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## If Momma Ain't Happy: Explaining Declines in Marital Satisfaction Among New Mothers

*This study tests competing explanations for the link between the transition to motherhood and declines in wives' marital satisfaction. Using data from the first and second waves of the National Survey of Families and Households (N = 569), we found that new mothers' marital satisfaction declines could be attributed to reductions in wives' quality time spent with their husbands and to increases in perceptions of unfairness in housework. Family role traditionalization in the wake of the birth of a child did not directly explain marital satisfaction declines but was linked to perceptions of marital unfairness. Attendance at religious worship services did not moderate the association between the transition to motherhood and marital satisfaction changes.*

Over the past century, the emotional functions of marriage have emerged as paramount in defining the nature and purpose of marriage in the minds of many Americans, especially as other functions historically associated with marriage have become less tightly bound to the institution

(Cherlin, 2004; Coontz, 2005). In particular, childbearing and childrearing—once considered integrally connected to marriage—are less tightly linked, both cognitively and practically, to marriage for many adults (Edin & Kefalas, 2005; Thornton & Young-Demarco, 2001). Indeed, studies have suggested that the transition to parenthood is more likely to lead to declines in marital quality than it was in the past (Twenge, Campbell, & Foster, 2003), perhaps because contemporary couples take more of an expressive approach to marriage than couples once did (Belsky & Rovine, 1990; Coontz, 2005). In other words, the evidence suggests that nothing threatens the reverie of contemporary soul-mate marriages like the arrival of a bawling, hungry infant.

At the same time that an expressive model of marriage has gained traction in the lives of many Americans, so, too, has an intensive ethic of motherhood that would seem to stand in tension with this expressive model of marriage (Hays, 1996; Lareau, 2003). Indeed, perhaps one reason the transition to motherhood is increasingly associated with declines in marital quality is that mothers expect to devote more time and emotional energy to the tasks of motherhood now than in the past, even as their expectations for emotional satisfaction in marriage have increased. If this is the case, then we expect that changes in the nature of marital relations after a baby arrives—for example, women spending less time with their spouse—account for much of

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the negative association between the transition to motherhood and marital quality.

Alternatively, marital satisfaction may fall because women's expectations for equitable work–family arrangements after the arrival of a child are not met (Cowan et al., 1985; Hochschild & Machung, 1989; Twenge et al., 2003). Typically, the transition to parenthood leads to increased traditionalization of family roles, where women focus more on domestic tasks, focus less on work outside the home, and become more financially dependent on their husbands; at the same time, husbands often increase their focus on work outside the home (Baxter, Hewitt, & Haynes, 2008; Cowan et al., 1985). Many women may experience such shifts as restrictive and unfair, especially because recent research has suggested that wives are happier when they share housework and child care with their husbands (Amato, Johnson, Booth, & Rogers, 2003; Wilkie, Ferree, & Ratcliff, 1998). If women experience family role traditionalization as restrictive or unfair, then we expect that increases in housework and decreases in labor-force participation account for declines in marital satisfaction during the transition to motherhood.

Accordingly, we use data from the National Survey of Families and Households to investigate whether changes in couple time or in women's family roles explain the association between the transition to motherhood and marital satisfaction changes. Because culture may play an important role in determining how married women experience the transition to motherhood, we also explore the potential moderating role of religion.

#### THE TRANSITION TO MOTHERHOOD AND EXPRESSIVE MARRIAGE

In recent decades, marital norms have increasingly emphasized emotional intimacy and personal growth (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985; Cancian & Gordon, 1988). Individuals expect to find and marry their soul mate—someone with whom they can share their deepest feelings and emotions (Whitehead & Popenoe, 2001). Once married, these norms assert that spouses should continue to express deep emotion and build their relationship (Cancian & Gordon). Because marriage has taken an expressive turn in recent decades, marriage is also supposed to provide individual

growth and personal fulfillment (Bellah et al., 1985; Glenn, 1996).

In light of the emotional turn that contemporary marriage has taken, spending time alone together as spouses (i.e., spousal time) has become an important way to build and maintain an expressive marriage. Spousal time helps couples be emotionally closer (Hill, 1988; Kingston & Nock, 1987). Married couples also expect spousal time, and spousal time predicts marital satisfaction (Dew, 2007; Kingston & Nock). Thus, spousal time permits couples to deepen and sustain an emotionally intimate relationship. For all these reasons, spousal time has emerged as one of the strongest predictors of women's happiness in marriage (Wilcox & Nock, 2006).

As women become mothers, however, they may lose spousal time. Studies have shown that spousal time declines are a main feature of parenthood (Kurdek, 1993; White, 1983). A recent study confirmed these findings. With 2003 nationally representative time-diary data, having minor children at home emerged as the strongest negative predictor of spousal time (Dew, 2009). Individuals with minor children at home had 2 fewer hours of spousal time per day than did individuals without minor children at home.

Not only do infants require large amounts of parental time *de facto*, but also changes in parental norms may contribute to declines in spousal time. Mothers and fathers expect to spend more time parenting now than parents expected in the past. Parents want to spend as much time with their children as they can (Daly, 2001; Lareau, 2003), and they often give children the bulk of their free time (Daly, 2001). Indeed, the amount of time that mothers and fathers spend with their children has increased since the 1960s (Bianchi, Robinson, & Milkie, 2006). Thus, new parents may have high parental expectations of themselves, which may contribute to declines in spousal time.

Accordingly, as women transition to motherhood, they are likely to experience a decline in spousal time and, as a consequence, to enjoy a less expressive marriage. As Belsky, Spanier, and Rovine (1983) observed, “Marriage becomes increasingly focused on instrumental functions and decreasingly focused on emotional expression with the advent of parenthood” (pp. 575–576). Given the rise of expressive norms about marriage, this shift is likely to lead to declines in marital satisfaction for married mothers (Doss, Rhoades, Stanley, &

Markman, 2009). Interestingly, a recent study of dual-earning, working-class couples found that those who spent more leisure time together before becoming parents had better marriages at their child's first birthday (Claxton & Perry-Jenkins, 2008), perhaps because they were able to sustain a higher level of spousal time as parents than were couples who had not done as much to focus on time together before the arrival of children. In general, then, we hypothesize that declines in spousal time mediate the relationship between the transition to motherhood and declines in marital satisfaction, largely because losses in spousal time undermine the expressive foundations of contemporary marriages.

An alternative reason new motherhood is associated with marital satisfaction declines may be social norms that dictate that women take on more traditional family roles after becoming mothers. Women often follow these norms whether voluntarily or involuntarily. After a baby arrives, husbands often increase their labor-force participation, whereas wives often decrease theirs; wives also begin engaging in more housework (Baxter et al., 2008; Nomaguchi & Milkie, 2003). New mothers are also the main caretakers of infants and young children. Such changes can be stressful in and of themselves, and for many women, engaging in more traditional roles may enhance marital dissatisfaction (Cowan et al., 1985; Grote, Frieze, & Stone, 1996).

Not only do these changes differentiate spouses more, but they can also change the way spouses view their marriage and create feelings of marital separation. For example, in a qualitative study, husbands felt that working more hours in the wake of the arrival of a child was a manifestation of their willingness to be good providers for their families. In contrast, their wives felt that husbands' increased work hours took the men out of the home when they were needed most (Cowan et al., 1985). Thus, the three changes that often accompany the transition to parenthood—more traditional family-role behavior, distress over new arrangements, and conflicting perceptions between spouses over family life—may bring about declines in marital satisfaction for women.

A recent meta-analysis provided suggestive evidence that traditionalization is the main factor behind the relationship between the parenthood transition and decline in marital satisfaction. Synthesizing the results from nearly 100 studies

on the transition to parenthood, Twenge et al. (2003) found that the relationship between the parenthood transition and declines in satisfaction was stronger for women, for individuals of recent birth cohorts, and for individuals of higher socioeconomic status (SES). These findings fit the role-traditionalization hypothesis because women face more role restrictions following childbirth than men, women from recent birth cohorts are participating more in the labor force after their first child, and women from higher-SES families have more opportunity costs associated with role restriction (e.g., greater salary decline) (Jacobs & Gerson, 2004). Accordingly, family-role traditionalization, rather than loss of spousal time, may account for the link between the transition to motherhood and wives' declines in marital satisfaction.

Changes in feelings of unfairness may directly relate more to women's declines in marital satisfaction during role traditionalization than actual changes in family-related behavior. Distributive justice theory asserts that when individuals perceive that aspects of their relationship are unfair to themselves, they become dissatisfied (Deutsch, 1985; Major, 1987). Studies have supported distributive justice theory; perceptions of inequity have strongly and consistently predicted wives' marital satisfaction, whereas the actual division of household labor has not (Stevens, Kiger, & Riley, 2001; Wilcox & Nock, 2006). Consequently, we hypothesize that role traditionalization following the motherhood transition largely influences wives' marital satisfaction through increased perceptions of unfairness rather than through role shifts themselves.

Although many studies have shown that marital satisfaction declines, on average, following the transition to parenthood, some couples experience no marital satisfaction change, and some experience marital satisfaction increases (Belsky & Rovine, 1990; Cox, Paley, Burchinal, & Payne, 1999; Shapiro, Gottman, & Carrère, 2000). For instance, wives who focus less on the expressive dimensions of married life or who believe that one of the central purposes of marriage is childbearing may be less likely to experience a decline in marital quality in the wake of childbirth than wives who look at marriage as primarily a romantic or soul-mate relationship (Belsky & Rovine, 1990). This leads to the interesting possibility that wives whose marriages are built on foundations other than

emotional intimacy may be able to weather the stresses of the transition to motherhood with their marital satisfaction more or less intact.

Religious faith may be an alternative marital foundation that buffers wives against declines in marital satisfaction after the transition to motherhood. For instance, religious attendance—the best measure of religious faith available in the data we used—may enable women to become mothers with a reduced risk of experiencing declines in marital satisfaction. Regular attendance of religious services exposes women to religious doctrines that endow motherhood with transcendent or spiritual meaning (Mahoney, Pargament, Murray-Swank, & Murray-Swank, 2003). Most religious congregations uphold and value childbearing and childrearing through religious teachings, child-centered religious ceremonies, or accommodations to families with children (Edgell, 2003; Mahoney et al., 2003). Most religious communities also stress positive marital and family relations (Mahoney et al., 2003; Pearce & Axinn, 1998). Thus, mothers who regularly attend worship services before childbirth may not experience a decline in marital satisfaction following childbirth because they view childbearing as fulfilling a divinely sanctioned role in marriage.

Religious attendance may also give new mothers access to social networks that provide them with support as they navigate the stresses of the motherhood transition. Religious communities often provide parenting advice, meals, periodic child care, and even financial resources to new parents (Pearce & Axinn, 1998; Wilcox, 2004). This support may reduce the stress of motherhood and lower the odds that parenting becomes a source of tension between spouses. Regardless of the exact mechanism, we expect that attendance of religious worship services before childbirth moderates the relationship between the motherhood transition and marital satisfaction.

Beyond these variables, we also included control covariates that have predicted marital satisfaction or the transition to motherhood in previous studies. The control covariates include income, education, marital duration, and race-ethnicity. Although we had planned to control for wives' age, tolerance statistics indicated that age and marital duration were too collinear to include together in the regressions. Further, we could not add controls for how long it had been since the women went through the motherhood

transition or for the number of children born. The first control would be justifiably missing for wives who did not become parents, and the second control was too collinear with the motherhood transition.

## METHOD

### *Data and Sample*

This study used data from the first two waves of the National Survey of Families and Households (NSFH), a nationally representative longitudinal sample. Researchers used random-digit dialing to select households for the sample and interviewed participants over the phone (see Sweet, Bumpass, & Call, 1988). The first wave (W1) was collected in 1987–1988, and the second wave (W2) reinterviewed participants about 5 years later in 1992–1994. We used the NSFH because it was one of the few nationally representative longitudinal data sets that simultaneously measured spousal time, employment and housework variables, religious service attendance, marital satisfaction, perceived marital unfairness, and the transition to motherhood.

Wave 1 of the NSFH began with more than 13,000 participants, of whom 6,881 were married. To be included in our study, women had to be married, could not already be mothers, had to be of childbearing age (e.g., 18–45), had to have participated in W2, and had to have remained married through W2. Of the 6,881 women who were married in W1, 5,902 (86%) were already mothers. Among the remaining 975 women, 171 (18%) were older than 45. Furthermore, 141 (18%) of the remaining women did not participate in W2. Finally, 94 additional women (14%) divorced between W1 and W2. The selection criteria yielded a final sample of 569 wives.

Two of these issues—attrition and divorce—have implications for our findings. Using logistic regression (not shown), we found that women working fewer hours and those with lower income were more likely to leave the sample through attrition ( $n = 141$ ). These women, however, were as satisfied with their marriages at W1 as were women who stayed in the sample. They also spent an equal amount of time with their spouse and did the same amount of chores. Because the women who were most likely to leave were already working fewer hours than those who stayed in the sample, we may overestimate the relationship between family

role traditionalization and marital satisfaction during the motherhood transition.

The 94 women who divorced between W1 and W2 had less education, were younger, spent less time with their husbands at W1, and had lower marital satisfaction at W1 than those who stayed married. If these women had remained married and become mothers, we may have found a greater relationship between the transition to motherhood and declines in marital satisfaction. Because these women had lower marital satisfaction to begin with, the stress of having a child join the family might have had a particularly negative effect on marital satisfaction (Doss et al., 2009). Further, spending time with one's spouse might have been less of a mediating variable. These women were already spending less time with their spouse, and so the spousal-time-change variable might have had a different distribution.

Many studies on the relationship between the transition to motherhood and marriage have used only individuals who became parents for the first time (e.g., Belsky & Rovine, 1990). Given that marital satisfaction generally declines over time, however, we used all wives in the NSFH who met the selection criteria, whether or not they had become parents by W2.

Between W1 and W2, 61% ( $n = 347$ ) of the wives became first-time mothers. Table 1 shows the descriptive statistics for the full sample and by the motherhood transition. At W1, most wives had been married for fewer than four years. The sample was mostly European American (90%). Table 1 shows that 45% of new mothers reported marital satisfaction declines, whereas only 30% of women who remained childless reported declines. Further, women who remained childless lost less spousal time, increased their housework much less, increased (rather than decreased) their employment hours, and had less of an increased perception of marital unfairness in the housework.

### *Measures and Analysis*

*Dependent variable.* In W1 of the NSFH, the only marital satisfaction variable was a global item that asked participants how happy they were with their marriage. The response set ranged from 1 (*very unhappy*) to 7 (*very happy*). We relied on ordinary-least-squares (OLS) change-score models to explore this outcome. To generate the change scores, we subtracted W1

levels of marital happiness from W2 levels. In change-score analyses, the variable represents the average within-person change in marital satisfaction on the basis of becoming a new mother (Allison, 1994; Johnson, 2005).

*Independent variables.* The main independent variable was a categorical variable that indicated whether women had become mothers between W1 and W2 (1 = *motherhood transition*). If wives indicated that they had never had children at W1 but had at least one child between W1 and W2, then they received a code of 1 on the motherhood transition variable.

All women who had their first child between W1 and W2 received a code of 1 on the motherhood transition variable regardless of whether they had additional children afterward. Some might wonder whether including new mothers with multiple births between W1 and W2 confounds two groups of women—one group that experienced the transition to motherhood and another group that experienced more than the transition to motherhood. These groups did have different family experiences, so we examined whether this distinction was empirically important.

First, in prior analyses, we used two dummy variables to represent the new mother groups rather than combining them. The findings were similar to what we report below. Second, we replaced the motherhood-transition variable with a variable that measured how many children women had (childless women were 0). Again, the findings were similar to what we report. Finally, we dropped women who had multiple births from the sample. We obtained similar results, except that some of the variables were only marginally significant ( $p < .10$ ), likely as a result of statistical power loss. Because our overall findings remained the same across different treatments of women with multiple births, we report the findings that included these new mothers and grouped them with the women who had only one child. Leaving these women completely out of the sample would suggest that they somehow did not experience the transition to motherhood.

We measured spousal time by an item that asked how frequently wives had spent time alone with their husbands in the previous month either engaged in an activity or talking. Responses ranged from 1 (*never*) to 6 (*almost every day*). To generate the change scores, we subtracted W1 spousal time from W2 spousal time.

Table 1. *Marital Satisfaction Changes, Changes in Family Behavior, and Women's Demographic Variables: Descriptive Statistics in Full Sample and by Motherhood Transition (N = 569)*

Individual Variables	Full Sample			No Motherhood Transition		Motherhood Transition	
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Marital satisfaction declined	.40	.49	0–1	.31	.46	.45	.50
Marital satisfaction stable	.41	.49	0–1	.46	.50	.38	.48
Marital satisfaction increased	.19	.39	0–1	.23	.42	.17	.37
Change in spousal time	–.92	1.56	–5–5	–.53	1.42	–1.17	1.56
Change in hours of housework	6.52	15.20	–40–53	1.29	13.68	9.87	15.21
Change in wives' employment hours	–6.16	20.28	–54–50	.65	17.90	–10.52	20.57
Change in wives' income proportion	.06	.33	–1.00–1.00	.08	.33	.04	.32
Change in perceived inequity	.16	.64	–2–2	.09	.63	.21	.65
Change in income <sup>a</sup>	.32	1.22	–4.81–5.04	.27	1.07	.35	1.30
Change in education	.16	.52	0–5	.20	.58	.15	.49
W1 religious attendance	4.75	2.70	1–9	4.28	2.75	5.06	2.61
W1 marital duration	3.93	4.09	0–17	5.91	5.27	2.67	2.36
African American <sup>b</sup>	.04	.19	0–1	.06	.24	.04	.19
Other race/ethnicity <sup>b</sup>	.06	.24	0–1	.05	.21	.09	.29

<sup>a</sup>Log10 transform. <sup>b</sup>Omitted category is White, non-Hispanic.

Three variables independently assessed whether wives' family roles became more traditional: changes in hours of housework, changes in weekly hours of paid employment, and changes in the proportion of total family income wives contributed. To create the change scores, we subtracted W1 weekly hours of housework from W2 weekly hours of housework and W1 paid employment hours from W2 paid employment hours. We also subtracted the proportion of total family income that wives contributed at W1 from the W2 proportion. Some of the variables had implausible values (e.g., declining 143 employment hours per week). Consequently, we top-coded W1 and W2 hours of housework and employment using a 95th percentile cutoff. Using the 95th percentile cutoff brought the change scores down to plausible values.

We assessed feelings of change in marital unfairness to oneself using an item that asked wives how fairly they felt housework was divided. This variable was reverse coded so that higher scores indicated higher perceived unfairness to oneself. Because perceived unfairness to oneself is key to distributive justice theory (Deutsch, 1985; Major, 1987), values that indicated no unfairness to oneself were set to 0. We subtracted W1 perceived unfairness in housework from W2 perceived unfairness to create change scores in perceived unfairness in

housework. Although the NSFH had two other fairness variables (employment and money), we did not use them because they did not scale well with the unfairness in housework variable.

Income was participants' total household income at W1 and W2. Education measured the number of wives' completed years of formal schooling at W1 and W2. For the change score analysis, we subtracted W1 income from W2 income and W1 education from W2 education. A few of the participants had W1 levels of education that were higher than their W2 levels. For those participants, we made their W1 levels equal to their W2 levels.

We measured religious attendance by an item that asked, "How often do you attend religious services?" The variable we created from the responses ranged from 0 (*never attended religious services*) to 9 (*attend services more than once per week*). Marital duration assessed how many years the wives' marriage had lasted at W1. One participant had an illogical value of 37 years of marriage. Because the participants could not be older than 45, this would mean that, at most, the participant was age 8 when she married. We top-coded the marital duration variable to the next highest value of 27. Finally, two dichotomous variables measured race: African American and other race-ethnicity. The reference category was non-Hispanic, White.

These last five variables were fixed, changed at the same rate for each participant, or needed to be measured at W1 (e.g., religious attendance). The only way to include them in a pure change-score model was to interact them with the change scores of interest—the motherhood transition (Allison, 1994; Johnson, 2005). Unfortunately, the main-effect components of these variables could not be included in the change-score models (Allison, 1994; Johnson, 2005). Consequently, we interacted centered values of religion, race, and marital duration with the motherhood transition variable. This preserved the pure change-score nature of the analyses. Significant interaction terms show the within-person effect of the interaction variable on marital satisfaction change during the transition to motherhood.

One third of the wives had one or more responses missing (none had all responses missing). Between 6% and 17% of the variable responses were missing. We used Proc MI in SAS to generate five sets of plausible imputed values. Proc MIANALYZE in SAS synthesized the regression results that we had for each set. We conducted multiple imputation because it is less likely to bias the sample and results than other techniques (Rubin, 1987). A dummy variable indicating that a participant had to have one or more variables imputed showed that the imputation did not substantially change the results (analysis not shown).

*Analysis.* We used change-score models for the analyses. Change-score models are advantageous because they become fixed-effect estimators when only two panels are used (Allison, 1994; Johnson, 2005). This automatically controlled all unmeasured heterogeneity that was unchanging. Change-score analyses were also appropriate because they examine only within-person variance (Johnson, 2005). Our questions revolved around within-person change.

## RESULTS

The first step of establishing the mediation model was to show that the transition to motherhood predicted the mediator variables (Baron & Kenny, 1986). We regressed changes in spousal time, role traditionalization, and changes in perceived unfairness onto the motherhood transition and the control covariates. We start by describing these relationships.

New mothers lost spousal time between W1 and W2 ( $b = -.77, p < .01$ ; Table 2). This represents the loss for mothers married at the W1 mean (about 4 years). Because the term for marital duration by motherhood transition was positive ( $b = .10, p < .05$ ), and because we used centered values to create the interactions, those who postponed having children until after 4 years of marriage lost less spousal time; those married fewer than 4 years lost even more time.

New mothers' family role behaviors also became more traditional, though again, marital duration and race moderated this. Mothers at the mean years of marital duration increased their amount of housework by more than 9 hours. Those who had been married longer had lower housework increases ( $b = -1.17, p < .01$ ), whereas those who had been married less than the mean had greater housework increases. European American mothers and mothers in the other racial-ethnic minority category decreased their weekly paid employment by nearly 12 hours, on average (Table 2). Interestingly, new African American mothers increased their weekly employment hours by about 8 hours. Despite declines in work hours, becoming a new mother did not predict changes in the proportion of family income that wives contributed. Because the motherhood transition did not predict changes in the proportion of family income, this variable could not be a mediator (Baron & Kenny, 1986); we dropped it from later analyses.

Finally, a relationship between the transition to motherhood and changes in perceived unfairness emerged. First, when we did not include the traditionalization variables in the models, the transition to motherhood predicted increases in perceived housework inequity ( $b = .13, p < .05$ ; model not shown). When we added the traditionalization variables, becoming a mother no longer predicted those changes. Changes in the hours of housework did predict changes in perceived inequity, however (Table 2). Thus, increased housework hours likely mediated the association between becoming a mother and increased perceptions of housework unfairness. That is, the motherhood transition predicted increases in housework, and increases in housework brought the association between motherhood and perceptions of unfairness to nonsignificance. A follow-up Sobel test (not shown) demonstrated that changes in housework could be considered a mediator of the relationship between the motherhood transition and

Table 2. *Change-Score Predictors of Wives' Changes During the Transition to Motherhood (N = 569)*

Variable	Spousal Time		Hours of Housework		Employment Hours		Proportion of Family Income		Perceived Unfairness in Housework	
	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>SE B</i>
Motherhood transition (centered)	-.77**	.16	9.30**	1.37	-11.90**	1.78	-.02	.03	.06	.06
Change in hours of housework									.005* <sup>b</sup>	.002
Change in weekly hours of employment									.01	.01
Change in proportion of family income earned									.04	.09
Change in income	-.21**	.07	1.35*	.53	.75	.69	.05**	.01	.05	.03
Change in education	-.51**	.15	1.18	1.24	-1.38	1.60	.03	.03	-.01	.05
Motherhood transition × Marital duration	.10**	.03	-1.17**	.29	.75*	.38	-.01	.01	-.01	.01
Motherhood transition × Black <sup>a</sup>	-.74	.80	5.84	6.81	17.96*	8.84	.11	.14	.62*	.30
Motherhood transition × Other race/ethnicity <sup>a</sup>	-.71	.70	-7.05	5.99	1.93	7.77	-.01	.13	.21	.26
<i>R</i> <sup>2</sup>	.10		.11		.08		.05		.05	

Note: We centered all time-invariant variables (e.g., W1 religious attendance, race) before creating the interaction terms.

<sup>a</sup>Omitted category is White, non-Hispanic. <sup>b</sup>Sobel test of mediation for motherhood transition significant at  $p < .05$  or better.

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

changes in perceived unfairness ( $p < .05$ ). Race also mediated that relationship. African American mothers had greater increases in perceived housework unfairness than did European American women.

The next step was to test the association between the main independent variable (transition to motherhood) and the dependent variable (marital satisfaction changes). Using OLS regression, we regressed the marital satisfaction change scores onto the motherhood-transition change scores, the control change scores, and interaction terms. New mothers experienced an average decline of  $-.33$  ( $p < .05$ ) in marital satisfaction between W1 and W2 (Table 3, Model 1). None of the interaction terms was significant. This second step in establishing the mediator model was successful.

Finally, we estimated a series of change-score models analyzing the relationship among the transition to motherhood, the mediator and moderator variables, and marital satisfaction changes. In separate models, we tested change in spousal time, family-role traditionalization, and

perceived unfairness as mediators. In another model, we tested all the variables together.

As expected, spousal time change mediated the relationship between the motherhood transition and marital satisfaction changes (Table 3, Model 2). Spousal time change positively predicted marital satisfaction changes. Thus, the more spousal time couples lost, the more marital satisfaction they lost. Adding spousal time also reduced the motherhood transition coefficient to nonsignificance. A follow-up Sobel test (not shown) confirmed that spousal time could be considered a mediator variable ( $p < .01$ ). This suggests that one reason motherhood is associated with a decline in women's marital satisfaction is that they spend less quality time with their husbands after children come along.

The mediating role of family role traditionalization also received support. Model 3 in Table 3 shows that increases in housework hours were negatively associated with marital satisfaction changes. Decreases in work hours were not significant, though. Adding these variables reduced the magnitude of the motherhood transition to nonsignificance. A follow-up Sobel test showed

Table 3. Change-Score Predictors of Wives' Changes in Marital Satisfaction (N = 569)

Variable	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B
Motherhood transition	-.33*	.13	-.18	.14	-.24	.14	-.21	.14	-.31*	.13	-.13	.14
Change in spousal time			.19** <sup>b</sup>	.04							.16** <sup>b</sup>	.04
Change in hours of housework					-.01*	.004	-.01	.01			-.01	.01
Change in weekly hours of employment					.01	.01	-.01	.01			-.01	.01
Change in perceived unfairness in housework							-.42** <sup>b</sup>	.10			-.35** <sup>b</sup>	.10
Motherhood transition × W1 religious attendance									.08	.05	.07	.05
Change in income	-.19*	.07	-.15	.08	-.18*	.07	-.15*	.07	-.19*	.07	-.13	.07
Change in education	-.17	.12	-.08	.11	-.16	.12	-.17	.11	-.18	.11	-.09	.11
Motherhood transition × W1 marital duration	.03	.03	.01	.03	.02	.03	.02	.03	.04	.03	.01	.03
Motherhood transition × Black <sup>a</sup>	-.51	.67	-.36	.63	-.45	.67	-.18	.64	-.58	.68	-.16	.62
Motherhood transition × Other race/ethnicity <sup>a</sup>	-.73	.52	-.60	.51	-.80	.52	-.71	.51	-.71	.51	-.55	.50
R <sup>2</sup>	.06		.11		.07		.11		.06		.15	

Note: We centered all time-invariant variables (e.g., W1 religious attendance, race) before creating the interaction terms.

<sup>a</sup>Omitted category is White, non-Hispanic. <sup>b</sup>Sobel test of mediation for motherhood transition significant at  $p < .05$  or better.

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

that increases in housework hours could also be considered a mediating variable ( $p < .05$ ). Thus, even though we framed the spousal-time and role-traditionalization mechanisms as competing, we found support for both of them.

The idea that changes in perceived unfairness are a mediator also received support (Table 3, Model 4). Every 1-point increase in perceived unfairness was associated with a  $-.42$  decrease in marital satisfaction ( $p < .01$ ). Adding change in perceived unfairness eliminated the significance of changes in housework hours.

We also tested the interaction of worship service attendance with the transition to motherhood (Table 3, Model 5). Including the interaction term without including the W1 main effect variables was the only way to test this unchanging variable in the change-score models (Allison, 1994; Johnson, 2005). The Religion × Motherhood interaction term was in the expected direction but did not quite attain statistical significance (Model 5).

In the full model, only change in spousal time and change in perceived unfairness in housework were statistically significant predictors of marital satisfaction changes (Table 3,

Model 6). Thus, changes in spousal time and perceived unfairness explained new mothers' marital satisfaction changes. Regarding family-role traditionalization, the results indicated that the pathway led from the transition to motherhood to increases in housework, to perceptions of increased unfairness in housework, to marital satisfaction declines.

## DISCUSSION

It is well known that the transition to motherhood is linked to wives' marital satisfaction declines (e.g., Twenge et al., 2003). This study was unique, however, in that it explored explanations beyond those that center largely on the impact of family-role traditionalization. It considered ways that changes in spousal time and religion also mediate or moderate this link.

Three sets of important findings emerged from this study. First, consistent with the theory that contemporary marriages are increasingly built on an expressive foundation (e.g., Cancian & Gordon, 1988), our results suggest that one reason new mothers are more likely to experience a decline in marital satisfaction

than their childless peers is that they spent significantly less time with their husbands following childbirth. Specifically, losing spousal time mediated the relationship between the transition to motherhood and declines in women's marital satisfaction. As prior research has suggested, spousal time plays an important role in facilitating communication, fostering emotional intimacy, and sharing valued activities between spouses—processes that are all particularly important sources of marital happiness for women now that marriage is viewed more as a vehicle for personal fulfillment and emotional intimacy and less as a vehicle for childbearing and/or childrearing, social support, and economic cooperation (Gager & Sanchez, 2003; Whitehead & Popenoe, 2001; Wilcox & Nock, 2006). Interestingly, this finding applied more to couples who began having children shortly after marriage than to those who postponed childbearing.

Our results suggest that new mothers often found that motherhood necessitated spending less time together with their husbands and that many wives were unprepared for the subsequent decline in intimacy in their relationship that follows the birth of their first child. This is not surprising, given the ethic of concerted cultivation that has emerged among parents, especially mothers, in recent decades (Lareau, 2003). More generally, our results were consistent with the notion that the arrival of a child threatens the expressive foundations of contemporary soul-mate marriages (Whitehead & Popenoe, 2001).

Second, we found support for the family role traditionalization theory (Cowan et al., 1985; Twenge et al., 2003). Twenge et al. (2003) asserted that, because women and recent marital cohorts were more likely to report a decline in marital satisfaction after the motherhood transition, role restriction was the likely explanation for that decline. Specifically, they hypothesized that many new mothers—especially women who have been socialized in recent years to expect more equality in the household division of labor—experienced increases in housework and child care and declines in paid work outside the home as stressful, unfair, and an affront to their professional identity. This in turn was likely to lead to lower marital satisfaction.

Consistent with this theory, we found that changes in perceived unfairness regarding housework mediated the link between motherhood and marital changes. Moreover, this study

indicated that the transition to motherhood was associated with increases in housework for wives that were in turn linked to increases in perceptions of unfairness. In summary, our findings suggest that one reason motherhood leads to declines in marital satisfaction is that some wives find the increased housework associated with motherhood inequitable; in turn, this perception of inequity dampens their marital satisfaction.

Third, the results reported in this study do not indicate that religious wives who transitioned to motherhood were less likely to experience declines in marital happiness than their less religious or secular peers. The results were nearly significant but did not quite attain the  $p < .05$  level. But when we ran the change-score models separately by level of worship service attendance, the motherhood transition negatively predicted marital satisfaction for those who attended at below-mean levels, but not for those who attended at above-mean levels (analysis not shown). Thus, although our findings were not significant, future research might profitably examine whether religiosity moderates the relationship between the motherhood transition and marital satisfaction changes.

This study has several limitations. First, the NSFH is an older data set. Consequently, the relationship between the transition to motherhood and marital satisfaction may have changed in the 14 years since collection of the W2 data. For example, increases in the popular appeal of a soul-mate model of marriage may have made the transition to motherhood even more difficult for contemporary women and increased the importance of the spousal time mechanism. At any rate, more recent data are necessary to replicate our findings.

Second, we used single items to measure many of the constructs (e.g., marital satisfaction, spousal time, religiosity). Although multi-item scales would yield more reliable constructs, the NSFH did not contain such scales. Further, because we believe that these items should change as a result of childbirth, test-retest reliability is not informative. Consequently, future research using different data, with more multi-item scales, could verify our findings.

Finally, we make no causal claims because questions of endogeneity persist. For example, the relationship between the decision to become a parent and marital quality may not be exogenous to other variables that we measured, such as religious service attendance. Another

example is that our requirement that participants not have already had children may have biased the sample more toward women who had postponed childbearing.

Despite these limitations, this study is unique in that it explores the temporal, gender, and religious factors that link the transition to motherhood and declines in marital quality. Our results suggest that wives who spend markedly less time with their husbands after a child arrives are the wives most likely to suffer marital declines. This study also suggests that family-role traditionalization in the wake of a first child plays a role in accounting for declines in marital quality for wives, insofar as role traditionalization increases wives' perceptions of marital unfairness.

Thus, this study is consistent with other research that has shown that the birth of a child need not necessarily lead to a decline in marital satisfaction (Belsky & Rovine, 1990). Specifically, this study suggests that new mothers can maintain their satisfaction with marriage if they and their husbands set aside time for their marriage and if wives resist the ethic of intensive motherhood (cf. Cox et al., 1999; Shapiro et al., 2000). This study also suggests that husbands need to make more of an effort to spend time with their wives after children arrive and to do their fair share of housework and child care so that the division of labor is equitable. In other words, the arrival of an infant may not spell trouble for wives if they and their husbands can take the time to keep working on their relationship. It also helps to have a husband who realizes that the arrival of a baby means that he also must devote considerably more of his own time and emotional energy to hearth and home.

#### NOTE

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