

# Dads Doing Diapers: Individual and Relational Outcomes Associated With the Division of Childcare Across the Transition to Parenthood

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This longitudinal study examined how relative contributions to the division of childcare are related to individual and relational outcomes across the first 2 years of the transition to parenthood. Data were collected from a large sample of first-time parents 6 weeks before the birth of their child and then at 6, 12, 18, and 24 months postpartum. The results revealed that certain individual differences—especially gender and attachment avoidance—shape individual reactions to childcare, above and beyond the proportion of childcare tasks that partners report completing. Women and less avoidantly attached new parents handle the introduction of childcare tasks better than most men, especially those who are more avoidantly attached. In addition, certain reactions to childcare, such as childcare self-efficacy and perceptions of work–family conflict, moderate the relation between contributions to childcare and relationship satisfaction over the course of the transition. We also discuss the need for more research on men’s adjustment during this particularly stressful transition.

*Keywords:* division of childcare, transition to parenthood, gender, attachment avoidance, relationship satisfaction

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The transition to parenthood is one of the most joyous and life-altering events that many people experience during their lives (Cowan & Cowan, 2000; Feeney, Hohaus, Noller, & Alexander, 2001). However, it is also one of the most chronically stressful and challenging life changes. Although the transition to parenthood enhances personal and marital well-being for some people (Cowan et al., 1985), it introduces pervasive

life-role changes, chronic fatigue, added financial burdens, and greater work–family conflict, all of which elevate the life stress of nearly all new parents. Most new parents, therefore, report decreases in marital satisfaction, drops in companionate activities, reduced sexual and intimate activities, and increases in conflict during the transition (Belsky & Pensky, 1988; Cowan & Cowan, 2000; Kohn et al., 2012).

One major source of stress associated with the transition to parenthood is the introduction of demanding and often unfamiliar childcare tasks. Previous research on the division of labor has focused on the total amount of childcare that individuals report completing and how this forecasts later relationship outcomes (e.g., Meier, McNaughton-Cassill, & Lynch, 2006). Considerably less is known about whether and how individual differences shape new parents’ childcare experiences during this important life transition. Certain individual differences, such as a person’s level of attachment avoidance (Bowlby, 1988), should amplify or mute the impact of certain experiences during the transition, in turn predicting both individual reactions to childcare and relationship outcomes (see Feeney et al., 2001). Additionally, most prior studies have disproportionately focused on women’s reactions to the transition to motherhood (e.g., Behringer, Reiner, & Spangler, 2011; Goldberg & Perry-Jenkins, 2004; Nomaguchi & Brown, 2011). Relatively few studies have investigated how both mothers and fathers navigate the transition to parenthood and how this critical experience affects their relationship across time. Given men’s increasing involvement in daily childcare (see Coltrane, 2000; Parker & Wang, 2013), research also needs to investigate men’s

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adjustment over this stressful life transition (see Aumann, Galinsky, & Matos, 2011).

The current research fills a number of major gaps in our knowledge by focusing on the role of *individual differences* in shaping both mothers' and fathers' experiences during the transition to parenthood. Specifically, we followed a large sample of married couples from approximately 6 weeks before the birth of their first child to 2 years postpartum. We assessed wives' and husbands' perceived contributions to childcare (relative to their spouse), their reactions to those contributions, relevant individual difference variables believed to shape those reactions, and relationship satisfaction prenatally and then at 6, 12, 18, and 24 months postpartum. We tested a series of hypotheses addressing whether and how two theoretically relevant individual differences—gender and attachment avoidance—moderate individuals' reactions to their contributions to childcare as well as how these individual differences and reactions moderate relationship-level outcomes—particularly relationship satisfaction—associated with each partner's relative childcare contributions. We also documented the time-course of these effects over the first 2 years of the transition to parenthood. In doing so, we sought to identify factors that protect partners and marriages from negative consequences, as well as those that exacerbate negative consequences.

### Childcare and the Transition to Parenthood

One of the most prominent changes associated with having a newborn is the introduction of daily childcare tasks. The stress associated with negotiating the division of these tasks and their completion can take a significant toll on new parents and their relationship. In fact, the most common source of conflict identified by new parents is the division of childcare (Cowan & Cowan, 2000; Kluwer, Heesink, & Van de Vliert, 1996, 1997). Thus, when investigating personal and relational adjustment across the transition to parenthood, it is important to consider not only how childcare is divided, but also new parents' reactions to their childcare contributions.

There are numerous characteristics of childcare tasks that make them a particularly pronounced source of stress during the transition to parenthood. First, childcare tasks are novel for new parents. Most individuals have little experience with childcare before becoming parents, particularly men (Cowan & Cowan, 2000). As a result, many new parents are likely to be uncomfortable and less confident about their ability to complete childcare tasks well. Second, negotiating the division of childcare is a novel relationship stressor for most new parents. Even though virtually all couples have experienced other major sources of stress (e.g., work, finances), childcare-related stress presents a new challenge that couples must resolve in the context of their relationship. Third, the completion of childcare tasks—especially during infancy—is demanding in a way that most life tasks are not. Whereas household chores can be postponed to the weekend, many childcare tasks, such as changing diapers and soothing a crying infant, must be done immediately. Fourth, the inherently unpredictable nature of childcare adds to its stressfulness. Although new parents can plan certain tasks, such as when and how often their child needs to eat or sleep, they cannot anticipate when their child will get sick, not want to take a nap, or throw a temper tantrum. Because childcare tasks must take highest priority at any given moment, most new

parents feel a sudden “lack of control” over their lives (Ross & Sastry, 1999). Finally, childcare tasks are a chronic, unabating source of stress (Cowan & Cowan, 2000; Feeney et al., 2001). While many household tasks must be completed daily, weekly, or monthly, childcare tasks—particularly during infancy—must be completed every few minutes or hours. Childcare, therefore, is never truly finished. Given the chronically demanding and unpredictable nature of childcare, as well as the pivotal role it assumes in the transition to parenthood, the current study focused on relations between new parents' relative contributions to childcare tasks and both individual-level and relationship-level adjustment across the first 2 years of the transition to parenthood.

### Individual Differences and Reactions to Childcare

Despite the fact that childcare tasks are a major source of stress during the transition to parenthood, their likely ties to personal and relational outcomes are not as straightforward as “greater childcare results in more personal, marital, or family problems.” These relations are complex, and research on this topic has yielded mixed findings. When studies have found relations between childcare and relationship outcomes, the patterns are often quite different for men and women (e.g., Meier, McNaughton-Cassill, & Lynch, 2006; Stevens, Kiger, & Mannon, 2005; Stevens, Kiger, & Riley, 2001; Walzer, 1996). Further, some research altogether failed to find any relations between childcare and relationship outcomes (e.g., Ehrenberg, Gearing-Small, Hunter, & Small, 2001; Pedersen, Minnotte, Mannon, & Kiger, 2011). In an attempt to clarify the nature of the relations between childcare and relationship outcomes, researchers have examined the roles of an ever-widening range of demographic variables (e.g., socioeconomic status, hours of paid work, education) and attitude domains (e.g., parenting attitudes, gender role attitudes, perceived fairness). However, discrepant findings persist in this literature.

To provide further insight into the relations between contributions to childcare and relationship outcomes, it is crucial to consider *individual differences* that might predispose new parents to experience more stress surrounding childcare. Prospective associations between childcare contributions and relational well-being should depend in part on individual differences that shape what new parents anticipate the transition will be like, as well as their subsequent reactions to their respective childcare contributions. These individual reactions, in turn, should affect the link between childcare contributions and relational outcomes during the transition to parenthood. For example, individuals who enter the transition feeling uncomfortable about doing childcare tasks or disliking the caregiving role more generally should have more negative reactions to childcare than individuals who do not have these expectations and beliefs. These reactions, in turn, ought to color both daily interactions with their partners (spouses) and perceptions of their relationships, such as satisfaction, contributing to more negative relational outcomes over the course of this life event. Thus, a greater consideration of individual differences should help clarify which *types* of individuals are likely to fare better or worse during this particularly stressful life transition.

One group of people who should be less familiar and more uncomfortable with childcare is new fathers. In our society, most men are not socialized in caregiving roles to the same extent that women are, especially with respect to caring for infants. Men's

general reactions to childcare, therefore, may be different than women's reactions. In addition, people who value their independence and autonomy and do not like providing care to others should also react negatively, especially when they perceive they are doing relatively large amounts of childcare. As we shall see, this should be particularly true of avoidantly attached people—especially highly avoidant men—who not only dislike having to care for others (Bowlby, 1979; Rholes, Simpson, Blakely, Lanigan, & Allen, 1997), but may feel “trapped” or “confined” in their role as new fathers. We first discuss gender differences, and then turn to attachment avoidance.

### Gender Differences

Although childcare is a major source of stress for *both* new mothers and new fathers, gender is an important variable to consider when studying individual reactions to childcare. In couples who engage in “traditional” division of labor, the majority of childcare tasks are completed by mothers. Although women still complete the vast majority of childcare in most cultures, this pattern is changing, with men becoming more involved in childcare in the United States since the 1960s (see Coltrane, 2000; Parker & Wang, 2013). Over the same time period, however, women have more than doubled the amount of time they spend on childcare (Parker & Wang, 2013), and they continue to complete about twice as much childcare as their husbands (Eagly & Carli, 2007). Thus, despite the fact that the gap has narrowed in the U.S. between men's and women's contributions to childcare (Bianchi, Milkie, Sayer, & Robinson, 2000), being female remains the single best predictor of completing household and childcare tasks (Coltrane, 2000). Consequently, the introduction of new childcare tasks during the transition to parenthood should result in different amounts of new work for most women compared with most men, and their reactions to these tasks may be markedly different.

Women's comparatively greater contribution to childcare, however, does not mean they should necessarily experience more negative outcomes across the transition to parenthood. In fact, women may, on average, have more positive reactions to new childcare tasks than most men do. Women are socialized to adopt more of a relational or communal orientation toward others (Bem, 1974; Spence, Helmreich, & Stapp, 1974), which makes caring for others more central to the female gender role. From the time they first engage in caregiving-related play as children until they care for their own children as adults, most women gain more experience with (or have more prolonged exposure to) childcare tasks than is true of most men. This, in turn, leads to greater comfort with and confidence in completing most childcare tasks. This greater comfort may also lead women to feel relatively more satisfied with the childcare they do complete (Ehrenberg et al., 2001). Indeed, new mothers report greater infant care self-efficacy and greater parenting satisfaction than new fathers do (Elek, Hudson, & Bouffard, 2003; Hudson, Elek, & Fleck, 2001). Thus, despite the fact that most women engage in significantly more childcare tasks than most men, women's reactions to these tasks should be more positive than their male partners' reactions.

Recent research also suggests that men tend to struggle with their increasing, albeit still considerably lower, involvement in childcare. Data from the 2008 National Study of the Changing Workforce (NSCW) indicates that most men now experience

greater work–family conflict than most women do, whereas there was no gender difference in 1977 (Galinsky, Aumann, & Bond, 2009). Exploring the reasons behind this shift, Aumann, Galinsky, and Matos (2011) proposed that most men are struggling with the “new male mystique,” namely the pressures that men should be more involved with their families while still serving as the primary financial provider (Bianchi, Robinson, & Milkie, 2006; Prentice & Carranza, 2002; Townsend, 2002). In essence, men are now experiencing the conflict that many women dealt with when they first entered the workforce many years ago. The pressure to be a good financial provider should be especially pronounced during the transition to parenthood, when many working women take time off of work, often without pay (U. S. Department of Health & Human Services, 2011). As a result, the transition to parenthood should be an especially difficult time for new fathers as they struggle to be engaged in childcare tasks (with which they typically are unfamiliar and uncomfortable) while simultaneously trying to support their families financially.

Not only should men and women cope with new childcare tasks differently, but their reactions may affect their relationship satisfaction somewhat differently. Indeed, researchers in this field have noted that, “predicting marital satisfaction is a complicated business, with men and women responding differently to the same features in the relationship” (Stevens et al., 2001, p. 525). Because the division of childcare is the most common source of conflict for new parents (Cowan & Cowan, 2000; Kluwer et al., 1996, 1997), men's and women's personal adjustment and reactions to childcare should affect their daily interactions with one another and, therefore, their marital satisfaction across the transition. This carry-over to the marital relationship may be especially pronounced for men, who typically view childcare as primarily the responsibility of their wives/partners (Feeney et al., 2001).

In sum, the roles and experiences of new mothers and new fathers are different across the transition to parenthood (see Cowan & Cowan, 2000). Although women typically make relatively larger childcare contributions than their male partners across the transition, men's and women's differential experience and comfort with childcare should lead men to have less positive reactions to childcare tasks than women, such as reporting smaller gains in self-efficacy from their childcare contributions. These reactions, in turn, should carry forward to differentially predict marital outcomes, such as marital satisfaction, for each gender across the transition.

### Attachment Avoidance

According to Bowlby (1979), avoidant people “are deeply distrustful of close relationships and terrified of allowing themselves to rely on anyone else, in some cases in order to avoid the pain of being rejected and in others to avoid being subjected to pressure to become someone else's caretaker” (p. 138). The chronic stress associated with the transition to parenthood, which involves negotiating new life roles and tasks with one's romantic partner while also providing constant care to a highly dependent infant, should be especially taxing on highly avoidant people (Bowlby, 1988; Feeney et al., 2001).

Most highly avoidant individuals have been rejected or have received poor care in prior relationships (Bowlby, 1973). Based on these experiences, they have learned to be self-reliant, which

entails not seeking or requesting support when they are upset, and not readily providing comfort or support when close others are distressed (Simpson, Rholes, & Nelligan, 1992). According to Mikulincer and Shaver (2003), highly avoidant individuals use deactivating strategies to dampen and control their negative emotions in stressful situations, which can be accomplished by ignoring, denying, or downplaying the presence or severity of stressors. These strategies also keep their attachment systems deactivated.

Given their difficult relationship histories, highly avoidant individuals both strongly dislike and feel uncomfortable in caregiving roles (Bowlby, 1979; Mikulincer & Shaver, 2007; Rholes et al., 1997). Having to constantly be “on call” to provide care to a needy infant should threaten the strong needs of highly avoidant people to remain independent and autonomous (Bowlby, 1988). Caring for an infant should compromise their ability to control their time, what they do, and what they can negotiate with their romantic partners. The chronically stressful nature of the transition to parenthood should also make it difficult for highly avoidant individuals to keep their attachment systems deactivated and their negative emotions down-regulated (Simpson & Rholes, 2012).

Consistent with this reasoning, highly avoidant individuals are less interested in becoming parents compared with their same-aged peers, they have more negative perceptions of what young children are like, and they expect to derive little satisfaction from being a parent (Rholes et al., 1997). Before having children, highly avoidant individuals also anticipate (Rholes et al., 1997) and perceive (Rholes, Simpson, & Friedman, 2006) that parenting will be more stressful and less rewarding than other people do. Once they become parents, highly avoidant individuals report feeling less close to their newborns (Wilson, Rholes, Simpson, & Tran, 2007), and avoidant mothers offer less behaviorally rated help/support when teaching their toddlers challenging tasks (Rholes, Simpson, & Blakely, 1995). They also strive to reestablish personal control and autonomy when engaged in different types of caregiving roles, including those beyond parenting (see Mikulincer & Shaver, 2007, for a review). Highly avoidant people do not base their self-worth or well-being on how well or how much they provide care to others (Bowlby, 1979). Therefore, even though avoidant people think they will be skilled parents (Rholes et al., 1997), their contributions to childcare should not be systematically related to their feelings of self-efficacy as a new parent.

Highly avoidant people should also be more likely to perceive that their new baby is “interfering” with other aspects of their lives, such as work, which should further threaten their sense of autonomy and independence. Avoidant individuals place considerable importance on goal achievement and personal advancement (Feeney, 2008; Mikulincer & Shaver, 2007), and they view their careers and other life interests as one way to maintain autonomy and avoid spending excessive time with (or experiencing too much intimacy with) their spouses and family (Hazan & Shaver, 1990). To the extent that highly avoidant individuals perceive that their child is blocking or impeding their other important life goals, they should feel that their autonomy is being restricted by their new family roles, responsibilities, and obligations. Because they cannot totally disregard or sidestep these family responsibilities, however, highly avoidant individuals are likely to feel resentful and perceive greater conflict between these responsibilities and their outside lives, namely their careers.

Not only should highly avoidant individuals have more difficulty adjusting to parenthood for all the reasons mentioned above, but their reactions to the division of childcare in their romantic relationship ought to color how they perceive and interact with their spouses across the transition. New parents’ interactions and discussions often focus on childcare, which commonly results in conflict. Hence, it is easy to envision how avoidant individuals’ reactions to childcare, such as the resentment they may feel toward their child for “interfering” with their personal or professional goals, could generalize to their romantic partners and shape their relationship perceptions as well. Additionally, parenthood’s unremitting demands for time, attention, and care should make the normal deactivating strategies used by highly avoidant people less effective, because they cannot easily sidestep or disregard the many tasks and responsibilities they must do as new parents. Because they cannot rely on deactivating strategies to manage their negative emotions, highly avoidant people should have more a difficult time regulating their negative thoughts, feelings, and behaviors while interacting with their romantic partners during this chronically stressful, caregiving-focused life transition (Berant, Mikulincer, & Florian, 2001). This should be particularly true when highly avoidant people perceive they are making high contributions to childcare (Bowlby, 1988).

There also are compelling reasons to anticipate that gender will moderate this impact of avoidance, with effects being stronger for highly avoidant men than for highly avoidant women. Highly avoidant men should have the most negative reactions to childcare. They should have a particularly difficult time regulating their negative thoughts, feelings, and behaviors when interacting with their romantic partners across the transition and, as a result, they should view their partners the most negatively. Although many fathers are now sharing more of the childcare burden, men’s and women’s reactions to childcare are still quite different. As discussed above, compared with most men, many women enter the transition with greater exposure to childcare and more experience and confidence with caregiving. In addition, caregiving is a central component of the expectations associated with motherhood (Johnston & Swanson, 2006), but not necessarily with fatherhood (e.g., Townsend, 2002). The norms and expectations related to childcare, therefore, are more clearly defined for mothers than for fathers. Although avoidant women should not typically enter parenthood with as strong of a desire to care for an infant as secure women do (Wilson, Rholes, Simpson, & Tran, 2007), the fact that they enter the transition with greater knowledge and clearer expectations regarding their maternal role may put them in a better position to provide care than men, generally speaking. By comparison, when the unique configuration of lower caregiving knowledge/skills, ill-defined role expectations, and low motivation or interest in parenting comes together (as it should for highly avoidant men) this should produce a “perfect storm,” producing especially negative outcomes across the transition to parenthood for highly avoidant men.

In sum, given their experiences, concerns, and motivations, highly avoidant individuals should have more negative reactions to their contributions to childcare, and these reactions should negatively color their perceptions of their relationships across the transition to parenthood. Specifically, when avoidant individuals report making relatively high childcare contributions, they should perceive greater conflict between their work and family lives.

Perceptions of greater work–family conflict should have a negative effect on relationship satisfaction across the transition, especially for those who report making relatively high childcare contributions. High contributions to childcare should also have a negative impact on relationship satisfaction trajectories, particularly for highly avoidant men.

### The Present Study

In this longitudinal study, we studied the predictors of individual and relational outcomes associated with the division of childcare over the first two years of the transition to parenthood in a large sample of married couples. The general model that guided our thinking and hypotheses is shown in Figure 1.

Specifically, we examined: (a) how certain individual differences (gender, avoidance, and their interaction) shape individuals' reactions to their contributions to childcare; and (b) how these individual differences and reactions combine to moderate the relation between contributions to childcare and relationship outcomes across the transition to parenthood. Data were collected at five assessment waves: approximately 6 weeks before birth, and at 6, 12, 18, and 24 months postpartum. At each wave, both partners (both spouses) completed self-report measures of their contributions to childcare (relative to the partner), attachment orientations (e.g., avoidance), childcare self-efficacy, work–family conflict, and marital satisfaction. We tested the following hypotheses.

### Hypotheses for Individual Outcomes

We anticipated that gender and attachment avoidance would moderate the connection between individuals' relative contributions to childcare and their reactions to childcare (see the first three boxes in Figure 1). Although we did not have specific predictions, we also examined whether the effects of these individual differences compounded over time to predict changes in individual reactions to childcare across the transition to parenthood.

*Hypothesis 1:* The relation between contributions to childcare and childcare self-efficacy should be moderated by gender; women should report greater childcare self-efficacy than men, particularly among those who report making relatively high contributions to childcare.

*Hypothesis 2:* The relation between contributions to childcare and perceptions of work–family conflict should be moderated

by gender and attachment avoidance; higher attachment avoidance should predict greater perceptions of work–family conflict, particularly among men who report making relatively high contributions to childcare.

### Hypotheses for Relationship Outcomes

These individual differences (i.e., gender, attachment avoidance) and reactions to childcare (i.e., childcare self-efficacy, perceptions of work–family conflict) should also moderate the relations between contributions to childcare and the quality of individuals' relationships (i.e., relationship satisfaction) across the transition to parenthood (see Figure 1).

*Hypothesis 3:* The relation between contributions to childcare and relationship satisfaction should be moderated by gender and attachment avoidance; higher attachment avoidance should predict lower and perhaps declining relationship satisfaction trajectories across the transition, particularly among men and those who report making relatively high contributions to childcare. However, lower attachment avoidance, even when reporting relatively high contributions to childcare, should buffer individuals from lower or declining relationship satisfaction.

*Hypothesis 4:* The relation between contributions to childcare and relationship satisfaction should be moderated by gender and childcare self-efficacy; lower childcare self-efficacy should predict lower and perhaps declining relationship satisfaction trajectories across the transition, particularly for men and those who report making relatively high contributions to childcare. However, greater childcare self-efficacy, even when reporting relatively high contributions to childcare, should buffer individuals from lower or declining relationship satisfaction.

*Hypothesis 5:* The relation between contributions to childcare and relationship satisfaction should be moderated by gender and perceptions of work–family conflict; greater perceived work–family conflict should predict lower and perhaps declining relationship satisfaction across the transition, particularly for men and those who report relatively high contributions to childcare. However, lower perceived work–family conflict, even when reporting relatively high contributions to childcare,

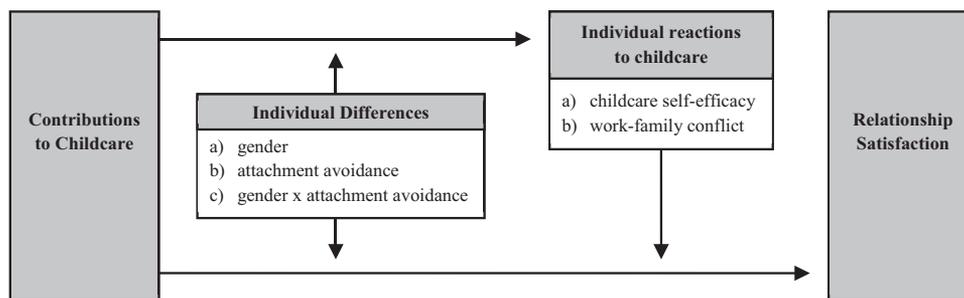


Figure 1. Model of the roles of contributions to childcare, individual differences, and individual reactions to childcare predicting relationship satisfaction across the transition to parenthood.

should buffer individuals from lower or declining relationship satisfaction.

## Method

### Participants

Cohabiting couples expecting their first child were recruited from childbirth classes offered at a local hospital in a Southwestern U.S. city. At Time 1, 192 couples (194 women, 192 men) participated in the study. During the study, 55 couples dropped out, resulting in 137 couples (144 women, 137 men) who participated at Time 5.<sup>1</sup> At Time 1, 95% of couples were married and had been married for a mean of 3.3 years ( $SD = 2.6$ ). The remaining 5% of couples were cohabiting (but not married) and had been living together for a mean of 1.85 years ( $SD = 2.19$ ).

At Time 1, the mean ages of men and women were 28.4 ( $SD = 4.4$ ) and 26.7 ( $SD = 4.1$ ) years, respectively. The majority of participants (82%) were Caucasian, 9% were Asian, and 9% were Hispanic. Forty-five percent of participants had a bachelor's degree (24% women), and an additional 25% (12% women) had a postbaccalaureate degree. Household income was moderate; 16% of the sample earned an annual household income under \$25,000, 46% earned \$25,000–\$55,000 per year, 38% earned more than \$55,000 annually, and 6% earned over \$100,000 a year. For additional sample information, see Rholes et al. (2011).

### Procedure

Couples were recruited through childbirth preparation classes and fliers distributed at local hospitals. To be eligible for participation, participants had to be expecting their first child and had to be married or cohabiting with their partners. At each data collection wave, questionnaires were mailed to each partner in separate envelopes. Participants were instructed to complete their questionnaires independently (without consulting with their partners) and to return their responses to the study coordinator in separate envelopes, which were provided to them. Self-report measures were completed 6 weeks before their expected due date (Time 1) and approximately 6 months (Time 2), 12 months (Time 3), 18 months (Time 4), and 24 months (Time 5) after the birth of their child. To minimize attrition, compensation was gradually increased across the study. Couples received \$50 for completing each of the Time 1, Time 2, and Time 3 questionnaires, \$75 for completing each of the Time 4 and Time 5 questionnaires, and were entered into a drawing for two \$500 cash prizes after completing all 5 waves of the study.

### Measures

**Contributions to the division of childcare (DOC).** The division of childcare tasks was assessed using well-validated questions adapted from Levy-Shiff and colleagues (1994; Levy-Shiff & Israelashvili, 1988). Specifically, participants were asked to indicate the percentage of time they spend, *relative to their partners*, completing 13 routine childcare tasks (e.g., play with the baby, change the baby's diaper, feed the baby). Each item was rated on a 10-point scale ranging from 0 (0%–10%) to 9 (91%–100%). Ratings at Time 1 indicated prenatal expectations about what the

division of childcare would be like after the child was born; ratings at all subsequent study waves reflected perceptions of the current division of childcare since the child was born. Mean scores were computed across the items within each phase, with higher scores indicating the completion of a higher percentage of childcare tasks. Across the five assessment waves, Cronbach alphas ranged from .85 to .91 for women and .83 to .93 for men.

**Attachment avoidance.** Attachment avoidance was assessed using an adapted version of the Experience in Close Relationships Scale (ECR; Brennan, Clark, & Shaver, 1998). The adapted ECR is a well-validated 36-item scale that asks participants to rate how well each item describes their beliefs and feelings toward romantic relationships and romantic partners *in general* (as opposed to their beliefs and feelings about their current partner/relationship). The avoidance subscale (18 items) contains items such as: "I prefer not to show partners how I feel deep down" and "I am nervous when partners get too close to me." Each item was rated on a 7-point scale ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Mean scores were computed across the items within each phase, with higher scores indicating greater attachment avoidance. Across the five assessment waves, Cronbach alphas ranged from .87 to .96 for women and .84 to .94 for men.

**Childcare self-efficacy.** The sense of self-efficacy that new parents' derived from completing childcare tasks was measured using a 12-item scale adapted from Pistrang (1984). Each item was rated on a 5-point scale ranging from 1 (*never*) to 5 (*very often*). Participants were asked to "think about the daily activities of taking care of your baby, and then think of how often you feel each of the following things." Example items include: "My baby gives me a feeling of self-fulfillment," "My baby makes me feel more competent," and "My baby gives me a feeling of self-worth." Ratings at Time 1 indicated prenatal expectations about childcare self-efficacy once the baby was born; ratings at all subsequent study waves reflected current perceptions of childcare self-efficacy. Mean scores were computed across the items within each phase, with higher scores indicating greater childcare self-efficacy. Across the five assessment waves, Cronbach alphas ranged from .89 to .94 for women and .91 to .94 for men.

**Work-family conflict.** Three items developed by Yang, Chen, Choi, and Zou (2000) assessed perceptions of conflict and interference between participants' work and family responsibilities. Example items include: "How much conflict do you feel there is between the demands of your job and your family life?" and "How much does your family situation interfere with your job?" Each item was rated on a 7-point scale ranging from 1 (*not at all/none*) to 7 (*a lot*). Mean scores were computed across the items within each phase, with higher scores indicating greater work-family conflict. Across the five assessment waves, Cronbach alphas ranged from .81 to .91 for women and from .77 to .82 for men.

**Relationship satisfaction.** Participants' satisfaction with their romantic relationship was assessed using the 10-item dyadic satisfaction subscale of the Dyadic Adjustment Scale

<sup>1</sup> Because partners (spouses) completed their surveys independently and returned them in separate envelopes, sometimes only one partner completed a given wave. This resulted in unequal numbers of men and women at various study waves.

(Spanier, 1976). The response options vary somewhat across items; however, most items were rated on 6-point scales ranging from 1 (*never*) to 6 (*all the time*). Example items include: "In general, how often do you think that things between you and your partner/spouse are going well?," and "How often do you and your partner/spouse quarrel?" Participants also rated their overall happiness with the relationship on a 7-point scale ranging from 0 (*extremely unhappy*) to 6 (*perfect*). Scores on the dyadic satisfaction subscale could range from 0 to 50, with higher scores indicating greater satisfaction at each phase. Across the five assessment waves, Cronbach alphas ranged from .81 to .89 for women and .83 to .89 for men.

## Results

### Data Analytic Models

Data were analyzed using multilevel modeling techniques for repeated measures within dyads (Kenny, Kashy, & Cook, 2006). Change in new parents' reactions to childcare and relationship satisfaction (the primary dependent measures) was modeled in two ways.<sup>2</sup> First, dyadic growth curve models were tested using multilevel modeling (MLM; Kashy & Donnellan, 2008). In these analyses, dyadic interdependence was modeled three ways: (a) as similarity on the outcome at time zero (by including a correlation between the spouses' intercepts); (b) as unique similarity at the specific time-points (by including a correlation between the spouses' time-specific residuals); and (c) as similarity in trajectory (by including a correlation between the spouses' slopes for time). This growth curve approach provides valuable information not only about the nature of the relations among contributions to childcare, individual differences, individual reactions to childcare, and marital satisfaction, but also about how these relations may *change* across the entire transition to parenthood period.

Because the questionnaires were completed separately by each partner and returned by mail, the precise timing of each assessment wave varied slightly within and across couples ( $SD = 0.36$ – $1.23$  months within each wave). Therefore, to accurately capture this variation, our Time variable was scored in months since the child's birth, depending on when each phase of questionnaires was returned by participants. The child's date of birth served as time zero. As a result, the intercept for all growth curve analyses indicates the outcome variable at birth, and the slope for time indicates monthly changes in that outcome variable across the transition to parenthood. All planned growth curve analyses were first conducted using both the linear and quadratic effects of time. These analyses revealed no systematic effects involving the quadratic terms, so they were dropped from the models. All growth curve results presented below include only the linear effects of time.

As a further test of the robustness of our findings, we also analyzed our data another way. Specifically, we analyzed changes in new parents' reactions to childcare and relationship satisfaction in terms of *residual change* since the prior wave. For example, for the models predicting individual reactions to childcare (i.e., childcare self-efficacy), at any given wave, relative contributions to childcare and individual differences at wave  $i$  were used to predict reactions to childcare at wave  $i$ , statistically controlling for reac-

tions to childcare at the prior wave ( $i-1$ ). Any significant effects of the predictor terms, therefore, represent the prediction of *residual change* in the outcome variables over the prior 6 months. These analyses, therefore, test for changes in the outcome measures within each set of adjacent waves (e.g., from Time 1 to Time 2, from Time 2 to Time 3, etc.).

For both types of analyses, gender was coded as  $-1$  for women and  $1$  for men. All other predictor variables were centered on the grand mean, and predictors in the growth curve models were time-varying. All possible interaction terms were included in all analyses. However, to simplify the presentation of the results, only interactions involving relative contributions to childcare and the focal moderator variables are elaborated upon for the growth curve models. Only interactions that corresponded to the focal (i.e., highest-order) growth curve effects are focused on for the residual change models.<sup>3</sup> For all significant interactions, high and low values were calculated at one standard deviation above and below the grand mean (Aiken & West, 1991).

### Preliminary Analyses

Means and standard deviations for the variables involved in the analyses are presented in Table 1. The values are shown for men and women separately at each wave. Correlations between these variables (as measured at Time 1) are presented in Table 2. There was no correlation between husbands' and wives' relative contributions to childcare; however, there were significant correlations between husbands' and wives' scores on most of the other variables, indicating nonindependence between dyad members' data. We controlled for this covariation in the multilevel models.

We also evaluated whether any differences existed between participants who completed the entire study and those who dropped out. Participants were considered dropouts if they failed to complete the final wave of the study (Time 5), regardless of when they dropped out. Independent samples  $t$  tests (see Table 3) revealed no differences between completers and dropouts for any of the variables in our analyses. However, the two groups did vary on several demographic variables. Participants who dropped out reported lower household income, age, and education levels than those who completed the study.<sup>4</sup> Dropouts also had been married or involved for a shorter length of time before childbirth.

Prior to conducting the primary analyses, we also tested for gender differences in relative contributions to childcare during the transition. This model included the fixed effect of gender and treated participants' responses from all waves as the outcome variable. This analysis revealed a main effect of gender. As Figure 2 illustrates, women reported completing approximately 70% of the childcare tasks, whereas men reported com-

<sup>2</sup> Example syntax for each type of model are included in the supplemental information.

<sup>3</sup> For all of the models examining residual change, there was always a significant main effect of the outcome variable at the prior wave ( $i-1$ ).

<sup>4</sup> All effects reported below remain after statistically controlling for the effects of household income and education, with one exception; the three-way interaction predicting perceptions of work-family conflict was no longer marginal.

Table 1  
Means and Standard Deviations of Variables at Each Assessment Wave for Men and Women

Variable	Assessment wave				
	Prenatal	6 months	12 months	18 months	24 months
<b>Men</b>					
Contributions to childcare	4.33 (1.33)	3.40 (1.34)	3.55 (1.26)	3.49 (1.13)	3.59 (1.26)
Attachment avoidance	2.50 (0.92)	2.31 (0.81)	2.34 (0.89)	2.29 (0.86)	2.37 (0.94)
Childcare self-efficacy	4.13 (0.63)	4.05 (0.71)	4.07 (0.73)	4.15 (0.72)	4.14 (0.68)
Work–family conflict	3.34 (1.27)	3.74 (1.33)	3.58 (1.43)	3.50 (1.32)	3.76 (1.34)
Relationship satisfaction	42.41 (5.29)	42.29 (4.99)	41.59 (6.84)	41.30 (6.53)	40.96 (6.86)
<b>Women</b>					
Contributions to childcare	6.59 (1.13)	6.98 (1.26)	6.81 (1.18)	6.85 (1.20)	6.70 (1.35)
Attachment avoidance	2.35 (0.93)	2.23 (0.96)	2.23 (0.99)	2.34 (1.06)	2.36 (1.14)
Childcare self-efficacy	4.10 (0.58)	4.21 (0.63)	4.20 (0.72)	4.20 (0.75)	4.18 (0.77)
Work–family conflict	2.83 (1.41)	2.75 (1.70)	2.91 (1.73)	2.77 (1.65)	2.82 (1.61)
Relationship satisfaction	42.88 (4.99)	42.29 (4.73)	42.50 (4.88)	42.42 (5.65)	41.54 (6.77)

pleting approximately 35% of the childcare tasks across the transition.<sup>5,6,7</sup>

### Individual-Level Outcomes Related to the Division of Childcare

We first examined new parents' individual reactions to the division of childcare and change trajectories of these reactions across the transition. These models included the fixed effects of relative contributions to childcare and applicable individual difference moderator variables (i.e., gender and/or attachment avoidance). The models also included all possible interaction terms. In the growth curve models, the fixed effect of time and interactions with time were also included to test for potential changes in these reactions across the transition. In the residual change models, individuals' reactions to childcare at the prior phase ( $i-1$ ) were statistically controlled to test for changes since the prior phase.

**Childcare self-efficacy (Hypothesis 1).** These models tested the moderating role of gender on the relation between relative contributions to childcare and childcare self-efficacy, as well as any changes in childcare self-efficacy that may have occurred over time. The growth curve model revealed a main effect of contributions to childcare (see Table 4) and 2 two-way interactions: one between gender and time, and another between contributions to childcare and time.

These effects, however, were qualified by a three-way interaction among contributions to childcare, gender, and time (see Figure 3), which partially supported Hypothesis 1. Although men and women both started the transition at similar levels of childcare self-efficacy (regardless of their initial expected contributions to childcare), relatively low contributions to childcare predicted slight *increases* in childcare self-efficacy for men,  $b = 0.005$ ,  $t(180) = 2.13$ ,  $p = .04$ , but clear *decreases* for women over time,  $b = -0.019$ ,  $t(314) = -3.57$ ,  $p < .001$ . When individuals reported relatively high contributions to childcare, men's childcare self-efficacy did not change over time,  $b = 0.0002$ ,  $t(322) = 0.039$ ,  $p = .97$ , whereas women's self-efficacy slightly increased over time,  $b = 0.006$ ,  $t(196) = 2.86$ ,  $p = .005$ . In other words, women seem to gain a greater sense of self-efficacy from childcare when they report making relatively high contributions, whereas men appear to gain more self-efficacy from childcare when they report making relatively low contributions.

A two-way interaction between relative contributions to childcare and gender revealed a very similar pattern of results in the residual change model,  $b = -0.036$ ,  $t(908) = -2.33$ ,  $p = .02$ . Specifically, women's childcare self-efficacy increased from the prior phase to the current one when they reported making relatively high contributions to childcare at the current phase.

**Work–family conflict (Hypothesis 2).** These models tested the moderating roles of gender and attachment avoidance on the relation between relative contributions to childcare and perceptions of work–family conflict, as well as any changes in these perceptions that may have occurred over time. The growth curve model revealed main effects of contributions to childcare, gender, and attachment avoidance (see Table 5). There were no significant interaction effects.

<sup>5</sup> It is important to note that gender ideology moderates this relation between gender and relative contributions to childcare. Gender ideology was assessed using the Role Orientation subscale of the revised Marital Satisfaction Inventory (MSI-R; Snyder, 1997). As would be expected, more egalitarian gender ideology in men was associated with higher reported contributions to childcare,  $b = 0.029$ ,  $t(469) = 4.47$ ,  $p < .001$ , whereas more egalitarian gender ideology in women predicted lower reported contributions,  $b = -0.019$ ,  $t(439) = -3.07$ ,  $p = .02$ , compared with same-gender others who reported more traditional gender ideology.

<sup>6</sup> All significant interactions are graphed using 1 *SD* above and below the grand mean as high and low values (Aiken & West, 1991), including reported contributions to childcare. Because women in our sample reported contributing almost twice as much to childcare tasks as their male partners did, even women making "low" contributions may still be making higher contributions to childcare, *relative to their partner*. Similarly, men making "high" contributions may still be making lower contributions to childcare, *relative to their partner*. Therefore, it is best to interpret the "high" and "low" designations in relation to what is typical *within* each gender; they do not necessarily indicate greater versus lesser contributions relative to one's specific partner.

<sup>7</sup> We did not derive any predictions for attachment anxiety. According to attachment theory (Bowlby, 1973, 1988), caring for children should not have any systematic effects on personal or relational outcomes for highly anxious individuals across the transition period. However, because we assessed the level of attachment anxiety in all participants, we ran exploratory analyses that included attachment anxiety and interactions involving anxiety, parallel to those involving avoidance, for all the models that included attachment avoidance. The inclusion of anxiety did not impact, alter, or qualify our attachment avoidance findings. See the supplemental information for these results.

Table 2  
Correlations for Variables at Time 1 for Men and Women

Variable	1	2	3	4	5
1. Contributions to childcare	(-.12)	.05	.02	-.05	-.18*
2. Attachment avoidance	-.07	(.18*)	-.22**	.00	-.34***
3. Childcare self-efficacy	.34***	-.10	(.23**)	-.11	.07
4. Work-family conflict	-.13 <sup>†</sup>	.19**	.00	(.07)	-.18*
5. Relationship satisfaction	-.01	-.33***	.14*	-.09	(.57***)

Note. Correlations among variables collected from men (husbands) appear below the diagonal; those collected from women (wives) appear above the diagonal. The values on the diagonal (in parentheses) are correlations between measures collected from each partner (e.g., the correlation between husbands' and wives' relationship satisfaction).

<sup>†</sup>  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

The residual change model also found main effects of avoidance and contributions to childcare. These effects, however, were qualified by a marginal three-way interaction among contributions to childcare, gender, and attachment avoidance,  $b = 0.055$ ,  $t(1143) = 1.81$ ,  $p = .07$ . In particular, higher levels of avoidance predicted increased perceptions of work-family conflict from the prior phase to the current one for both men,  $b = 0.265$ ,  $t(466) = 3.95$ ,  $p < .001$ , and women,  $b = 0.417$ ,  $t(590) = 2.49$ ,  $p = .01$ , who reported making relatively low contributions to childcare at the current phase. However, highly avoidant men who reported making relatively high childcare contributions experienced increases in work-family conflict from the prior phase to the current one,  $b = .320$ ,  $t(568) = 1.77$ ,  $p = .077$ , whereas highly avoidant women who reported making relatively high contributions to childcare did not experience increases in work-family conflict from phase to phase,  $b = .031$ ,  $t(559) = 0.46$ ,  $p = .64$ .

In sum, these results provide some support for Hypothesis 2 in that higher levels of avoidance were associated with greater residual change in work-family conflict. This effect, however, was much more pronounced for highly avoidant men than it was for

highly avoidant women who reported making relatively high contributions to childcare.

### Relationship-Level Outcomes Related to the Division of Childcare

We next examined relationship satisfaction in connection with both the division of childcare and change trajectories in relationship satisfaction across the transition. These models included the fixed effects of relative contributions to childcare, relevant individual difference moderator variables (i.e., gender and/or attachment avoidance), and applicable childcare reaction moderator variables (i.e., childcare self-efficacy or work-family conflict). The models also included all possible interaction terms. In the growth curve models, the fixed effect of time and interactions with time were also included to test for changes in relationship satisfaction across the transition. In the residual change models, individuals' relationship satisfaction at the prior phase ( $i-1$ ) was statistically

Table 3  
Differences Between Completers and Dropouts on Time 1 Variables

Variable	Completers		Dropouts		<i>t</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Contributions to childcare	5.39	1.65	5.68	1.75	1.52	0.17
Attachment avoidance	2.39	0.93	2.50	0.91	1.03	0.12
Childcare self-efficacy	4.09	0.61	4.17	0.60	1.09	0.13
Work-family conflict	3.05	1.30	3.20	1.53	0.85	0.14
Relationship satisfaction	42.96	4.24	41.79	6.95	1.62	0.20
Marriage length (years)	3.02	2.58	2.29	2.73	2.33*	0.27
Age	28.09	4.21	26.11	4.27	4.09***	0.47
Level of education	4.96	1.16	4.10	1.53	5.24***	0.63
Household income	3.41	1.67	2.82	1.46	3.18**	0.38

Note. Level of education was rated on a 7-point scale: 1 (no high school diploma or GED), 2 (high school diploma or GED), 3 (some college or technical school, but no degree), 4 (2-year degree), 5 (4-year degree), 6 (master's degree), or 7 (doctoral degree). Household income was rated on a 7-point scale: 1 (under \$25,000), 2 (\$25,000 to \$39,999), 3 (\$40,000 to \$54,999), 4 (\$55,000 to \$69,999), 5 (\$70,000 to \$84,999), 6 (\$85,000 to \$99,999), or 7 (over \$100,000).

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

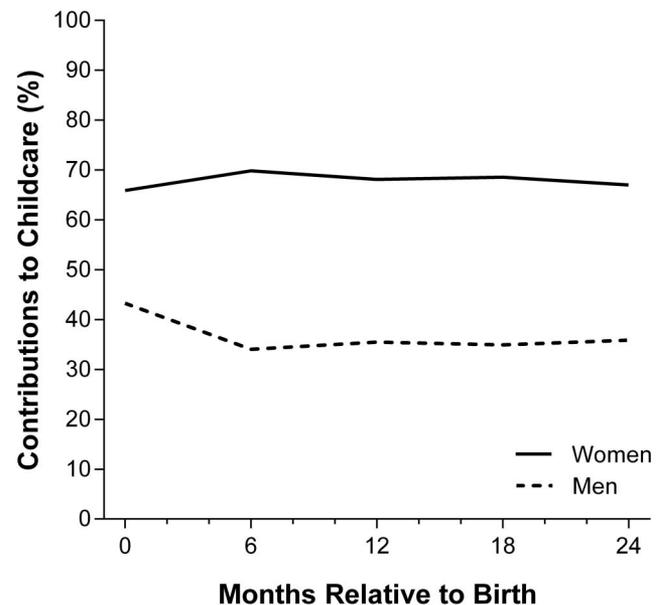


Figure 2. Men's and women's average reported relative contributions to childcare at each assessment wave.

**Table 4**  
*Childcare Self-Efficacy as a Function of Contributions to Childcare, Moderated by Gender*

Fixed effects	<i>b</i>	<i>t</i>
Intercept	4.15	106.07***
Gender	0.016	0.48
Time	-0.002	-1.02
DOC	0.031	1.99*
Gender × Time	0.004	2.20*
Gender × DOC	0.027	1.72
Time × DOC	0.003	2.46**
Gender × Time × DOC	-0.004	-3.45***

*Note.* DOC = contributions to the division of childcare. For gender, 1 = men, -1 = women.  
\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

controlled to test for changes since the prior phase. We first examined the moderating effects of the individual differences (i.e., Hypothesis 3: gender and attachment avoidance), and then examined the additional moderating effects of each of the childcare reaction variables (i.e., Hypothesis 4: childcare self-efficacy; Hypothesis 5: work-family conflict).

**Gender and attachment avoidance (Hypothesis 3).** These models tested the moderating effects of gender and attachment avoidance on the relation between relative contributions to childcare and relationship satisfaction, as well as changes in relationship satisfaction that occurred over time. The growth curve model revealed main effects of contributions to childcare, gender, attachment avoidance, and time (see Table 6). There were also 2 two-way interactions: one between gender and avoidance, and another between avoidance and time. In addition, there was a three-way interaction among gender, avoidance, and time.

These effects, however, were qualified by a four-way interaction (see Figure 4 and Table 7 for the simple slopes). Consistent with Hypothesis 3, making relatively high contributions to childcare predicted lower relationship satisfaction at birth for highly avoidant individuals, with avoidant men also showing sharp de-

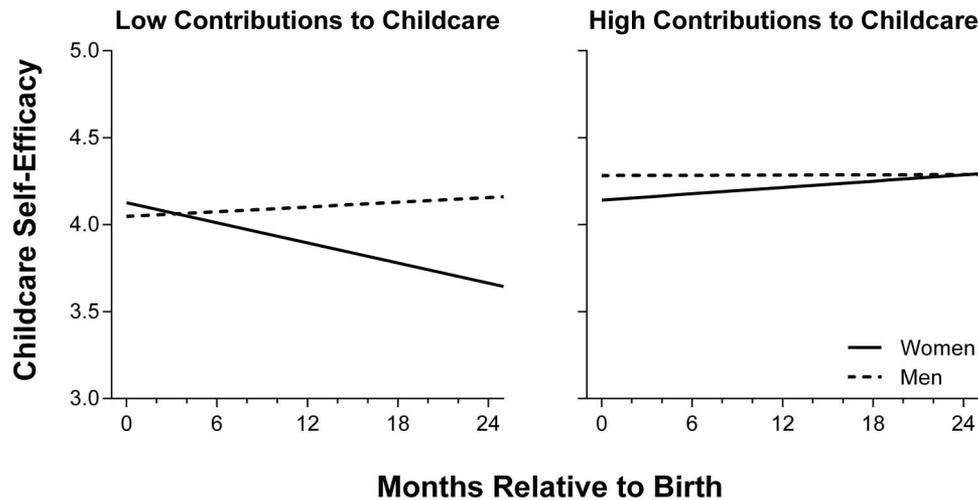
**Table 5**  
*Perceptions of Work-Family Conflict as a Function of Contributions to Childcare, Moderated by Attachment Avoidance*

Fixed effects	<i>B</i>	<i>t</i>
Intercept	3.13	38.32***
Gender	0.194	2.41*
Time	0.006	1.14
DOC	-0.083	-2.21*
Avoidance	0.177	2.23*
Gender × Time	0.000	0.01
Gender × DOC	0.005	0.14
Gender × Avoidance	0.143	1.80†
Time × DOC	0.003	-1.08
Time × Avoidance	0.002	0.40
DOC × Avoidance	0.021	0.52
Gender × Time × DOC	-0.000	-0.01
Gender × Time × Avoidance	-0.003	-0.50
Gender × DOC × Avoidance	0.010	0.24
Time × DOC × Avoidance	-0.002	-0.60
Gender × Time × DOC × Avoidance	0.001	0.29

*Note.* DOC = contributions to the division of childcare. For gender, 1 = men, -1 = women.  
†  $p < .10$ . \*  $p < .05$ . \*\*\*  $p < .001$ .

clines in satisfaction across the transition. Highly avoidant individuals who reported making relatively low childcare contributions also showed declines in relationship satisfaction, but they were less extreme than those experienced by highly avoidant men who reported making relatively high childcare contributions. In contrast, less avoidant individuals had higher and more stable relationship satisfaction trajectories, regardless of their contributions to childcare. Among those who reported making relatively high contributions to childcare, highly avoidant men report relationship satisfaction levels approximately *two standard deviations* lower than less avoidant men at 2-years postpartum.

A three-way interaction among contributions to childcare, gender, and avoidance revealed a very similar pattern of results in the



*Figure 3.* Linear changes in childcare self-efficacy over time as a function of contributions to childcare, moderated by gender.

Table 6

*Relationship Satisfaction as a Function of Contributions to Childcare, Moderated by Gender and Attachment Avoidance, Childcare Self-Efficacy, or Work–Family Conflict*

Fixed effects	Moderator					
	Attachment avoidance		Childcare self-efficacy		Work–family conflict	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Intercept	42.833	127.53***	42.881	120.21***	42.771	121.26***
Gender	–0.419	–2.00*	–0.549	–2.56*	–0.453	–2.01*
Time	–0.082	–3.95***	–0.097	–4.43***	–0.078	–3.60***
DOC	–0.266	–2.39*	–0.324	–2.86**	–0.320	–2.70**
Moderator	–1.070	–4.19***	0.870	2.52*	–0.352	–2.28*
Gender × Time	–0.021	–1.43	–0.027	–1.66†	–0.015	–0.93
Gender × DOC	0.111	0.90	0.161	1.27	0.119	0.92
Gender × Moderator	–0.610	–2.56*	0.247	0.77	–0.003	–0.21
Time × DOC	0.000	0.04	–0.003	–0.30	0.001	0.16
Time × Moderator	–0.077	–4.33***	0.079	3.35**	–0.042	–3.45**
DOC × Moderator	–0.168	–1.29	0.078	0.45	0.010	0.13
Gender × Time × DOC	–0.009	–0.99	–0.016	–1.62	–0.010	–1.05
Gender × Time × Moderator	–0.038	–2.23*	–0.005	–0.21	–0.017	–1.46
Gender × DOC × Moderator	0.138	1.02	–0.137	–0.77	0.026	0.33
Time × DOC × Moderator	–0.002	–0.18	–0.004	–0.31	–0.005	–0.88
Gender × Time × DOC × Moderator	–0.030	–3.44**	0.032	2.71**	–0.017	2.79**

Note. DOC = contributions to the division of childcare. For gender, 1 = men, –1 = women.

†  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

residual change model,  $b = -0.457$ ,  $t(666) = 4.56$ ,  $p < .001$ , including the severe decline in relationship satisfaction from phase to phase among highly avoidant men who reported making relatively high contributions to childcare.

**Childcare self-efficacy (Hypothesis 4).** These models tested the moderating roles of gender and childcare self-efficacy on the relation between relative contributions to childcare and relationship satisfaction, as well as changes in relationship satisfaction that occurred over time. The growth curve model revealed main effects of contributions to childcare, gender, childcare self-efficacy, and time (see Table 6). There was also an interaction between childcare self-efficacy and time.

These effects, however, were qualified by a four-way interaction (see Figure 5 and Table 7 for the simple slopes). Consistent with Hypothesis 4, lower childcare self-efficacy predicted declines in marital satisfaction over time. This effect was especially pronounced for men who reported relatively high contributions to childcare and for women who reported relatively low contributions to childcare. In contrast, greater childcare self-efficacy predicted higher and more stable relationship satisfaction trajectories for both men and women, regardless of the level of their childcare contributions.

A three-way interaction among contributions to childcare and childcare self-efficacy revealed a very similar pattern of results in the residual change model,  $b = 0.476$ ,  $t(848) = 3.73$ ,  $p < .001$ . Specifically, the relation between childcare self-efficacy and changes in relationship satisfaction from phase to phase was strongest among men who reported relatively high contributions to childcare and among women who reported relatively low contributions to childcare.

**Work–family conflict (Hypothesis 5).** These models tested the moderating roles of gender and work–family conflict on the relation between relative contributions to childcare and relationship satisfaction, as well as changes in relationship satisfaction that

occurred over time. The growth curve model revealed main effects of contributions to childcare, gender, work–family conflict, and time. There was also a two-way interaction between work–family conflict and time (see Table 6).

These effects, however, were qualified by a four-way interaction (see Figure 6 and Table 7 for the simple slopes). Consistent with Hypothesis 5, higher work–family conflict was generally associated with declines in relationship satisfaction across time, but the effect was most pronounced among men who also reported relatively high contributions to childcare. High work–family conflict was associated with lower, but not declining, marital satisfaction for women who reported relatively high contributions to childcare. In contrast, lower work–family conflict was associated with higher and more stable relationship satisfaction for both men and women across the transition, regardless of their relative contributions to childcare.

Finally, a three-way interaction among contributions to childcare, gender, and work–family conflict revealed a very similar pattern of results in the residual change model,  $b = -0.243$ ,  $t(651) = -3.74$ ,  $p < .001$ . In particular, higher work–family conflict was associated with lower relationship satisfaction, with men who also reported relatively high childcare contributions having the lowest relationship satisfaction,  $b = -1.876$ ,  $t(390) = -4.76$ ,  $p < .001$ .

## Discussion

This longitudinal study examined individual and relationship outcomes associated with contributions to childcare across the first 2 years of the transition to parenthood. The results reveal that simply doing a larger proportion of childcare tasks does not necessarily generate more negative individual or relational outcomes across the transition. Instead, one needs to consider how certain individual differences, namely gender and attachment

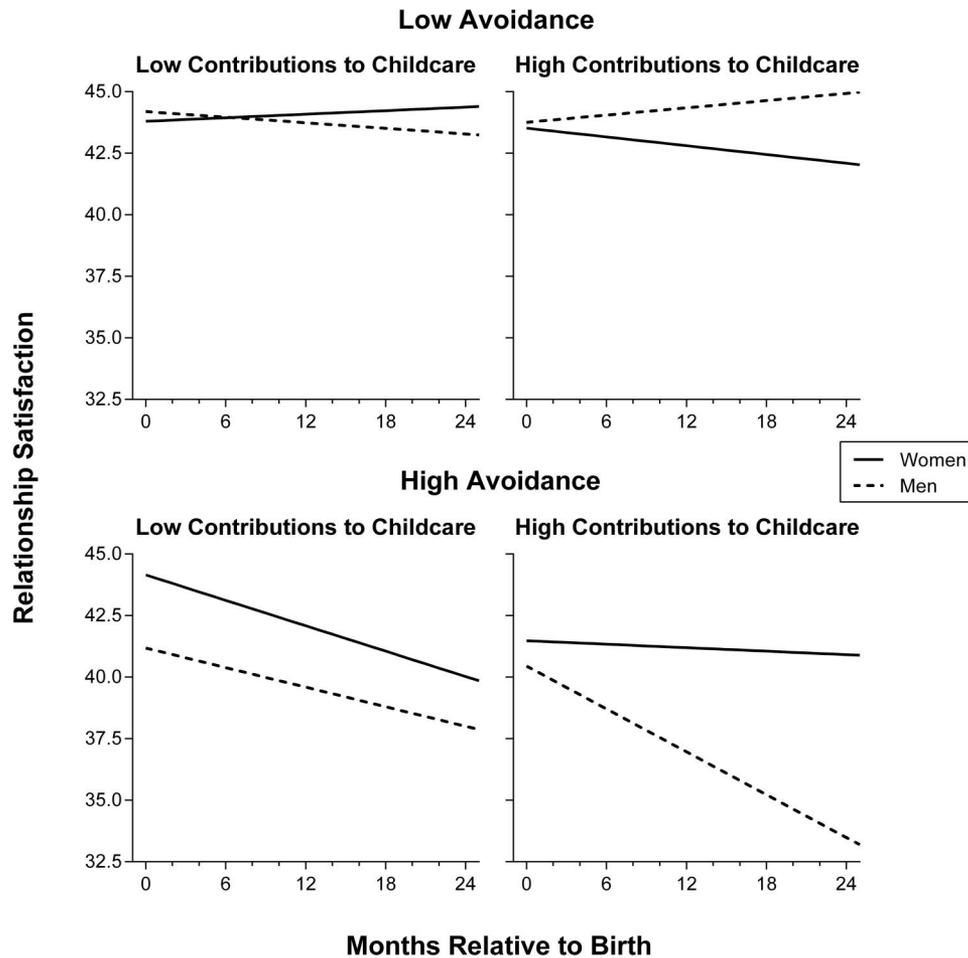


Figure 4. Linear changes in relationship satisfaction over time as a function of contributions to childcare, moderated by gender and attachment avoidance.

avoidance, shape new parents' reactions to childcare activities, above and beyond the sheer proportion of childcare tasks that individuals report completing. The results also indicate that certain reactions to childcare contributions can exacerbate or buffer partners (and marriages) from negative consequences across this stressful life transition.

To date, the wider division of labor literature has typically examined combinations of various demographic factors (e.g., income, education, hours of work outside the home) and attitudes (e.g., prenatal expectations, parenting attitudes, perceived fairness) to try to elucidate ties between childcare and relationship outcomes (e.g., Adamsons, 2013; Biehle & Mickelson, 2012; Goldberg & Perry-Jenkins, 2004; Meier et al., 2006; Stevens et al., 2001; Stevens, Minnotte, Mannon, & Kiger, 2006; Walzer, 1996). Studies in this area have frequently adopted a largely atheoretical, computational approach to the question, trying to boil down relational outcomes to a mathematical function of variables such as time spent on childcare, time spent working outside the home, and attitudes relevant to individuals' ideal balance of the two. The result has been a literature plagued by complex and often contradictory findings. As the patterns and size of some of the effects

reported above indicate, attachment avoidance plays a powerful role in how people—and especially how highly avoidant men—experience the transition to parenthood and the toll it takes on their romantic relationships. Our results highlight the need for moving beyond these atheoretical, computational approaches to studying childcare, and instead focusing more on fundamental aspects of the self that are relevant to caregiving. Future research in this area needs to examine key individual difference factors that strongly shape individuals' reactions to engaging in childcare and caregiving more generally, especially attachment avoidance (Bowlby, 1979, 1988; Rholes et al., 1997).

### Individual Difference Moderators

Our results highlight the importance of two individual differences relevant to caregiving (and interactions between them): gender and attachment avoidance.

**Gender.** Despite the fact that women reported contributing almost twice as much to the division of childcare as their male partners did, women seemed to handle the transition to parenthood and childcare tasks better than most men. This might be attribut-

Table 7

*Simple Slopes for Four-Way Interactions With Gender and Attachment Avoidance, Childcare Self-Efficacy, or Work-Family Conflict*

	Low contributions to childcare				High contributions to childcare			
	Low avoidance		High avoidance		Low avoidance		High avoidance	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
<b>Men</b>								
Intercept	44.266	93.15***	41.182	91.00***	43.758	49.49***	40.450	42.97***
Slope for time	-0.037	-1.30	-0.132	-4.81***	0.049	0.71	-0.290	-4.27***
<b>Women</b>								
Intercept	43.861	52.20***	44.150	46.57***	43.520	107.08***	41.480	102.53***
Slope for time	0.012	0.202	-0.172	-3.02**	-0.059	-2.67**	-0.024	-1.07

	Low childcare self-efficacy		High childcare self-efficacy		Low childcare self-efficacy		High childcare self-efficacy	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
	<b>Men</b>							
Intercept	41.805	92.79***	43.513	87.03***	41.315	38.92***	42.695	55.60***
Slope for time	-0.099	-3.44***	-0.074	-2.38*	-0.251	-2.92**	-0.071	-1.10
<b>Women</b>								
Intercept	44.268	49.28***	44.533	51.45***	41.732	94.47***	43.188	100.56***
Slope for time	-0.204	-4.43***	0.010	0.18	-0.052	-2.12*	-0.034	-1.49

	Low work-family conflict		High work-family conflict		Low work-family conflict		High work-family conflict	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
	<b>Men</b>							
Intercept	43.377	79.50***	42.065	93.24***	42.346	48.01***	41.486	44.19***
Slope for time	-0.050	-1.40	-0.098	-3.63***	0.045	0.61	-0.267	-3.85***
<b>Women</b>								
Intercept	44.584	57.06***	43.616	41.54***	42.930	113.86***	41.764	89.78***
Slope for time	-0.013	-0.23	-0.161	-2.30*	-0.036	-1.81†	-0.043	-1.61

Note. For gender, 1 = men, -1 = women.

†  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

able to the fact that the typical woman has greater familiarity or experience with childcare tasks. Whereas men experienced steeper declines in relationship satisfaction when they reported making relatively high contributions to childcare, women's satisfaction trajectories were much less influenced by the amount of childcare they reported completing.

With regard to childcare self-efficacy, women had more negative reactions not to making high contributions to childcare, but to making *low* contributions. We found that both men and women derived similar levels of childcare self-efficacy from making relatively high childcare contributions, but making low contributions interfered with this process for women. Specifically, women's childcare self-efficacy declined across the transition when they reported making low childcare contributions, whereas men's childcare self-efficacy actually increased at low contribution levels. These findings are consistent with prior research showing that new mothers tend to report greater infant care self-efficacy and more parenting satisfaction than new fathers do (Ehrenberg et al., 2001; Elek et al., 2003; Hudson et al., 2001), and they also shed light on the role of childcare contribution levels in predicting these differences over time.

New parents' feelings of childcare self-efficacy were also systematically related to relationship satisfaction trajectories across the transition, but these effects were also moderated by gender. On

the whole, higher childcare self-efficacy predicted higher and steadier relationship satisfaction trajectories across the transition, regardless of an individual's relative contributions to childcare. In contrast, lower childcare self-efficacy predicted declines in relationship satisfaction across time. These declines, however, became more pronounced with relatively high contributions to childcare, but only for men. Greater childcare self-efficacy, in other words, appears to buffer new parents from the declines in marital satisfaction that may occur during the transition to parenthood (see Kohn et al., 2012); however, lower childcare self-efficacy is particularly detrimental for men's relationship satisfaction, possibly due to their lesser familiarity with childcare tasks and greater difficulty balancing the demands of new fatherhood (e.g., remaining engaged in childcare tasks while also supporting their family financially; see Aumann et al., 2011).

**Attachment avoidance.** Attachment avoidance systematically shaped new parents' reactions to childcare, both at individual and relational levels. As hypothesized, highly avoidant individuals perceived increasing levels of work-family conflict from one wave to the next when they reported making high contributions to childcare. Avoidant individuals are likely to view both their child and the demands of new parenthood as restricting their autonomy and blocking their other important life goals (both personal and professional), two things that are threatening to highly avoidant

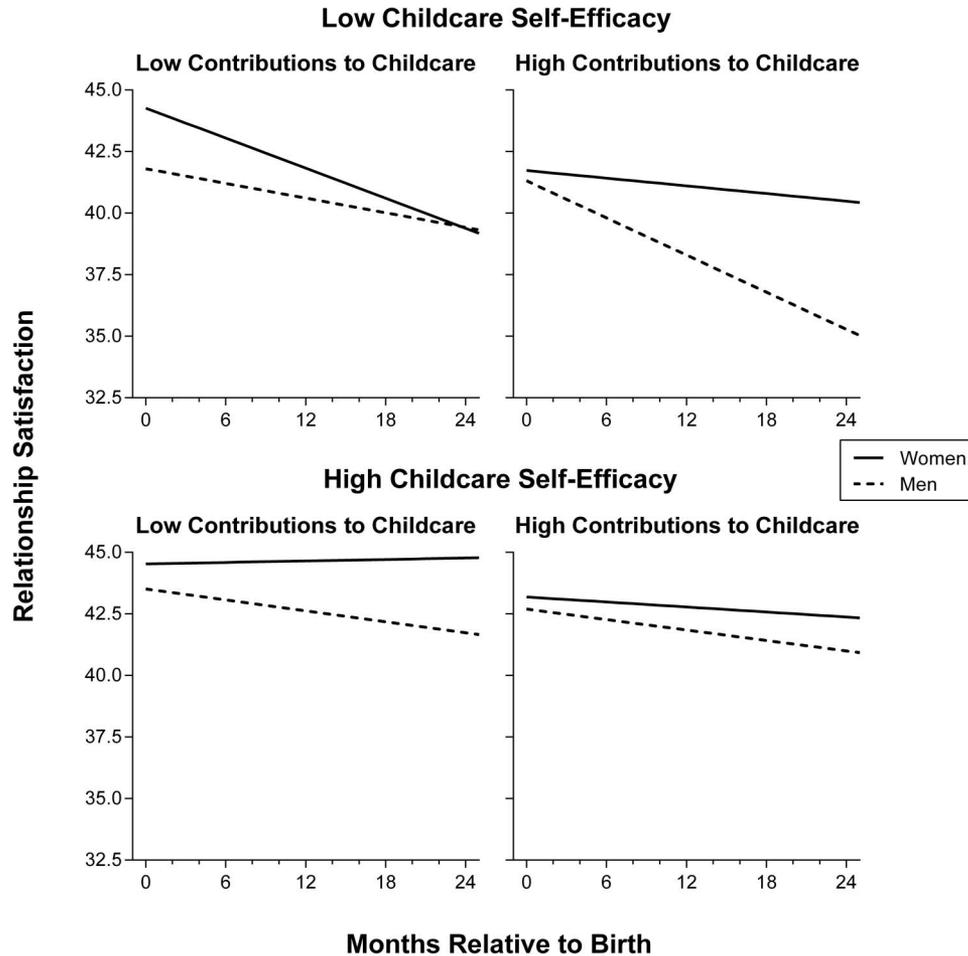


Figure 5. Linear changes in relationship satisfaction over time as a function contributions to childcare, moderated by gender and childcare self-efficacy.

people (Feeney, 2008; Mikulincer & Shaver, 2007). Greater perceived work–family conflict, in turn, predicted declines in marital satisfaction across the first 2 years of the transition to parenthood, particularly among men who reported relatively high contributions to childcare.

Attachment avoidance also shaped relationship satisfaction trajectories across time. Specifically, highly avoidant people experienced declines in relationship satisfaction across the transition, regardless of their level of childcare contributions. This effect, however, was especially pronounced for highly avoidant men who reported relatively high contributions to childcare. In fact, when their children were 2-years-old, the relationship satisfaction of these men was approximately *two standard deviations* lower than it was for less avoidant men who reported the same high contributions to childcare. Thus, highly avoidant individuals' negative reactions to childcare appear to also hurt their romantic relationships. It is possible that the chronic stress associated with the transition hampers their ability to regulate their negative thoughts, feelings, and behaviors when interacting with their partners on a daily basis (see Berant, Mikulincer, & Florian, 2001).

**Moderation of avoidance by gender.** Finally, as predicted, gender interacted with attachment avoidance to predict individual

and relational outcomes across the transition, with highly avoidant men clearly having the most difficulty adjusting to the transition. Highly avoidant men who made relatively high contributions to childcare reported increases in perceptions of work–family conflict from phase to phase, but highly avoidant women's perceptions of work–family conflict were steady from phase to phase. Whereas highly avoidant men reported precipitous declines in relationship satisfaction across the transition when they reported making relatively high contributions to childcare, highly avoidant women who also made relatively high contributions reported fairly steady relationship satisfaction trajectories. When the minimal caregiving knowledge/skills and ill-defined role expectations of fatherhood are mixed with less interest and comfort with parenting (which are characteristic of highly avoidant men), this combination appears to create a “perfect storm,” resulting in especially negative intrapersonal and interpersonal outcomes across the transition to parenthood.

Highly avoidant women's resiliency, even when making relatively high contributions to childcare, was somewhat unexpected. Whereas highly avoidant women who reported high contributions to childcare did report lower mean levels of satisfaction across the transition, they did not show the same sharp declines in relation-

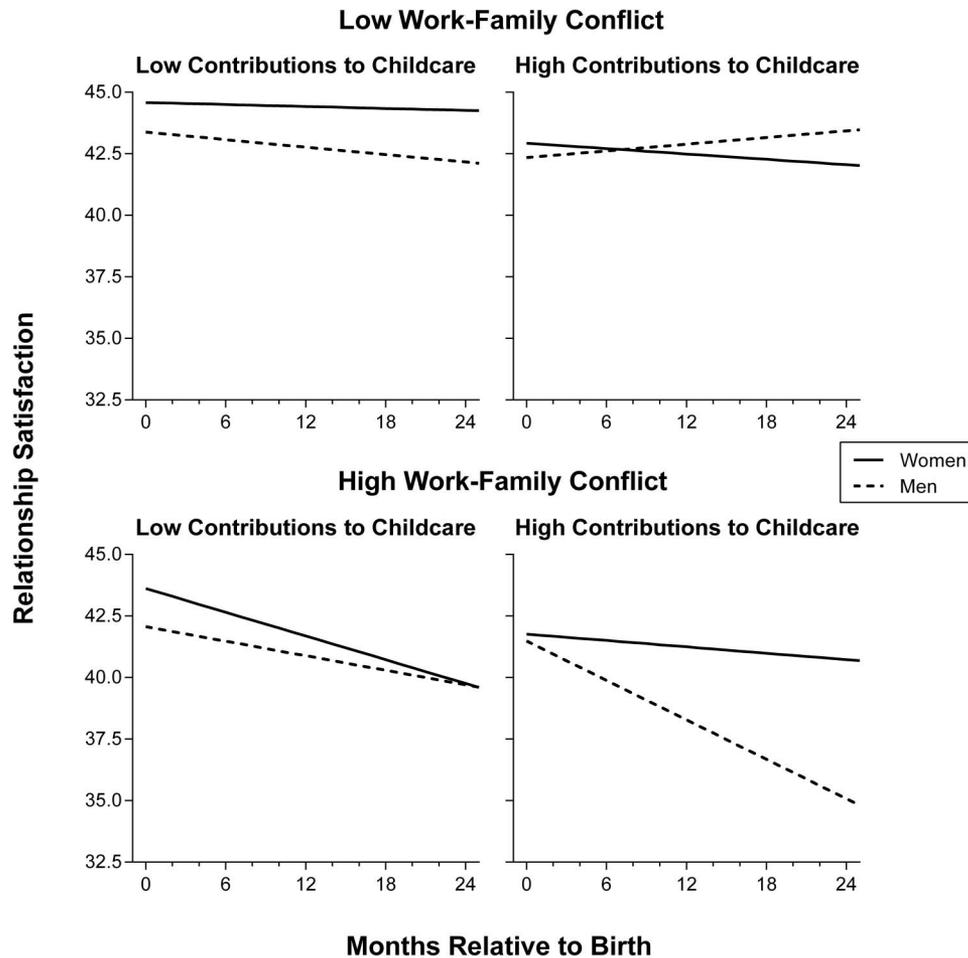


Figure 6. Linear changes in relationship satisfaction over time as a function of contributions to childcare, moderated by gender and perceptions of work–family conflict.

ship satisfaction over time that highly avoidant men did. This null effect parallels women’s tendency to not experience satisfaction declines across the transition (see Kohn et al., 2012). We suspect that once highly avoidant women become established in their role as primary caregivers, they may learn to derive more satisfaction from this role, especially if their caregiving experiences run counter to their initial expectations. Indeed, in a different transition sample, Simpson, Rholes, Campbell, and Wilson (2003) found that highly avoidant new mothers fare better across the first 6 months of the transition when they feel closer to their newborns. When highly avoidant individuals find themselves in situations from which they cannot easily “escape” that disconfirm their initially negative expectations, their working models should change in response to these experiences (see Bowlby, 1988; Simpson, Rholes, Campbell, & Wilson, 2003). This psychological process could account for this unexpected resiliency among highly avoidant women.

### Strengths and Limitations

Our longitudinal study has several strengths that set it apart from most other transition to parenthood studies. First, unlike most prior

studies, our study focused on key individual differences that had a clear impact on certain individual and relational outcomes across the transition. Instead of examining how contributions to childcare affect new parents *in general* during the transition, we identified which *types* of individuals should adjust best and worst to the introduction of new and demanding childcare tasks. This may help practitioners to identify and intervene with those people who are most vulnerable to problems during this particularly stressful life event. Second, we identified important factors that exacerbate or buffer individuals and relationships from negative outcomes across the transition. Our results illustrate that one must consider *how* certain people react to their contributions to childcare, above and beyond the sheer amount of those contributions. Although it is difficult to decrease the amount of childcare a new parent must complete, practitioners may be able to help new parents think about their contributions to childcare in ways that maintain or even improve relational outcomes.

Our study also has several methodological strengths that set it apart. For example, we assessed the first 2 years of the transition to parenthood. Most prior transition studies have had only one or two assessments that occurred soon after birth (e.g., Adamsons,

2013; Goldberg & Perry-Jenkins, 2004; Rholes, Simpson, Campbell, & Grich, 2001). By following new parents across five time-points spanning 2 years, we could track longer-term outcomes as parents fully settle into their new life roles. We also investigated both individual and relational outcomes for *both* sexes. Many past transition studies have focused exclusively on how women deal with the transition to parenthood (e.g., Behringer, Reiner, & Spangler, 2011; Churchill & Davis, 2010; Gauthier, Guay, Senecal, & Pierce, 2010; Goldberg & Perry-Jenkins, 2004; Nomaguchi & Brown, 2011; Salmela-Aro, Nurmi, Saisto, & Halmesmaki, 2001). However, as we have shown, highly avoidant men fare the worst across the transition. By placing equal focus on women and men, we achieved a more complete and balanced portrait of how *couples* adjust to having their first baby. Finally, we distinguished between the more general division of labor following the birth of a first child and the more specific division of routine childcare tasks in the home. Many prior studies have combined these concepts, but they should be distinguished (see Goldberg & Perry-Jenkins, 2004; Sullivan, 2013). Whereas the division of household labor is gradually becoming more balanced between men and women (and was close to 50:50 in this study), the division of childcare remains sharply unbalanced, being closer to 70:30 (with women still doing most of the childcare tasks). The transition, therefore, involves different types and amounts of new work for mothers versus fathers. The two types of tasks also have distinct personal and relational consequences (e.g., Pedersen et al., 2011; Steil, 1997; Stevens et al., 2005; Sullivan, 2013; see Coltrane, 2000, for review). Childcare tends to be more stressful and onerous than most common household tasks, which should be particularly true for highly avoidant men. By focusing on childcare tasks per se, this study was able to examine individual and relational outcomes as they relate to a major source of stress that is unique to the transition to parenthood.

This study also has some limitations. We chose to assess new parents' perceptions of their childcare contributions *relative to their partners*, instead of perceptions of their absolute contribution to childcare in hours per day or week. By asking for estimates of couples' relative contributions, however, we may have gotten a more accurate measurement of the division of childcare across the transition to parenthood. Prior research has found a pervasive tendency for individuals to overreport their contributions to childcare on retrospective reports of time spent on household and childcare tasks; comparisons of retrospective estimates to time-diary data have shown that both men and women considerably overestimate their contributions, with men's estimates being particularly inaccurate (Kamo, 2000; Marini & Shelton, 1993; Press & Townsley, 1998). By assessing childcare contributions *relative to one's partner*, we avoided the inaccuracies of these estimates and may have gotten a more accurate assessment of the division of childcare responsibilities. However, we do not know what participants thought or felt about the fairness of their division. Such perceptions might also forecast individuals' personal and relational adjustment across the transition.

We also do not know how much participants were working at each time-point during the transition, so we could not determine how much total labor outside the home each partner was completing. The extent of individuals' workload, both inside *and* outside the home, should also affect their reactions and adjustment to the introduction and division of childcare tasks. For example, the combi-

nation of large amounts of work both inside *and* outside the home may partially explain men's negative individual and relational outcomes across the transition, especially those of highly avoidant men. Our study, however, had a good psychological measure of work-family conflict, which assessed how much strain individuals felt regarding the demands of their work life in relation to their family life. These perceptions of work-family conflict may actually be a better variable to use in transition studies than raw number of hours of work outside the home, because individuals may react very differently to the same amount of work, depending on the nature, structure, and demands of their jobs.

The nature of our variables and data analytic techniques also limit the conclusions that can be drawn from this study. There are a number of ways to analyze the type of longitudinal data we collected. By using a growth curve approach, we are able to model trajectories of change in individual and relational outcomes over the entire transition to period, which was the primary purpose of this research. Our further examination of these effects in terms of residual change between adjacent assessment waves lends further support to our findings. This research, of course, is correlational, so we cannot determine causality from our analyses. Nevertheless, given the wider literature on gender as it relates to the division of labor, along with the extensive literature on attachment avoidance as it relates to relationships and caregiving, we can be confident that these constructs are unique and that our results make sense within the context of these literatures. Although reverse causal pathways to those we suggest are possible, they seem unlikely. Definitely testing and confirming these causal pathways is an important task for future research, which may be best achieved by studies using more frequent measurements over short time periods (e.g., daily diaries).

Finally, at Time 1 (6 weeks before birth), two of the variables assessed participants' expectations about what childcare would be like once the baby was born (i.e., contributions to childcare and childcare self-efficacy). Although the inclusion of these prenatal expectations may have impacted our results, they ought to be associated with certain postbirth experiences because they are a natural part of the transition process. Additionally, from a psychological standpoint, the transition to parenthood begins when a couple first learns that the female partner is pregnant. This is particularly true for women, who experience major physical and lifestyle changes during pregnancy (Cowan & Cowan, 2000). Most transition to parenthood studies include prebirth measures in their modeling, and we did as well in order to capture as much of the transition as we could. Future studies of the transition to parenthood should start even before women get pregnant to assess and model the full trajectory of outcomes associated with this major life transition. The current study represents an important first step in identifying and understanding some of the key individual differences that shape both individual reactions to childcare and relationship outcomes across this stressful life transition.

### Future Directions and Conclusions

There are several important directions in which future research might head. First, given that men tend to have more negative reactions to the transition than women do (particularly highly avoidant men), future research should focus on how men think about, feel about, and handle childcare tasks as they try to adjust

to them across the transition to parenthood. We suspect that some of the pressures associated with the “new male mystique” (Aumann et al., 2011) may play a role in how different men react to caring for their young children. However, other factors, such as men’s gender ideology, amount of prior exposure to childcare, and the specific nature of their careers may assume equally important roles. As men continue to increase their involvement in childcare, it will also be important to understand how they cope with the often conflicting demands of work and family life. Because men’s reactions to childcare appear to “carry over” into their marital relationships in a more negative way than is true for women, this research would not only be important for understanding men’s adjustment, but also for understanding *couples’* adjustment to this major life transition.

Future research should also identify other theoretically relevant variables that may influence individuals’ contributions to, as well as their reactions to, the division of labor, including childcare. Several studies have sought to explain contributions and reactions to childcare in economic terms, sometimes suggesting that things can be boiled down to a simple mathematical function of income and hours spent outside the home. Very few studies, however, have considered what shapes an individual’s *motivation* to complete childcare tasks and their subsequent reactions to those contributions. The findings of the current study illustrate the profound impact that attachment avoidance has on individual and relational outcomes across the transition to parenthood, particularly for highly avoidant men. Future research should focus on identifying additional individual differences that may play an equally influential role during this difficult life transition.

It is important to note that the majority of our effects emerged across time. Our results suggest that the interactions between contributions to childcare and the individual difference variables examined in this study may have a “compounding effect” on new parents’ personal and relational outcomes across the transition to parenthood. Future research should investigate the time-course of these effects, including why they emerge this way. This work could also identify specific periods during the transition that are critical for the development of new parents’ positive or negative reactions to childcare, and whether it carries over to influence different domains of relationship functioning.

Finally, our results suggest that it may be necessary to broaden the scope of the division of labor literature. Most prior studies have examined the total amount (or relative proportion) of childcare that individuals report completing, which in turn predicts outcomes of interest. Our findings showcase the importance of individual differences and individuals’ reactions to childcare in shaping *relational* outcomes, above and beyond the amount of childcare that individuals report completing. Instead of simply quantifying how much childcare individuals complete, future research should identify additional factors that exacerbate or buffer individuals from negative outcomes across the transition. Such research could inform interventions that can then target these moderating factors, such as helping new parents derive a greater sense of self-efficacy from the childcare they complete.

In conclusion, prior research on the transition to parenthood and the division of labor has disproportionately focused on women and has largely ignored important motivational factors that predict *both* parents’ outcomes. Studies examining postpartum depression and the “transition to motherhood” are very common in the literature.

The findings of this longitudinal study suggest that researchers need to pay more attention to *men* as well and factors that influence their adjustment during this very stressful and often difficult life transition. Not only do men—particularly highly avoidant men—react quite negatively to childcare when they report completing more of it; their negative reactions appear to “bleed over” and undermine their relationship satisfaction. This negative carry-over effect is much less pronounced in women, including highly avoidant women. Instead, women’s greater childcare self-efficacy seems to buffer them from satisfaction declines across the transition. Future interventions designed to improve the transition to parenthood experience should target men just as much as, if not more than, women, placing special focus on the unique motives, needs, and skills of highly avoidant men and the factors that could buffer them and their marriages from deleterious outcomes.

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