

Published in final edited form as:

Soc Sci Res. 2008 March ; 37(1): 254–267.

INFLUENCES OF GENDER IDEOLOGY AND HOUSEWORK ALLOCATION ON WOMEN'S EMPLOYMENT OVER THE LIFE COURSE

Mick Cunningham, Ph.D.

Department of Sociology, Western Washington University

Abstract

The study investigates the influences of women's attitudes about gender and couples' housework allocation patterns on women's employment status and work hours across the life course. The influence of these factors on the employment characteristics of continuously married women is investigated at four time points: 1977, 1980, 1985, and 1993. Data come from the Intergenerational Panel Study of Parents and Children and the analysis sample includes 556 continuously married women. Findings from structural equation, fixed effects, and tobit models offer consistent evidence of long-term positive influences of women's egalitarian gender ideology and men's participation in routine housework on women's labor force participation. The results provide support for hypotheses based on the notion of lagged adaptation.

Keywords

attitudes; gender; housework; life course; marriage; women's employment

Women's roles in families and the labor market changed dramatically during the latter half of the 20th Century. Women's labor force participation rates increased (Goldin, 1990; Spain and Bianchi, 1996), the amount and relative proportion of household labor they performed decreased (Artis and Pavalko, 2003; Sayer, Robinson, and Bianchi 2005), and their support for gender differentiated family roles declined (Brewster and Padavic, 2000; Brooks and Bolzendahl, 2004; Thornton and Young-DeMarco, 2001). In order to understand the linkages between these factors, a number of studies have examined how women's employment patterns are shaped by their responsibility for unpaid labor in families (Coverman, 1983; Shelton and Firestone, 1988a; 1988b; Hersch and Stratton, 1997; Kalleberg and Rosenfeld, 1990) and their ideological support for gender-differentiated family roles (Cunningham et al., 2005; Fortin, 2005; Vella, 1994). Existing research has not, however, examined the relationship between these factors over long intervals of the life course, limiting our understanding of the causal processes at work. The current study investigates the influences of women's attitudes about gender and couples' patterns of housework allocation on women's employment status and work hours across a 31-year interval.

Author Contact Information: Mick Cunningham, Associate Professor of Sociology, Western Washington University, 516 High Street, Bellingham, WA 98225-9081, Work Phone: 360-650-4881, Work Fax: 360-650-7295, Email: Mick.Cunningham@wwu.edu.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

The analyses provide several contributions to our understanding of the relationship between unpaid family work, attitudes about gendered family roles, and women's participation in the paid labor market. First, although several cross-sectional studies have investigated linkages between housework and women's employment, these studies must rely on assumptions about the time-ordering of variables that may be difficult to justify (Kalleberg and Rosenfeld, 1990; Shelton and Firestone, 1988a). The analysis of longitudinal data presented here provides stronger certainty about the causal influence of gender-related attitudes and household interactions on employment outcomes than has most previous research. Second, the very long time interval of the study facilitates assessment of the duration of the influences of gendered patterns of housework allocation and women's gender ideology on women's investments in paid employment. Finally, the findings from a combination of structural equation, fixed effects, and tobit models together provide strong evidence of linkages between attitudes, housework, and women's employment over long periods of time.

The analyses draw on a probability sample of women who make up the older generation of the Intergenerational Panel Study of Parents and Children. The data include measures of couples' housework allocation, gender attitudes, and women's employment captured between 1962 and 1993. The paper begins by reviewing research linking unpaid family work, gender attitudes, and women's patterns of paid employment. After outlining the theoretical expectations, the data and measures are described in detail. A series of multivariate models are then presented, and the paper concludes with several observations about the influences of women's attitudes and couple behaviors on women's employment over the life course.

BACKGROUND AND HYPOTHESES

INFLUENCES OF ATTITUDES ABOUT GENDER ON WOMEN'S EMPLOYMENT

Studies investigating the influence of gender-related attitudes on women's employment have reached mixed conclusions. Several researchers have argued that measures of women's gender ideology are not effective predictors of their subsequent employment (Gerson, 1985; Risman, Atkinson, and Blackwelder, 1998; Tallichet and Willits, 1986). These researchers assert that women's employment patterns are more likely to be shaped by job and family contexts than by individuals' orientations toward gendered family roles. A larger number of longitudinal studies, however, find that women's gender egalitarianism is positively related to their subsequent participation in the labor market (Ferber, 1982; Fortin, 2005; Rexroat and Shehan, 1984; Thornton and Camburn, 1979). This body of research suggests that women who reject the idea of gender segregated family roles are more likely to enter the paid labor market than are women who believe that men should be the family's primary economic provider and women should focus primarily on household activities. Further, several studies find that women with egalitarian attitudes are likely to spend more time on the job than women who support gender differentiation in family roles (Cunningham et al., 2005; Vella, 1994). I hypothesize that women who hold more egalitarian attitudes about gendered family roles will be more likely to enter the paid labor force than women who are generally supportive of gender-differentiation in families. I further expect women with more egalitarian attitudes will spend a greater number of hours engaging in paid work than those with less egalitarian attitudes.

INFLUENCES OF THE GENDERED DIVISION OF LABOR ON WOMEN'S EMPLOYMENT

Another major dimension of gender relations in families that is expected to be linked to women's employment is the gendered division of family work. Although individual attitudes about gender and gendered patterns of household labor may be related, they are clearly separate constructs. Indeed, not all studies find an association between the two (Shelton and John, 1993). The second major hypothesis of the current study is that husbands' participation in routine housework will be linked with women's entry into the paid labor market. In this research

I focus primarily on the causal influence of couples' relative participation in stereotypically female housework, because this kind of work must be performed frequently and has a low level of "schedule control" for its completion (Barnett & Shen, 1997). In addition, research by Noonan (2001) suggests that it is time spent on these kinds of "feminine" tasks that has the greatest influence on wages.

Human capital theorists have convincingly argued that the accumulation of human capital in the form of education and employment experience may have important implications for individuals' subsequent employment characteristics (Mincer and Polachek 1974; Schultz 1961). Advocates of the new home economics have extended our understanding of human capital by recognizing that investments in household production may also shape employment outcomes (Becker 1991). In this paper I assess the influence of domestic human capital in the form of routine household labor on women's subsequent employment outcomes.

At any single point in time, women's responsibility for family work may influence employment characteristics by decreasing the amount of time women have available for employment, decreasing the energy available for market work, leading to a propensity to work in certain types of jobs (e.g. jobs with flexible hours or limited travel requirements), or increasing the potential for discrimination by employers who believe certain employees will be less productive due to their domestic responsibilities (Becker 1991; Coverman 1983; Noonan, 2001). Husbands who benefit from women's greater responsibility for family work may also resist their wives' employment (Hochschild, 1989). Several cross-sectional studies have suggested that housework performance is negatively associated with women's wages (Coverman 1983; Hersch 1991; Hersch and Stratton 1994; McAllister 1990; Shelton and Firestone 1988a), and a smaller number of studies have documented an association between women's housework obligations and women's employment hours (Kalleberg and Rosenfeld 1990; Shelton and Firestone 1988b). Recent research by Stratton (2001) suggests that the primary mechanism through which housework is related to wages is that responsibility for routine housework leaves less time available for paid work. However, because the key variables in these cross-sectional studies are measured simultaneously, it is difficult to establish the time-ordering that is necessary for making causal attributions.

Longitudinal studies of the influence of housework on employment provide more compelling evidence that housework is related to women's wages (Hersch and Stratton 1997; Noonan 2001). No longitudinal research to date, however, has examined the influence of the allocation of family work on women's employment status or employment hours. Based on these studies of wages, however, I hypothesize that women whose husbands' participate in a relatively greater share of stereotypically female housework will be more likely to enter the paid labor market. I further expect that men's participation in routine housework will be positively associated with the number of hours women who are employed devote to paid work.

LONG-TERM INFLUENCES OF ATTITUDES AND HOUSEWORK ALLOCATION

In their explanation of the relationship between paid and unpaid work in families, Gershuny, Godwin, and Jones (1994) argue that an adjustment of responsibility for each type of work occurs not in the short term, but rather "through an extended process of household negotiation ... over a period of many years" (p. 151). They refer to this process as "lagged adaptation." Following Gershuny and colleagues' (1995) argument about adaptive partnerships, I hypothesize that gender-related attitudes and the gendered division of routine housework at one point in time will influence women's employment at later time points. I argue that gender-related family dynamics, once established, will exert long-term influences on women's employment by changing the context in which husbands and wives negotiate decisions about paid and unpaid family work.

It is also important to consider the unique historical circumstances of the women analyzed in the current study. The women in the IPSPC sample married and formed families during the latter years of the baby boom era. Although they subsequently entered the labor force in large numbers, they reached adulthood prior to the most active years of the movement for women's equality and before the initiation of the most rapid changes in women's employment. The work and family experiences of the women in the sample analyzed here may differ in important ways from the experiences of women in more recent cohorts. It is likely, for instance, that these women entered marriage with relatively lower expectations about future employment than their peers in subsequent decades (Goldin, 1990). Investigation of cohort-related influences requires the analysis of data with representatives of different age-groups of women, however, and is beyond the scope of the current study. Nonetheless, the analyses presented here provide a unique opportunity to examine the extent to which gender-related attitudes and behaviors influenced subsequent employment patterns among a sample of women who formed families in an historical era in which the gender segregation of family roles was relatively high.

DATA

The original respondents in the Intergenerational Panel Study of Parents and Children were selected from a probability sample of White married women in the Detroit metropolitan area. These women had given birth to a first, second, or fourth child in the summer of 1961.¹ Follow-up surveys were conducted by telephone in the fall of 1962, and in 1963, 1966, 1977, 1980, 1985, and 1993. Throughout this panel the original respondents were re-interviewed, regardless of the location of their current residence. Substantial fractions of the sample had moved outside of the Detroit area by 1993. The 1962 survey had a response rate of 92% (n=1,113 families), and approximately 85% of those families responded to the 1993 survey. This is an exceptional response rate for studies of this duration.

Because the goal of this research is to identify the long-term effects of women's employment, the data are appropriate for the central research questions posed in the analysis. It is of course possible that the determinants of housework allocation among the women analyzed in the current study differ from those of more contemporary cohorts. Nonetheless, the ability to study long-term influences requires data based on women from older cohorts. Although this cohort of women married and became parents prior to the largest surge in women's rates of employment, they subsequently entered the labor market in relatively large numbers.

MEASURES

The first outcome measure is a dichotomous variable indicating whether women were engaged in any paid employment in 1977, 1980, 1985, and 1993. The second measure assesses the number of hours employed women worked per week, and it is assessed in the same 4 years.

Women's attitudes about gender in families are assessed with 2 items in 1962 and with 6 items in 1977, 1980, and 1985 (see Appendix for text). The items are coded so that a high score represents lower levels of support for the male breadwinner, female homemaker family model. In some models these items are included as individually-observed indicators, and in other models they are summed into an index. The six items from 1977 appear to measure a single underlying construct in 1977 (Cronbach's $\alpha = .76$; see Figure 1 for factor loadings), and the items are also correlated at high levels in 1980 ($\alpha = .72$) and 1985 ($\alpha = .71$). The measurement properties are somewhat less desirable for the 1962 index ($\alpha = .44$)

¹The study was initially designed to study fertility, and women with four children were sampled to ensure sufficient representation of families with high fertility. The children born in 1961 were interviewed in 1980 and subsequent years, but are not included in this analysis.

The primary measure of the gendered division of labor assesses the relative participation of husbands and wives in stereotypically female household tasks based on an ordinal response scale (see Appendix for text). The questions were administered in 1962 and 1977, and each respondent reported whether she or her spouse usually performed a particular task. Three types of tasks are assessed at each interview wave: shopping for groceries, washing the dishes, and cleaning the house. As a result of a change in wording and mode of administration between the 1962 and 1977 waves, the response format for each task was changed. In 1962, response options ranged from “wife almost always, wife mostly, husband and wife exactly the same, husband mostly, husband almost always,” (on a show card in a face-to-face interview). In 1977, a telephone-administered question included the responses “wife usually, wife a little more often, husband a little more often, husband usually.” The option of “husband and wife exactly the same” available in 1962 was removed in subsequent waves as an explicit choice, although respondents could still volunteer this option. This change in mode and wording implies that the responses from 1962 and 1977 are not directly comparable. The variables are coded so that a high score represents greater participation by the man in the task relative to his wife. In some models the items are treated as individual indicators reflecting a latent factor (see Figure 1), and in other models they are combined into an index.

The analyses control for a range of other characteristics of the women in order to reduce the likelihood that the observed associations are spurious. Control variables include respondents’ age, years of education in 1962, 1961 family income, the number of children in the household, and the husband’s employment status. The number of children in the household is assessed in different ways depending on the survey year. For 1977 and 1980, two separate variables capture the number of children in the household under 6 and the number of children aged 6 to 17. Because very few households included young children in the later years of the study, a single variable assessing the number of children aged 0 to 17 in the household is used in 1985 and 1993. The husband’s employment status is captured with a dummy variable in 1977, 1980, 1985, and 1993. Previous research suggests that the control variables listed above may be linked with gender-related attributes and women’s employment (England and Farkas, 1986; Goldin, 1990).

PLAN OF ANALYSIS

The first goal of the analysis is to assess the long-term influences of gender ideology and housework allocation on the likelihood of women’s employment. This is accomplished with a structural equation model in which the main outcomes are women’s employment status in 1977, 1980, 1985, and 1993.² The key predictor variables in this model are gender egalitarianism and housework segregation, but the model also includes the control variables outlined above for the years 1962 and 1977 (see Figure 1). The individual indicators of gender ideology and household task allocation are posited to reflect underlying factors representing attitudinal support for the male breadwinner family and gender segregation in household tasks, respectively. Unstandardized factor loadings are shown in Figure 1. The error terms for similar items captured in 1962 and 1977 (e.g. grocery shopping in each year) are allowed to correlate, although this is not shown in Figure 1. Perfect measurement is assumed for those variables assessed with single indicators. Coefficients representing the influence of all variables measured in 1962 on all subsequently measured variables are estimated. Similarly, the model is specified so that all variables captured in 1977 influence employment status in 1977 and at each subsequent time point. The errors of prediction for 1977 variables other than employment status are allowed to correlate. In addition, as shown in Figure 1, the prediction errors for the

²Models were estimated using MPlus Version 4.2 (Muthén and Muthén, 1998–2006).

terms capturing women's employment status in 1977, 1980, 1985, and 1993 are allowed to correlate.

An alternate strategy for accounting for correlated residuals within individuals over time is fixed effects regression. These "within-person" models control out effects resulting from the omission of unobserved personal characteristics that might otherwise bias parameter estimates due to their association with the outcome. The influence of gender attitudes at one point in time on women's employment status at subsequent points in time is also examined with a fixed effects logistic regression model.

The final set of models examines the influence of gender ideology and housework allocation on women's weekly employment hours. One strategy for assessing the influence of these factors on employment hours is the use of a two-step model (Heckman 1979). Under this specification, the probability of women's employment is the dependent variable in the first step and a variable capturing the probability of employment is then included in the second step, where women's employment hours are the dependent variable. Such a model requires, however, that at least one variable be included in the "selection equation" (predicting the probability of employment) that is not included in the "substantive equation" (predicting women's employment hours).³ There is no variable available in the IPSPC data that can plausibly be linked to women's employment status but not to women's employment hours, so the selection of an identifying variable for such an equation would be completely arbitrary. Recent research suggests, further, that equations based on these types of models are highly unstable (Achen, 1986; Stolzenberg and Relles, 1990). As a result, the models of employment hours are conducted using tobit regression equations which simultaneously estimate the influence of the predictor variables on the likelihood of being employed and the number of hours employed.

RESULTS

Descriptive statistics for all variables are listed in Table 1. Women's employment reached its highest levels in 1985, when 65% of the continuously married women in the sample were engaged in paid work. Their average age at this time was 49.

The first step in the multivariate analysis is to estimate the long-term influences of attitudes and housework on women's employment status. The key outcome measure is a dummy variable representing women's employment status in 1977, 1980, 1985, and 1993. The results from the structural model are presented in Table 2, and additional parameter estimates are shown in Figure 1. The first row of coefficients in Table 2 supports the hypothesis that women's gender egalitarianism is positively related to the likelihood that they are employed. The relationship between attitudes and employment is strongest in 1977, when the two variables are measured simultaneously. The key support for hypotheses about the long-term influence of attitudes on employment comes from the coefficients predicting employment status in 1980 and later years. Here we see that the influence of gender ideology on the likelihood of being employed is positive and statistically significant in 1980, 1985, and 1993. These results control for an earlier measure of gender ideology captured in 1962, reducing the possibility that the observed relationship is spurious. Further, the model accounts for the correlation across time in the likelihood women are employed (see Figure 1). Finally, the model clearly shows how the influence of attitudes on employment status becomes weaker over time, with the influence of egalitarian attitudes on employment declining from .74 in 1977 to .38 by 1993. Nonetheless, the statistically significant influence of attitudes on women's employment status 16 years later

³These Heckman-type models are technically identified without the inclusion of an identifying variable, but such a step relies solely on distributional assumptions (Sartori, 2003).

provides compelling evidence about the long-term influence of gender-related attitudes on women's employment.

It is of course possible that the association between women's attitudes and employment is the result of unobserved characteristics not included in the model. Fixed effects regression represents an effective method for minimizing selectivity by using within-person models to control out sources of bias associated with stable unobserved characteristics (Halaby 2004). A fixed effects logistic regression equation using a time-lagged measure of gender attitudes to predict women's employment status was estimated, and the results are shown in Table 3. For this model, the attitudinal items were combined into an index, and captured in 1962, 1977, 1980, and 1985. These indices were used to predict women's employment status in the subsequent survey wave (1977, 1980, 1985, and 1993). The model also controlled for the husband's employment status in each year that women's employment status was assessed. In this model, women's egalitarianism in the previous wave is positively associated with the likelihood of employment. By eliminating potential bias in parameter estimates that can result from influences related to unmeasured variables, the fixed effects equation provides additional support for the hypothesis that women's gender egalitarianism exerts long-term influences on their behavior in the labor market.

The results thus far demonstrate the influence of gender egalitarianism on the likelihood that women subsequently enter the paid labor market. Although many studies have documented an association between women's gender attitudes and the division of family labor (Greenstein, 1996; Orbuch and Eyster, 1997), the association between them is far from perfect. The second hypothesis of the current study is that the gendered division of routine housework will be associated with the likelihood that wives are employed. The coefficients in the second row of Table 2 provide results for the test of this hypothesis. Table 2 shows that the wives of men who perform a relatively large share of stereotypically female housework are more likely to be engaged in paid employment than are the wives of men who perform relatively less routine housework. Further, the influence of housework allocation assessed in 1977 extends to women's employment status in 1980 and 1985. The association between unpaid housework and paid employment is somewhat weaker than the association between attitudes and employment, but it is important to remember that the housework measure excludes tasks such as laundry and cooking that require the most time and are the most strongly segregated by gender. In addition, the analysis controls for earlier housework allocation and a number of other variables. The results provide some of the strongest evidence to date about the long-term influence of unpaid family work on women's participation in paid employment within the same families over time.⁴

The analyses presented to this point have documented the influences of women's gender attitudes and men's participation in stereotypically female housework on the likelihood that women are employed, and these influences have been shown to operate over long periods of time. A related question concerns the extent to which gender attitudes and the gendered division of household labor influence the levels of employment among those women who enter the labor market. Table 4 presents coefficients from a series of tobit regression equations in which the dependent variable is the number of hours women are employed in 1977, 1980, 1985, and 1993. Like the structural equation model of employment status, the tobit equations control for age, education, family income, and household composition. The measures of gender attitudes and housework in 1962 are excluded from the tobit models, but the substantive results are very similar when those variables are included (not shown). The tobit equations also include measures of husband's employment status and number of children in the household in each

⁴It was not possible to examine a fixed effects model estimating the lagged influence of housework allocation due to the fact that housework allocation was assessed less frequently in the surveys.

year women's employment is assessed. The indices of ideology and housework allocation are standardized with a mean of 0 and a standard deviation of 1 to facilitate interpretation. The coefficients from the tobit regression equations in Table 4 have been decomposed into two components (Roncek 1992). The upper coefficient represents the influence of each variable on the likelihood of being employed. The lower coefficient, in brackets, represents the influence of the independent variable on hours of employment, conditional on being employed. Because the probability of employment was the focus of the structural equation model, I focus here on the interpretation of coefficients representing effects on employment hours.

The first equation in Table 4 estimates the influence of the independent variables on women's employment hours in 1977. The influence of gender ideology is positive and statistically significant, and suggests that, conditional on being employed, a standard deviation increase in the attitude index is associated with a 4 and one-half hour increase in wives' weekly employment hours. Of course, in this equation attitudes and employment are measured simultaneously, so stronger tests of the duration of influences are available in Models 2–4. Although its influence weakens as time passes, the relationship between attitudes captured in 1977 and employment status in subsequent years remains statistically significant. Indeed, a standard deviation increase in the attitude index in 1977 is associated with 2.34 hours of additional work hours per week (conditional on being employed) 16 years later. These results offer original evidence of the long-term influence of gender ideology on the level of wives' commitment to the labor force.

The models in Table 4 also assess the influence of husbands' participation in routine housework, again offering support for the hypothesized relationship. Model 1 of Table 4 suggests that a standard deviation increase in men's participation in routine housework increases employed women's work by 1.6 hours per week. Because the variable capturing housework allocation is based on a measure assessed simultaneously with employment (in 1977), the grounds for assessing causality are somewhat weaker in Model 1 of Table 4 than in Models 2–4. If we examine the influence of men's participation in stereotypically female housework in 1977 on wives' employment hours in subsequent years, a new pattern emerges. Unlike the results in previous equations, the influence of 1977 housework does not seem to wane over time. Indeed, men's housework participation in 1977 has a stronger influence on the employment hours of employed women in 1993 than it does in 1977, net of other factors. These findings provide original evidence documenting a process of lagged adaptation through which support for egalitarian family roles increases the amount of time women devote to paid work.

CONCLUSION

The analyses presented here have drawn on data spanning a very long time interval to demonstrate the influence of gender ideology and housework allocation on women's participation in the paid labor market. The findings provide some of the strongest evidence to date linking women's attitudes toward the gendered division of family roles at one point in time with the likelihood that women are employed at later points in time. The analyses also suggest that men's participation in routine housework facilitates women's entry into the labor market. A number of theoretical conclusions emerge from this research.

It seems likely that the majority of women in this sample did not enter marriage with strong expectations that they would subsequently become employed. Based on their mothers' experiences and the prevailing conditions when they married, they had relatively little reason to expect to devote a large portion of their lives to paid work. Yet, at their peak, employment rates among these continuously married women reached 65%. Clearly, shifting social and economic factors shaped the context in which these women made decisions about paid

employment. The movement for women's equality rose to prominence in the years between the first two major waves of the study, and aggregate levels of women's employment level increased rapidly during this period. In the context of these substantial changes in the employment opportunity structure, individual attitudes and couple characteristics played an important role in shaping wives' subsequent patterns of paid work. Women who held relatively egalitarian attitudes toward gendered family roles and whose husbands participated in a relatively greater share of unpaid family work were more likely to enter the labor market and were employed more hours if they did work than their less egalitarian peers. At the later interview waves, this implied a decreased probability of exiting the labor force for those with more egalitarian attitudes and households compared to those with less egalitarian beliefs or practices. The results provide some of the strongest evidence to date of long-term interconnections between attitudes and behaviors related to unpaid work in families and women's involvement in paid employment.

The findings from this paper contribute to a growing body of research documenting the sociological importance of attitudes about gender. This research has linked gender ideology to a wide range of outcomes including family formation, schooling, voting patterns, living arrangements, and marital quality (Amato and Booth 1995; Barber and Axinn, 1998; Brooks 2000; Brooks and Bolzendahl 2004; Cunningham et al., 2005; Kaufman 2000). The current paper adds to these studies in part by establishing a very clear time ordering between gender-related attitudes and women's subsequent employment. In addition, the very long time interval considered in the current analysis offers new insight into the duration of influences of attitudes about gender over the life course. Specifically, the findings showed evidence of a process of lagged adaptation in families, through which gender attitudes at one point in time were associated with an increased likelihood that women were employed at later points in time (Gershuny, Godwin, and Jones, 1994). Although women's attitudes measured at the earliest interview wave were not associated with women's employment in 1977 and later years (Table 2), gender egalitarianism in 1977 was associated with the likelihood that women were employed in 1977 and in all subsequent interview waves. Furthermore, egalitarian gender attitudes were the strongest predictor of the amount of time that employed women devoted to paid work. These results highlight the importance of ideological factors in shaping women's employment behaviors during a period of rapid social change.

Although the measure of housework allocation was relatively weak in comparison to time diary estimates, the results also provided evidence of lagged adaptation of women's employment in response to husbands' participation in routine housework. The influence of housework allocation on women's employment status was not as strong or as long-lasting as the influence of gender attitudes, but the models nonetheless demonstrated that housework allocation at one point in time was linked to women's employment status up to 8 years later and to women's employment hours up to 16 years later, net of a wide range of controls. These findings illustrate how couple-level patterns of housework allocation earlier in the marital life course exert long-term influences on patterns of women's employment.

In order to minimize the possibility that the results were biased by unobserved factors influencing the explanatory factors and the outcomes, the analyses controlled for a number of characteristics among the sample mothers. These control variables included the respondents' age, education, household composition, and also husbands' employment status. In addition, supplementary analyses suggested that factors such as age at marriage, religious affiliation, employment history, religious involvement, husband's education, and wives' premarital pregnancy were unrelated to the outcome and did not substantially alter the observed pattern of relationships (not shown). Although the discussion of results did not focus on the influence of the control variables, it is interesting to note that very few of these measures were related to women's employment status or work hours. The multivariate equations suggested, however,

that young children in the household reduced the likelihood of women's employment and that education and age became more strongly related to women's employment over time. The general paucity of effects of these control variables provides additional evidence about the relative importance of individual attitudes and housework allocation patterns for shaping women's subsequent employment.

Because the goal was to understand couple dynamics over the life course, one factor that this study did not investigate was marital dissolution. Divorce has been positively linked to women's employment (Gray, 1995), and future research could more carefully consider the influence of divorce and remarriage on women's employment. Indeed, supplementary analyses showed that the influences of attitudes and housework allocation were weaker when remarried women were included in the sample, suggesting, for instance, that housework interactions with a previous spouse have a relatively smaller influence on the employment patterns of remarried women than of continuously married women. This finding hints at the relationship-specific role of domestic human capital in shaping intra-household decisions about paid work.

Due to the study's initial sampling strategy, the women in the IPSPC were among those who were least likely to enter the labor force. African-American women engaged in paid work at higher rates than did White women throughout much of the 20th Century. In addition, most of these women lived in a region in which there was a relative abundance of well-paying jobs for men with varying levels of education. Moreover, these women entered marriage at a time when the gendered division of paid and unpaid labor between spouses was quite high. This research provides compelling evidence, however, that gender-related attitudes and behaviors had measurable and lasting influences on the employment patterns of these relatively privileged wives and mothers. Although change in the allocation of paid and unpaid work between wives and husbands has progressed slowly, the longitudinal analyses presented here suggest that women's involvement in the paid labor force adapts to women's attitudes about gendered family roles and to the patterns of housework allocation that couples have negotiated.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgements

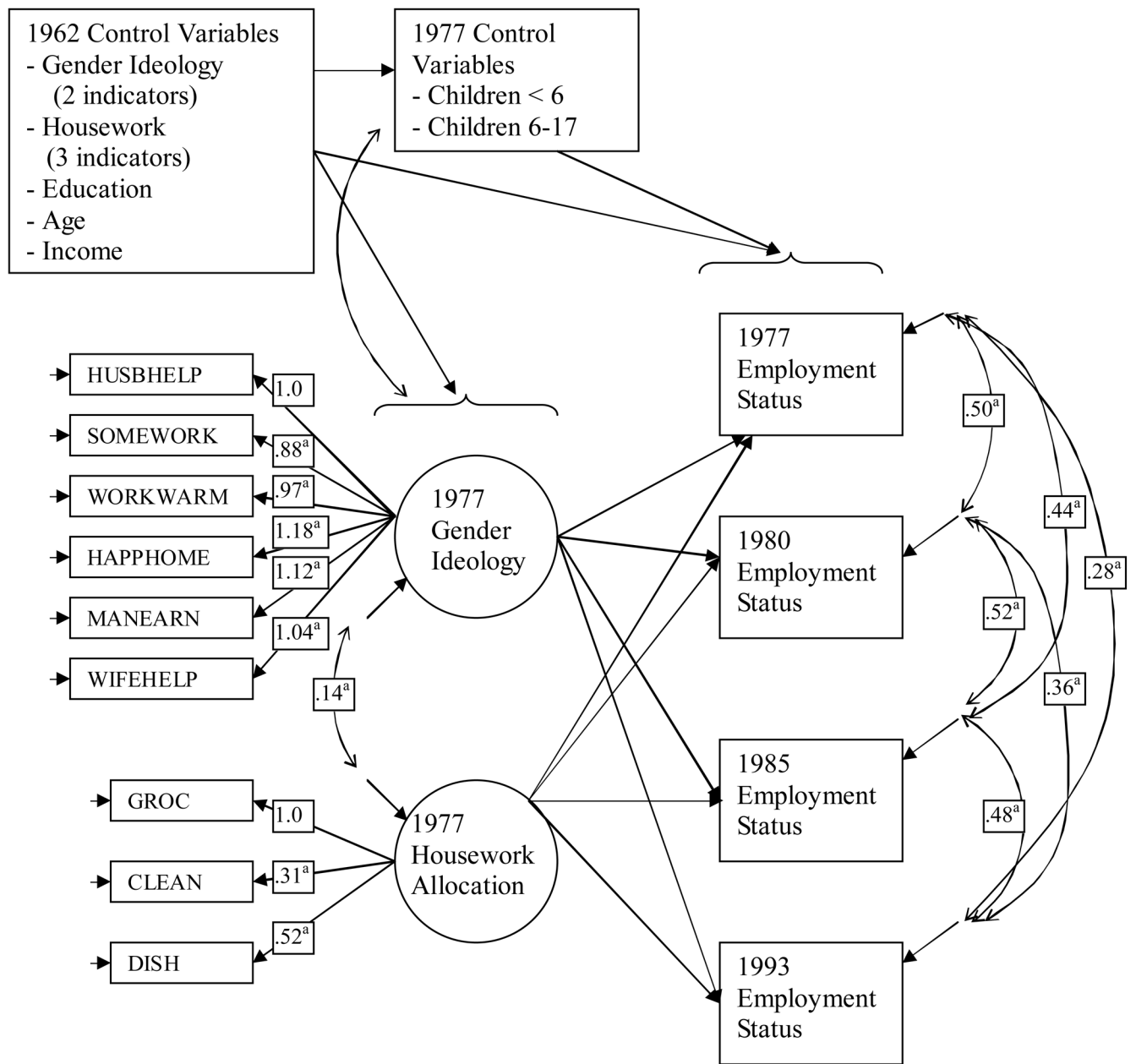
This research was supported by grant R03 HD42449-01 from the National Institute of Child Health and Human Development. I thank Arland Thornton, Jay Teachman, Mary Noonan, Jen Lois, Kyle Crowder, Georgina Binstock, Sanjiv Gupta, and two anonymous reviewers for helpful feedback on earlier stages of this work.

References

- Achen, CH. The Statistical Analysis of Quasi-experiments. University of California Press; Berkeley, CA: 1986.
- Amato PR, Booth A. Changes in gender role attitudes and perceived marital quality. *American Sociological Review* 1995;60:58–66.
- Artis JE, Pavalko EK. Explaining the decline in women's household labor: individual change and cohort differences. *Journal of Marriage and Family* 2003;65:746–761.
- Barber JS, Axinn WG. Gender-role attitudes and marriage among young women. *The Sociological Quarterly* 1998;39:1–31.
- Barnett RC, Shen YC. Gender, high- and low-schedule-control housework tasks, and psychological distress: a study of dual-earner couples. *Journal of Family Issues* 1997;18:403–428.
- Becker, GS. A Treatise on the Family. Harvard University Press; Cambridge, MA: 1991.
- Brewster KL, Padavic I. Changes in gender ideology, 1977–1996: the contribution of intracohort change and population turnover. *Journal of Marriage and the Family* 2000;62:477–487.

- Brooks C. Civil rights liberalism and the suppression of a Republican political realignment in the U.S., 1972–1996. *American Sociological Review* 2000;65:482–505.
- Brooks C, Bolzendahl C. The transformation of US gender role attitudes: cohort replacement, social-structural change, and ideological learning. *Social Science Research* 2004;33:106–133.
- Coverman S. Gender, domestic labor time, and wage inequality. *American Sociological Review* 1983;48:628–37.
- Cunningham M, Beutel AM, Barber JS, Thornton A. Reciprocal relationships between attitudes about gender and social contexts during young adulthood. *Social Science Research* 2005;34:862–892.
- England, P.; Farkas, G. *Households, Employment, and Gender: A Social, Economic, and Demographic View*. Aldine; New York: 1986.
- Ferber MA. Labor market participation of young married women: causes and effects. *Journal of Marriage and Family* 1982;44:457–467.
- Fortin NM. Gender role attitudes and the labour-market outcomes of women across OECD countries. *Oxford Review of Economic Policy* 2005;21:416–438.
- Gershuny, J.; Godwin, M.; Jones, S. The domestic labour revolution: a process of lagged adaptation?. In: Anderson, M.; Bechhofer, F.; Gershuny, J., editors. *The Social and Political Economy of the Household*. Oxford University Press; Oxford: 1994. p. 151-197.
- Gerson, K. *Hard Choices: How Women Decide about Work, Career, and Motherhood*. University of California Press; Berkeley, CA: 1985.
- Goldin, C. *Understanding the Gender Gap: An Economic History of American Women*. Oxford University Press; New York: 1990.
- Gray JS. The causality between employment and divorce. *Family Economics and Resources Management Biennial* 1995;1995:171–177.
- Greenstein TN. Gender ideology and perceptions of the fairness of the division of household labor: effects on marital quality. *Social Forces* 1996;74:1029–1042.
- Halaby CN. Panel models in sociological research: theory into practice. *Annual Review of Sociology* 2004;30:507–544.
- Heckman J. Sample selection bias as a specification error. *Econometrica* 1979;47:153–161.
- Hersch J. The impact of non-market work on market wages. *American Economic Review* 1991;81:157–60.
- Hersch J, Stratton LS. Housework, wages, and the division of housework time for employed spouses. *American Economic Review* 1994;84:120–25.
- Hersch J, Stratton LS. Housework, fixed effects, and wages of married workers. *The Journal of Human Resources* 1997;32:285–307.
- Hochschild, A. *The second shift*. Avon Books; New York: 1989.
- Kalleberg AL, Rosenfeld RA. Work in the family and in the labor market: a cross-national, reciprocal analysis. *Journal of Marriage and the Family* 1990;52:331–346.
- Kaufman G. Do gender role attitudes matter? Family formation and dissolution among traditional and egalitarian men and women. *Journal of Family Issues* 2000;21:128–144.
- McAllister I. Gender and the household division of labor. *Work and Occupations* 1990;17:179–199.
- Mincer J, Polachek S. Earnings of women. *Journal of Political Economy* 1974;82:S76–108.
- Muthén, LK.; Muthén, BO. *Mplus User's Guide*. 4. Muthén & Muthén; Los Angeles, CA: 1998–2006.
- Noonan MC. The impact of domestic work on men's and women's wages. *Journal of Marriage and Family* 2001;63:1134–1145.
- Orbuch TL, Eyster SL. Division of household labor among Black couples and White couples. *Social Forces* 1997;76:301–332.
- Rexroat R, Shehan C. Expected versus actual work roles of women. *American Sociological Review* 1984;49:349–358.
- Risman B, Atkinson M, Blackwelder S. Understanding the juggling act: gender-role socialization versus social structural constraints. *Sociological Forum* 1998;14:319–344.
- Roncek DW. Learning more from tobit coefficients: extending a comparative analysis of political protest. *American Sociological Review* 1992;57:503–507.

- Sartori AE. An estimator for some binary-outcome selection models without exclusion restrictions. *Political Analysis* 2003;11:111–138.
- Sayer LC. Gender, time, and inequality: trends in women's and men's paid work, unpaid work, and free time. *Social Forces* 2005;84:285–303.
- Sayer LC, Bianchi SM, Robinson JP. Are parents investing less in children? trends in mothers' and fathers' time with children. *American Journal of Sociology* 2004;110:1–43.
- Schultz TW. Investment in human capital. *American Economic Review* 1961;51:1–17.
- Shelton BA, Firestone J. Time constraints on men and women: linking household labor to paid labor. *Sociology and Social Research* 1988a;72:102–105.
- Shelton BA, Firestone J. An examination of household labor time as a factor in composition and treatment effects on the male-female wage gap. *Sociological Focus* 1988b;21:265–278.
- Shelton BA, John D. Does marital status make a difference? Housework among married and cohabiting men and women. *Journal of Family Issues* 1993;14:401–420.
- Spain, D.; Bianchi, SM. *Balancing Act: Motherhood, Marriage, and Employment among American Women*. Russell Sage Foundation; New York: 1996.
- Stolzenberg RM, Relles DA. Theory testing in a world of constrained research design: the significance of Heckman's censored sampling bias correction for nonexperimental research. *Sociological Methods and Research* 1990;18:395–415.
- Stratton LS. Why does more housework lower women's wages? testing hypotheses involving job effort and hours flexibility. *Social Science Quarterly* 2001;82:67–76.
- Tallichet SE, Willits FK. Gender-role attitude change of young women: influential factors from a panel study. *Social Psychology Quarterly* 1986;49:219–227.
- Thornton A, Camburn D. Fertility, sex role attitudes, and labor force participation. *Psychology of Women Quarterly* 1979;4:61–80. [PubMed: 12336875]
- Thornton A, Young-DeMarco L. Trends in attitudes toward family issues in the United States: late 1980s and early 1990s. *Journal of Marriage and Family* 2001;63:1009–1037.
- Vella F. Gender roles and human capital investment: the relationship between traditional attitudes and female labour market performance. *Economica* 1994;61:191–211.

**Figure 1.**

Heuristic Model and Selected Coefficients from Structural Equation Model of the Influences of Gender Ideology and Housework Allocation on Women's Employment Status in 1977, 1980, 1985, and 1993

Notes: Coefficients represent additional results from model presented in Table 2. a = $p < .001$

Table 1

Means, Standard Deviations, and Proportions for Analysis Sample, Intergenerational Panel Study of Parents and Children, 1962–1993

Measure	Mean	Std. Dev.	Proportion
Employment status			
Respondent employed: 1977	--	--	0.57
Respondent employed: 1980	--	--	0.63
Respondent employed: 1985	--	--	0.65
Respondent employed: 1993	--	--	0.53
Employment hours (0 if not in labor force)			
Respondent weekly employment hours: 1977	16.04	16.89	--
Respondent weekly employment hours: 1980	19.48	17.71	--
Respondent weekly employment hours: 1985	21.33	18.32	--
Respondent weekly employment hours: 1993	17.24	19.02	--
Gender attitudes and housework allocation			
Wife should not expect husband's help in house: 1962	2.92	1.12	--
Some work men's and some women's: 1962	3.11	1.13	--
Gender attitude index: 1962 (2 items)	6.02	1.80	--
Dishes: 1962	1.56	0.79	--
Grocery shopping: 1962	2.43	1.34	--
House cleaning: 1962	1.96	0.89	--
Housework allocation index: 1962	5.94	2.01	--
Wife should not expect husband's help in house: 1977	3.39	1.07	--
Some work men's and some women's: 1977	3.80	0.99	--
Working mother can establish warm relationship: 1977	3.40	1.11	--
Women are much happier if they stay at home: 1977	2.62	1.08	--
Better for everyone if the man earns main living: 1977	3.52	0.93	--
More important for wife to help husband's career: 1977	3.03	1.05	--
Gender attitude index: 1977 (6 items)	19.77	4.23	--
Dishes: 1977	1.54	1.05	--
Grocery shopping: 1977	1.53	0.84	--
House cleaning: 1977	1.63	1.19	--
Housework allocation index: 1977	4.57	1.98	--
Gender attitude index: 1980 (6 items)	20.09	4.12	--
Gender attitude index: 1985 (6 items)	20.68	4.01	--
Control variables			
Respondent years of education	12.32	1.80	--
Respondent age	25.86	4.70	--
1961 Total family income (thousands)	7.14	3.35	--
Number of children under 6: 1977	0.12	0.35	--
Number of children 6–17: 1977	2.91	1.30	--
Number of children under 6: 1980	0.03	0.19	--
Number of children 6–17: 1980	2.10	1.30	--
Number of children 0–17: 1985	0.56	0.78	--
Number of children 0–17: 1993	0.03	0.20	--
Husband employment status: 1977	--	--	0.95
Husband employment status: 1980	--	--	0.92
Husband employment status: 1985	--	--	0.88
Husband employment status: 1993	--	--	0.53

Note: $n = 556$. See Appendix Table for full text of gender attitude and housework items.

Table 2

Coefficients from Structural Equation Model of Women's Employment Status in 1977, 1980, 1985, and 1993 on Predictor Variables, Intergenerational Panel Study of Parents and Children, 1962–1993

Predictor Variable	1977 Gender Attitudes	1977 Housework	1977 Kids < 6	1977 Kids 6–17	1977 Employment Status	1980 Employment Status	1985 Employment Status	1993 Employment Status
Gender attitude index: 1977	--	--	--	--	.74 (6.47) ***	.60 (4.81) ***	.57 (4.39) ***	.38 (3.19) **
Housework allocation index: 1977	--	--	--	--	.18 (2.07) *	.20 (2.29) *	.19 (2.07) *	.13 (1.61)
Gender attitude index: 1962	.42 (4.08) ***	.26 (1.29)	.08 (1.41)	-.08 (0.18)	-.33 (1.61)	-.27 (1.24)	-.27 (1.17)	-.14 (0.71)
Housework allocation index: 1962	-.03 (0.47)	.23 (1.69)	-.01 (0.39)	.03 (0.33)	.13 (1.19)	.15 (1.31)	.11 (0.96)	.08 (0.80)
Respondent years of education	.10 (5.63) ***	.07 (2.16) *	-.01 (1.33)	.06 (1.82)	-.02 (0.77)	.01 (0.34)	.08 (2.56) *	.07 (2.13) *
Respondent age	-.03 (5.44) ***	-.02 (1.45)	-.01 (-3.33) ***	-.09 (7.64) ***	-.004 (0.34)	-.01 (1.05)	-.01 (0.95)	-.06 (4.95) ***
1961 Total family income	.02 (1.65)	-.03 (1.73)	.003 (0.66)	.02 (1.02)	-.04 (2.47) *	-.02 (1.05)	-.05 (2.53) *	-.02 (1.03)
1977 Kids < 6	--	--	--	--	-.48 (3.14) **	-.23 (1.41)	.09 (0.54)	.01 (0.05)
1977 Kids 6–17	--	--	--	--	.04 (0.96)	.03 (0.67)	.01 (0.15)	-.01 (0.37)

Note: $n = 556$; Root Mean Square Error of Approximation = .04; Conditional Fit Index = .97 (absolute value of t-statistics in parentheses.)

* $p < .05$;

** $p < .01$;

*** $p < .001$ (two-tailed tests)

Table 3

Fixed Effects Logistic Regression Coefficients of Influence of Time-Lagged Gender Ideology on Women's Employment Status, 1977 to 1993, Intergenerational Panel Study of Parents and Children

Independent Variable	B	Odds Ratio	S.E.	T
Lagged gender ideology	.02	1.02	.01	2.46
Husband's employment status	1.36	3.90	.84	6.26

Note: Number of Observations = 1068; Number of Cases = 267. Remaining cases dropped due to all positive or all negative outcomes.

Table 4

Decomposition of Tobit Regression Coefficients Estimating the Influence of Gender Ideology and Housework Allocation on the Probability of Wives' Employment (Upper coefficient) and Wives' Employment Hours (Lower Coefficient) in 1977, 1980, 1985, and 1993, Intergenerational Panel Study of Parents and Children, 1962–1993

	1977	1980	1985	1993
Gender attitude index: 1977	0.16 [4.47] ***	0.13 [4.45] ***	0.10 [3.92] ***	0.08 [2.34] ***
Housework allocation index: 1977	0.06 [1.60] **	0.05 [1.87] **	0.04 [1.76] **	0.06 [1.94] **
Respondent years of education	−0.01 [−0.35]	0.01 [0.41]	0.02 [0.93] **	0.03 [0.93] **
Respondent age	−0.00 [−0.04]	−0.01 [−0.18]	−0.01 [−0.21]	−0.02 [−0.74] **
1961 Total family income	−0.02 [−0.49] **	−0.01 [−0.41] *	−0.01 [−0.50] **	−0.01 [−0.27]
Number of children under 6: 1977	−0.24 [−6.61] **			
Number of children 6–17: 1977	0.01 [0.19]			
Husband employment status: 1977	−0.04 [−1.30]			
Number of children under 6: 1980		−0.24 [−8.40] *		
Number of children 6–17: 1980		−0.01 [−0.50]		
Husband employment status: 1980		−0.04 [−1.61]		
Child in household: 1985			−0.00 [−0.03]	
Husband employment status: 1985			0.02 [0.91]	
Child in household: 1993				−0.07 [−2.20]
Husband employment status: 1993				0.11 [3.34] **
Constant	0.50 [13.85] **	0.35 [12.29] *	0.13 [5.12]	0.34 [10.33] *
Cox-Snell R ²	.21	.17	.15	.17

Note: $n = 556$; [Coefficient representing influence of independent variable on employment hours among employed women in brackets.]

*
 $p < .05$;

**
 $p < .01$;

 $p < .001$ (two-tailed tests)

Appendix

Text of Items Measuring Gender Attitudes and Housework Allocation

Label	Years Assessed	Gender attitudes Response format: 1 = <i>Strongly agree</i> ; 5 = <i>Strongly disagree</i>
HUSBHELP	1962, 1977, 1980, 1985	A wife should not expect her husband to help around the house after he comes home from a hard day's work.
SOMEWORK	1962, 1977, 1980, 1985	There is some work that is men's and some that is women's, and they should not be doing each other's.
WORKWARM	1977, 1980, 1985	A working mother can establish as warm and secure a relationship with her children as a mother who does not work. [†]
HAPPHOME	1977, 1980, 1985	Women are much happier if they stay at home and take care of their children.
MAINEARN	1977, 1980, 1985	It is much better for everyone if the man earns the main living & the woman takes care of the home & family.
WIFEHELP	1977, 1980, 1985	It is more important for a wife to help her husband's career than to have one herself.
Stereotypically female housework ^a Response format: 1 = <i>Husband usually</i> ; 5 = <i>Wife usually</i>		
GROC	1962, 1977	Which category best describes how grocery shopping is divided up in your family? [†]
CLEAN	1962, 1977	How about straightening up before company comes? [†]
DISH	1962, 1977	(How about) doing the evening dishes? [†]

^aResponse format in 1962: 5 = *Husband almost always*; 1 = *Wife almost always*

[†]Indicates reverse-coded items