles. Second, we encourage the extension of multi-level designs to other cross-national variations in inequality. Since no one employed in the household has such a significant influence on working-aged poverty and since the welfare state index does not have a significant effect among this group, scholars should examine if the political context has an effect on individual-level unemployment. The recent effective use of multi-level models in cross-national research, especially with the LIS, can produce a great deal of leverage on important questions for inequality scholars (Mandel and Semyonov 2005; Pettit and Hook 2005).

Our study seeks to provide at least a modest correction to the individualist vision of the sociology of attainment and stratification that has featured prominently in our discipline at least since Blau and Duncan (1967). Obviously, the individualist tradition has been one of sociology's more effective cumulative research programs over the past several decades (Goldthorpe 2000). Yet, we propose that the broader contextual turn, which has picked up momentum in recent years and is best exemplified by the rise of multi-level modeling, represents a productive agenda for inequality scholars. We contend that poverty is not solely the result of a

lack of employment and education, the presence of single parenthood, or any other individual characteristic. Returning to Sawhill (2003:79), she writes, "No feasible amount of income redistristribution can make up for the fact that the rich are working and marrying as much or more than ever while the poor are doing just the reverse." Our study challenges Sawhill's claim and her broader behavioralist theory of poverty. Sawhill, and many observers of contemporary U.S. poverty, effectively blame the poor for their plight and proclaim that if the poor practiced different behaviors, they would not be poor. By contrast, we show that working-aged adults with the same disadvantaged work, education and family characteristics in other affluent democracies are far less likely to be poor simply because they reside outside of the U.S. political context. Rather than contrasting the behaviors of the poor against the behaviors of the U.S. mainstream, we show that those same behaviors, if put in a different political context, are not a guaranteed sentence of poverty. Ultimately, poverty is shaped both by the characteristics of an individual and the political context in which that individual resides.

ENDNOTES

1. Rank (2005:49, 50) explains, "Within the United States, the dominant perspective has been that of poverty as an individual failing. . .The emphasis on individual attributes as the primary cause of poverty has been reinforced by social scientists engaged in poverty research. . .The unit of analysis in these studies is by definition the individual, rather than the wider social or economic structures, resulting in statistical models of individual characteristics that predict individual behavior."
2. Tilly (1998:35) elaborates, "[E]xtension of relational analyses within the study of social inequality does not deny the existence of individuals or individual-level effects. It does, however, place individualistic processes in their organizational context. It does, finally, challenge any ontology that reduces all social processes to the sentient actions of individual persons."
3. Based on a content analysis of leading U.S. sociology journals in the 1990s, Brady (2003a) finds that only 7.6 percent of quantitative sociological poverty studies examine countries besides the U.S.
4. In an important article, Bergh (2005) shows that using the pre-fisc income distribution as a counterfactual to compare with post-fisc is biased because of: a) how welfare states redistribute between individuals and over the life-cycle; b) the interdependence between pre-fisc incomes and taxes and transfers; c) the incorrect description of the redistributive effect of social insurance that crowds out market insurance; and d) how welfare states influence the distribution of earnings through education. Partly for such reasons, Wright (2004:4) remarks, "It is therefore misleading to talk about a clear distinction between pure 'distribution' of income and a process of politically shaped 'redistribution.'"
5. Combining both roles, the state also organizes the distribution of risk (e.g. via constraints on employers laying off workers). By managing the risk of those likely and unlikely to become poor, welfare states also implicitly enhance the security of those unlikely to be poor, even though those likely to be poor receive more direct benefits.
6. Another way to put this is that the welfare state should have an effect on the slopes of individual characteristics. However, given our particular multi-level approach (see below), referring to them as random slopes is not precise.
7. While power resources theory has been a leading explanation of the welfare state, of course, it has limitations (e.g. neglect of gender and race, and how business sometimes supports the welfare state). So, it serves as a starting, not ending, point for theorizing how Leftist political actors influence poverty.
8. Welfare states contribute to societies' ideologies and normalize collective expectations about whether various economic distributions are appropriate (Brooks and Manza 2007). Welfare states institutionalize the very possibility of how much poverty is acceptable in a society through path dependency.
9. We used the most recent dataset for each country as of January 2007. Details on the LIS and a list of the datasets are available at www.lisproject.org.
10. Smeeding et al. (2001:165) describe DPI as, "The best current definition is disposable cash and noncash income (that is, money income minus direct income and payroll taxes, and including all cash and near-cash transfers, such as food stamps and cash housing allowances, and refundable tax credits, such as the Earned Income Tax Credit)."
11. Within the LIS, some individuals are clustered within households, which may result in underestimated standard errors. In turn, we also estimated the models while clustering by household but not by country (results available upon request). The results are almost identical for the individual/household-level variables (esp. signs and significance). Unfortunately, this ignores the clustering by country, and given the remote access of LIS, there is no modeling strategy that allows us to cluster at both household- and country-levels. When the welfare generosity country-level variable is added (while clustering at the household-level), the significance level is dramatically over-confident (z-scores > 70). Because we cannot cluster by both country and household, we cluster at the country-level to reflect the theoretical focus of our analysis on cross-national differences.
12. The LIS standardized education measure is a recent innovation where the LIS staff codes each country into three categories: a) less than secondary education (low), b) secondary education or some tertiary education (medium), and c) completed tertiary or more education (high). This measure is a useful solution to comparing education systems across countries. The LIS has created a routine to generate these codes, but we wrote code to copy this routine and to expand it to the U.K. (see: http://www.lisproject.org/dataccess/educlevel.htm).
13. We code couples using the LIS variable "married" and code married couples and non-married cohabiting couples (including same sex couples) as couples.
14. Since we only analyze 18-65 year olds, it is essential to be clear about these age of head variables. A working-aged adult could live in a household headed by someone under 18 (only 1/10th of 1 percent of sample) or a household headed by someone over 65 (3.9 percent, see Table 1), but the individual is still 18-65 years old. An

alternative would be to simply analyze the individual's, rather than head's, age. But, since intergenerational living arrangements are common, especially in Europe, individual's age may be a less precise measure of the effect of age. In analyses available upon request, we found substantively identical results if we include dummies for heads under-18 and heads 18-29, so we combined the two.

15. Our index combines measures that previous studies have shown to significantly influence poverty (Brady 2003b, 2005; Brady and Kall 2008; Moller et al. 2003). Another alternative would be Scruggs and Allan's (2006) decommodification index (cf. Esping-Andersen 1990). Unfortunately, this index is not available for Spain and Luxembourg. Our welfare state index correlates strongly with their measure (r=.69). In analyses available upon request, we substituted their measure and found similar results, although with two fewer countries.

16. Only true Social Democratic or Leftist parties are coded as Leftist. Thus, in Huber et al.'s (2004) dataset, the "left" in Canada and the U.S. are coded as centrist (Huber and Stephens 2001). In Spain, this variable was tabulated since the first democratic elections after Franco's death in 1977. In analyses available upon request, we also examined cumulative right party power, but found it never had a significant effect (with or without cumulative left party power and/or union density in the model).

17. Of course, there are reasonable multi-level modeling alternatives. Unfortunately, given that the LIS is only available via remote access and in SPSS, Stata or SAS, one cannot directly use multi-level modeling software like HLM. Within SAS, one could use the procedures NLMIXED or GLIMMIX, but these had difficulty converging, especially with cross-level interactions. As a result, these approaches were unfeasible (although we conducted sensitivity analyses with the models that did converge). One could estimate the individual-level within-country models in the LIS, and then export those estimates into a two-step "variance-known" procedure in HLM (Pettit and Hook 2005). Also, one could estimate a random effects model or estimate a model with robust-clustered errors. We propose our strategy is defensible with comparable strengths to these alternatives. In footnote 19, we report a sample of our sensitivity analyses for key coefficients.

18. This female coefficient remains significantly positive if the welfare state index is added as in model 2. As the appendix reveals, the female variable does not correlate particularly highly with the other independent variables, so collinearity is not a serious problem. Dropping the female variable throughout does not change our conclusions.

19. Using PROC GLIMMIX in SAS, the welfare state index is also significantly negative (b=-.55, z=-4.20). Using binary logistic regression without any clustering of the errors, the welfare state index is negative (b=-.64) and, as expected, overconfidently significant (z=-80.08). Finally, the welfare state index is significantly negative with a poverty threshold of 40% (b=-.71, z=-3.35) and 60% (b=-.58, z=-4.65) of median income.

20. When entered into the model individually, economic growth (b=.04, z=.37) unemployment (b=.10, z=.78) and manufacturing (b=-.11, z=-1.25) remain insignificant. These three variables remain insignificant when the poverty threshold is 40% of median income, and unemployment and manufacturing employment remain insignificant when the threshold is 60% of the median income. Economic growth, however, has a significant negative effect when the poverty threshold is 60% of the median income (b=-.14, z=-2.78). We acknowledge that by sampling only affluent democracies, our analyses neglect the essential role of long-term economic development for expanding welfare states and reducing inequality and relative poverty.

21. In model 3, the welfare state index continues to be significantly negative with a poverty threshold of 40% (b=-.57, z=-2.85) and 60% (b=-.48, z=-4.83) of median income.

22. In analyses available upon request, we specified a more parsimonious model by dropping the six insignificant variables from model 3. The results and conclusions remain robust.

23. The descriptive statistics and correlations for the cross-level interaction variables and the sub-samples are available upon request.

24. We do not include union density and Left party power in the same model because of collinearity. As the Appendix shows, union density and cumulative Left party power are highly associated (r=.78). If we include both in the model before adding the welfare state index, only cumulative Left party power is significant.

25. While these models have the advantage of capturing both cross-national and individual variation, they lack the ability to discern within-state heterogeneity. In federal states such as Canada and especially the United States, the distribution of resources varies across provinces and states, so it should not be assumed that such states are monolithic. For instance, Osberg (2000) demonstrates that social assistance and unemployment insurance generosity varied by province/state and were significant predictors of poverty.

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Table 1. Descriptive Statistics for Variables in Analyses (N=336,066).

	Mean	***Standard Deviation***
Individual-Level Variables		
Poverty	.087	.282
No One Employed in HH	.099	.298
Multiple Earners in HH	.628	.483
Head Low Education	.283	.450
Head High Education	.285	.451
Single Mother HH	.042	.200
Female-Head No Children HH	.089	.285
Single Father HH	.011	.102
Male-Head No Children HH	.089	.285
Head Under-30	.120	.325
Head 65 and Over	.039	.192
# Over 65 in HH	.093	.339
Child Under 5 in HH	.739	.439
# of Children in HH	.800	1.092
Female	.507	.500
Country-Level Variables		
Welfare State Index	-.391	.895
Economic Growth	3.772	1.369
Unemployment	6.373	2.630
Manufacturing Employment	23.400	2.658
Union Density	31.710	20.428
Cumulative Left Party Power	14.185	14.113

Table 2. Luxembourg Income Study (LIS) Specifics and Values of Country-Level Variables.

		LIS N	*LIS Poverty Rate*	*Welfare State Index*	*Economic Growth*	*Unemployment*	*Manufacturing*	*Union Density*	*Cumulative Left Party Power*
Australia	1994	10526	10.070	-1.131	4.204	9.125	21.270	34.182	18.770
Austria	2000	3963	5.274	.551	4.983	3.548	29.200	34.628	33.378
Belgium	2000	3463	3.234	.393	2.137	9.955	21.590	48.983	18.980
Canada	2000	46388	11.180	-.465	3.729	6.788	21.030	28.529	0.000
Denmark	1992	16669	5.453	1.428	2.824	9.003	24.600	68.122	25.390
Finland	2000	18172	2.917	.364	4.439	9.697	24.610	67.699	22.930
France	2000	16001	5.618	.786	2.200	9.300	21.450	8.658	16.170
Germany	2000	17295	4.897	.670	3.433	7.992	30.420	22.832	14.560
Ireland	2000	4580	8.057	-1.424	6.490	4.296	27.260	31.072	5.980
Italy	2000	14697	10.458	.302	3.114	10.519	28.530	29.918	8.560
Luxembourg	2000	4090	4.768	.057	8.835	1.866	22.760	34.000	15.680
Netherlands	1999	7871	9.236	-.359	5.274	3.489	20.580	23.682	13.200
Norway	2000	23376	3.123	.163	7.303	3.447	20.940	52.249	40.543
Spain	2000	8751	9.370	-.357	3.685	13.852	26.690	11.574	13.500
Sweden	2000	19710	4.074	1.370	4.200	5.862	23.130	75.113	44.860
Switzerland	2000	5996	5.871	-.718	2.316	2.612	26.140	18.804	14.400
UK	1999	35239	8.459	-.106	2.481	6.000	24.330	27.981	18.830
USA	2000	79279	13.854	-1.526	3.289	3.974	22.140	12.087	0.000

Table 3. GEE Logit Models of Poverty on Individual- and Country-Level Variables in 18 Affluent Western Democracies (N=336,066): Odds Ratios and (Z-Scores).

	Model 1	***Model 2***	***Model 3***
Individual-Level Variables			
No One Employed in HH	3.198***	4.035***	4.121***
	(7.07)	(8.61)	(8.07)
Multiple Earners in HH	.266***	.196***	.213***
	(-12.09)	(-18.70)	(-9.29)
Head Low Education	1.579***	1.773**	1.723**
	(3.67)	(3.14)	(2.90)
Head High Education	.596***	.523**	.531***
	(-3.53)	(-3.05)	(-3.37)
Single Mother HH	1.852***	1.893***	1.923***
	(3.53)	(3.68)	(3.66)
Female-Head No Children HH	1.699***	1.946***	1.914***
	(5.74)	(6.00)	(5.02)
Single Father HH	1.185	1.135	1.134
	(1.62)	(1.36)	(1.30)
Male-Head No Children HH	1.348***	1.526***	1.498***
	(5.96)	(4.69)	(4.10)
Head Under-30	2.310***	2.787***	2.713***
	(7.77)	(7.44)	(6.39)
Head 65 and Over	.964	.932	.913
	(-.66)	(-.94)	(-1.23)
# Over 65 in HH	.570***	.511***	.517***
	(-4.06)	(-4.43)	(-4.02)
Child Under 5 in HH	.967	.923	.932
	(-.63)	(-1.60)	(-1.33)
# of Children in HH	1.333***	1.390***	1.383***
	(5.86)	(6.29)	(5.46)
Female	.975**	.975*	.976*
	(-3.27)	(-2.28)	(-2.09)
Country-Level Variables			
Welfare State Index		.387***	.334*
		(-3.87)	(-2.32)
Economic Growth			1.099
			(.61)
Unemployment			1.189
			(.94)
Manufacturing Employment			.845
			(-1.06)
Intercept	(-9.10)	(-7.37)	(-.536)

*** p< .001 ** p< .01 * p< .05

Table 4. Cross-Level Interactions and Sample Decomposition of GEE Logit Models of Poverty on Individual- and Country-Level Variables in 18 Affluent Western Democracies: Coefficients and (Z-Scores).

	Cross-Level Interactions	***Unemployed***	***Low Education***	***Single Mother HH***	***Head Under-30***
Individual-Level Variables					
No One Employed in HH	1.226*** (5.37)		1.365*** (8.53)	1.656*** (11.07)	1.450*** (10.58)
Multiple Earners in HH	-1.573*** (-18.69)		-1.761*** (-17.06)	-1.558*** (-10.61)	-1.703*** (-23.36)
Head Low Education	.341* (2.46)	.319* (1.97)		.610** (2.86)	.387* (2.19)
Head High Education	-.621** (-3.09)	-.228* (-2.58)		-.740** (-2.63)	-.656*** (-3.64)
Single Mother HH	.578* (2.21)	.443* (2.52)	.572*** (4.03)		.407* (2.36)
Female-Head No Children HH	.695*** (4.71)	.679*** (3.94)	.648*** (4.89)		.788*** (4.18)
Single Father HH	.151 (1.59)	.235 (1.12)	-.180* (-2.07)		.223 (1.66)
Male-Head No Children HH	.394*** (4.83)	.679*** (5.11)	.364*** (3.76)		.359*** (3.16)
Head Under-30	1.147*** (8.13)	1.072*** (4.08)	.855*** (4.46)	.418*** (3.89)	
Head 65 and Over	-.090 (-1.15)	-.084 (-.74)	-.160 (-1.51)	.267 (.64)	
# Over 65 in HH	-.693*** (-4.63)	-.671*** (-3.74)	-.691*** (-4.27)	-1.310*** (-4.27)	-.900* (-2.04)
Child Under 5 in HH	-.106 (-.96)	-.286* (-2.22)	-.151* (-2.12)	.127** (2.59)	.028 (.36)
# of Children in HH	.243*** (7.07)	.310*** (3.63)	.345*** (5.98)	.300*** (4.35)	.242** (3.23)
Female	-.059* (-2.15)	-.056* (-2.28)	-.020 (-.97)		-.051* (-2.27)
Country- and Cross-Level Variables					
Welfare State Index	-.541** (-2.69)	-.785 (-1.28)	-.821*** (-4.24)	-1.111*** (-5.12)	-.466*** (-3.92)
No One Employed in HH * Welfare State Index	-.333 (-1.31)				
Low Education * Welfare State Index	-.329* (-2.09)				
Single Mother HH * Welfare State Index	-.102 (-.53)				

Female-Head No Children HH * Welfare State Index	.102 (1.35)				
Head Under-30 * Welfare State Index	.291*** (3.54)				
# of Children in HH * Welfare State Index	-.097*** (-4.20)				
Female * Welfare State Index	-.046 (-1.89)				
Intercept	-2.611*** (-9.51)	-.814 (-1.74)	-2.417*** (-14.16)	-2.543*** (-7.24)	-1.506*** (-6.92)
N	336,066	33,124	94,989	14,099	40,241

*** p< .001 ** p< .01 * p< .05

Table 5. GEE Logit Models of Poverty on Individual- and Country-Level Variables in 18 Affluent Western Democracies (N=336,066): Odds Ratios and (Z-Scores).

	Model 1	***Model 2***	***Model 3***	***Model 4***
Individual-Level Variables Included But Not Shown:	No One Employed in HH, Multiple Earners in HH, Head Low Education, Head High Education, Single Mother HH, Female-Head No Children HH, Single Father HH, Male-Head No Children HH, Head Under-30, Head 65 and Over, # Over 65 in HH, Child Under-5 in HH, # of Children in HH, Female			
Country-Level Variables				
Welfare State Index			.408** (-2.92)	.474* (-2.45)
Union Density	.976** (-2.66)		.994 (-.61)	
Cumulative Left Party Power		.944** (-2.99)		.975 (-1.68)
Intercept	(-5.26)	(-8.80)	(-4.46)	(-5.04)

*** p< .001 ** p< .01 * p< .05

Appendix. Correlation Matrix for Variables in Analyses (N=336,066).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1) Poverty																				
2) No One Employed in HH	.241																			
3) Multiple Earners in HH	-.262	-.430																		
4) Head Low Education	.095	-.109	-.098																	
5) Head High Education	-.089	-.094	.077	-.396																
6) Single Mother HH	.139	.066	-.126	.006	-.030															
7) Female-Head No Children HH	.095	.117	-.235	.012	.007	-.065														
8) Single Father HH	.021	-.010	-.016	.004	-.012	-.022	-.032													
9) Male-Head No Children HH	.062	.059	-.237	-.016	-.003	-.065	-.098	-.032												
10) Head Under-30	.114	-.028	-.033	-.065	-.012	.045	.087	.033	.167											
11) Head 65 and Over	-.001	.159	-.140	.126	-.062	-.012	.060	.001	-.026	-.074										
12) # Over 65 in HH	-.013	.179	-.155	.128	-.064	-.019	.041	-.0004	-.001	-.088	.691									
13) Child Under 5 in HH	.024	.106	-.166	.027	-.016	-.187	.187	-.136	.186	.175	.087	.095								
14) # of Children in HH	.054	-.106	.117	-.056	.022	.173	-.230	.066	-.229	-.080	-.117	-.134	-.469							
15) Female	.031	.050	-.036	-.00004	.005	.152	.215	-.056	-.265	-.001	.073	.035	-.019	.003						
16) Welfare State Index	-.104	.127	-.066	.067	-.071	-.049	-.021	-.038	-.008	-.008	-.025	-.027	.015	-.050	-.005					
17) Economic Growth	-.051	-.119	.110	-.021	.004	-.036	-.031	-.009	-.015	-.031	-.005	-.014	-.016	.013	-.015	-.059				
18) Unemployment	-.038	-.022	-.022	.231	-.074	-.043	-.012	-.026	-.016	-.031	.028	.051	.002	-.055	-.004	.401	-.339			
19) Manufacturing Employment	-.039	.096	-.098	.273	-.155	-.027	-.012	-.031	-.037	-.064	.040	.057	.002	-.047	-.0004	.306	-.194	.400		
20) Union Density	-.100	-.051	.078	.003	-.052	-.050	-.031	-.026	.013	-.007	-.036	-.046	.002	-.030	-.016	.423	.372	.198	.059	
21) Cumulative Left Party Power	-.118	.004	.035	.020	-.133	-.049	-.036	-.039	-.019	-.038	-.019	-.038	.001	-.025	-.014	.492	.420	.083	.126	.776