Public Policy and Social Context: The Influence of Gender and Race on Public Child Care Spending Across the American States, 1999-2004

Rebecca Dunning

Department of Sociology
Duke University
Box 90088
Durham NC 27708
rdunning@soc.duke.edu

March 2007

Paper prepared for presentation at the annual meeting of the Population Association of America, March 29-31, New York, NY.

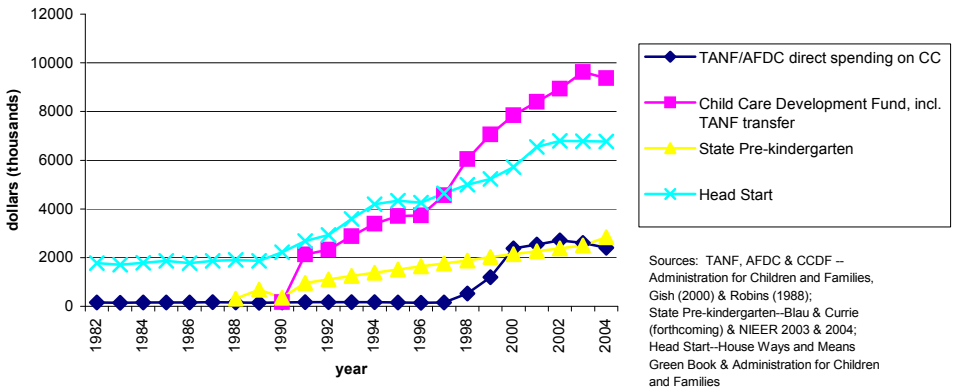
Abstract

In sharp contrast to the past, American states are committing significant resources to subsidized child care. This resource commitment varies widely across states. Based on the historical influence of race and gender on national child care policy, this paper tests the impact of these constructs as contextual variables on state spending levels and spending trajectories between 1999 and 2004. Using a multilevel growth curve modeling framework to approximate the process of policy institutionalization, I find that measures of race and gender play a significant part in explaining between-state differences in spending levels. States with prior institutional support for women's labor market participation and states with a higher proportion of blacks have significantly higher spending. These results hold for the full sample (47 states over six years) and in a sample-restricted analysis of only non-Southern states. While significant variation exists in the trajectories (slopes) of spending over time, much of the source of variation in trajectories of change remains unexplained by the model. Results indicate that there has been no convergence across states in spending levels over the time period analyzed. Nor have states expanded child care spending above 1999 levels.

Introduction

Over the past decade U.S. spending on child care and early education increased exponentially, with the combined sum of child care subsidies, Head Start, and state pre-kindergarten initiatives rising from $1.5 billion in 1992 to nearly $20 billion in 2004 (Figure 1). Today's level of support contrasts sharply with a long-standing historical opposition to public funding for non-maternal care of young children (Beatty 1995; Berry 1993; Gordon 1994; Michel 1999). A key impetus to increased funding has been the programmatic link between subsidized child care and welfare-to-work initiatives effectuated by the Personal Responsibility and Work Opportunities Act of 1996.

Figure 1. Federal and State Spending on Early Childhood Education and Care, Major Programs, 1982-2004 (2004 dollars)



These initiatives shifted welfare and child care policy-making to the states, added stiff new timelines for caseload reduction, and required states to set up administrative structures to distribute child care subsidies to welfare and low-income families. With prodding from the federal government, states have thus become the architects of their own developing child care systems.

The simultaneous devolution of policy-making and administrative power to the states coupled with vastly increased funding provides an opportunity to quantitatively examine the creation of a new policy domain (Burstein 1991) and the variation in domain institutionalization across the differing social and economic conditions that characterize U.S. states. State child care spending provides one measure of policy that varies both across time and social context.

In addition to variation in *levels* of spending across states, spending *trajectories* can also be used as a measurable dependent variable, with parameters—intercept and slope—estimated with relation to state characteristics. This methodological approach is congruent with a view that policies arise incrementally through time in response to environmental (social, political, economic, institutional) constraints.

This paper uses a multilevel growth-curve modeling framework to examine state child care spending between 1999 and 2004. Of specific interest is the hypothesized impact of gender and race—conceptualized as contextual variables—on levels and trajectories of state spending. Historical analysis indicates that cultural conceptions of race and gender have been powerful influences on the form and direction of child care policies (Berry 1993; Gordon 1994; Jenson and Sineau 2001; Michel 1999; O'Connor 1993; Quadagno 1994; Skocpol 1992; Stoltzfus 2003; Zylan 2000). The current analysis extends this line of thought to a multivariate framework.

The analysis in this paper contributes to the social policy literature in several ways. First, it extends existing research by examining an understudied policy area, child care, and tests explanations that have proven useful in other areas of public policy. By quantifying the explanatory power of race and gender it also contributes to the study of

contextual influences on policy outcomes. Finally, this study uses an estimation procedure that has not been applied to the study of policy development, but that more accurately approximates the historical process of policy institutionalization. This approach could be extended to examine other instances of policy change and variation.

Background and Research Questions

Welfare state scholars have implicated racial and gender dynamics as key forces in the historical development of U.S. social policies (Fording 2003; Lieberman 1998; Quadagno 1994), including support for public child care (Berry 1993; Gordon 1994; Jenson and Sineau 2001; Lieberman 1998; Michel 1999; O'Connor 1993; Quadagno 1994; Skocpol 1992; Stoltzfus 2003; Zylan 2000). Yet none of the recent quantitative examination of across-state variation in state spending has fully and simultaneously accounted for these dynamics (Herk 1993; Levy 2000; Rigby 2005). The U.S. approach to child care has been linked to cultural assumptions regarding women's roles (Michel 1999), and these cultural assumptions vary based on social characteristics and geographic place (Bolzendahl and Myers 2004; Rindfuss, Brewster, and Kavee 1996). It follows that geographically-specific measures that capture these assumptions should have an impact on the decentralized child care policies that are now being formulated at the state level.

Prior research also indicates that cultural assumptions regarding race should have an impact on the generosity and distribution of child care spending in U.S. states. Clear empirical connections have been made between racial composition and state social welfare provision and attitudes toward this provision (Alesina, Baqir, and Easterly 1999; Alesina and Sacerdote 2001; Branton and Jones 2005; Fellowes and Rowe 2004; Fording 2003; Hero and Tolbert 1996; Johnson 2003; Rodgers and Tedin 2006; Soss, Schram,

Vartanian, and O'Brien 2001; Taylor 1998). Most of these studies find a negative relationship between black composition or a more general measure of racial heterogeneity and some aspect of welfare generosity or public spending. Race should be implicated in support for child care because of the increased coupling of the child care and welfare policy domains, particularly in the wake of welfare reform.

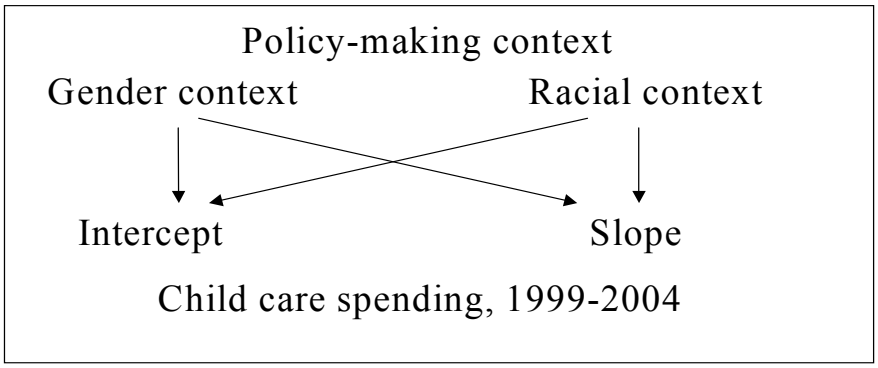
The following analysis examines variation in child care spending within and between states between 1999 and 2004 and estimates the extent to which racial and gender dynamics explains this variation. I begin with 1999 because it is the first full post-welfare reform year for which data for all states are available. Differences across states are defined by variations in trajectories of growth composed of initial values in 1999 and changes in spending through 2004. While I focus more narrowly on gender and race as explanatory factors, the analysis also considers alternative explanations for spending variation by utilizing variables that measure the economic, social, demographic and political characteristics of states. I also consider to what extent state spending has converged or diverged across the time period, and how we can explain this convergence or divergence.

A common approach in comparative studies of public spending across states or countries is to pool across time and spatial unit. The level of a predictor variable is associated with the level of an outcome variable, regardless of the passage of time (although corrections for autocorrelation of errors are often made). If we believe that the passage of time influences policy formation, however, then it becomes reasonable to assume that time itself is part of the policy-making process, and thus will have a substantive influence on outcomes. This connection between policy change and variation

and institutionalized policy legacies has been at the core of historical research on policy development (Amenta 1998; Dobbin 1993; King 1992; Pierson 1993; Thelen 1999; Weir 1982; Weir 1992).

A conceptual representation that accords with policy legacies and incremental institutionalization is represented in Figure 2, below. The figure connects explanatory constructs to measures of policy change—represented by variation in level of spending and in spending change-trajectories over time. This specification allows us to posit hypotheses relating explanatory factors to *variation in initial levels* of spending and to *variation in change* in these levels over time and place.

Figure 2. Statistical Model for Child Care Spending Level and Change



Hypotheses

I anticipate that a more favorable *gender context* will be related to a higher initial (in 1999) spending level, but will be weakly related to a decline in the rate of change (Table 1). I operationalize gender context with a number of measures, including state-specific means of mothers' labor market participation, female political representation, and institutional support in the form of prior state law. States characterized by greater support for women's labor market participation in the past should be more willing and able to establish the organizational structures to administer child care and to expend

greater state resources, resulting in a high initial spending status in 1999. This should be true whether the funds are targeted narrowly for women on welfare, or more broadly for low-income families. This expectation derives from the large body of historiography that connects normative conceptions of women's proper (or improper) participation to the labor market and concomitant support (or non-support) of publicly funded child care (Berry 1993; Degler 1980; Ladd-Taylor 1994; White 2002).

Historical support for women's work may also impact the trajectory of child care spending. I anticipate that states previously unwilling to support non-maternal child care may begin lower in the provision of resources, but may more rapidly increase expenditures over time. Pressure to reduce welfare roles in conjunction with tighter organizational and rhetorical connections between child care and early education, which legitimates non-maternal care, lead states to commit funding and develop administrative structures to distribute these funds. As a result, states that began the period with lower spending levels should more rapidly increase than states with higher spending levels.

I also anticipate that differences in *racial context* will impact child care spending. Much of the recent literature connecting racial and ethnic heterogeneity to public policy finds a negative relationship between heterogeneity and public spending and attitudes toward welfare spending (Alesina 1999; Alesina 2001; but see Branton & Jones 2005 and Stein, Post & Riden 2000). Measures of heterogeneity in the American case, however, should be qualified as to whether they derive primarily from a white/black bifurcation. There is far more support for racial bifurcation as the source of opposition to social spending than there is evidence for more general racial heterogeneity, although few studies have considered both measures simultaneously (Hero & Tolbert 1996). I

anticipate that net of white/black bifurcation, we will not see a relationship between racial/ethnic diversity and child care spending for either the initial level of spending nor pace of change over time.

The influence of racial bifurcation lends itself to two possible outcomes. Based on prior research linking a large African-American population to lower spending on social programs, it might be expected that spending on child care will be similarly low. Conversely, because subsidization has come to represent the means to move welfare recipients into the labor market (or preclude wider access to welfare for those near eligibility) a larger black population may result in higher spending on child care. I anticipate larger black populations will be associated with a lower initial spending level but higher rate of increase because of the reconceptualization of public child care resulting from welfare reform. Welfare reform tightly linked the provision of public child care to efforts to move mothers off the welfare roles (Cohen 2001; Orloff 2006). Thus child care as policy may now be considered as much an "anti-welfare" strategy as it is a form of social welfare. Contexts in which support for social welfare have been unfavorable should be associated with a higher rate of increase due to this reconceptualization.

Table 1. Hypotheses Relating Gender and Racial/Ethnic Context to Initial Spending Level and Trajectory of Change

H1: A more favorable gender context will be related to high initial support for child care spending. H2: A more favorable gender context will be negatively and weakly related to change over time in child care spending.
H3: Greater racial heterogeneity, net of the black/white ratio, will not be associated with initial levels of child care spending. H4: Greater racial heterogeneity, net of the black/white ratio, will not be related to change over time in child care spending.

H5: A higher black/white ratio will be associated with a lower initial level of child care spending.
H6: A higher black/white ratio will be positively related to change over time in child care spending.

Analytic Strategy

To test hypotheses regarding sources of variation in the level and change-trajectory for spending at the state level I utilize a two-level random-effect model (also referred to as random coefficient, multilevel, or hierarchical models). Random effects (RE) models are used when data at one level are clustered within another level. Examples are individuals clustered within organizations or within labor markets, or measures taking at various time points clustered within individuals. RE models offer statistical advantages compared to least squares estimation, correcting for clustering that artificially reduces standard errors and increases Type I error (Cohen 2001; DiPrete and Forristal 1994; Orloff 2006; Steenbergen and Jones 2002).

Substantively, RE models are often better suited for testing hypotheses based on temporal comparative differences than alternative specifications such as panel regression with corrected standard errors (Shor, Bafumi, Keele, and Park 2006; Steenbergen and Jones 2002; Western 1998). RE models allow testing of the assertion that a causal process—in this case policy formation and implementation—varies across states due to variation in characteristics of the level-2 context. Variance is decomposed into parts attributable to (1) differences between policy points located across contexts and (2) variation in policy points over time within the same context. Because the modeling framework permits the combination of multiple levels of analysis, the impact of predictors at each level and the effect of cross-level interactions may be estimated. This

makes it possible to determine whether the effect of a "lower-level" predictor is moderated by a "higher-level" predictor.

RE models have become increasingly popular in comparative political and social research. The random-intercept model, for example, is commonly used instead of country dummy variables or fixed effects. The random-intercept approach is similar to the multilevel growth curve model used in the current analysis in that each model may consider state spending by year as the outcome variable, with level 1 the yearly time points and level 2 the state contexts. The two approaches differ in their inclusion of time as a substantive predictor. The random-intercept leaves time out of the equation, connecting variation in the *level* of a predictor variable to variation in the *level* of state spending, while allowing a random component in the estimation of state-specific intercepts. Specification of the growth curve model generates a time-dependent spending trajectory, with parameter coefficients shifting the intercept and slopes of the mean trajectories. I utilize the growth-curve specification because it more accurately represents institutionalization of policy over time.

The multilevel growth curve model is also sometimes termed the "multilevel model for change" (Singer and Willett 2003). I will use this term because it captures the substantive interest that motivates the use of this modeling strategy for policy outcomes—it suggests that we can apply statistical means to examine the institutionalization of a policy domain over time. Institutionalization is described by initial status and change over time, each of which depends on characteristics that vary across and within states. The multilevel model for change offers a mathematical

representation of a process of policy variation and change that coincides with comparative and historical representations of policy development.

While random intercept models are increasingly used in comparative research, particularly within political science, I could find no instances in the literature where the growth curve specification has been used. Therefore, I go into greater detail in the following section to explain how this framework applies to policy variation and change.

The Multilevel Model for Change

The multilevel model for change consists of a level-1 submodel that describes the level and rate of change in spending within a state, and a level-2 model that describes how these levels and rates differ across states. The level-1 submodel is specified as follows:

$$Y_{ij} = \pi_{00} + \pi_{1i}\text{TIME} + \varepsilon_{ij} \qquad \varepsilon_{ij} \sim N(0, \sigma_\varepsilon^2) \qquad (1)$$

The model asserts that spending on child care for state *i* at time *j* is a linear function of the "age" of the state child care policy. This is very different than using time as a control variable for exogenous shocks, another use of time in multivariate panel cross-section analysis. In the current analysis time has substantive meaning, with the outcome varying as a direct result of the passage of time.

The trajectory of changing child care spending in Equation 1 is postulated as having a linear form, where deviations from this linearity in the observed sample data result from random measurement error (ε_{ij}). The parameters π_{00} and π_{1i} represent the state intercept and slope, respectively. Since time is measured by year, then π_{00} represents state *i*'s spending level in year 1 (1999 for this analysis). The parameter π_{1i} represents

the slope of the individual state change trajectory—the annual rate at which state *i's* spending changes over time.

The level-1 submodel describing the relationship between predictors and spending asserts that all the state change trajectories have a common algebraic form. But this does not assume that all states have identical trajectories. Across-state heterogeneity is permitted via individual growth parameters of slope and intercept (reflected in the subscripts of π_{00} and π_{1i}).

Under the multilevel model for change we assume that the growth parameters—each state intercept and state slope—are drawn from a normally distributed population of intercepts and slopes. The task, then, is to predict what conditions (what measured explanatory variables) predict the intercepts and slopes. This is where the level-2 submodel enters. The level-2 model consists of two equations: one where the intercept is the outcome, the other where the slope is the outcome, as follows:

$$\pi_{0i} = \gamma_{00} + \gamma_{01} + \zeta_{0i} \qquad \zeta_{0i} \sim N(0, \sigma_0^2) \qquad (2)$$

$$\pi_{1i} = \gamma_{10} + \gamma_{11} + \zeta_{1i} \qquad \zeta_{1i} \sim N(0, \sigma_1^2) \qquad (3)$$

The "fixed effects" are the four level-2 parameters: $\gamma_{00}, \gamma_{01}, \gamma_{10}$, and γ_{11}. These represent the population-averaged slope and intercept values across all states, and capture the influence of predictor values on initial status and rates of change. In a model without predictors, the only fixed effects are γ_{00} and γ_{10}, representing the population averaged intercept and slope, respectively. Predictors entered into the model impact the outcome via their influence on these slope and intercept parameters.

It is easier to see how predictors influence slope and intercept if the three level-1 and level-2 equations are algebraically manipulated to create a composite specification.

Equation 5.4 is the composite model and includes *Confederacy*[1] as an illustrative time-invariant predictor:

$$Y_{ij} = \gamma_{00} + \gamma_{10} TIME_{ij} + \gamma_{01} Confederacy + \gamma_{11}(Confederacy * TIME_{ij}) + \zeta_{0i} + \zeta_{1i} TIME + \varepsilon_{ij} \quad (4)$$

This single-equation specification provides an intuitive basis for interpretation because it directly identifies which parameters describe interstate differences in initial status (γ_{00} and γ_{01}) and which describe interstate differences in change (γ_{10} and γ_{11}). It also makes it clearer that state spending depends simultaneously on the level-1 predictor *time,* the level-2 predictor *Confederacy*, and the cross-level interaction between *time* and *Confederacy*. For example, the difference in the average annual rate of change for Confederate and non-Confederate states is represented by γ_{01}—the incremental difference in initial status due to being a formerly Confederate state, and by γ_{11}—the incremental difference in annual rate of change in spending due to this characteristic.

We look to the magnitudes and significance of the intercept and time*predictor slope coefficients to determine whether or not the average initial status and average trajectory of spending differs between states.

An additional benefit of using the multilevel model for change is the ability to distinguish the impact of predictors on change *within* states vs. their impact on variation *between* states. Time-varying characteristics (e.g. Democratic strength in the legislature) can be related to differences in outcomes within a given state over time. By also incorporating a variable measuring the state-mean for the time-varying variable—a mean of Democratic strength across the time period for each state—we can effectively

[1] "Confederacy" is used rather than "South" to indicate that the variable is defined by a state's membership in the former Confederacy.

distinguish the impact of change in Democratic strength on spending within a state from mean levels of Democratic strength that vary across states and are associated with spending differences between them. The within effect is specified by group-centering the variable: the state-specific mean is subtracted from the target variable's value for each year. The contextual effect of the variable is represented by the state mean across the time period. The influence of this context on initial status is represented by the intercept shift equal to the coefficient value associated with this mean level. The influence of the context on change over time is represented by the interaction between time and the contextual variable.

If the two components of variation for a time-varying variable—the "within" and "between" effects—are not distinguished, the coefficient of the predictor is a blend of these two effects. In many cases this will be sufficient; for example, if the variable is a control and not of substantive interest. Even if this is the case, however, between and within effects should be tested to guard against the "ecological fallacy"—the erroneous assumption that the relationship between a predictor and outcome is the same within one context as it is for the mean of the dependent variable across all contexts (Raudenbush and Bryk 2002; Singer and Willett 2003; Snijders and Bosker 1999)[2].

The variance of the level-two residuals, σ_0^2 and σ_1^2 (equations 2 and 3) can also be of substantive interest in the multilevel model for change. These parameters represent those portions of the level-2 outcomes—the intercept and slope—that remain unexplained by the level-2 predictor(s). The variance summarizes the variation in individual state

[2] The null hypothesis that the within and between-group regression coefficients are equal is tested by examining the t-ratio of the mean centered variable (the within effect). If significant, and if there is interest in analyzing the impact that each separately has on the outcome, then both variables should be retained in the model (Snijders and Bosker 1999: 53-57).

intercepts and slopes around the population-average intercept and slope. Whereas residuals do not have substantive value in many modeling frameworks, within random effects models the interpretation of residuals can be as informative as the parameter estimates. The proportion of variance explained at each level can be compared across nested models by comparing the reduction in residual variance as explanatory factors are entered into the model.

Level-2 variance components are also useful in analyzing relationships between initial status and change over time. The covariance between the level-2 residuals summarizes the magnitude and direction of the association between initial status and rate of change. From this we can determine whether states with a high initial spending level also have more rapid increases in spending. By analyzing the proportional change in this covariance across nested models, we can discover if an introduced explanatory variable accounts for the relationship between status and rate of change.

Modeling Procedure and Evaluation of Fit

The models are estimated utilizing maximum likelihood (ML). ML estimates are obtained by maximizing the log-likelihood function, the logarithm of the joint likelihood of observing all of the sample data actually observed. A method for judging comparative model fit in ML estimation is to calculate a deviance statistic that compares the log-likelihood for two models differing by one nested parameter. Deviance statistics are compared (an *F*-test) and a critical value determined from an *F* distribution table. In some instances high collinearity between predictor variables raises the likelihood of Type I error (rejection of significant predictors due to inflated standard errors). In these cases I

base inclusion or rejection of a variable on *F*-tests rather than comparatively fallible t-tests (Gujarati 1995: 335).

Comparative model fit can also be ascertained for non-nested models by utilizing the Bayesian Information Criterion. The BIC is based on the deviance statistic and penalizes the log-likelihood with a correction for sample size and number of parameters, making it less sensitive to an increase in model fit that is due solely to a large sample size or increase in parameters. Smaller BIC values are preferred, though there is no objective standard for judging differences in values as they explain fit.

The modeling results, below, are presented through a series of tables containing nested models, with each table associated with a set of predictor variables. I interpret change in coefficients as parameters are introduced, and compare improvement in model fit when a decision is made to exclude or retain a variable. Change in the size of variance components between models is discussed in the results section.

Measurement

This section details the measurement of variables used in the multilevel model for change. Descriptive statistics for each of the variables used in the analysis are given in Table 2. Table 3 contains expectations as to the direction and strength of the effects of variables on initial status and rates of change.

Information on key variables is either not available or is an outlier for the District of Columbia and the states of Alaska, Hawaii and Nebraska. With these states dropped from the analysis, the N for analysis of spending over time is 282 (47 states * 6 time periods).

Dependent Variable

The dependent variable measures *state child care spending*, equal to the total state contributions to the Child Care Development Fund (CCDF), Temporary Assistance to Needy Families (TANF) transfers to this fund, and TANF direct spending on child care. These three sources comprise the vast majority of state spending on child care (Blau and Currie forthcoming; Witte and Trowbridge 2004). Information on state spending is derived from expenditure reports from the Child Care Bureau (U.S. Department of Health and Human Services, Administration for Children and Families). Administrative data are adjusted in two ways for use as the outcome variable in analysis. First, reported spending is adjusted to account for the double-counting of state maintenance-of-effort contributions for TANF and CCDF which can overlap and artificially inflate spending (Gish 2002). Secondly, I subtract any portion of reported state spending that derives from state pre-k commitments. These commitments do not necessarily support mothers' labor market participation. Pre-k spending is reported by states as rounded percentages of state match and maintenance of effort funds. I estimate the pre-k commitment based on these percentages. While these amounts are necessarily inexact, they comprise quite a small portion of each states spending, with a mean of 1% and standard deviation of 3%.[3] All spending variables are inflation-adjusted to represent 2004 values, are calculated per four-year old to adjust for differences in state population, and logged to correct for skew.

Independent Variables

The analysis presented below was designed to test hypotheses about the level and temporal trajectories of state child care policy, operationlized as state spending for child

[3] Note that states the pre-k portions that states report in their Child Care Development Fund plans do not encompass all state spending on early education.

care via the CCDF and TANF. The hypotheses posit directional relations between state contexts that differ based on race and gender dynamics. The contextual measures tested are described in this section.

Measuring Racial Context

Numerous empirical studies have illustrated the association between racial/ethnic composition and outcomes ranging from social spending, attitudes, wage differentials, and likelihood of incarceration (Bobo and Hutchings 1996; Branton and Jones 2005; Hero and Tolbert 1996; Hero and Tolbert 2004; Johnson 2003; Keiser, Mueser, and Choi 2004; Oliver and Mendelberg 2000; Rodgers and Tedin 2006; Stein, Post, and Rinden 2000). *Percent black* and *percent Hispanic* are constructed from the means of state populations averaged over the period and logged due to skew (Data source: U.S. Census Bureau, American Community Surveys). Preliminary analysis differentiating within and between effects also indicated the utility of using a variable specification based on the state mean. An index is constructed for *non-black racial heterogeneity* based on the sum of the squared percentages of Hispanics, Asians and identified "other" state residents.[4] Based on findings in the literature that racial/ethnic composition sometimes has a curvilinear relationship to outcomes, I also test squared and cubic forms. I anticipate that percent black will be negatively related to initial spending levels and positively related to rate of change. I do not anticipate the proportion of Hispanics or measure of non-black racial heterogeneity to be related to either the initial status or change trajectory of spending.

[4] The index follows Rae's (1967) index of party fractionalization.

Measuring Gender Context

In contrast to the amount of attention given racial context in the literature, much less attention has been paid to the empirical relationship between gender as a social construct and measurable policy outcomes. As a result there is not a large body of scholarship that has tested the utility of various measures of gender context. Two rare examples are McCammon's (2001) conceptualization and measurement of gender context and its relationship to the passage of suffrage amendments by U.S. states, and Soule & Olzak's (2004) use of gender context to predict variation in state support for the Equal Rights Amendment.

I examine five measures. Mothers labor force participation is the state average for married mothers of children younger than age five who participated in the labor force in 1990. (Data source: Ruggles et al. 2004). I use the measure for married rather than all mothers to reduce the possibility that female labor force participation is a reflection of economic need or poor welfare provision (which would increase rates of labor force participation for single mothers). A second measure is employment equality, equal to the proportion of physicians, executives, and administrators in the state who are female, in 1990 (Data Source: U.S. Census Bureau, Equal Employment Opportunity tabulations 1990). Because a number of studies indicate that religious conservatism impacts gender ideology, both individually and contextually (Hoffman and Miller 1997; Moore and Vanneman 2003), I utilize a third measure of religious conservatism based on the proportion of the state population who claim membership in Evangelical Christian or Mormon churches (Data sources: American Religious Identification Survey, Kosmin, Keyser and Mayer 2000; Glenmary Survey of American Religious Bodies, Jones et al., 2002). A fourth measure is the index of three pieces of legislation supported/unsupported

by state governments in the three decades preceding PRWORA. *Work support* sums up 0/1 values for each of the following: (1) if the state had legislated maternity leave prior to the Family and Medical Leave Act in 1992 (2) if the state had equal pay legislation prior to the federal Equal Pay Act of 1967 (3) if the state passed (and did not subsequently rescind passage) of the Equal Rights Amendment (Data sources: Waldfogel 1999; Zylan 1995; Soule & Olzak 2004). The fifth measure examined is the annual proportion of women in the state legislature (Data source: Center for American Women and Politics), lagged by one year. With the exception of women's political representation, each is measured prior to the welfare and child care legislation of 1996 to attenuate possible reverse causation.

Each of these variables could be considered to represent behaviors and attitudes measuring or reflecting support for mother's role as labor market participants. More women working and working in more prestigious occupations may increase the likelihood that individuals have contact with employed women and accept this work as normative. Yet occupationally prestigious women have not necessarily supported greater public provision of child care; the emergence of a professional class of women workers in the early part of the century was related to a stronger push for protective legislation and welfare provisions designed to reduce mothers' presence in the labor market (Kessler-Harris 1990; Kessler-Harris 2001; Ladd-Taylor 1994). Later in the century, women's' professional groups were not strong supporters of public child care spending, instead expending resources to challenge inequality in occupational access. Gender ideology, rather than gender as a demographic characteristic, guides attitudes toward mother's role

in the workforce (Bolzendahl and Myers 2004). Conservative female representatives may be as likely as their male colleagues to oppose child care spending.

Based on this evidence, I anticipate that religious conservatism, mother's labor force participation, and work support will be significantly related to child care spending, while employment equality and proportion of women in the state legislature will have an inconsistent relationship.[5]

Control Variables

Economic resources, time, welfare burden, political control, demographic conditions, political engagement, and interest-group advocacy have been empirically connected to differences across states in generosity of social spending and stringency of program rules (Barrilleaux, Holbrook, and Langer 2002; Fellowes and Rowe 2004; Gray 1973; Hanson 1983; Howard 1999; Miller 1996; Rodgers and Tedin 2006; Saeki 2005; Soss, Schram, Vartanian, and O'Brien 2001). Below is a description of how each was operationalized in the current study. All control variables, with the exception of time, are grand mean centered for ease of interpretation. Unless otherwise noted variable data spans the years 1999-2005.

Time

As discussed above, *time* in the multilevel model for change represents a baseline mean trajectory of spending across all level-2 units. Interactions between predictors and

[5] In preliminary analysis I also examined a measure of public opinion on women's roles, utilizing answers to a survey question from the American National Election Study (ANES data for 1971 provided by Susan Olzak). ANES and other public opinion surveys (e.g. General Social Survey) were not designed to be representative of state-level opinion, and thus their use in comparative research remains controversial. While I do not use a direct measure of public opinion for this reason, I did find that the public opinion measure highly correlated with *religious conservatism* (r = -.561), *work support* (r = .595), and *proportion of women in the state legislature* (r = .313) supporting the assertion that public opinion is expressed in religious and political institutions and variation can be ascertained at the state level.

time then represent the influence of these predictors on change in spending levels across the study period.

Economic Resources

I control for state economic resources using *state personal income per capita* as a measure of state's economic capacity to fund child care programs (data source: U.S. Census Bureau, Statistical Abstract). Based on prior studies of spending on Aid to Families with Dependent Children (AFDC) and Temporary Assistance to Needy Families (TANF), I expect that greater economic capacity will be associated with more generous spending.

Unemployment is an alternative measure of state economic health, and can be considered a control accounting for changes in the business cycle (data source: U.S. Department of Labor, Bureau of Labor Statistics). It has also been suggested that states with low unemployment may push welfare recipients into strong labor markets by restricting benefits. This might result in higher child care spending to move welfare mothers into the workforce. However, because child care decisions are made biennially and take months to be approved and implemented, I do not expect that unemployment will be related to spending.

A third measure of economic health is *percent children in poverty,* which measures the proportion of children younger than 18 living below the federal poverty (data source: U.S. Census Bureau, Statistical Abstract)[6]. States with a larger percentage of children in poverty may spend less per child because of strained state resources. I use this measure rather than a "welfare burden" measure based on TANF participation

[6] An alternative poverty measure was constructed to consider regional differences in the cost of living. Both measures had similar results and thus in the text only the findings using the unadjusted variable are reported.

because of the possibility of endogneity between TANF participation and child care spending; states that more generously fund TANF may also more generously fund child care.[7]

Demographic Composition

Demographic composition may have an influence on child care spending. As with the number of children in poverty, a larger young or aged population could strain state resources. I evaluate two population-based variables: *percent of the population older than 65* and *percent of the population less than 17* (data source: U.S. Census Bureau, American Community Surveys). Each of these groups is over-representative of non-working and non-tax-paying individuals, and thus higher proportions of either could put pressure on state resources. Because child care is a small part of the overall state budget, however, I do not expect that either of these two variables will be significant predictors.

Political Partisanship

Political party is measured as the Democratic proportion of the state legislature. The distinction between short-term change and long-term institutional control of state government is expected to be important in child care provision. A group centered variable, *percent Democrat,* estimates the influence of change in the state legislature over time on change in state spending. An institutional measure of Democratic strength, *Institutional Democrat,* is operationalized as the mean proportion of Democrats in the state legislature over the six-year time period. I anticipate that this measure will be more strongly associated with differences in levels and trajectories of spending because it is a

[7]However, the relationship between the percent population on TANF and child care spending (and program coverage) is not strong: the correlation between the number of children receiving state child care funds and state TANF recipients, both calculated as a percent of the population served, is 0.23).

better representation of the administrative continuity that builds intra-agency strength and inter-agency networks to support initiatives.

I anticipate Democratic strength will be positively related to initial levels of spending because of the support that (non-Southern) Democrats have had for child care for working women (for example, in the legislative debates in the 1970s and 1980s, see Cohen 2004, Klein 1990). Democrats are also more likely to support more generous social spending (Brown 1997; Saeki 2005). As noted previously, however, child care in the post-reform era has become part-and-parcel of TANF caseload reduction. Therefore, while it is likely that Democratic strength will be associated with a higher level of initial spending, we may see a slower growth trajectory than states with a smaller Democratic presence. These more conservative states are expected to begin the period with low spending, but to ramp-up child care subsidies to reduce TANF roles. This is tested with an interaction between the Democratic measure and *time.*

Confederacy, coded 1 for each of the 13 states of the former Confederacy, controls for the well-known differences between Democrats and Southern Democrats. It is noted that *Confederacy* itself is conflated with both race and gender, as Southern states have shown both less institutional support for working women and have a higher black/white ratio. By controlling for race and gender, however, I partially remove these sources of conflation. In a subsequent section of this paper I also run analyses on samples of only Confederate and only non-Confederate states.

I test the influence of party competition using the *Ranney index* (Ranney 1976) and the absolute value of the proportion of Democrats in the legislature less the proportion of Republicans. This latter value, *party competition,* was logged due to skew.

Because public funding of child care has yet to become a politicized issue at the state level, I do not anticipate that these measures will be significantly related to child care spending.

Advocacy and Political Engagement

Advocacy and political engagement consider the impact that a more active electorate can have on child care provisioning. Political engagement is measured by *voter turnout*, measured as the average participation in state legislative elections between the years of 1997 and 2002 (data source: U.S. Census Bureau, Statistical Abstract). Based on the relationship between voter turnout and welfare spending established in prior literature, I anticipate *voter turnout* will be positively related to the initial level of spending, as policy makers have typically responded to a more mobilized electorate with higher spending.

Advocacy is measured as the number of child advocacy organizations per 100,000 children under the age of four in the year 1997 (the only year that this information is available, data source: De Vita & Mosher-Williams 2001). Child advocacy organizations—the Children's Defense Fund, most prominently—have long pushed for greater public funding to support preschool and child care subsidization for low-income parents (Cohen 2001). I anticipate that *Advocacy* will be positively related to initial levels of child care spending.

A third measure of advocacy that is often used to explain variation in policy outcomes is *union membership.* Because unions have not historically been vocal supporters of subsidized child care, however (Michel 1999), I do not expect union membership to reach significance

Political Culture

Political culture as a construct is defined by individuals (or the aggregate of individual) beliefs about the proper role of government in the social order (Almond and Verba 1980). Elazar's categorization of states as traditional, moralistic, or individualistic is used to measure this construct, as it is both the best-known theory of state political culture and has proven to be predictive of state approaches to welfare and other categories of social spending (Koven and Mausolff 2002; Lieske 1993). Dummy-coded variables *Elazar_m* and *Elazar_i* are used. An alternative continuous measurement of state political ideology is that developed by Berry and colleagues (Berry, Ringquist, Fording, and Hanson 1998). The measure is calculated annually and is based on three underlying measures that are partisan-based: interest group ratings of members of congress, election returns for congressional races, and data on the party composition of state legislatures and party affiliation of governors. Smaller values are associated with a more conservative ideology.

Much of the variation in political culture across states has been explained by regional differences, race, and political partisanship (Hero and Tolbert 1996; Hill 1981; Lieske 1993). Therefore, I anticipate that with controls applied the political culture variables will not be significant predictors of child care spending.

Results of the Multilevel Model for Change

Full tabular results of the multilevel models are attached in Tables 4-12. Figures are embedded in the text.

Influence of Controls

Results of the multilevel model for change are given in Tables 4 – 12. Table 4 presents the initial variance components model with and without *time*. Model 1 simply partitions the outcome variation between and within states. A look at the relative size of the variance components indicates that state-level variation (level-2) accounts for 74% of the total variation in spending. The intercept value in Model 1 indicates the average spending per four year old across states in 1999 was \$329 ($100*\exp^{5.7}$).

The addition of *time* and $time^2$ in Models 2 and 3 establish the mean slope of the growth trajectories across all states. The negative coefficient value for $time^2$ indicates a non-linear increase in spending. This accurately reflects the decreasing rate of increase in child care spending in the early 2000's (Figure 1).

Random terms for *time* and $time^2$, representing the variation in individual state rates of change around the mean rate, were entered, but only the linear time trend proved significant (Model 4). This indicates significant heterogeneity in rates of increase but insignificant differences in the moderating decline due to the quadratic term for time. Thus only the linear *time* component is retained as random.

Table 5 incorporates economic and demographic controls. The effect of *state personal income* (Model 1) is positive, significant, and robust indicating that states with greater economic resources spend more generously on child care. For each \$10,000 increase above the overall mean of state personal income states spend 2.6% more on child care. Between and within effects for income, tested as noted above with the simultaneous inclusion of a group-centered variable and state mean revealed no difference (results not shown), thus the combined effect is retained as a single variable.

Differences in *state personal income* does not have any influence on the pace of change in spending (results not shown).

The remaining measures of economic capacity and economic health, the *unemployment* rate (Model 2) and *percent children in poverty* (Model 3), are insignificant. The poverty rate is strongly correlated with *state personal income* (*r =-0.52*). Based on an *F*-test *percent children in poverty* does not provide additional explanatory power and was not included in model specification. There is a possibility that the impact of unemployment may be reduced due to the inclusion of *time*. However, *unemployment* tested with and without *time* or $time^2$ and differenced into within and between effects did not alter the insignificance of *unemployment*. This indicates that state decisions to fund child care are not related to short term trends in unemployment, nor do differences between state unemployment rates account for differences in spending.

Models 4 and 5 incorporate population controls. Preliminary analysis revealed Utah as an outlier in the *percent population less than 17*. The value for Utah on this variable was replaced with the overall mean. Regardless, the proportion of youth in states is associated with a significantly lower level of child care spending. Because the proportion of children in poverty was unrelated to spending, the significance of this population variable may be a reflection of some other state characteristics with which it is correlated. As other contextual variables are entered into the model, below, we will see the impact of the proportion youth in the state wane. *Percent population older than 65* is significant and positive in Model 5. Because this variable is highly correlated with *percent population less than* 17 (*r* = -0.69), and because its impact washes-out once political partisanship variables are added, it is not retained in succeeding models.

Table 6 incorporates measures of political partisanship. The group-mean centered time-varying measure, *percent Democrat,* is not significant alone (Model 1), but strengthens somewhat when *Confederacy* is added (Model 2). The alternative measure *Institutional Democrat,* is strong and significant (Model 3), and adding *Confederacy* in Model 4 increases the significance and size of the coefficient. Model 5 drops the group-centered measure, with little impact on remaining parameter values. The strength of *Institutional* indicates that Democratic strength derives from longer-term institutional influences on approaches to child care rather than year to year change in political power.

Model 6 tests the possibility that differences in Democratic strength between states might influence rates of change in spending. This was not found to be the case. Model 7 tests a similar possibility for *Confederacy.* Again, I find no impact on rates of change in spending. Therefore, while levels of spending in non-Confederate and Democratically-strong states are significantly higher than in other states, spending over the time period proceeds at approximately the same rate for states regardless of their Confederate status or strength of Democrats in the legislature.

The influence of *party competition* is tested in Model 8. Results for this measure and for the *Ranney* index (results not shown) indicated little influence of party competition on child care spending. Model 8 re-incorporates the variable *percent population < 17*, which is reduced in size and level of significance.

We see that *Confederacy* is a moderating variable that quantifies the noted differences between Southern and non-Southern Democrats, increasing the predictive influence of Democratic strength. However, Confederate states can also be considered as unique contexts that subsume the independent variables that are the focus of this study—

race and gender. One means to deal with the influence of *Confederacy* is to run separate models for Confederate and non-Confederate states. I do this in a later subsection of this paper. For the moment, to avoid the loss of degrees of freedom from splitting the dataset, I note that some of the explanatory power of *Confederacy* is likely lost in its correlation with other variables and reflected by weaker significance levels in some models.

Table 7 incorporates measures of political engagement and advocacy. Models 1-5 incorporate *voter turnout, advocacy,* and *union membership.* With only the *state personal income* and *time* controls each has a significant positive influence on child care spending. Collinearity between the three and *Confederacy* is a problem, however. I based retention of *advocacy* in the final model, Model 6, on two factors: (1) nested *F*-tests comparing the additional explanatory power of adding *advocacy* vs. the alternatives and (2) historical evidence indicating non-union advocacy has played a much larger role in child care support than union-based advocacy. Though I retain *advocacy,* I do so with the caveat that greater involvement in the electoral process, measured by *voter turnout,* is tied to greater advocacy. These variables are correlated at $r = 0.70$.

With a fuller set of controls incorporated in the model, we see the significance of *population less than 17* wane (Models 5 and 6), and this variable is dropped in subsequent analysis.

In results not shown, I estimated the impact of *advocacy* on the rate of change in spending. Non-significance of the *time*advocacy* interaction indicates that higher levels of advocacy are not related to differences in rates of spending on child care between 1999 and 2004.

Table 8 considers the influence of political culture on child care spending. As anticipated, neither measure, based on Elazar (1984) or Berry et al. (1998) , was a significant predictor of child care spending.

In summary, the results indicate that non-Confederate and wealthier states with a sustained Democratic legislative presence and a strong child advocacy community spend more generously on child care. Generosity is seen in higher levels of spending, but not in change over time, indicating that the relationship between significant explanatory variables and levels of spending remained constant across the study period. With key economic, demographic and political variables controlled, I now consider the impact of racial and gender context on child care spending.

Influence of Gender and Racial Context

Table 9 reports results on the incorporation of various measures of gender context in the model of state child care spending. Model 1 considers the influence of higher levels of *mothers labor force participation.* There is no evident relationship between the proportion of mothers working and child care spending. I tested alternative measures of labor force participation—for black and white mothers separately and overall for all women regardless of marital or motherhood status—with similar non-significant findings.

Equality in professional employment (Model 2) is insignificant and negatively related to child care spending, indicating that there is no significant association between support for child care and representation of females in the professional sector. This result is congruent with the historical relationship between women working in the upper echelons of the occupational distribution and lack of support for child care that supports mothers work, as noted earlier in this paper.

Higher proportions of *female legislators* (Model 3) is also statistically unrelated to greater child care spending. This same insignificance holds when the variable is re-specified to measure proportional representation by women in the Democratic and Republican parties separately. The total proportion of women in the state legislature is a significant predictor if Democratic strength variables are not included in the model, however. This is due to the fact that women are much more highly represented in the Democratic party (28% across the study period compared to 19% for Republicans). I tested interactions between *Institutional Democrat* and the proportion of Democratic (and total) females in the legislature to determine if greater numbers of Democratic women had a differentially positive impact on greater child care spending, but the interaction did not prove a significant predictor (results not shown). These findings indicate that a greater proportional representation by women in the state legislature is not necessarily associated with greater support for child care spending. This aligns with historical findings that women do not necessarily vote as a group, and that views about mother's proper work roles are not necessarily similar for all women.

Religious Conservatism is an insignificant predictor of child care spending when controls are included in the model, but does have a significant impact on spending if *Confederacy* is not included. Clearly this reflects the tight correlation between Southern states, religious conservatism, and a conservative gender ideology. Nested *F*-tests indicate that retaining *religious conservatism* in addition to *Confederacy* does not significantly improve model fit.

Work Support is the single predictor of gender context that retains significance even with all controls entered. Nested *F*-tests also indicate that *work support* is the only

gender context measure that added significant explanatory power beyond the controls. This institutional measure of state support for women's work is highly correlated with several of the other gender context variables, as noted previously. In the nomenclature of confirmatory factor analysis, *work support, public opinion on women's roles* and *religious non-conservatism* all appear to load on the same construct representing support for women's participation in the public sphere as workers. As noted above, the size of the female labor force has little relationship to the other gender variables or to child care spending. Institutional support for women's work appears to be more salient to child care spending than the actual percentage of mothers who work.

Model 6 in Table 9 considers the impact that support for women's work may have on state rates of change in spending (operationalzed as the interaction of *time* and *work support*). Recall that I anticipated convergence among states, and thus the *work support* variable when interacted with time should be significant and negative. The coefficient is of the expected negative sign, but the value was far from significant. Thus I conclude that historical support for women and mother's work in the labor market is associated with a significantly higher level of spending on child care, but that differences in levels of institutional support across states have not had any influence on change in spending over the 6-year period.

Including *work support* impacts the significance and coefficient strength of controls, reflecting its correlation with other variables. Based on nested *F*-tests, however, each of the variables in Model 6 added significant explanatory power to the model and is, therefore, retained in the model.

Measures of racial context are considered in Table 10. Models 1 and 2 consider the relationship between state proportions of Hispanic and black residents on child care spending. While proportion Hispanic has a small and non-significant impact, *percent black* has a strong and significant impact on spending levels. The hypothesized influence of differences in the size of the black population on rates of change is tested in Model 3. The sign is positive as expected, which would indicate that larger black populations are associated with more rapid increases in child care spending across the 6-year period, but this variable fails to reach significance at the $p = 0.10$ level. Nested *F*-tests also indicate it should not be included as an explanatory variable. Model 4 considers the impact of *non-black racial heterogeneity* on spending levels, and Model 5 estimates the effect of this variable on rates of change. No support for either association is found. Therefore, I conclude that racial bifurcation is a significant source of variation in state spending levels, but racial heterogeneity arising from other sources has no impact on spending.

The final specification for the multilevel model for change is Model 6, Table 10. This incorporates the *work support* variable, controls, and *percent black.* Table 11 gives proportional change in spending for one standard deviation increase in the value of each independent variable, with remaining variables held at their mean. While not a focus of this study, *Advocacy* has a surprisingly strong impact on spending level. It is important to recall that this variable was highly correlated with voter turnout, indicating that an involved electorate accompanies greater social spending.

Figures 2 – 4 illustrate model findings. Figure 2 graphs predicted values based on high and low values for the key independent variables, *percent black* and *work support* (with remaining variables at their mean). High values are equal to one standard deviation

above the mean and low values one standard deviation below the mean. Spending is greater in states with a combination of historical support for women's work and a higher proportion of blacks.

Figure 2. Multilevel Model for Change, Child Care Spending Per 4-year-old, Combinations of High/Low Work Support and High/Low Percent Black

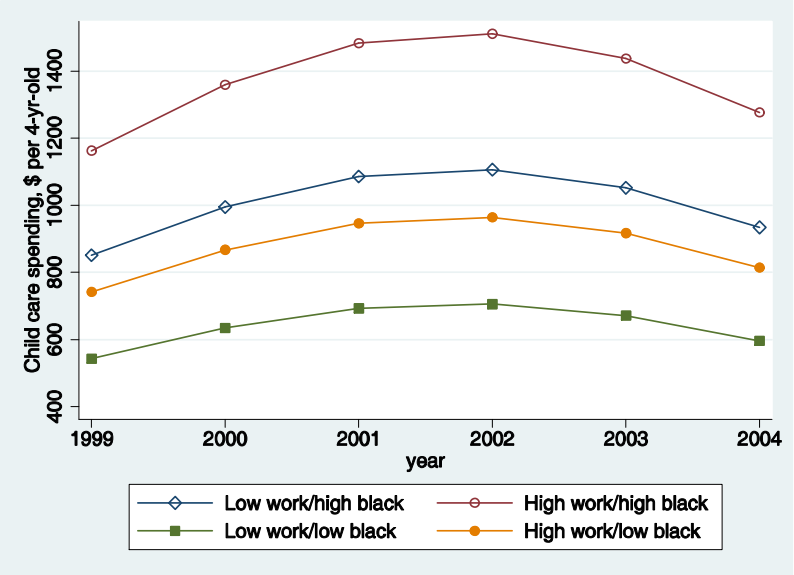
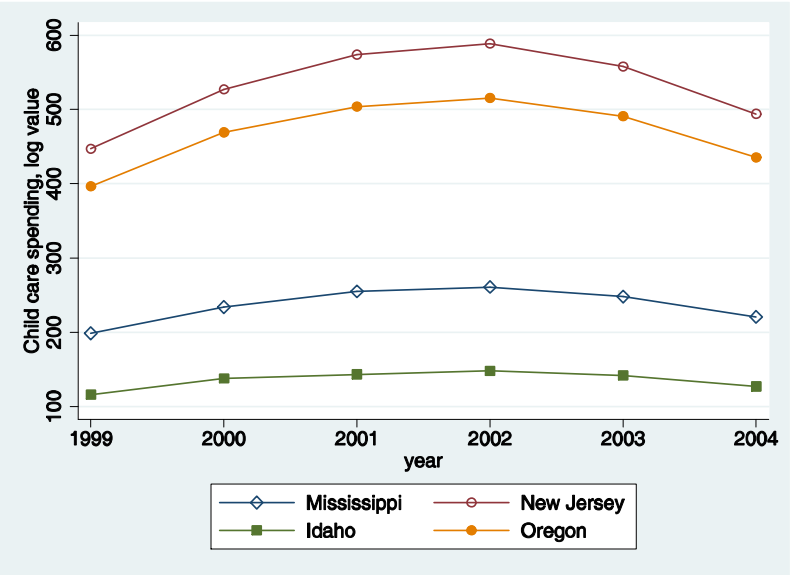


Figure 3 takes states that are representative of each of the gender/racial combinations represented in Figure 2: Mississippi for high black/low work; Idaho for low black/low work; Connecticut for high black/high work; and Oregon for low black/high work. The relative ordering of states by these characteristics are the same as the race/gender combinations of Figure 2. The predicted values are larger in Figure 2, however, as the combination of high/low black and work support values and mean levels of other variables is not represented exactly by the states portrayed in Figure 3. The distance between the top two lines is narrower using actual percentages of blacks and *work support* rather than standard deviation differences. The reason is that there are no

states that have both very high percentages of blacks (as high as Mississippi or other Southern states) and also score very high on *work support.*

Figure 3. Multilevel Model for Change, Child Care Spending Per 4-year-old, Four Representative States, Fixed Effects



Discussion and Extensions

Results of the modeling progression presented in Tables 4-11 support the hypotheses regarding levels of spending on child care and their relationship to gender and racial context. There was little support for the hypotheses regarding heterogeneity in change trajectories. Below I present key findings for the explanatory variables.

Gender Context

States with a history of historical support for women's labor market participation are more likely to fund child care more generously. Several other measures of gender context tested—female labor force participation, female political representation, equality in professional occupation—were not found to have a significant impact on child care

support when full controls were present in the model specification. However, correlations between other measures of gender context and the institutional measure support the assertion that institutional support for women's work in legal statute is a reflection of more favorable views of women's equal participation in the labor market. These views are reflected in public opinion, female political and economic representation, and religious views. Positive attitudes toward women's representation in the labor market permeate the institutional rules that impact women's work, and these have in turn influenced public support for child care spending.

Racial Context

No support was found to connect non-black racial heterogeneity with spending. Racial bifurcation measured by percent black in the state had a strong and positive association with spending. Thus, in contrast to numerous findings that the black population reduces welfare spending, I find that with regard to child care spending the larger the proportion of the population that is black, *ceteris paribus,* the more generous is state spending on welfare.

What should we make of the positive relationship between a states proportion black population and spending on child care? One explanation is that states are more willing to push black mothers into the labor market than they are white mothers. Recent work on across-state variation in TANF programs indicates that states with higher black populations offer lower benefits, stricter eligibility requirements, and relatively more punitive standards than states with lower percentages of blacks (Soss 2001; Fellowes 2004). Historical analysis also supports the contention that black women and black motherhood has never been accorded the same deference as that of white motherhood

(Boris 1993; Roberts 1995). Another plausible explanation is that states with higher numbers of blacks have comparatively lower wages and more restricted job opportunities for low wage workers; only by subsidizing child care for a wider swath of mothers can these women be moved into the labor market. The explanation behind the finding may be less one of discrimination and one based more on economic conditions. While we would expect that the controls for relative wealth across states (*state income per capita*) and general economic health and labor market conditions (*unemployment)* would control for economic differences across states, a more detailed specification of differences in state labor markets might indicate that those less able to absorb unskilled workers at a living wage are also those that have higher child care spending.

Advocacy and Partisanship

Advocacy measured as the number of children's advocacy groups in the states also has a high potential to increase child care spending. As noted above, states that have more active advocacy groups are also have more engaged voters. Where political engagement can be harnessed to children's advocacy, these groups have the potential to positively impact state spending on child care.

While year-to-year change in Democratic representation does little to explain variation in child care spending, political partisanship measured as proportionate Democratic control over the 6-year period is also a strong predictor of spending. An alternative specification of Democratic control based on proportional representation over the prior 10-year period yielded similar results. These results are interpreted as a reflection of the long-term institutional influence of political party ideology on rule-making institutions. Democratic support for child care stems from a decades-old

movement to fund child care more widely for all working women. Republicans, in contrast, have been historical opponents of public child care. I anticipated that the quantitative findings would indicate a weakening in the influence of Democratic representation on child care spending, as Republican support blossomed in recent years with the prospect that welfare roles can be reduced if mothers enter the labor market. Interactions between time and political partisanship did not provide support for this contention, however.

Explaining Heterogeneity in Rates of Change

None of the interactions (between *time* and the independent and control variables) designed to test the influence of state mean differences on spending trajectories were significant. The expectation that support for women's work and proportion black, for example, would impact rates of change in spending was not supported by the statistical findings.

Convergence over time in trajectories would indicate that states are becoming more like each other in their spending behavior. The covariance between rate of change and initial status random effects is one indication that states are converging in their levels of child care spending. Across all states we have no indication that this is occurring. There remains significant variation in both initial status and rates of change, but no indication that higher initial status is related to a higher or lower rate of change.

Confederacy as a Distinct Context

Most of the key variables that predict child care spending—*institutional support for women's work, percent black,* and *advocacy*—have mean levels that are significantly lower in Confederate states. The unique social context of Confederate states include

historical resistance to welfare spending, a political leadership opposed to publicly funded child care for working women, a larger percentage black population, and lower political engagement and advocacy than other American states. Therefore, it is reasonable to assume that explanations for initial levels and change over time in the Confederate context may differ than that for other states.

To test the possibility that model findings for the full sample are dependent on the stark differences between Confederate and non-Confederate states, I estimated the model based on a split sample (Table 12). We see that the findings and conclusions presented above still hold for the non-Confederate group. Within the states of the former Confederacy, however, only state wealth has a significant impact on state spending, and this difference is slight, with an increase of $10,000 in state personal income associated with less than a 1% increase in child care spending. Coefficient values for advocacy, support for women's work and proportion black were large but far from significant. All variables were tested as direct effects (without other predictors in models not shown), with the same non-significant coefficients.

The coefficient for *time* indicates Confederate states increased spending more rapidly over the time period than non-Confederate states, but only in relation to their own much lower levels of spending. In other words, Confederate states had a more rapid rate of increase than non-Confederate states, but their level of spending remains distinctly lower than the non-Confederate states. Interactions between race and time or gender and time were both insignificant, indicating that differences in these contexts did not alter rates of change. (This was true within non-Confederate states, as well, as noted above.)

A comparison of the random effects between the Confederate and Non-Confederate state models indicate less variation within each Confederate state on spending across the period (0.048 for Confederate states vs. 0.076 for non-Confederate), but much greater variation in initial status that remains unexplained by the fixed effects (0.369 for Confederate and 0.051 for non-Confederate). Non-Confederate states are also characterized by significant heterogeneity in their spending trajectories over time, while the differences are insignificant within Confederate states (0.005 for non-Confederates compared to 0.002 for Confederates).

These statistical findings suggest that confederate states have had quite flat trajectories between 1999 and 2004 and that the explanatory variables used here do not go very far in explaining differences among Confederate-only states in initial spending levels. These findings remain qualified for Confederate states, however, because of the much reduced sample size and thus reduced power to discern significant effects.

The Full Model: Spending Levels and Rates of Change

Returning to the full-sample findings, the final model across all states (Model 6 in Table 10 and, equivalently the first column in Table 12) explains a great deal of variation between states in support for child care. Between the unconditional means (Model 1 in Table 4) and final model (Model 6 in Table 10) estimated parameters explain 67% of the between-state variance.

The model is relatively less successful in explaining the variation in spending within states over time and in differences in the trajectories (slopes) between states. The proportion explained for variation within states can be gauged with a comparison of the random effects in the final model compared to both the unconditional means (Model 1,

Table 4) and the unconditional growth (Model 4, Table 4). In comparison to the unconditional means model with no predictors, the time trend variables explain 23% of the variance across states for within-state change. Throughout the subsequent model progression, none of the time-variant predictors is able to reduce within-state variance in spending. Taken in the aggregate, states have followed a similar increase and then decrease in spending over the period. This is likely attributable to states' similar experience with a rapid fall in welfare caseloads. States may have expended greater amounts of child care funds in early years of welfare reform to reduce caseloads, and now find less overall numbers of women actually on welfare that required child care subsidies.

The estimated model is also relatively less successful in explaining differences in initial values and levels over time between states (heterogeneity in trajectories between states). Variance in trajectories across states (level-2 rate of change) is reduced by approximately 25%, from 0.004 to 0.003 between the unconditional growth and final model (between Model 4 Table 4 and Model 6 Table 10).

We can conclude that in most cases states have not chosen to widen coverage of public child care subsidies to a greater number of working women. Child care subsidization aids states in moving women off of welfare roads, contributing to the reduction in caseloads since the mid-1990s. While states do make subsidy funds available to low-income women who are not and have not used TANF, there does not appear to have been any move to more widely subsidize child care. States have continued to meet their matches to qualify for federal funds but have become less likely to use general TANF funds. These TANF funds are available for states to reabsorb into

their general revenue streams. Most states appear to be doing this rather than using the funds to expand their child care programs.

Conclusion

The motivation for this research project was to make explicit use of social context and historic process to inform a model of policy development. The simultaneous devolution of child care policy-making power to the state level in the 1990s and the exponential increase in funding associated with welfare reform provide an opportunity to examine the institutionalization of a new policy domain across the changing social and economic contexts that characterize the American states. The history of public child care subsidization in the U.S. is linked to conceptions of race and of gender. Various measures of race, ethnicity and gender were used as proxies for these dynamics. A multilevel growth curve modeling strategy was chosen because it best approximates the historical process of policy development and institutionalization of a policy domain. The data consisted of six policy points (annual spending levels) nested within 47 state contexts.

The quantitative findings support the significance of race and gender as contextual influences on state public child care spending. Institutional support for women's labor market participation increases the likelihood that a state subsidizes public child care. States with larger proportions of black residents spend relatively more on child care, as well. Wealthier, non-Southern states with greater Democratic congressional representation and stronger child advocacy communities also have relatively more generous spending.

The model was less successful in explaining heterogeneity among states in spending trajectories. None of the explanatory variables considered, with the exception of a time trend, reduced between-state trajectory variance. I expected greater convergence among states, with those characterized by lack of historical support for women's labor market participation and greater black populations increasing their spending at a faster rate than other states. While the sign of the coefficients representing these trends (which were constructed as interactions with *time*) were positive, which would support my expectations, the coefficients were not statistically significant. Expanding the time period beyond six years might yield different results, however, as the time period analyzed may be too short to pick up subtle trends.

One question left unanswered by the present analysis is the reason for greater child care spending in states with larger black populations. As discussed above, it is unclear whether this greater spending is due to policy-makers desire to "push" black mothers into the labor market, or whether low-income, low-skill employment contexts require greater child care expenditures to maintain a continued decline in welfare caseloads. A second important area to explore is the question of child care quality, an important topic not touched upon in the present analysis. Questions of quantity vs. quality are difficult to address, however, as measures of child care quality across states differ and there is no source of comparative data. Questions of quality and quantity, convergence and divergence, deserve further explanation, particularly in a political climate that appears conducive to the further devolution of federal programs (Head Start, for one, (c.f. Horn 2004)) to the control of state policy-makers.

References

Alesina, A., R. Baqir, and W. Easterly. 1999. "Public Goods and Ethnic Divisions." *The Quarterly Journal of Economics* 114:1243-1294.

Alesina, Alberto and Bruce Sacerdote. 2001. "Why Doesn't the US Have a European-Style Welfare State." *presented at the Brookings Panel on Economic Activity, Sept. 7, 2001*.

Almond, Gabriel A. and Sidney Verba. 1980. *The Civic Culture Revisited: An Analytic Study*. Boston: Little, Brown.

Amenta, Edwin. 1998. *Bold Relief: Institutional Politics and the Origins of Modern American Social Policy*. Princeton, N.J.: Princeton University Press.

Barrilleaux, Charles, Thomas Holbrook, and Laura Langer. 2002. "Electoral Competition, Legislative Balance, and American State Welfare Policy." *American Journal of Political Science* 46:415-427.

Beatty, Barbara. 1995. *Preschool Education in America: The Culture of Young Children from the Colonial Era to the Present*. New Haven: Yale University Press.

Berry, Mary Frances. 1993. *The Politics of Parenthood: Child Care, Women's Rights, and the Myth of the Good Mother*. New York: Viking.

Berry, William D., Evan J. Ringquist, Richard C. Fording, and Russell L. Hanson. 1998. "Measuring Citizen and Government Ideology in the American States, 1960-1993." *American Journal of Political Science* 42:327-348.

Blau, David and Janet Currie. forthcoming. "Preschool, Day Care, and After School Care: Who's Minding the Kids?" *forthcoming in the Handbook on the Economics of Education*.

Bobo, L. and V.L. Hutchings. 1996. "Perceptions of Racial Group Competition: Extending Blumer's theory of Group Position to a Multiracial Social Context." *American Sociological Review* 61:951-972.

Bolzendahl, Catherine and Daniel Myers. 2004. "Feminist Attitudes and Support for Gender Equality: Opinion Change in Women and Men, 1974-1998." *Social Forces* 83:759-790.

Boris, Eileen. 1993. "The Power of Motherhood: Black and White Activist Women Redefine the "Political." Pp. 213-245 in *Mothers of a New World: Maternalist Politics and the Origins of Welfare States.* Edited by Seth Koven and Sonya Michel. New York: Routledge.

Branton, Regina P. and Bradford S. Jones. 2005. "Reexamining Racial Attitudes: The Conditional Relationship Between Diversity and Socioeconomic Environment." *American Journal of Political Science* 49:359-372.

Brown, Robert D. 1997. "Party Cleavages and Welfare Effort in the American States." *American Political Science Review* 89:23-33.

Burstein, Paul. 1991. "Policy Domains: Organization, Culture, and Policy Outcomes." *Annual Review of Sociology* 17:327-350.

Center for American Women and Politics. 2006. http://www.cawp.rutgers.edu/

Cohen, Sally S. 2001. *Championing Child Care*. New York: Columbia University Press.

Degler, Carl. 1980. *At Odds: Women and the Family in America from the Revolution to the Present*. New York: Oxford University Press.

DeVita, Carol J. and Rachel Mosher-Williams. 2001. *Who Speaks for America's Children? The Role of Child Advocates in Public Policy.* Washington, D.C.: Urban Institute Press.
DiPrete, Thomas A. and Jerry D. Forristal. 1994. "Multilevel Models: Methods and Substance." *Annual Review of Sociology* 20:331-57.
Dobbin, Frank R. 1993. "The Social Construction of the Great Depression: Industrial Policy during the 1930s in the United States, Britain, and France." *Theory and Society* 22:1-56.
Elazar, Daniel. 1984. *American Federalism*. New York: Basic Books.
Fellowes, M. C. and G. Rowe. 2004. "Politics and the New American Welfare States." *American Journal of Political Science* 48:362-373.
Fording, R.C. 2003. "Laboratories of Democracy or Symbolic Politics? The Racial Origins of Welfare Reform." in *Race and the Politics of Welfare Reform*, edited by S. F. Schram, J. Soss, and R. C. Fording. Ann Arbor: University of Michigan Press.
Gish, Melinda. 2002. *Child Care: Funding and Spending Under Federal Block Grants*. Washington: Library of Congress, Congressional Research Service.
Gordon, Linda. 1994. *Pitied But Not Entitled: Single Mothers and the History of Welfare 1890-1935*. New York: The Free Press.
Gray, Lawrence E. 1973. "Policy Decisions in the Aid to Families with Dependent Children Program: Comparative State Analysis." *The Journal of Politics* 35:886-923.
Gujarati, Damodar N. 1995. *Basic Econometrics.* New York: McGraw-Hill
Hanson, Russell L. 1983. "The "Content" of Welfare Policy: The States and Aid to Families with Dependent Children." *The Journal of Politics* 45:771-785.
Herk, Monica Lynn. 1993. "Helping the Hand that Rocks the Cradle: The Politics of Child Care Policy at the State Level." PhD Thesis, Princeton University, Princeton, NJ.
Hero, R. E. and C. J. Tolbert. 1996. "A Racial/ethnic Diversity Interpretation of Politics and Policy in the States of the U.S." *American Journal of Political Science* 40:851-871.
Hero, Rodney E. and Caroline J. Tolbert. 2004. "Minority Voices and Citizen Attitudes about Government Responsiveness in the American States: Do Social and Institutional Context Matter." *British Journal of Political Science* 34:109-121.
Hill, David B. 1981. "Political Culture and Female Political Representation." *The Journal of Politcs* 43:159-168.
Hoffman, John P. and Alan S. Miller. 1997. "Social and Political Attitudes among Religious Groups: Convergence and Divergence over Time." *Journal for the Scientific Study of Religion* 36:52-70.
Horn, Wade. 2004. "Coordinating Head Start with the States." Pp. 459-465 in *The Head Start Debates.* Eds. E. Zigler and S.J. Styfco. Baltimore, MD: Paul H. Brookes.
Howard, Christopher. 1999. "The American Welfare State, or States?" *Political Research Quarterly* 52:421-442.
Jenson, Jane and Mariette Sineau. 2001. *Who Cares? Women's Work, Childcare, and Welfare State Redesign*. Toronto: University of Toronto Press.

Johnson, Martin. 2003. "Racial Context, Public Attitudes, and Welfare Effort in the American States." Pp. 151-170 in *Race and the Politics of Welfare Reform*, edited by J. S. a. R. C. F. Sanford F. Schram. Ann Arbor: University of Michigan Press.

Jones, Dal E., Sherri Doty, Clifford Grammich, James E. Horsch, Richard Houseal, Mac Lynn, John P. Marcum, Kenneth M. Sanchgrin, and Richard H. Taylor. 2002. *Religious Congregations & Membership in the United States: An Enumeration by Region, State and County Based on Data Reported for 149 Religious Bodies*. Nashville, TN: Glenmary Research Center.

Keiser, Lael R., Peter R. Mueser, and Seung-Whan Choi. 2004. "Race, Bureaucratic Discretion, and Implementation of Welfare Reform." *American Journal of Political Science* 48:314-327.

Kessler-Harris, Alice. 1990. "A Woman's Wage: Historical Meanings and Social Consequences." University Press of Kentucky, Lexington, KY.

—. 2001. *In Pursuit of Equity: Women, Men, and the Quest for Economic Citizenship in 20th Century America*. New York: Oxford University Press.

King, Desmond S. 1992. "The Establishment of Work-Welfare Programs in the United States and Britain: Politics, Ideas, and Institutions." Pp. 217-250 in *Structuring Politics: Historical Institutionalism in Comparative Analysis*, edited by S. Steinmo, K. A. Thelen, and F. Longstreth. Cambridge and New York: Cambridge University Press.

Kosmin, Barry A., and Egon Mayer. 2001. *American Religious Identification Survey.* Graduate Center of the City of New York, New York.

Koven, Steven G. and Christopher Mausolff. 2002. "The Influence of Political Culture on State Budgets: Another Look at Elazar's Formulation." *The American Review of Public Administration* 32:66-77.

Ladd-Taylor, Molly. 1994. *Mother-Work: Women, Child Welfare, and the State, 1890-1930*. Urbana: University of Illinois Press.

Levy, Denise Urias. 2000. "Child Care Policies in America: Inter-State Differences and the Progress of Devolution." PhD Thesis, University of Illinois at Chicago, Chicago.

Lieberman, Robert C. 1998. *Shifting the Color Line: Race and the American Welfare State*. Cambridge: Harvard University Press.

Lieske, Joel. 1993. "Regional Subcultures of the United States." *The Journal of Politcs* 55:888-913.

McCammon, Holly J., Karen E. Campbell, Ellen M. Granberg, and Christine Mowery. 2001. "How Movements Win: Gendered Opportunity Structures and U.S. Women's Suffrage Movements, 1866 to 1919." *American Sociological Review.* 66: 49-70.

Michel, Sonya. 1999. *Children's Interests/Mothers' Rights: The Shaping of America's Child Care Policy*. New Haven: Yale University Press.

Miller, C. 1996. "Demographics and Spending for Public Education: A Test of Interest Group Influence." *Economics of Education Review* 15:175-185.

Moore, Laura M. and Reeve Vanneman. 2003. "Context Matters: Effects of the Proportion of Fundamentalists on Gender Attitudes." *Social Forces* 82:115-139.

O'Connor, Julia. 1993. "Gender, Class and Citizenship in Comparative Analysis of Welfare State Regimes: Theoretical and Methodological Issues." *British Journal of Sociology* 44:501-518.
Oliver, J. Eric and Tali Mendelberg. 2000. "Reconsidering the Environmental Determinants of White Racial Attitudes." *American Journal of Political Science* 44.
Pre[k]now. 2006. "Votes Count: Legislative Action on Pre-K, Fiscal Year 2007." accessed on 12/12/06, http://www.pewtrusts.com/pdf/PreKNow_LegislativeReport_1006.pdf.
Ranney, Austin. 1976. "Parties in State Politics." In *Politics in the American States*, edited by H. Jacob and K.Vines. Boston: Little, Brown & Co.
Steven Ruggles, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander. *Integrated Public Use Microdata Series: Version 3.0* [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor], 2004. http://usa.ipums.org/usa/
Soule, Sarah A. and Susan Olzak. 2004. "When Do Movements Matter? The Politics of Contingency and the Equal Rights Amendment." *American Sociological Review* 69: 473-497.
Orloff, Ann Shola. 2006. "Farewell to Maternalism." in *forthcoming in The State After Statism*, edited by J. Levy. Cambridge: Harvard University Press.
Pierson, Paul. 1993. "When Effect Becomes Cause: Policy Feedback and Political Change." *World Politics* 45:595-628.
Quadagno, Jill. 1994. *The Color of Welfare: How Racism Undermined the War on Poverty*. New York: Oxford University Press.
Rae, Douglas. 1967. *The Political Consequences of Electoral Laws*. New Haven: Yale University Press.
Raudenbush, S.W. and A.S. Bryk. 2002. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Thousand Oaks, CA: Sage Publications, Inc.
Rigby, Dawn Elizabeth. 2005. "The Politics of Early Care and Education Policymaking in the American States." PhD Thesis, Political Science, Columbia, New York.
Rindfuss, Ronald, Karin L. Brewster, and Andrew L. Kavee. 1996. "Women, Work, and Children: Behavioral and Attitudinal Change in the united States." *Population and Development Review* 22:457-482.
Roberts, Dorothy E. 1995. "Race, Gender and the Value of Mothers' Work." *Social Politics.* Summer: 195-207.
Rodgers, Harrell R. and Kent L. Tedin. 2006. "State TANF Spending: Predictors of State Tax Effort to Support Welfare Reform." *Review of Policy Research* 23:745-759.
Saeki, Manabu. 2005. "Systematic, Political, and Socioeconomic Influences on Educational Spending in the American States." *Review of Policy Research* 22:245-.
Shor, Boris, Joseph Bafumi, Luke Keele, and David Park. 2006. "A Bayesian Multilevel Modeling Approach to Time Series Cross-Sectional Data." *accessed November 17, 2006 at http://home.uchicago.edu/~bshor/papers/tscs.bml.pdf.*
Singer, Judith D. and John B. Willett. 2003. *Applied Longitudinal Data Analysis: Modeling Change and Event Occurrence*. Oxford, UK: Oxford University Press.

Skocpol, Theda. 1992. *Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States*. Cambridge, MA: Harvard University Press.
Snijders, A.B., Tom, and Roel J. Bosker. 1999. *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling.* Thousand Oaks, CA: Sage.
Soss, Joe, Sanford F. Schram, Thomas P. Vartanian, and Erin O'Brien. 2001. "Setting the Terms of Relief: Explaining State Policy Choices in the Devolution Revolution." *American Journal of Political Science* 45:378-395.
Steenbergen, M. R. and B. S. Jones. 2002. "Modeling Multilevel Data Structures." *American Journal of Political Science* 46:218-237.
Stein, Robert M., Stephanie Shirley Post, and Allison L. Rinden. 2000. "Reconciling Context and Contact Effects on Racial Attitudes." *Political Research Quarterly* 53:285-303.
Stoltzfus, Emilie. 2003. *Citizen, Mother, Worker: Debating Public Responsibility for Child Care after the Second World War*. Chapel Hill, NC: University of North Carolina Press.
Taylor, Marylee C. 1998. "How White Attitudes Vary with the Racial Composition of Local Populations: Numbers Count." *American Sociological Review* 63:512-535.
Thelen, Kathleen. 1999. "Historical Institutionalism in Comparative Politics." *Annual Review of Politics* 2:369-404.
U.S. Census Bureau, American Community Surveys. Accessed June 2006. http://www.census.gov/acs/www/.
U.S. Census Bureau, Equal Employment Opportunity tabulations 1990 http://www.census.gov/hhes/www/eeoindex/eeoindex.html)
U.S. Census Bureau, Statistical Abstract of the U.S. (various years). Washington, D.C. http://www.census.gov/statb/www/.
United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Bridged-Race Population Estimates, United States, 1990 - 2004, July 1st resident population by state, county, age, sex, race, and Hispanic origin, on CDC WONDER On-line Database, November 2005.
U.S. Department of Labor, Bureau of Labor Statistics (various years). Local Area Unemployment Statistics. http://www.lbs.gov/lau/home.htm/.
Waldfogel, Jane. 1999. "Family Leave Coverage in the 1990s." *Monthly Labor Review*. October: 1-21.
Weir, Margaret. 1982. *Politics and Jobs: The Boundaries of Employment Policy in the United States*. Princeton, NJ: Princeton University Press.
—. 1992. "Ideas and the Politics of Bounded Innovation." Pp. 188-216 in *Structuring Politics: Historical Institutionalism in Comparative Analysis*, edited by S. Steinmo, K. Thelen, and F. Longstreth. New York: Cambridge University Press.
Western, Bruce. 1998. "Causal Heterogeneity in Comparative Research: A Bayesian Hierarchical Modeling Approach." *American Journal of Political Science* 42:1233-1259.
White, Linda A. 2002. "Ideas and the Welfare State: Explaining Child Care Policy Development in Canada and the United States." *Comparative Political Studies* 35:713-743.

Witte, Ann and Marisol Trowbridge. 2004. "The Structure of Early Care and Education in the United States: Historical Evolution and International Comparisons." Wellesley College, Department of Economics, Wellesley.
Zylan, Yvonne. 1995. “The Divided Female State: Gender, Citizenship, and U.S. Social Policy Development, 1945-1990.” PhD Thesis, Sociology, New York University, New York.
Zylan, Y. 2000. "Maternalism Redefined - Gender, the State, and the Politics of Day Care, 1945-1962." *Gender & Society* 14:608-629.

Table 1 embedded in text.

Table 2. Descriptive Statistics for Child Care Spending Model

Variable	mean	SD	min	max
total child care spending per 4-yr old	388.971	218.634	60.915	1042.597
logged value	5.795	0.607	4.109	6.949
Mother's labor force participation	60.353	5.322	44.800	71.790
Equality of employment	23.531	6.890	11.784	47.639
Proportion of women in legislature	22.071	7.300	4.000	41.000
Religious Conservatism	39.433	26.849	2.889	87.530
Institutional support for women's work	1.340	1.118	0.000	3.000
percent black	10.649	9.696	0.312	36.747
logged value	1.752	1.307	-1.165	3.604
Percent Hispanic	7.179	8.693	0.504	41.140
logged value	1.397	1.066	-0.685	3.717
Racial heterogeneity net of black	26.901	12.733	4.175	60.146
State per capita income, $10,000's	31.876	5.087	21.146	48.225
Unemployment	4.600	1.127	2.200	8.100
Percent children in poverty	16.460	4.942	6.000	30.000
Percent population <=17	25.099	1.745	21.188	32.182
Percent population >=65	12.357	1.820	7.078	17.566
Percent Democrats	50.921	15.524	12.875	87.000
group mean centered	0.000	15.079	-37.778	34.124
Institutional Democrats	53.423	14.527	18.182	87.168
Confederacy	0.234	0.424	0.000	1.000
Party competition, log	-1.858	1.033	-5.177	-0.260
Voter turnout	45.851	6.870	35.100	64.400
Advocacy, orgs. per 100,000 children	3.128	0.959	1.354	6.146
Union membership	12.052	5.333	3.100	26.900
Political culture				
Elazar, traditional	0.298	0.458	0.000	1
Elazar, moralistic	0.362	0.481	0.000	1
Berry	44.850	26.210	0.000	97.92

Table 3. Expectations of Parameter Significance and Direction, Child Care Spending Model

Construct	Measure	Expectation of impact on initial status: within and between effects		Expectation of impact on rates of change
		Within effect*	Between effect	Between effect
Gender context	Mothers labor force participation		Positive	Negative
	Employment equality		ns	ns
	Proportion of women in the state legislature		ns	ns
	Religious conservatism		Negative	Positive
	Work support		Positive	Negative
Racial context	Non-black racial heterogeneity		Negative	ns
	Proportion black population		Negative	Positive
	Proportion Hispanic population		ns	
Economic resources	State personal income	ns	Positive	ns
	Unemployment	ns	ns	ns
	Child poverty	ns	ns	ns
Demographic Composition	Percent of the population > 65	ns	ns	ns
	Percent of the population < 17	ns	ns	ns
Political Partisanship	Percent Democrat	Positive	Positive	Negative
	Institutional Democrat		Positive	Negative
	Confederacy		Negative	Positive
	Party competition	ns	ns	ns
Political Engagement	Voter turnout		Positive	ns
	Advocacy		Positive	ns
	Union membership	ns	ns	ns
Political culture	Elazar		ns	ns
	Berry		ns	ns

- Note that non-time varying variables only have a between effect for initial status and rates of change.
- ns = non-significant relationship expected

Table 4. Variance Components and Time, Child Care Spending 1999-2004
(n = 282)

MODELS:	1	2	3	4
Fixed Effects				
Initial Status				
Intercept	5.795***	5.722***	5.395***	5.395***
Rate of Change				
Time		0.021**	0.266***	0.266***
Time^2			-0.035***	-0.035***
Random Effects				
Level-1, within	0.095***	0.086***	0.073***	0.073***
Level-2				
In initial status	0.277***	0.271***	0.220***	0.220***
In rate of change				0.004***
Covariance				0.001
Goodness-of-Fit				
Deviance	-138.28	-136.40	-124.48	-118.10
BIC	293.50	295.36	277.16	275.69
df	3	4	5	7

* $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Table 5. Economic and Demographic Controls, Child Care Spending 1999-2004
(n = 282)

MODELS:	1	2	3	4	5	6
Fixed Effects						
Initial Status						
Intercept	5.470***	5.468***	5.463***	5.545***	5.602***	5.457***
State inc./cap	0.026***	0.025***	0.026***	0.025***	0.027***	0.026***
Unemployment		-0.008				
Per. Child poverty			0.002			
Pop. <= 17				-0.127***		-0.045
Pop. >= 65					0.091***	0.041
Rate of Change						
Time	0.221***	0.218***	0.224***	0.221***	0.218**	0.221***
Time^2	-0.029***	-0.028***	-0.030***	-0.029***	-0.029*	-0.030***
Random Effects						
Level-1, within	0.073***	0.073***	0.073***	0.073***	0.073***	0.073***
Level-2						
In initial status	0.171***	0.171***	0.170***	0.149***	0.158***	0.149***
In rate of change	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***
Covariance	0.000	0.001	0.000	0.000	0.000	0.000
Goodness-of-Fit						
Deviance	-113.96	-113.92	-113.94	-110.60	-111.4	-110.24
BIC	273.05	278.62	278.65	271.90	273.59	276.89
df	8	9	9	9	9	10

* $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Table 6. Political Partisanship Controls, Child Care Spending, 1999-2004

(n = 282)

MODELS:	1	2	3	4	5	6	7	8	9
Fixed Effects									
Initial Status									
Intercept	5.466***	5.554***	5.479***	5.556***	5.554***	5.554***	5.547***	5.554***	5.553***
State inc./capita	0.026***	0.022***	0.026***	0.022***	0.022***	0.022***	0.021***	0.021***	0.021***
% Dems	0.004	0.006*	-0.006	-0.004					
Inst. Democrat			0.010**	0.012***	0.012***	0.012***	0.012***	0.012***	0.009**
Confederacy		-0.387***		-0.400***	-0.414***	-0.415***	-0.389**	-0.417***	-0.360***
Pop. <=17									-0.091**
Party competition								-0.008	
Rate of Change									
Time	0.221***	0.227***	0.222***	0.228***	0.229***	0.217***	0.233***	-0.230***	0.229***
Time^2	-0.029***	-0.030***	-0.030***	-0.031***	-0.031***	-0.031***	-0.031***	-0.030***	-0.031***
% Dems, btw						0.000			
Confederacy							-0.014		
Random Effects									
Level-1, within	0.073***	0.737***	0.074***	0.073***	0.073***	0.073***	0.073***	0.073***	0.073***
Level-2									
In initial status	0.165***	0.143***	0.143***	0.128***	0.131***	0.131***	0.131***	0.130***	0.122***
In rate of change	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***
Covariance	-0.000	- 0.000	0.002	0.000	-0.000	0.000	-0.000	-0.001	-0.002
Goodness-of-Fit									
Deviance	-113.4	-110.38	-110.9	-107.4	-107.7	-107.7	-107.6	-107.7	-103.55
BIC	277.6	277.21	278.17	276.94	271.91	277.5	277.4	277.50	269.17
Df	9	10	10	11	10	11	11	11	11

* $p < 0.10$ ** $p < 0.05$ ** $p < 0.01$

Table 7. Political Engagement & Advocacy Controls, Child Care Spending, 1999-2004
(n = 282)

MODELS:	1	2	3	4	5	6
Fixed Effects						
Initial Status						
Intercept	5.462***	5.461***	5.420***	5.414***	5.420***	5.500***
State inc./capita	0.025***	0.023***	0.018**	0.014*	0.014*	0.019***
Voter turnout	0.012*			-0.003	0.003	
Advocacy		0.185***		0.176***	0.162**	0.152**
Union memb.			0.037***	0.037***	0.027**	
Institutional Dem.					0.010***	0.013***
Confederacy					-0.026	-0.252*
Pop. < 17					-0.035	-0.048
Rate of Change						
Time	0.223***	0.227***	0.237***	0.243***	0.242***	0.232***
Time^2	-0.029***	-0.030***	-0.030***	-0.031***	-0.031***	-0.031***
Random Effects						
Level-1, within	0.073***	0.073***	0.074***	0.074***	0.074***	0.073***
Level-2						
In initial status	0.161***	0.150***	0.126***	0.112***	0.098***	0.113***
In rate of change	0.004***	0.004***	0.004***	0.004***	0.004***	0.004***
Covariance	0.000	-0.000	0.000	-0.000	-0.002***	0.002***
Goodness-of-Fit						
Deviance	-112.6	-110.4	-108.9	-105.4	-101.44	-103.6
BIC	275.9	271.6	268.5	272.8	281.89	274.8
df	9	9	9	11	14	12

* $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Table 8. Political Culture Controls, Child Care Spending, 1999-2004
(n = 282)

MODELS:	1	2	3	4
Fixed Effects				
Initial Status				
Intercept	5.571***	5.570***	5.477***	5.510***
State inc./capita	0.021***	0.020**	0.030***	0.023***
Advocacy		0.198***		0.192***
Institutional Dem.		0.013***		0.013***
Confederacy		-0.336*		-0.237
Elazar_traditional	-0.254	0.010		
Elazar_moralistic	-0.110	-0.036		
Berry			0.001	0.001
Rate of Change				
Time	0.229***	0.232***	0.223***	0.235***
Time^2	-0.031***	-0.031***	-0.030***	-0.032***
Random Effects				
Level-1, within	0.074***	0.073***	0.062***	0.062***
Level-2				
In initial status	0.166***	0.113***	0.191***	0.127***
In rate of change	0.004***	0.004***	0.005***	0.004***
Covariance	0.001	-0.003	-0.003	-0.005
Goodness-of-Fit				
Deviance	-112.9	-104.9	See note	See note
BIC	282.2	281.1		
df	10	14		

- $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$
- Berry institutional ideology measure missing for Wyoming, therefore comparative fit statistics are not given for these models

Table 9. Gender Context and Child Care Spending, 1999-2004 (n = 282)

MODELS:	1	2	3	4	5	6
Fixed Effects						
Initial Status						
Intercept	5.520***	5.507***	5.510***	5.473***	5.470***	5.474***
State inc./capita	0.019***	0.020**	0.019***	0.016*	0.015*	0.015*
Advocacy	0.177***	0.190***	0.185***	0.153**	0.093	0.093
Inst. Dem.	0.014***	0.014***	0.137***	0.013***	0.011**	0.010***
Confederacy	-0.251*	-0.255*	-0.252*	-0.139	-0.154	-0.154
Mothers FLFP	0.002					
Empl. Equality		-0.333				
Female leg.			0.000			
Relig. Conserve.				-0.004		
Work Support					0.147**	0.130*
Rate of Change						
Time	0.232***	0.232***	0.233***	0.239***	0.218***	0.240***
Time^2	-0.031***	-0.031***	-0.031***	-0.317***	-0.030***	-0.031***
Work Support						-0.008
Random Effects						
Level-1, within	0.073***	0.073***	0.073***	0.073***	0.073***	0.073***
Level-2						
In initial status	0.116***	0.114***	0.114***	0.119***	0.107***	0.106***
In rate of change	0.003***	0.004***	0.003***	0.004***	0.004***	0.004***
Covariance	-0.002	-0.002	-0.002	-0.003	-0.000	-0.000
Goodness-of-Fit						
Deviance	-103.9	-104.0	-104.10	103.57	-102.1	-101.8
BIC	275.7	275.8	275.9	274.9	271.9	277.0
Df	12	12	12	12	12	13

$p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Table 10. Racial Context and Child Care Spending, 1999-2004 (n = 282)

MODELS:	1	2	3	4	5	6
Fixed Effects						
Initial Status						
Intercept	5.504***	5.531***	5.531***	5.539***	5.530***	5.500***
State inc./capita	0.021***	0.010	0.009	0.011	0.011	0.005
Advocacy	0.173***	0.286***	0.286***	0.269***	0.268***	0.197***
Institutional Dem.	0.013***	0.009**	0.009**	0.009**	0.008**	0.006*
Confederacy	-0.267*	-0.467***	-0.467***	-0.474***	-0.473**	-0.370**
Work Support						0.139**
Percent hisp, log	-0.030					
Percent black., log		0.179***	0.160**	0.185***	0.185***	0.174**
Race Hetero., non-black				-0.003		
Rate of Change						
Time	0.236***	0.250***	0.222***	0.248***	0.235***	0.257***
Time^2	-0.031***	-0.330***	-0.031***	-0.327***	-0.033***	-0.034***
Per. Black			0.002			
Race Hetero.					0.004	
Random Effects						
Level-1, within	0.073	0.073***	0.073***	0.073***	0.073***	0.073***
Level-2						
In initial status	0.114***	0.102***	0.102***	0.100***	0.100***	0.092*
In rate of change	0.004***	0.004***	0.004***	0.004***	0.004***	0.003***
Covariance	-0.002	-0.000	-0.000	-0.000	-0.000	-.000
Goodness-of-Fit						
Deviance	-103.9	-100.8	-100.8	-100.5	-100.5	-98.77
BIC	275.6	269.3	274.0	274.4	280.0	270.9
Df	12	12	13	13	14	13

- $p < 0.10$ ** $p < 0.05$ *** $p < 0.0$

Table 11. Percentage Change in Child Care Spending per 4-year-old For a 1 Standard Deviation Increase in Each Independent Variable (remaining variables held at their mean, and 0 in the case of Confederacy)

Variable	% change in spending for 1 SD increase in independent variable
State income per capita	2.64%
Advocacy	20.86%
Institutional Dems.	10.70%
Confederacy	-30.73% (from 0 to 1)
Work support	16.89%
Percent black	15.21%

Table 12. Confederate vs Non-Confederate States, Child Care Spending, 1999-2004

MODELS:	Final Model, All States (n = 282)	Non-Confederate States (n=216)	Only Confederate States (n=66)
Fixed Effects			
Initial Status			
Intercept	5.500***	5.500***	5.030***
State inc./capita	0.005	-0.008	0.039***
Advocacy	0.197***	0.181***	0.319
Institutional Dem.	0.006*	0.009***	0.005
Confederacy	-0.370**	--	--
Work Support	0.139**	0.186***	-0.222
Percent black, log	0.174**	0.180***	-0.433
Rate of Change			
Time	0.257***	0.254***	0.313***
Time^2	-0.034***	-0.032***	-0.044***
Work Support			
Per. black			
Race Hetero.			
Random Effects			
Level-1, within	0.073***	0.076***	0.048***
Level-2			
In initial status	0.192*	0.051***	0.369*
In rate of change	0.003***	0.005***	0.002
Covariance	-0.000	0.000	-0.026
Goodness-of-Fit			
Deviance	-98.77	-74.2	11.6
AIC	223.5	172.5	47.3
BIC	270.9	213.0	73.5
Df	13	12	12

* $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$