

Autonomy, Dependence, or Display? The Relationship Between Married Women's Earnings and Housework

I argue that both the dominant models of the relationship between earnings and housework, economic dependence and gender display, have fundamental defects. They focus on the effect of women's earnings compared to their husbands' on their housework and ignore the possibility of an independent relationship between women's own earnings and their time spent on housework. Using a sample of 914 married women employed full time from the second wave of the National Survey of Families and Households, I show that women's housework is affected only by their own earnings, not by their husbands', and not by their earnings compared to their husbands'. Further, I show that findings suggestive of dependence and display in earlier research are more simply explained in terms of women's absolute rather than relative earnings. These results invalidate the dependence and display models of the relationship between earnings and housework time and suggest that married women have a substantial degree of economic autonomy in the areas of domestic life for which they are normatively responsible.

Do women's earnings ease their housework burden or add to it? An extensive literature on domestic labor has not yielded a clear answer to this fundamental question (see Coltrane, 2000, and Shelton & John, 1996, for reviews). Although it has been amply documented that the daily work of providing nutrition, clean clothing, and a sanitary environment to members of heterosexual households is done largely by women (e.g., Bianchi, Milkie, Sayer, & Robinson, 2000), the relationship between married women's earnings and their time spent on housework is not well understood. A growing body of research has articulated and tested two important theories about the nature of the association between women's monetary resources and their performance of domestic labor, the *economic dependence* and *gender display* hypotheses (e.g., Bittman, England, Folbre, Sayer, & Matheson, 2003; Brines, 1994; Evertsson & Nermo, 2004; Greenstein, 2000). It has failed to reach an empirical consensus, however, about the validity of these models.

In this article, I argue that the inconclusiveness of earlier research stems from its focus on married women's earnings *compared* to their husbands', that is, their relative earnings. Both the dominant theoretical models of the relationship between women's earnings and their time spent on housework posit an association between spouses' relative earnings and housework. The first describes the gender gap in housework as a consequence of the economic dependence of women on men, given that wives' earnings are typically lower than their husbands'. This

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Key Words: gender, gender display, housework, relative earnings.

dependence creates an exchange of women's domestic labor in return for access to monetary resources. The second model hypothesizes gender-specific deviations from this inverse linear relationship that facilitate *gender display*. Women whose earnings exceed their husbands' will spend *more* time on housework than other women in order to affirm their gender identities in the face of their gender-atypical relative incomes.

Despite their differing predictions, both these theories derive their explanatory power from the notion that what affects women's housework is their earnings compared to their husbands'. They ignore the possibility of a relationship between women's *own* earnings, separately from their husbands', and their time spent on domestic labor. Yet there is considerable evidence for such autonomous effects of women's earnings on household outcomes related to their normative areas of domestic responsibility. Several studies have found that women's earnings have a greater association than their husbands' with household expenditures on substitutes for domestic labor and on child care (Brandon, 1999; Cohen, 1998; Phipps & Burton, 1998; Soberon-Ferrer & Dardis, 1991). This research suggests that women's earnings may have a distinct, or autonomous, association with their housework time, but few studies to date have analyzed this possibility.

In this study, I conduct the first explicit test of the autonomy hypothesis against the conventional dependence and display models of the relationship between earnings and housework by determining whether women's time spent on household chores is predicted better by their absolute or relative earnings. My analysis also addresses another crucial gap in the existing research, namely, its failure to account for the relationship between women's absolute and relative earnings. Recent research has shown that married women with low earnings are more likely than other women to have high relative earnings, that is, earnings compared to their husbands' (Winslow-Bowe, 2006). The dependence and display models of the relationship between earnings and housework do not account for this pattern. By contrast, my study explicitly determines the implications of the association between married women's absolute and relative earnings for predictions of their housework time. The results have broad implications for the theoretical significance of women's own monetary resources separate from their husbands', and for our under-

standing of the economic character of marriage generally.

BACKGROUND

To date, the quantitative research on housework has analyzed the effects of women's earnings *compared to* their husbands', that is, their relative earnings. In the following discussion, I argue that this focus on relative earnings has certain basic theoretical flaws; I propose an alternative model that is driven instead by women's absolute earnings. I begin with a summary of the dominant theoretical models of the relationship between earnings and housework, and of the findings of the research to date motivated by them. Next, I discuss the evidence pointing to the problems with these perspectives and suggest an alternative.

Economic Dependence and Gender Display

These theoretical tendencies emerged as critiques of the functionalist and "new home economics" accounts of heterosexual households (Becker, 1991; Lopata, 1993, describes the evolution of the functionalist model), which conceptualized men and women as collaborative actors pursuing a common objective, the well-being of the household and its members. Husbands and wives were said to concentrate their efforts in the labor market and the domestic sphere, respectively, in order to maximize the common good, or "joint utility," of household members. This role specialization was dictated by their respective skills, productivity, and the actual or expected rewards for time spent on particular activities. Because men's wages were typically higher than women's, they spent more time working for pay; women spent more time on domestic labor because they were better at doing it.

Later structural and feminist critiques of these models challenged this consensual model of the household (e.g., Blumberg & Coleman, 1989; England & Budig, 1998; Huber & Spitze, 1983). They argued that men and women in couple households have distinct, potentially competing interests, and different means for realizing them. On the basis of this view, researchers have highlighted the importance of women's earnings for their power or capacity to achieve favorable outcomes in the household (e.g., England & Kilbourne, 1990; Sorensen & McLanahan, 1987). Specifically, the division of domestic

labor is viewed as the result not of cooperation between spouses for the common good but rather of a process of contestation and negotiation in which wives have a weaker hand than husbands. The generally weaker position of women in this bargaining process is readily understood in terms of their typically lower earnings compared to their male partners.

Following this line of reasoning, the economic dependence model, also referred to as the *economic exchange* or *relative resources* hypothesis, proposes an inverse relationship between a partner's share of the couple's total income and the time the partner spends on domestic labor. The allocation of housework depends on the distribution of marital power, which in turn depends on the relative economic resources of the partners. Equivalently, the partner with lower earnings is viewed as being economically dependent on the other and may spend more time doing household chores out of a reciprocal obligation to the partner with higher earnings. The argument has also been cast in terms of an exchange between earnings and domestic labor: The partner with lower earnings compensates the other by doing more housework. Recent game-theoretic approaches in economics arrive at similar conclusions, though from a different starting point. These treat the performance of housework as the result of a bargaining process whose outcome is a function of the relative economic resources of the partners (see Bittman et al., 2003, for a discussion).

Given that men's earnings are higher on average than women's, the economic dependence hypothesis is a plausible explanation for the gender gap in housework. It is ostensibly gender neutral, however, because partners' time spent on housework is predicted to vary inversely with their shares of total income, regardless of their gender. By contrast, the *gender display* argument, also known as the *doing gender* or *deviance neutralization* hypothesis, theorizes gender-specific departures from economic dependence. The gender display interpretation of housework was advanced by West and Zimmerman (1987), who argued that gender is a "routine, methodical, and recurring accomplishment" (p. 126). According to this view, individuals perform gender through their daily behaviors such as domestic labor, especially when interacting with individuals of the opposite gender. This conceptualization was articulated slightly differently by Berk (1985), who stated that the marital household generated not

only domestic goods and services but, through the labor required for their production, gender itself.

The gender display perspective has been fruitfully applied in the domestic labor literature, for example, to explain differences in time spent on housework by marital status (South & Spitze, 1994). Here I focus on its application to analyses of the relationship between earnings and time spent on household labor. The argument is that individuals use housework to affirm gender identity in the face of gender-atypical economic circumstances: Partners with income shares that are unusually high or low for their gender are predicted to compensate by exaggerating their gender-normative housework performance. Thus, married women whose earnings exceed their husbands' will spend more time on domestic labor than other women, and men whose earnings are unusually low compared to their spouses' are predicted to spend less time on housework than other men. In one of the first tests of the gender display hypothesis as it applies to this association, Brines (1994) found that married women's housework behavior fit the dependence hypothesis, but that men's provided evidence of gender display. Greenstein (2000) suggested a modified version of this argument, namely, *deviance neutralization*, to describe the norm-affirming housework behavior of individuals with gender-atypical relative earnings.

Table 1 summarizes the results of the recent research based on the dependence and display hypotheses of the relationship between earnings and housework performance. These studies have yielded conflicting findings, especially in the case of women. Evertsson and Neramo (2004) reported a gender display pattern for women in multiple waves of the same longitudinal survey that Brines (1994) used, the Panel Study of Income Dynamics (PSID). They found no such tendency in the relationship between relative earnings and housework among Swedish women, however, whose behavior was consistent with the exchange model. Greenstein (2000) found a gender *deviance neutralization* pattern in the effect of women's share of couples' earnings on their share of total housework. Bittman et al. (2003) were unable to replicate this result for U.S. women using the same data as Greenstein (2000) but did find some evidence of gender display in the case of Australian women. Their analysis showed that Australian women's housework followed the predictions of economic dependence up to the point where their earnings were equal to their husbands' but

Table 1. *Recent Studies Based on the Economic Exchange and Gender Display Perspectives*

Study	Women	Men	Data
Bittman et al. (2003)	Dependence Both	Display Neither	National Survey of Families and Households, 1987 – 1988 Australian Time-Use Survey, 1992
Brines (1994)	Dependence	Display	Panel Study of Income Dynamics (PSID), 1985
Evertsson and Nermo (2004)	Neither	Display	PSID, 1973
	Display	Dependence	PSID, 1981, 1991
	Display	Neither	PSID, 1999
	Dependence	Dependence	Swedish Level of Living Survey, 1974, 1981, 1991, 2000
Greenstein (2000)	Display	Display	National Survey of Families and Households, 1987 – 1988
Parkman (2004)	Dependence	Dependence	National Survey of Families and Households, 1987 – 1988

Note: The dependent variable in the studies by Bittman et al. (2003), Brines (1994), Evertsson and Nermo (2004), and Parkman (2004) is absolute housework hours. Greenstein (2000) uses both absolute and share measures of housework hours; above based on distributional measure.

deviated in the direction suggested by the gender display hypothesis if their earnings exceeded their husbands’.

An Alternative Model: Autonomous Effect of Women’s Earnings on Their Housework Time

The lack of consensus in the literature summarized in Table 1 could result from differences in samples and study designs. I argue here, however, that it is the result of basic theoretical defects in the dependence and display models of the association between earnings and household labor. These models are a significant improvement over the functionalist and neoclassical frameworks because they account explicitly for gender disparities in power and resources within families, but they mask the extent to which women may be autonomous economic actors in their households. The dependence hypothesis implies that women acquiesce in an exchange of time for money because they typically earn less than their husbands. Even the suggestion that women can bargain over housework based on their relative earnings presumes that they have no alternatives to negotiation in order to spend less time on it. The gender display model presumes that women—and their male partners—are so wedded to conventions of identity that they nullify the bargaining power of high relative earnings for the sake of gender safety. A recent study by Deutsch, Roksa, and Meeske (2003), however, found that wives whose earnings exceeded their husbands’ were proud of their high incomes and did not experience any less gratitude than other wives from their spouses for their contributions to household income.

The literature on household spending suggests an alternative view that emphasizes women’s economic agency. Several studies in the last decade have shown that women’s earnings matter more than their husbands’ to expenditures related to household labor and child care. Soberon-Ferrer and Dardis (1991) found that women’s wage rates, but not men’s, were positively associated with spending on housework substitutes. Subsequently, Cohen (1998) found that women’s incomes were directly associated with household spending on housekeeping services and on eating out. This result is particularly noteworthy in light of the fact that cleaning and cooking are the two most time-consuming routine household chores (Bianchi et al., 2000; South & Spitze, 1994). Moreover, Cohen (1998) showed that the association of housekeeping expenses with women’s earnings was nearly twice as large as their association with husbands’ earnings. Oropesa (1993) also reported a link, for women employed full time, between their own incomes and the likelihood of paying someone to clean the home; there was no association, however, between their own earnings and expenditures on substitutes for cooking.

With respect to child care, another aspect of household life that is primarily the responsibility of women, Phipps and Burton (1998) reported that only women’s incomes were associated with child-care expenditures in Canada, even when both spouses were employed full time. For the U.S., Brandon (1999) found that mothers’ own earnings increased the odds of their choosing market child care over parental care; fathers’ incomes affected child-care choices only if husbands and wives pooled their incomes. An earlier

and highly influential study by Lundberg, Pollak, and Wales (1997) showed that government cash payments to mothers in the U.K. in the late 1970s were associated with greater expenditures on women's and children's clothing, compared to expenditures on men's. Although this finding is not about married women's labor market earnings and domestic labor, it does suggest that women and men do not have identical economic priorities and may use their monetary resources in different ways.

These studies point to the generalization that women's earnings exert a greater influence than their husbands' on outcomes in the areas of domestic life for which women bear primary responsibility. Specifically, they suggest that every additional dollar earned by wives will matter more to their housework time than an additional dollar earned by their husbands. If this is the case, the dependence and display models are flawed because they implicitly assume that the associations of wives' and husbands' earnings with their housework time are equal and that what matters are the relative magnitudes of their earnings. Consider two married women with annual earnings of \$15,000 and \$30,000, with husbands' incomes of \$30,000 and \$60,000, respectively. If women's housework time is affected equally by both partners' earnings, what will matter is that they both earn half as much as their husbands. But if women's own earnings affect their housework much more than do their husbands', what matters is that the second woman earns twice as much as the first. Gupta (2006) has shown that the effect of women's own earnings on their housework time is many times greater than that of their husbands' earnings. This finding casts serious doubt on the validity of the relative earnings measure as a predictor of housework performance.

A second major theoretical flaw in the dependence and display models, as they have been applied to analyses of the relationship between housework and earnings, is their failure to take into account the relationship between women's absolute and relative earnings. This failure is particularly critical for the gender display perspective, which derives its effect from a focus on women earning more than their husbands but overlooks the possibility that these women may spend more time on housework than others because they belong disproportionately to poorer couples. A recent study by Winslow-Bowe (2006) found that lower income women are

more likely to be in nontraditional couples—the focus of the gender display hypothesis—than their higher earning peers. Wives in the bottom quartile of women's income had higher odds of earning more than their husbands than wives in the top quartile, controlling for both spouses' employment hours. Also, Winkler (1998) showed that men married to women whose earnings equal or exceed their own themselves have low incomes, or are not employed full time, year round.

The quantitative literature on domestic labor to date has ignored this relationship between women's absolute and relative earnings. Although the studies shown in Table 1 control for total household income, they do not account for the lower absolute earnings of women with high relative earnings, or for their husbands' lower absolute earnings. Consequently, it is not clear whether any relationship observed between women's relative earnings and housework performance actually results from their relative earnings, or whether it is driven instead by their absolute earnings. Another potential flaw in the existing literature is that it includes women of every employment status: not in the labor force, part time, and full time. It is possible, therefore, that the findings of earlier studies in favor of dependence or display are affected by unobserved characteristics such as women's degree of attachment or commitment to the labor force.

To date, very few studies have addressed these problems with the dependence and display models of the relationship between earnings and domestic labor by examining the independent effects of women's own earnings on their housework. An early analysis by Maret and Finlay (1984) found that women's wages had a negative effect on their housework responsibilities that was different from the effect of their husbands' wages. Because they used categorical (and different) measures for the two partners' wages, however, we do not know what the actual effects were or how they compared with one another. Ross's (1987) study contained the sole acknowledgment, until Gupta (2006), of the need to test for differences between the effects of husbands' and wives' earnings. Ross (1987) used the difference between spouses' earnings rather than the ratio measures used by later research and found that the effects of husbands' and wives' earnings had opposite signs and somewhat different magnitudes. But because Ross (1987) used categorical measures of earnings and an index of mean

responses to questions about who did various chores rather than a measure of the actual time spent on them, we do not know the effects of both partners' earnings on time spent doing housework.

Subsequently, Shelton and John (1993) found that the effect of women's own earnings on their housework hours was 10 times greater than that of their partners' earnings, but this finding was incidental to their comparison of the housework performance of married and cohabiting individuals, and they did not pursue its implications for the dependence and display theories of the relationship between housework and earnings. Finally, Gupta (2006) showed that the association of women's housework time with their own earnings was much larger than its association with their partners' earnings. The study, however, did not conduct an explicit test of the dependence and display models in light of its findings.

My investigation addresses the two principal theoretical gaps in the existing literature, namely, its failure to recognize the possibility of an autonomous effect of married women's earnings on their time spent on domestic labor and its potential conflation of the effects of their absolute and relative earnings. I perform the first explicit test of the validity of the economic dependence and gender display hypotheses against an alternative model that allows women's earnings to affect their housework independently of their husbands' earnings. That is, I determine what matters more to married women's housework, their absolute or relative earnings. Second, in contrast to existing research, I analyze explicitly the consequences of the relationship between women's relative and absolute earnings for women's housework. The hypothesis tested can be stated formally as follows:

Women's own earnings matter more to their housework performance than do their earnings compared to their husbands', that is, their relative earnings.

If this hypothesis is correct, it would follow that the economic dependence and gender display models used widely in the literature are invalid. Otherwise, my analysis will lend additional support to one of these perspectives. To reduce the influence of unobserved characteristics such as attachment to the labor force, or preferences for domestic versus market labor, I restrict my analysis to women employed full time. A replication on a complete sample of married women yields

very similar findings, as discussed immediately following the Results section.

The models presented here control for the same variables used in previous studies based on the exchange and display models, such as those shown in Table 1. The controls include employment hours, race or ethnicity, education, and household composition. Where applicable, both spouses' measures are present in the models. For example, prior studies have generally reported negative associations of women's housework time with their own employment hours and positive relationships with their male partners' paid work hours. Previous research has also documented associations between women's housework time and the age and gender composition of their households. Findings regarding the relationship between housework and education are mixed, but I include educational level for the sake of comparability with earlier research. I control also for women's attitudes regarding their family roles because some studies have found associations between individuals' gender ideologies and housework hours (e.g., Greenstein, 1996). A comprehensive review of the research regarding the relationships between all these variables and time spent on household labor appears in Coltrane (2000).

METHOD

Sample

The data for this study come from the second wave of the National Survey of Families and Households (NSFH), which used a national probability sample of housing units. One adult per household was randomly selected as the main respondent, and members of racial and ethnic minorities were oversampled, as were single-parent families and cohabiting couples (Sweet, Bumpass, & Call, 1988). The survey was initiated in 1987; the second wave used in the present study was conducted in the period 1992 – 1994. The first wave of the survey had a response rate of 74%, with 13,007 respondents. The second wave retained 10,005 of these original respondents. I chose the second wave for this study because it is more recent. (Although a third wave is now available, it contains a rather restricted subset of the sample from the first two waves, with only older respondents or those who were parents of focal children in the first two waves. See the NSFH Web site, <http://www.ssc.wisc.edu/nsfh/home.htm>, for a complete description

of the three waves.) All analyses are weighted to account for sample attrition between waves. The use of a single panel of a longitudinal survey, however, may introduce biases in the results; this issue is addressed in the discussion of robustness following the Results section.

The NSFH data used here have certain disadvantages with respect to analyses of housework. First, they are somewhat dated. There is no evidence, however, that the relationship between women's earnings and their housework has changed fundamentally during the last decade; this was confirmed in a separate replication using the 1999 wave of the PSID (results available from author). Second, respondents are known to overestimate time spent on housework in retrospective surveys such as the NSFH compared to time diary data (e.g., Bianchi et al., 2000; Juster & Stafford, 1991). Despite these disadvantages, the NSFH is better suited for the present analysis than other contemporaneous sources of data. Its measure of time spent on housework, derived from several questions about specific chores, is considerably better than the cursory questions contained in other surveys such as the PSID. Further, it contains a richer set of covariates than most sources of time diary data. Crucially, it contains matched data on respondents' partners. Accordingly, the first two waves of the NSFH have been used widely in studies of domestic labor; a partial listing is available at <http://www.ssc.wisc.edu/nsfh/bib.htm#householdtask>.

The sample is a subset of the 3,191 married women in the second wave of the NSFH. Following earlier studies, the ages of the women and their husbands are restricted to the range 18 – 65, inclusive, eliminating 468 or 15% of the married women. (Because of the aging of the original NSFH sample by the second wave, the lower bound of age in my sample is actually 22 years.) Of the remaining 2,723 married women, 1,142 reported being employed full time, year round. These are the women eligible to be in the final analytic sample, which is intended to be representative of married women in the United States working full time during the survey period in the early 1990s, and is therefore restricted to married women who reported working outside the home for 35 or more hours per week at the time of the survey, and for 50 or more weeks in the preceding year. (The constraint on number of weeks necessarily was obtained from employment information for the prior year rather than for the year of the survey; eliminating it had no effect

on the results.) The restriction of the sample to women employed full time around the year is designed to increase the representation of women with high relative earnings, that is, those who according to previous research are most likely to provide evidence for gender display. It also reduces the influence of variation in employment hours on the relationship between earnings and housework and diminishes the potential influence of unobserved characteristics that may be related to both earnings and housework performance, such as their degree of attachment, or commitment, to the labor force. There is no restriction on their husbands' employment hours: 88% of them were working full time, but nearly 10% of the husbands were not employed at the time of the survey. Accordingly, there is greater variance in the women's husbands' employment hours than in their own, as shown in Table 2. Separate models limited to women with husbands employed full time yielded results nearly identical to the ones presented here (results available from author).

A small fraction of the 1,142 women eligible to be in the sample, about 3%, was eliminated because of missing housework data. A further 182, or 14%, of the remainder were removed because of missing data on husbands, and a small additional number was eliminated because of missing or invalid data on one or more variables used in the analysis. The implications of missing housework and husband data for my analysis are discussed at the end of the Results section. The final analytic sample consists of 914 married women working full time, year round. A separate analysis including cohabiting women yielded results similar to the ones reported here; they were omitted because of a larger loss of cases with missing information on their partners.

Of the women in the final sample, 78% were married to the same person in the first wave of the NSFH, 8% had never been married at the time of the first wave, 9% had divorced and remarried since the first wave, and 5% had married after being in cohabiting unions earlier. There were some differences in mean earnings and housework hours by these categories: Women who were either never married or separated in the first wave had slightly higher annual earnings in the second wave than women in the other groups (\$22,000 compared to \$21,000), and women who were married to the same person in both waves spent somewhat more time on housework than the others (21.5 hours per week

Table 2. *Weighted Means and Standard Deviations of Variables Used in Analysis (N = 914)*

	<i>M</i>	<i>SD</i>
Housework hours	20.72	12.54
Women's characteristics		
Annual earnings (\$ thousands)	21.59	14.05
Share of couple's total earnings (%)	47.26	20.45
Weekly employment hours	41.79	4.84
Age	40.75	9.27
Race/ethnicity		
White	0.85	
African American	0.08	
Other	0.07	
Education (years)	13.57	2.42
Husbands' characteristics		
Annual earnings (\$ thousands)	27.14	20.72
Employment hours	41.06	16.05
Education (years)	13.57	2.42
Household composition		
Children present (1 = yes)	0.54	
Adult men present (1 = yes)	0.16	
Adult women present (1 = yes)	0.13	
Other controls		
Owns home (1 = yes)	0.84	
Traditional gender ideology scale	-0.29	0.57

compared to 20 hours). The addition of indicators for these marital status histories, however, had virtually no effect on the results presented here. Note that the analytic sample excludes women who were married in the first wave but divorced by the second. (Possible selection biases resulting from this exclusion are discussed following the Results section.) These women, however, are included in a comparison sample of 918 single women who reported full-time, year-round paid employment, derived from a total of 969 single women younger than 65 years employed full time. This sample includes 562 women who were married in the first wave and divorced by the second; an indicator identifying these women did not alter the results.

Dependent Variable

The dependent variable in this analysis is women's absolute number of weekly housework hours. Though a few studies have used individuals' share of couples' total housework hours (e.g.,

Blair & Lichter, 1991; Greenstein, 2000), such measures make it difficult to determine whether some women do a greater proportion of couples' total housework than others because they spend more time on housework or their partners spend less, or both. For this reason, I follow the majority of the studies described in Table 1 in using absolute hours as the dependent variable. The measure used here is the total number of hours women reported spending per week on four tasks: cooking, washing the dishes, house cleaning, and laundry. Time spent on these chores has become the focus of the quantitative housework literature because they have to be performed often, perhaps daily. Other tasks, such as yard work, are relatively discretionary.

To account for the implausibly high values for housework hours reported by some respondents, I adopt a procedure used by South and Spitze (1994). Values higher than the 95th percentile are recoded to that percentile for each of the four chores before summing them to obtain the dependent variable. To maximize the number of usable cases, the mean number of hours for each task is imputed for women who did not specify or did not know how many hours they spent on that task. Also, 0 is substituted for men who did not answer the survey question for a particular task but reported hours for at least five other tasks.

Independent Variables

The main independent variables are women's own annual labor market earnings and their partners', measured in thousands of dollars, from the year preceding the survey. The relative earnings measure used here is the same used in earlier studies, namely, wives' earnings as a proportion of couples' total earnings. The other variables in the model are employment hours, race or ethnicity, education, and household composition. Where applicable, both spouses' measures are present in the model. A dummy variable identifies home ownership. Employment hours at the time of the survey are included as continuous measures. Age is present in the model as a continuous variable. Both spouses' educational levels are measured by their years of education. I add race/ethnicity in the form of two indicator variables for African American and other non-White, with White being the reference category. Household composition is represented by three indicators for the presence of adult women other than the respondent, adult men other than her husband,

and children younger than 18 years. For all the household composition variables, using interval measures (e.g., number of children) rather than categorical ones makes no difference to the substantive results.

Finally, I control for women's traditional family role attitudes with a scale that has been used in earlier housework studies using the NSFH data (Greenstein, 1996, 2000), constructed from responses to six questions in the survey about mothers' employment, housework, and children's upbringing. The composite scale, with Cronbach's $\alpha = .64$, is constructed by summing the standardized responses ($M = 0$, $SD = 1$) with responses to individual items arranged so that lower values correspond to more liberal family role attitudes and higher ones to more traditional views. Two of these asked respondents on a scale of 1 – 7 if they approved of mothers with children younger than 5 years who worked full time and part time, respectively (1 = *strongly approve*, 7 = *strongly disapprove*). In another set of three questions on women's employment, all scaled from 1 (*strongly agree*) to 5 (*strongly disagree*), respondents were asked if they agreed with the following statements: Whether preschool children suffer if their mothers work, if it is better for families if men are breadwinners and women are responsible for domestic affairs, and whether housework should be shared equally between spouses if both work full time. The last question concerns parental socialization of children and asks if parents "should encourage just as much independence from their daughters as in their sons."

Analytic Strategy

I first determine how the models used in previous research fare upon the addition of women's own absolute earnings. The typical form of these models is

$$Y_I = \beta_0 + \beta_I X_I + \beta_2 X_I^2 + \beta_T T_I + \beta_Z Z_I + \varepsilon_I. \quad (1)$$

Here Y_I is a woman's housework hours, and X_I is her share of the couple's total earnings, a commonly used measure of relative resources. (Some studies have used the equivalent ratio of the difference between partners' earnings and the sum.) The linear term represents the exchange effect. Its coefficient will be negative if partners' housework hours are inversely related to their shares of couples' total earnings.

The second-order term captures the curvilinearity in the relationship between relative earnings and housework that characterizes gender display. In the case of women, the coefficient will be positive if women with unusually high relative earnings do more housework than other women. Following Brines (1994), I use orthogonalized linear and squared forms of wives' share of couples' total earnings. The model controls for total couple or household income, T_I , which is typically equal to the sum of the two partners' earnings, $W_I + M_I$. Note that by including couples' total earnings as a single term, this model implicitly assumes that the effects of the two partners' earnings on women's housework are identical: $\beta_T T_I = \beta_T (W_I + M_I) = \beta_T W_I + \beta_T M_I$. Gupta (2006) showed that this assumption is invalid if the coefficient of women's earnings is substantially different from that of husbands' incomes. (Ross, 1987, made the same point regarding the difference between the two partners' earnings.) The other controls are represented collectively by the term Z_I . In my alternative model, I replace this term with its constituents, wives' and husbands' own, separate, incomes:

$$Y_I = \beta_0 + \beta_I X_I + \beta_2 X_I^2 + \beta_W W_I + \beta_M M_I + \beta_Z Z_I + \varepsilon_I. \quad (2)$$

Next, I compare Model 2 to the autonomy model, which uses only wives' and husbands' absolute earnings:

$$Y_I = \beta_0 + \beta_W W_I + \beta_M M_I + \beta_Z Z_I + \varepsilon_I. \quad (3)$$

Because Model 3 is nested in Model 2, we can test the null hypothesis that $\beta_1 = \beta_2 = 0$ upon the addition of women's absolute earnings (and their husbands') to the model. A rejection of this hypothesis would imply that the relative earnings terms X_I and X_I^2 do not add significantly to the variance in housework hours explained by a simpler model using only the absolute incomes W_I and M_I .

Because the dependence/display Model 1 and the autonomy Model 3 are not nested, a direct comparison of the two is difficult. As an alternative, I compare them by plotting their predicted values against women's relative earnings, or income shares. The predictions of the gender display Model 1 will display the curvilinearity documented by earlier studies if $\beta_2 > 0$. If the

predicted values of the absolute earnings Model 3 also display the same pattern, it will be further evidence that it performs at least as well as Model 1 but without relying on the relative earnings measures.

To provide another indirect assessment of the validity of the autonomy model compared to the conventional models, I apply Equation 3 to a sample of single women who reported working full time around the year. Because these women do not have husbands on whom they are economically dependent or to whom they need to display gender, a comparison of the earnings coefficient with that observed for married women will provide another basis for a comparison of the conventional and autonomy models. Husbands' earnings and other characteristics are omitted from this model, but it is otherwise identical to the model for married women. All analyses are weighted for panel attrition, sampling stratification, and nonresponse; the weights are described in detail at ftp://elaine.ssc.wisc.edu/pub/nsfh/cmapp_o.001. The models also incorporate the complex survey design of the NSFH in computing standard errors for the regression coefficients reported here.

RESULTS

Descriptives

Table 2 shows weighted means and standard deviations for all the variables. In addition to the measure of variance in housework time reported in the table, there are other indications of wide dispersion in married women's housework time and earnings. Separate calculations show that women at the high end of the housework distribution, the 90th percentile, spent nearly five times as many hours on housework per week than women at the 10th percentile. Similarly there is considerable variation in their absolute earnings, even though the sample is restricted to women working full time around the year—the ratio of the 90th and 10th percentiles was a little greater than 4. This is almost identical to the same ratio among an equivalent sample of married men working full time, year round. With respect to the relative earnings variable that has been the focus of research to date, the mean of women's share of couples' total earnings was 47% in this sample. This is substantially higher than its value of 33% for all married women (i.e., including women working part time and not employed).

There is a sufficiently large proportion of women in this sample with unusually high relative earnings to permit a fair test of the gender display hypothesis: 20% contribute 60% or more of couples' total earnings, and 9% have shares of 80% or higher.

Comparing the Autonomy and Dependence/Display Models

The results of the models specified in Equations 1 – 3 above are shown in Panels I, II, and III in Table 3. The results of the conventional economic dependence and gender display models are shown in Panel I. The coefficient of the square of women's shares of couples' total earnings is positive and significant. As argued in some earlier studies, this is evidence for gender display: Women whose earnings substantially exceed their husbands' are predicted to spend more time on housework than other women. The inflection point in women's relative earnings implied by the coefficients in Panel I is 72%, corresponding to women whose earnings are more than double their husbands'. Women's housework time is predicted to decline with their relative earnings up to that point but to increase beyond it. As previous tests of the dependence and display hypotheses have found, the coefficient for couples' total earnings is negative and significant.

Panel II in Table 3 displays the results of the modified version of the conventional models, in which spouses' separate earnings are substituted for couples' total earnings. We observe two important changes to the results compared to those in Panel I. First, the terms in women's relative earnings are no longer statistically significant. That is, women's relative earnings lose their association with women's housework time upon the addition of women's absolute earnings to the model. Second, the negative coefficient of women's absolute earnings is larger than the effect of couples' total earnings observed in Panel I. The conventional model forces the coefficient of women's and partners' earnings to be equal, by folding both into one term for the sum of their incomes. This dilutes the coefficient of earnings. When the sum is disaggregated, as in Panel II, it is clear that the coefficient of women's own earnings is much larger than that of their husbands'. Indeed, the coefficient of husbands' earnings fails to achieve statistical significance.

The results of my autonomy model are shown in Panel III. The coefficient of women's own

Table 3. Multivariate Results for Married Women's Housework Hours (N = 914)

	Panel I		Panel II		Panel III	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Earnings share	1.891*	0.883	0.648	1.304		
Earnings share squared	1.281*	0.611	0.805	0.706		
Couple's total earnings (thousands)	-0.058**	0.018				
Women's earnings (thousands)			-0.112**	0.038	-0.133**	0.031
Husbands' earnings (thousands)			-0.024	0.032	-0.012	0.023
Weekly employment hours	0.178	0.109	0.190	0.110	0.198	0.110
Age	0.178**	0.053	0.184**	0.052	0.190**	0.051
Race/ethnicity						
White (reference)						
African American	2.435	1.582	2.447	1.574	2.399	1.556
Other	2.887	1.945	2.929	1.958	2.964	1.985
Education (years)	-0.224	0.228	-0.212	0.227	-0.226	0.228
Husbands' employment hours	0.025	0.035	0.027	0.034	0.022	0.036
Husbands' education (years)	-0.830**	0.227	-0.810**	0.227	-0.796**	0.228
Household type and composition						
Children aged 0 – 17 present	4.615**	0.854	4.677**	0.846	4.724**	0.863
Adult men present	-0.115	1.320	-0.237	1.313	-0.248	1.315
Adult women present	0.714	1.228	0.630	1.224	0.541	1.221
Owns home	-0.384	1.297	-0.363	1.299	-0.381	1.282
Traditional gender ideology scale	0.855	0.801	0.811	0.806	0.882	0.801
Constant	20.270**	5.869	19.036**	5.796	18.287**	6.006
r^2	0.139		0.140		0.140	

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

earnings, -0.13, is 10 times larger than the coefficient of their husbands'. The effect implies meaningful earnings-based differences among women with respect to domestic labor. Every additional \$7,500 in married women's incomes corresponds to 1 fewer hour spent on housework per week, controlling for other factors. This means that the women at the low end of the annual income distribution, \$10,000 or less, are predicted to spend nearly 1 hour more on housework every day than women at the high end earning \$40,000 or more. (The earnings numbers may be multiplied by 1.41 to place them in today's context. Thus \$10,000 would be \$14,000, and \$40,000 equivalent to \$56,000 in current dollars.) This is a sizeable difference not only in absolute terms but also given that the mean predicted daily housework time for all married women in the sample is about 3 hours. Note also that about \$35,000 in married women's annual earnings offsets the additional housework created by the presence of children.

As for the control variables, neither married women's nor their husbands' employment hours

are associated with women's housework time. In a sample of all married women, however, women's employment hours have the expected negative effect on their housework time, so that the absence of an effect here appears to be a consequence of the restriction of the sample to women working full time. Women's own education is not associated with their housework hours, but every year of their husbands' education reduces their housework hours by 0.80. Older women are predicted to spend more time on housework, but neither home ownership nor women's traditional family role attitudes are associated with it. Finally, the presence of children increases married women's housework by 4.7 hours and that of other adults has no effect.

Next, I conduct a formal test of the additional variance explained by the relative earnings measures in the model shown in Panel II, Table 3, upon the inclusion of women's absolute earnings. This is equivalent to evaluating the fit of this model against the autonomy model specified in Equation 3, which omits both the linear and square terms in women's relative earnings. Because this

model is nested in Model 1, this procedure consists of an F test for the joint significance of the two terms in relative earnings in Model 1. The result is $F(2, 897) = 0.48$, with a p value of .62. This test demonstrates that the additional variance in housework hours explained by wives' relative earnings is minimal compared to that explained by their absolute earnings. It confirms the results of Panel II, namely, that once women's absolute earnings are present in the model, their relative earnings are of little additional value in predicting their housework hours. This is also evident in the stability of the coefficient of their absolute earnings across the three models.

Figure 1 presents a visual representation of the finding that married women's absolute earnings have at least as much explanatory power as their relative earnings in a model of their housework time. It shows a comparison of the predicted values from the dependence/display and autonomy models (Equations 1 and 3, respectively) superimposed on a scatter plot of housework versus women's relative earnings, or share of total earnings. The predicted values from both models are obtained while holding the other independent variables constant at their means (for continuous variables) or modes (for binary variables), and are connected in the figure by median splines. Some previous studies have presented figures showing the characteristic gender display pattern of curvature in the relationship between housework and earnings share. Figure 1 shows that this pattern is replicated reasonably well by the autonomy model despite the fact that it does not use

women's earnings share as a predictor. That is, the autonomy model reproduces the mild curvilinearity said to be characteristic of gender display but using only women's absolute earnings.

Relationship Between Women's Absolute and Relative Earnings

The finding that married women's relative earnings do not affect their housework once their absolute earnings are accounted for suggests a link between the two measures that has not been scrutinized by previous studies. This connection is depicted in Figure 2, which plots both women's earnings and their mean predicted housework hours from the reduced model, computed holding all variables except women's earnings constant at their means or modes, against their relative earnings. (The lowest and highest ranges on the horizontal axis are broader because of the relatively small number of cases in these categories.) We observe that the mean housework hours first decline with women's earnings share and then increase, as predicted by the gender display model. But we also see that women's mean earnings decline past the 60%–70% range of relative earnings; the average earnings of women in the highest range, 80%–100%, are actually lower than those of women whose earnings are comparable to their husbands'. The same pattern is observed with observed rather than predicted housework hours (not shown).

Comparison With Single Women

The results for single women, shown in Table 4, underline the importance of women's own earnings for their time spent on housework. The coefficient for single women's own earnings, -0.10 , is somewhat smaller than it is for married women. Single women appear to derive a slightly smaller benefit from their incomes, in terms of fewer hours of housework, than do married women. This is plausible given that single women spend less time on domestic labor than do married women (South & Spitze, 1994), so that they have less of a need to convert earnings into reductions in housework. The interaction between marital status and earnings, however, is not statistically significant in a pooled sample with both single and married women (results available from the author). As in the case of married women, single women's employment hours are not associated with their housework. Their own education,

FIGURE 1. COMPARISON OF PREDICTED VALUES FROM DISPLAY AND AUTONOMY MODELS

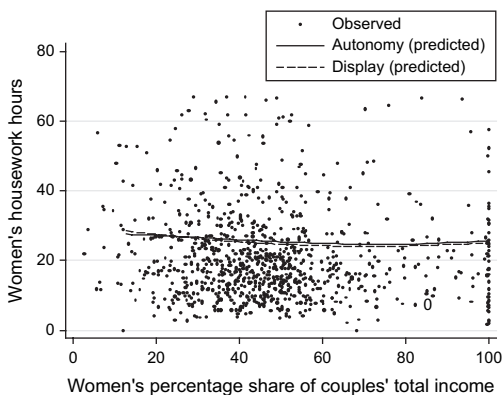
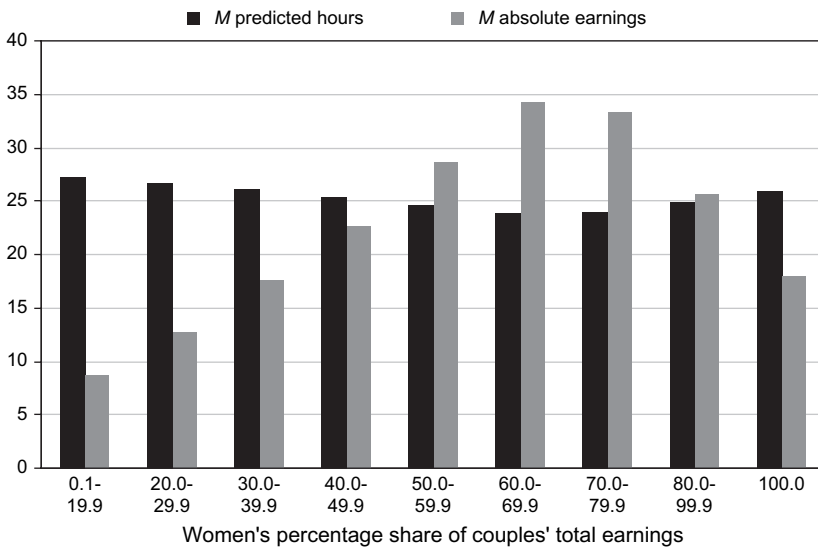


FIGURE 2. RELATIONSHIP BETWEEN MEAN PREDICTED HOUSEWORK HOURS, MEAN WOMEN'S ABSOLUTE EARNINGS, AND RELATIVE EARNINGS



however, has a negative effect on their housework, though it does not for married women. Other differences from the results for married women include a significant race effect, with African American single women predicted to spend 3 more hours per week on housework than White women. Also, the presence of children adds somewhat more time to single women's housework than it does to married women's.

Robustness of Findings

I conducted a number of tests to evaluate the robustness of the findings reported here; all the results are available upon request. As a further check on the autonomy model (Equation 3), I evaluated it on two additional samples of married women from the second wave of the NSFH, one consisting of all married women and the other of married women with nonzero earnings, including those employed part time. In both cases, the coefficient of women's earnings was about 10 times larger than that of husbands' earnings, which did not achieve statistical significance in either sample. Further, the patterns shown in Figures 1 and 2 were reproduced in both samples. In addition to these samples, I estimated the model on a sample of married women in the 1999 wave of the PSID (data provided by Marie Evertsson

and Magnus Nermo). In this case also the coefficient of women's earnings was substantially higher than that of their husbands', and the latter was not statistically significant.

I also performed a number of checks to assess the effect of missing data on the results. The largest reduction in the potential sample size of 1,142 married women with housework data results from missing data on husbands' characteristics. An additional model using all these women, but excluding husband characteristics, yielded a coefficient of -0.14 for women's own earnings, very close to the one reported in Panel III, Table 3. Imputing values for missing data on the independent variables using a variety of techniques did not alter the results. Finally, 23 women who were otherwise eligible to be in the sample had missing data on housework time. The likelihood that women who would otherwise be in the sample had missing housework data was associated negatively with their employment hours and positively with traditional family role attitudes. It is reasonable to suppose, therefore, that women with missing housework data spent more time on housework than other women. A separate model with imputed values equal to the 75th percentile of the housework distribution for women in the sample yielded results virtually identical to the ones presented here.

Table 4. *Multivariate Results for Single Women's Housework Hours (N = 918)*

	<i>b</i>	<i>SE</i>
Women's earnings (thousands)	-0.100**	0.034
Weekly employment hours	-0.026	0.070
Age (years)	0.021	0.048
Race/ethnicity		
White (reference)		
African American	3.084*	1.187
Other	1.098	1.378
Education (years)	-0.417*	0.163
Household type and composition		
Children aged 0 – 17 present	5.197**	1.099
Adult men present	-0.982	1.012
Adult women present	-2.072*	0.905
Owens home	-0.918	0.782
Traditional gender ideology scale	0.496	0.832
Constant	24.298**	5.175
r^2		0.123

* $p < .05$. ** $p < .01$.

Additionally, I performed a series of tests to make sure that the collinearity between wives' absolute and relative earnings (weighted correlation coefficient = .31) did not affect the substantive findings. For example, Model 2 in Table 2 is overspecified in earnings because it includes both wives' and husbands' absolute earnings and women's share of the total. This multicollinearity leads to somewhat inflated standard errors for the earnings variables. None of these variables has a variance inflation factor greater than 5, however, and the mean variance inflation factor of the model is less than 1.5. According to the criteria customarily used in evaluating such diagnostics, these values suggest that multicollinearity is not a pressing problem. Even so, I ran a better specification that excludes husbands' earnings, which are not significant in Model 2. This model (not shown) yielded results nearly identical to those of Model 2, with reduced standard errors for the coefficient of women's earnings. Taken together with the result that husbands' earnings do not matter to wives' housework time, these results reinforce the fundamental point that it is women's absolute rather than relative earnings that are associated with their time spent on domestic labor.

Finally, I considered the consequences of choosing a sample from just the second wave of a longitudinal survey. For example, a systematic

attrition of certain kinds of women between the two waves could bias the results. To evaluate the potential seriousness of this problem, I replicated the models presented here on an equivalent sample from the first wave; this yielded substantive results identical to the ones presented here. The relationship between women's earnings and their housework may also be affected by their marital and union histories prior to the second wave. Accordingly, I added controls for individuals' marital and cohabiting histories prior to the second wave; again, this made no difference to the findings. Another potential problem arising from my selection of the second wave is that women who were married in the first wave but divorced by the second were not eligible to be in the analytic sample; this could introduce selection biases into the results. Like other single women, these previously married women had somewhat lower earnings and housework hours in the second wave than the married women in the analytic sample. Their earnings and housework time, however, were no different from those of the married women in the analytic sample in the *first* wave, which suggests that their exclusion from the analytic sample does not lead to especially large selection biases. A formal selection model would be outside the scope of this analysis, but these women were included in the comparison sample of single women; the addition of an indicator variable identifying them made no difference to the results.

DISCUSSION

My analysis calls into question the validity of the economic dependence and gender display theories of the relationship between married women's earnings and housework. For the first time in the quantitative domestic labor literature, it demonstrates that women's relative earnings contribute little in terms of explained variance to models containing their absolute earnings. It also shows that the predictions of the gender display model of the relationship between earnings and housework, which uses linear and square terms in women's relative earnings, can be reproduced more parsimoniously using just women's absolute earnings. These findings confirm and go beyond Gupta's (2006) analysis showing that women's housework time does not depend on the magnitude of their earnings compared to their husbands' and that only their own earnings matter.

These results have specific implications for each of the two conventional models of the relationship between earnings and time spent on domestic labor. First, they constitute a *prima facie* case against the dependence model as applied to the association between earnings and domestic labor. If women's housework time is unaffected by their husbands' earnings, the degree of their economic dependence as captured by their relative earnings is irrelevant. It could be argued, however, that this unimportance of husbands' earnings is consistent with a modified version of the dependence model, one that derives its explanatory power from women's absolute rather than relative earnings. That is, women with high absolute earnings may be less dependent on their partners than women with low earnings, regardless of how large their incomes are relative to their partners', and therefore spend less time on housework. From the bargaining perspective, women with higher absolute earnings may have greater bargaining power in heterosexual households, independent of their partners' earnings, and consequently spend less time on housework than women with lower earnings. The credibility of this alternative interpretation of the dependence or bargaining models is lessened by the finding that the effect of absolute earnings on housework is similar for married and single women. By definition, single women do not have partners on whom they are dependent or with whom they bargain. Though it is possible that different processes lead to comparable outcomes for single and married women, the possibility that a common mechanism is at work for the two groups is at least as realistic.

My findings also suggest that the gender display pattern in the relationship between earnings and housework documented in some earlier studies, that is, the greater amount of time spent on housework by women with high relative earnings, is spurious. This is not to suggest that the gender display perspective as applied to domestic labor is generally flawed; far from it. The association between relative earnings and housework identified in earlier research as evidence of display, however, appears to be a consequence of the relationship between women's relative and absolute earnings shown in Figure 2. Women at the high end of the relative earnings distribution are poorer, in terms of their own earnings, than women in the equality range. A plausible inference is that women with unusually high relative earnings spend more time on housework than

other women not because of gender display, but because their absolute earnings are lower than those of other women. More formally, Panel II, Table 3, shows that the square term in women's relative incomes is not statistically significant once women's absolute earnings are explicitly specified in the model. Further, Figure 1 shows a convergence of the predictions from the absolute and relative earnings models. These results support the findings of other researchers that women's relative earnings are unreliable indicators of their economic resources.

Despite their divergence from the predictions of the economic exchange and gender display models of the relationship between earnings and time spent on housework, my findings are consistent with their theoretical spirit in one crucial respect. Both these theories were developed as critiques of earlier models of housework that ignored the gender dynamics of marital households. My study also emphasizes the deeply gendered nature of routine housework. It shows that this necessary labor is segregated by gender not only with respect to its performance but also its relationships with wives' and husbands' earnings. Unlike the exchange and display models of these associations, however, my analysis offers a plausible explanation for the trends in recent decades in both women's earnings and their housework time. The median annual labor market earnings of U.S. women rose from about \$9,800 in 1965 to more than \$16,000 in 1995 (U.S. Bureau of the Census, 1998). Over the same period, married women's time spent weekly on routine chores declined from 30.4 to 15.8 hours (Bianchi et al., 2000). The findings reported here suggest a link between these trends.

One of the limitations of this study is that it cannot determine the mechanism by which women's earnings translate into reductions in their housework time. The simplest possibility is that women defray their housework time by using their earnings to purchase market substitutes, or services, for domestic labor. This possibility is consistent with earlier research showing a link between women's incomes and household expenses on such substitutes. I cannot perform a direct test of this hypothesis, however, because the NSFH, like other data sets used frequently in the housework literature, does not have detailed data on household expenses. The data sets used in the research on household expenditures have expense data but lack time-use information. A complete analysis of the link between income,

time use, and expenses will require a data set with quality measures of all three variables. Possibly the housework time of married women is determined by some combination of all three processes: the use of their own earnings to substitute for domestic labor, bargaining over its allocation, and the practice of gender display. With the limited information on household finances and gender dynamics available in surveys such as the NSFH, it is difficult to sort out the relative importance of these factors. To do so may also require ethnographic data of the kind pioneered by Hochschild and Machung (1989).

Additionally, like all the other existing research on the dependence and display models of housework, this analysis does not directly address the potential biases introduced by women's unobserved commitment or attachment to the labor force. In an attempt to minimize these biases, the models presented here are limited to women employed full time. Strictly speaking, the results are, therefore, generalizable to this specific population of married women. A fuller investigation of this issue would require estimates of the relationship between potential, not just actual, earnings and time spent on housework. Although such formal selection models are outside the scope of my analysis, I did replicate the models presented here on a sample of all married women, not just those employed full time. I also applied them to a sample of all married women with nonzero earnings. In both cases, only the women's earnings, and not their husbands', were associated with their time spent on domestic labor. These findings suggest that a detailed consideration of potential earnings would refine rather than negate the results presented here.

The findings presented here are consistent with other explanations. For example, the effect of women's own earnings on their time spent on housework may be understood in terms of its "opportunity costs." That is, the higher their earnings are, the higher the cost of housework time is to women in terms of foregone or potential earnings and therefore the greater the incentive to reduce it. This interpretation is consistent with other research showing that women's expected or potential wages are positively associated with labor force participation before and after childbirth (e.g., Desai & Waite, 1991; Klerman & Leibowitz, 1994). With the data at hand, it is difficult to distinguish this explanation from the one advanced here. The literature on resource alloca-

tion within households, however, shows that women's economic resources are more important than men's even for family outcomes not directly associated with the opportunity costs of time, such as children's nutrition, health, and expenditures on their clothing (e.g., Lundberg et al., 1997; Thomas, 1990). This research suggests that my findings are not solely about economic calculations of opportunity cost but also about conscious choices made by women about the areas of domestic life for which they are primarily responsible.

The association between women's earnings and housework time may also reflect a lesser sense of obligation on the part of higher earning women to do domestic labor, or lower standards for certain outcomes such as cleanliness, for example. Perhaps, women feel freer to buy out their housework if they themselves earn more. Because there are no direct measures in the NSFH regarding preferences for housework or spending, it is difficult to evaluate these explanations directly. Neither women's traditional family role attitudes nor their interaction with earnings is statistically significant. Another possibility is that the male partners of women with high earnings spend more time on housework than the partners of women with lower earnings, although that is not the case in this sample (results available from the author).

The results of this analysis may also be the consequence of a division of *financial* labor between wives and husbands. Couples may segregate their expenses by type and delegate responsibility for different types of expense separately to each partner. Such arrangements may arise out of convenience rather than or in addition to gender inequity. They may mitigate what Treas (1993) called the "transaction costs" of decision making in households, the efforts required to coordinate, negotiate, and monitor their members' activities. Treas (1993) found that couples organized their finances in ways that minimized these transaction costs. Although Treas's (1993) study did not deal directly with the organization of expenses, it raises the possibility that partners pool their earnings for some purposes but not others such as housework substitution. This strategy may also be designed to ease the friction associated with negotiations over the allocation of domestic labor documented by Hochschild and Machung (1989). Again, a resolution of these issues would require detailed data on earnings, expenses, time use, and couples' financial arrangements.

Finally, it may be that the relationship between women's earnings and housework time operates in the reverse direction from the one suggested here. Women's time spent on domestic labor has been implicated in the gender gap in earnings (Baxter, 1992; Shelton & Firestone, 1989), and some studies have investigated the possibility of a negative effect of housework time on women's wages (Hersch & Stratton, 1997, 2002; Noonan, 2001; Stratton, 2001). Hersch and Stratton (2002) also found that this inverse relationship obtains among both single and partnered women. (These studies used hourly wage rate rather than earnings as their measure of income and excluded employment hours as an independent variable. Using wage rate in my model and omitting employment hours, I get a coefficient of -0.31 for wage rate that is highly significant. That is, every additional dollar per hour earned in the labor market is associated with -0.31 fewer hours spent on housework.) Though my analysis does not resolve the question of causal direction in the relationship between women's housework and earnings, the restriction of the sample to women working full time around the year limits the variation in time spent in labor market activity, which should reduce the possibility of a reverse effect of housework time on earnings mediated by time available for employment. As Noonan (2001) states, a definitive resolution of the question of causality would require several waves of longitudinal data collected at short intervals. To my knowledge, there is no such longitudinal survey with quality data on both housework hours and earnings.

My results underline the theoretical and practical significance of women's own earnings in the context of marital households. Their implications could extend beyond the issue of domestic labor. For example, they may be relevant to an unresolved debate regarding the importance of married women's own earnings and wealth in defining their socioeconomic positions (see Sorensen, 1994, for a review). The conventional view in this controversy is that married women's economic locations are determined mostly by their husbands' occupations and socioeconomic characteristics (e.g., Goldthorpe, 1983). This argument is supported by studies such as Baxter's (1994), which finds that wives' class self-identifications are influenced more by their husbands' class locations than by their own in the United States and some other Western nations. This literature has not conceptualized married women's time spent on domestic labor as an aspect of their socioeco-

nomie positions. To the extent that married women's time spent on domestic labor is a facet of their class, however, it appears that what really matters is their own earnings rather than their husbands'. Of course, the earnings measures used here do not capture the complexity of class; future research might examine whether the pattern documented here is borne out with other measures of class position such as occupation, education, and wealth.

To summarize, my analysis implies that so far as the relationship between earnings and housework is concerned, married women may as well be single. Despite the sharing of life experiences and resources that characterize marriage, it appears that women's earnings matter more than their husbands' to certain outcomes within it. Taken together with previous research on household expenditures on housework substitutes and child care, my study suggests the generalization that women act as autonomous economic agents in the domestic sphere to the extent made possible by their own earnings. It is important we understand exactly how and why this is the case, whether married women could in principle draw on their husbands' earnings to reduce their housework and do not do so for convenience or some other reason, or if women's responsibility for routine household labor is so well defined that this is not a realistic possibility. In other words, we need to know whether the autonomous relationship between married women's earnings and their housework is a manifestation of their freedom to make economic decisions that benefit them, or of their inability (or unwillingness) to draw on their husbands' earnings to reduce their domestic labor. The extent to which the results reported here result from choice or necessity is a worthwhile subject for future investigation.

NOTE

I thank Michelle Budig, Paula England, Jennifer Lundquist, and Joya Misra for their extensive feedback on successive drafts of this article.

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