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THE DEVELOPMENT OF THE PARENTING PARTNERSHIP OVER THE TRANSITION TO PARENTHOOD

By

Laurie A. Van Egeren

A DISSERTATION

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ABSTRACT

THE DEVELOPMENT OF THE PARENTING PARTNERSHIP
OVER THE TRANSITION TO PARENTHOOD

By

Laurie A. Van Egeren

The current study is an exploratory and descriptive account of the development of the parenting partnership from its initiation, the birth of the first child, through the ensuing 6 months. Married couples (N = 101 couples) were assessed during the third trimester of their first pregnancy and 1, 3, and 6 months after the child's birth. Using multiple measures of coparenting and marital quality, structural equation modeling analyses provided evidence for the specificity of the parenting partnership construct and the nature of the association between the coparenting and marital relationships. Additionally, hierarchical linear modeling was used to identify developmental trajectories for perceptions of the parenting alliance over the first 6 months. The average parenting alliance trajectories for the sample as a whole was shown to be quite high and stable; however, fathers were significantly more satisfied with the parenting partnership than were mothers. Despite the overall high quality and stability of the perceived coparenting relationship, factors measured both prior to and after the child's birth accounted for individual differences in parenting alliance trajectories. Pre-birth predictors of the parenting alliance for one or both parents included the marital relationship,

differences in childrearing philosophies, assimilation of the parenthood role, ego development, reactance, and socioeconomic status. Moreover, the parenting alliance continued to be predicted by the post-birth marital relationship, violated expectations of childcare and housework, and parenting efficacy.

In general, the results point to differences in the ways that mothers and fathers experience and affect each other's experiences of the parenting partnership, and particularly emphasize the critical role of the marital relationship in organizing coparenting. It is suggested that mothers regard coparenting as a distinctly different part of the relationship than do fathers, and that fathers are more likely to experience a general relationship quality that encompasses marital, family, and parent-child interactions. In addition, mothers appear to drive the systemic development of the parenting partnership, directly affecting fathers' perceptions, and indirectly affecting their own through interactions with fathers. The need for a common language and expanded definitions of the parenting partnership is discussed.

For Tess, the pilot study

and

Theo, the follow-up.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

For the most part, investigations of associations between family relationships and child development have concentrated on mother-child or, to a lesser extent, father-child dyads. Additionally, explorations into the contributions of the marital relationship to child outcomes are abundant. Recently, however, inquiries into family interactions have expanded from the study of dyadic relationships to consideration of family-level variables (McHale & Cowan, 1996). According to Belsky, Putnam, and Crnic (1996), "Whole-family-dynamics include events and processes that involve all family members together or a family subsystem (parent-child or husband-wife) that affects and is affected by the other subsystems in the family" (p. 46). Following this framework, one subsystem that comprises a family-level variable is the coparental system, or the relationship between two parents directed specifically at the children and childrearing. This coparenting alliance has been described by family systems theorists (Bowen, 1978; Haley, 1976; Minuchin & Fishman, 1981), but has only recently become a focus for developmental researchers.

Coparenting has proven difficult to operationalize. Assessment of three or more individuals is likely to necessitate complicated, and probably nonlinear, models to represent their systemic interrelationships. In addition, coparenting can be manifested at multiple subjective and behavioral levels, and requires reliable

differentiation from related relationships such as the marriage. In response to this lack of coherence in definitions of coparenting, McHale (Cowan & McHale, 1996; McHale, 1999) has identified a critical next step among coparenting researchers to be the development of a common language. At a general level, the coparenting partnership encompasses the ways that parents work together as a team, including both facilitative (vs. indifferent/obstructive) behaviors, as well as perceptions of support and feelings of respect for partners as they implement parenting functions (Abidin & Brunner, 1995; Cohen & Weissman, 1984; Gable, Belsky, & Crnic, 1992; Minuchin & Fishman, 1981; Weissman & Cohen, 1985).

Currently, one predominant method examines the subjective feelings of satisfaction and support in coparenting that Cohen and Weissman (1984) have termed the parenting alliance (Abidin & Brunner, 1995; Frank et al., 1991). From their perspective, derived from family systems and psychoanalytic theory and applied predominantly within the context of a traditional marriage, the parenting alliance is a relationship between the parenting partners, different from but a component of the marital relationship. The multifaceted parenting alliance construct includes investment in the parenting role, esteem for the other parent's involvement and respect for his/her parenting decisions, and the desire to communicate together about parenting issues. These phenomenological aspects of the coparenting relationship represent the subjective feelings of mutuality in parenting, a common commitment to the child's well-being, and a sense of

comprising a united front as the couple fulfills the organizational functions of the coparenting subsystem. In the absence of an integrated parenting alliance, "parents proceed on the basis of their own belief systems, whether or not these clash with those of their partner" (McHale, Kuersten, & Lauretti, 1996, p. 8), thereby opening the door to resentment and discord.

An alternative conceptualization of the parenting partnership relies on observations (Camara & Resnick, 1989; Gable, Belsky, & Crnic, 1995; Katz & Gottman, 1996; Lindahl, Clements, & Markman, 1997; McHale, 1995; Schoppe, Mangelsdorf, Charlton, Dorris, & Frosch, 1999) and self-reports (Ahrons, 1981; Brody & Flor, 1996; McHale, 1997) of the type and frequency of particular coparenting behaviors to assess the process and quality of the coparenting partnership. Backing up the other parent's directives, competing for the child's attention, facilitating the other parent's efforts to teach the child a task, and invoking the other parent's name (warmly or derogatorily) in his/her absence are examples of the behavioral approach to coparenting measurement.

Only within the past five years has attention been explicitly directed to the influence of the parenting partnership, apart from the marital relationship, in family development. Prior studies have revealed that marital satisfaction, adjustment, and interactions have significant effects on child-centered concerns such as parenting confidence and parent-child relationships (Belsky, Youngblade, Rovine, & Volling, 1991; Cox, Tresch-Owen, Lewis, & Henderson, 1989; Erel &

Burman, 1995; Floyd & Zmich, 1991; Goldberg & Easterbrooks, 1984; Kerig, Cowan, & Cowan, 1993; Stoneman, Brody, & Burke, 1989). Much discussion has also centered around the association between marital and/or interparental conflict and child adjustment and behavior problems (Brody, Flor, & Neubaum, 1998; Brody, Stoneman, & Flor, 1995; Camara & Resnick, 1989; Cummings, 1994; Davies & Cummings, 1994; Goldberg & Easterbrooks, 1984; Grych & Fincham, 1990; Howes & Markman, 1989; Jouriles, Farris, & McDonald, 1991a; Jouriles, Pfiffner, & O'Leary, 1988; Lindahl, Clements, & Markman, 1998; Owen & Cox, 1997; Reid & Crisafulli, 1990). However, the emerging literature on the coparenting partnership substantiates the differentiation of the parenting relationship from the marital relationship. Further support is found in studies of divorce, which indicate that a cooperative parenting partnership is related to better conflict resolution and more successful child outcomes and parent-child relationships despite the dissolution of the marital relationship (Ahrons, 1981; Buchanan, Maccoby, & Dornbusch, 1991; Camara & Resnick, 1989; Dozier, Sollie, Stack, & Smith, 1993; Maccoby, Depner, & Mnookin, 1990).

Given the consistent correlations between marital variables and child adjustment, as well as our incipient understanding of the role of the parenting partnership, it seems likely that the well-documented influence of the marriage on children and parenting is at least partially, if not primarily, an indirect relationship mediated by the parenting alliance. Indeed, Floyd, Gilliom, and Costigan (1998)

provided recent evidence of the mediational role of the parenting alliance in the relationship between marital quality and parenting perceptions and behaviors, and coparenting has been shown to be associated with child behavior problems even after accounting for the influence of marital adjustment (Bearss & Eyberg, 1998; Brody et al., 1994; McHale & Rasmussen, 1998) and individual mother-child relations (McHale et al., 1996).Our knowledge of the parenting partnership must be greatly expanded in light of the far-reaching implications for both intact and divorced families and for child outcomes.

In explicating developmental processes, systems theorists have encouraged researchers to focus on particular transition points that are most likely to be reflected in perturberations in the system of interest (Parke, Ornstein, Rieser, & Zahn-Waxler, 1994; Smith & Thelen, 1993; Thelen, 1992; Thelen, 1995), and P. Minuchin (1988) has specifically emphasized the importance of transitional periods for investigating family subsystem development. One milestone experienced by the majority of wedded couples, and indeed by most individuals, is the transition to parenthood. Over this period, a number of systemic changes occur as spousal relationships are renegotiated, familiar roles are revised, and new roles are taken on. Theorists who initially addressed the transition to parenthood postulated that the first child's birth precipitates a crisis in the existing marital dyad that forces "a drastic reorganization of statuses, roles, and relationships," (Dyer, 1963, p. 196) and from which "the large majority of couples appear to have

made a quite satisfactory recovery" (p. 201; see also LeMasters, 1957). However, subsequent investigations dismissed the "crisis" model of family change and reconceptualized the transition as a normative developmental stage, encompassing a multiplicity of changes, both stressful and rewarding, resulting from the entrance of a third individual into an established dyad (Hobbs, 1965; Hobbs, 1968; Hobbs & Cole, 1976; Hobbs & Wimbish, 1977; Jacoby, 1969; Nock, 1981; Rossi, 1968; Russell, 1974). The pre-birth husband-wife dyad is represented by the marital relationship; yet the new triad is characterized not only by the marital relationship, but also by each parent's individual relationship with the child and the new parenting partnership.

To date, research on the couple's transition to parenthood has overwhelmingly concentrated on its effects on marital relationships (e.g., Belsky, 1985; Cowan & Cowan, 1988b; Heinicke & Guthrie, 1996; Isabella & Belsky, 1985; Ruble, Fleming, Hackel, & Stangor, 1988; Wallace & Gotlib, 1990), and, to some extent, on the development of parenting abilities (Ferketich & Mercer, 1995; Isabella & Belsky, 1985; Mercer & Ferketich, 1995; Palkovitz, 1985; Wilkie & Ames, 1986) and change in adult personality (Antonucci & Mikus, 1988; Deutsch, Brooks-Gunn, Fleming, Ruble, & Stangor, 1988; Leifer, 1977; Sirignano & Lachman, 1985). Despite burgeoning interest in the parenting partnership, no published studies have examined the development of coparenting at the time at which it initiated, upon the birth of the first child. However, work is progressing;

a symposium at the 1999 meeting of the Society for Research in Child Development presented preliminary findings from three programs (including that of the current study) examining pre-birth predictors of coparenting over the transition to parenthood. For the most part, these studies related parental representations of relationships measured prior to the child's birth with post-birth coparenting behaviors at one point in time. No studies have integrated both subjective and behavioral aspects of the parenting partnership, nor has there been any multi-wave longitudinal investigation of the course and correlates of the parenting partnership over the transition to parenthood. Following Parke and colleagues' (1994) recommendation to explore developmental processes by implementing short-term longitudinal studies over transitional periods presumably characterized by rapid change, the aim of the current research was to examine the development of the parenting alliance, as a newly emergent relationship during the transition to parenthood, in the initial months after the birth of the first child. Four questions were addressed in this exploratory and descriptive study:

1. Does evidence exist for the construct validity of the parenting partnership as a separate dimension from the marital relationship?
2. How does the experience of the parenting partnership change over the initial months of parenthood?
3. What pre-birth characteristics predict the quality of the parenting partnership and individual patterns of change over time?

4. What is the interrelationship between the parenting partnership and other variables that may change or develop as a result of the transition to parenthood?

REVIEW OF THE LITERATURE

This review of the literature first presents studies that have looked specifically at the parenting partnership. Subsequently, variables postulated as likely to predict the development of a new parenting partnership and factors that may affect change in the parenting partnership are discussed.

The Parenting Partnership Construct: Definitions, Typologies, and Correlates

Investigations of the parenting partnership have typically operationalized coparenting in one of four ways: perceptions of the parenting alliance, self-reported coparenting behaviors, direct observation of coparenting behaviors within the family context, or measurement of differences between parents on some parenting variable, with the degree of convergence between parents connoting the coparenting dimension.

Perceptions of the parenting alliance. Studies support the distinction between the parenting alliance and the marital relationship. Whereas correlations between the two constructs have generally reached statistical significance, the magnitude of the relationship has been low to moderate, with stronger associations for fathers. Specifically, correlations between parenting alliance and marital adjustment self-report measures have ranged from .20 to .38 for mothers and from .44 to .67 for fathers; and correlations between mothers' and fathers' reports of the parenting alliance have ranged from .33 to .50 (Abidin & Brunner,

1995; Floyd & Zmich, 1991; Frank, Jacobson, Hole, Justkowski, & Huyck, 1986). Evidence thus supports the posited linkage of perceptions of the spousal and coparental relationships, but also confirms that a large percentage of unique variance in predicting the parenting alliance beyond that attributable to marital satisfaction remains to be explained.

Allocation of power within the couple may moderate the relationship between the experience of the parenting alliance and couple interactions. Laub (1990) found that father-dominant couples reported the most positive perceptions of the parenting alliance, but manifested the most negative behaviors in a problem-solving task directed toward a parenting issue. Conversely, mother-dominant couples reported the most negative perceptions of the parenting alliance, but their problem-solving outcomes were not significantly different from either father-dominant or egalitarian couples. It appears plausible that traditional father-dominant couples may have the strongest need for social desirability, but lack the communication abilities to effectively work through real problems.

Perceptions of the parenting alliance have been shown to exhibit theoretically predicted associations with other parenting variables. For example, in a sample of parents with 4- to 6-year-old children, mothers and fathers who reported a positive parenting alliance were less likely to report high levels of parenting stress (Abidin & Brunner, 1995). They were also more likely to endorse a warm, authoritative parenting style; in contrast, marital satisfaction and

parenting style were unrelated. In addition, Floyd and Zmich (1991) reported that a positive parenting alliance was related to greater parenting confidence and more positive parent-child interactions among parents of school-aged mentally retarded and typically developing children. Although these cross-sectional correlational studies preclude firm conclusions regarding the causal effects of the parenting alliance, theoretically, the supportive function of the parenting alliance would be expected to directly decrease stress related to childrearing and indirectly promote more efficacious feelings and constructive parenting behaviors.

The parenting alliance appears to be particularly salient for fathers' relationships with their children. Abidin and Brunner (1995) found that for fathers, the parenting alliance was related to self-reported attachment to the child, whereas maternal attachment to the child was independent of the parenting relationship. Furthermore, fathers', but not mothers', experiences of the parenting alliance were related to their child's adjustment across multiple raters (mothers, fathers, and teachers). Frank et al. (1991) demonstrated that fathers reporting a stronger parenting alliance experienced greater strain when their child had frequently been ill. In contrast, fathers reporting a weaker alliance reported no relationship between stress and child illness. Perceptions of the parenting alliance did not relate to mothers' experiences of stress and child illness. Taken as a whole, the above results suggest that a father who considers himself to be part of a successful parenting team is likely to place a higher priority on parenting and to be

more involved in child-related functions, potentially with beneficial effects on child adjustment. Ironically, the Frank et al. study portends that highly involved fathers may be particularly vulnerable to stress when faced with child illness, whether emotionally as they empathize with their child's discomfort, or due to logistical complications as they attempt to alter work commitments in the service of doctor visits and childcare. Conversely, fathers who do not perceive themselves as part of a functional coparenting dyad are likely to be not only uninvolved coparents, but less involved with parenting in general, and thereby buffered against stressful events related to the child.

Recently, McBride and Rane (1998) conducted an exploratory factor analysis of the Parenting Alliance Inventory (Abidin & Brunner, 1995), producing three factors: appraisal of the other spouse's parenting, perceptions of the other spouse's confidence in one's own parenting, and shared philosophy and perceptions of parenting. Both fathers' and mothers' perceptions of the parenting alliance predicted father involvement; however, for mothers, all three factors were associated with father involvement, but for fathers, only wives' confidence in their (fathers') parenting skills was related. After accounting for hours of maternal employment, marital satisfaction accounted for little variance beyond the effects of parenting alliance perceptions. This study highlights the complex processes that occur within the family system; in the prediction of father involvement, it is mothers' perceptions and opinions of their husbands' parenting abilities, as well

as of their own parenting confidence, that appear to be critical.

Overall, it appears that for men, more so than for women, a well-functioning parenting partnership is likely to be accompanied by more positive parent-child relationships. Nonetheless, one study indicated that mothers', but not fathers', reports of a weaker parenting alliance were related to reports of fairly severe behavior problems in typically developing children, although not in mentally retarded children (Floyd & Zmich, 1991). Therefore, while the parenting alliance appears especially important for fathers, by no means is it incidental for mothers.

Self-reported coparenting behaviors. Whereas measures of the parenting alliance tap individuals' personal feelings about the quality of the parenting partnership, an alternative method has focused on self-reported behaviors that serve coparenting functions. Noting that coparenting can occur even in the absence of the parenting partner, McHale (1997) asked parents to individually rate how often they manifested particular coparenting behaviors, either in the presence of the partner or when alone with the child. Cluster analysis was then used to identify five coparenting dyad types: Disconnected coparents (19% of the families) were characterized by a lack of warmth and little engagement in discipline activities; Supportive coparents (31%) promoted family integrity, even in the partner's absence (e.g., invoked the partner's name when alone with the child) and evidence little conflict or criticism; Average coparents (21%) had

average ratings on all behaviors, the exception being higher paternal involvement in discipline issues; Distressed-Conflicted coparents (9%) did not promote family integrity and manifested high levels of criticism and conflict; and Passionate coparents (20%) both promoted family integrity and reported criticism and conflict.

In the McHale (1997) study, Supportive couples had the highest levels of marital satisfaction, Disconnected and Distressed-Conflicted couples the lowest (with the Distressed-Conflicted group falling into the clinical range), and both Average and Passionate families reported average marital satisfaction. Thus, a commitment to representing the family and the coparenting subsystem as an integrated whole, rather than a lack of conflict, appeared to distinguish couples with better relationship functioning overall. Similarly, Kerig (1995) found that mothers, fathers, and children who rated the spousal subsystem as having a tendency to triangulate the child were more likely to be rated as having a conflictual marriage by all involved.

Self-reported coparenting behaviors are also associated with child adjustment. In an ongoing study of family relationships and child outcomes in rural African-American families, perceptions of more effective coparenting relationships were linked to whole-family interaction quality and greater self-regulation in 9- to 12-year-olds, which in turn predicted fewer behavior problems and better academic achievement (Brody & Flor, 1996). Interestingly, fathers'

perceptions of coparenting support were only indirectly related to child self-regulation through the quality of family interactions; however, mothers' perceptions of coparenting support, in conjunction with an interparental conflict variable combined from the reports of both parents, directly predicted self-regulation. Moreover, in another study, parents and teachers rated 4-year-old children as lower in internalizing and externalizing problems when the fathers were committed to promoting family integrity or mothers refrained from criticizing their spouse in the child's presence (McHale, 1997). These studies again underscore the differentiated but interconnected pathways that mothers and fathers traverse in maintaining the coherence of the family system.

Observed coparenting behaviors. Coparenting interactions rated by outside observers show independent associations from individual parent-child interactions (Belsky et al., 1996; Lindahl et al., 1997; McHale & Cowan, 1996), indicating that "whole-family processes are not simply extensions of mother-child and father-child relationships" (McHale & Cowan, 1996, p. 13). A caveat must be noted: To date, coding systems have focused on three family members participating in a laboratory-based play interaction; when more than three members have been present, behaviors have been coded in relation to a target child. Research on family-level interactions is, therefore, currently limited to the family triad, either actual or created through the exclusion of other family members.

Naturalistic study of coparenting behaviors has demonstrated that parents

were more likely to support one another in coparenting exchanges than to criticize or undermine each other's parenting efforts (Gable et al., 1995). However, fathers were significantly more likely to support mothers in coparenting than mothers supported fathers, although there were no sex differences in the likelihood of undermining each others' efforts. This is not to say that mothers were unsupportive; in this home setting, mothers were probably also more likely to initiate opportunities for cooperative parenting, thereby providing more occasions for fathers to exhibit coparenting behaviors directed toward support functions. Relatively speaking, fathers were the recipients of a greater proportion of unsupportive coparenting experiences, and may potentially be more vulnerable to feeling denigrated by their wives.

Poor coparenting appears to occur primarily in the context of stressors, with the most frequently investigated stressor being marital discord (e.g., Belsky & Volling, 1987; McHale, 1997). For example, one set of findings indicates that marital difficulties and triangulation of children in a family interaction task go hand in hand for both parents (Lindahl et al., 1997; Lindahl et al., 1998). However, other studies suggest that fathers' reactions within marital interactions may trigger, or at least mark, the formation of different types of alliances. On the one hand, marital withdrawal by husbands is associated with the formation of alliances at the expense of either the mother or father (Katz & Gottman, 1996; Paley, Cox, Kanoy, Harter, & Margand, 1999). On the other hand, greater marital

hostility is associated with more frequent coparenting disagreements and more intrusive but less positive parenting by fathers, but with more positive parenting by mothers (Katz & Gottman, 1996). Similarly, Belsky et al. (1991) found that when feelings of love had decreased for one or both spouses, fathers were more likely to be intrusive and mothers to be positive when interacting with their child. Both of these studies suggest the formation of a mother-child alliance, presumably as mothers attempt to buffer children from the effects of interparental conflict. Another possibility is that mothers who experience marital dissatisfaction may invest disproportionately in their role as parents (Brody, Pellegrini, & Sigel, 1986; McHale, 1995), and be likely to feel that the parenting alliance is weak as well (Floyd et al., 1998).

Marital problems, and specifically marital hostility (Katz & Gottman, 1996) appears to be related to coparenting difficulties, with hostile marital interactions mirrored by unsupportive, competitive, uncooperative coparenting interactions. To complicate matters, McHale (1995) found that poor coparenting, evident only among maritally distressed couples, was contingent upon the child's sex. Parents of boys were likely to evidence hostile and competitive behaviors as they attempted to engage the infant together, while parents of girls showed a pattern of maternal involvement and father withdrawal. This may reflect a greater desire on the part of fathers to continue involvement with their sons in the face of an unhappy marriage, concurrently exposing the parenting partnership to "spillover"

of resentments from the marital relationship. Regardless, most of the work on coparenting has examined mother-father differences, but has not considered interactions with the child's sex; although further complicating an already labyrinthine endeavor, it is clearly imperative that we make it a habit to investigate parent-by-child sex interactions in the study of family processes.

Apart from the negative influence of marital problems, chronic day-to-day stress appears to exacerbate difficulties in the parenting partnership. Belsky, Crnic, and Gable (1995) observed coparenting interactions in homes of parents with 15-month-old sons. More negative, angry, and critical coparenting behaviors were predicted by greater differences between mothers and fathers in personality, such as extraversion, sensitivity to others, and comfort with intimate relationships, but not by demographic differences or differences in attitudes toward using discipline and control with the child. Personality differences were especially predictive of unsupportive coparenting when parents were experiencing many hassles (although it should be noted that the researchers did not specifically investigate whether marital conflict played a role in these difficulties, nor did the sample include female children).

Additional support for the relation between coparenting and child behavior is apparent in a follow-up study with the Belsky et al. (1995) sample. Unsupportive coparenting interactions were associated with changes in inhibition between ages 1 and 3; specifically, those boys who would be predicted on the

basis of early temperament to be more inhibited as preschoolers were actually substantially less inhibited if their parents demonstrated more unsupportive coparenting interactions (Belsky et al., 1996). The influence of poor coparenting was evident even beyond the effect of greater parental insensitivity and intrusiveness toward the child, which was independently related to declining inhibition. One might conjecture that unsupportive coparenting is a factor in impelling these children toward greater externalizing problems. However, Schoppe et al. (1999) found that more supportive coparenting and less unsupportive coparenting measured at age 3 was related to fewer child externalizing problems as rated by parents and teachers at age 4. It may be that although these inhibited boys grow less inhibited over time, their greater overall levels of inhibition may protect them from manifesting significant externalizing problems as preschoolers in the face of unsupportive individual parenting and coparenting.

Mechanisms through which the parenting partnership affects parenting processes and parent-child relations are just beginning to be identified. In a rare study examining differential coparenting between younger and older siblings, coparental cooperation, rather than competitiveness, was a critical factor in the types of control strategies parents used and the likelihood of child compliance (Gorvine, 1999). When parents were more actively cooperative with one another, older siblings (M age = 46.9 months), but not younger siblings(M age = 16

months), were more likely to comply immediately with mothers' directives and were unlikely to ignore fathers' directives. Additionally, in more cooperative couples, fathers relied on gentle guidance to a greater extent than negative control strategies. Whether these compliance/control relations then mediate child adjustment remains to be seen, but the Gorvine study provides a first step toward the specification of elaborated coparenting processes.

Taking a different tack from that of the previous studies, Fivaz-Depeursinge and colleagues (Fivaz-Depeursinge & Corboz-Warnery, 1999; Fivaz-Depeursinge, Frascarolo, & Corboz-Warnery, 1996; Frascarolo, Fivaz-Depeursinge, & Corboz-Warnery, 1999) have developed a program of research specifically designed to explore family dynamics at the level of the family rather than the dyad. They have proposed a hierarchical model of triadic alliances in which the coparents are the "framing unit" and the infant is the "developing unit." Family interactions with young infants (beginning at 3 months) are coded microanalytically for participation, task attention, role organization, and affective contact. Four types of progressively unhealthier family alliances have been hypothesized: in Cooperative alliances, all family members participate and attend to the task, with defined roles and consistent affective communication; in Stressed alliances, all members participate and have clear roles, but affective contact and task attention are inconsistent; in Collusive alliances, all family members participate, but roles are poorly defined, and there is poor task attention and

emotional contact; and in Disordered alliances, participation, role organization, attention, and affective contact are all poor. In a preliminary longitudinal study with 12 families, the hierarchical triadic model was confirmed when the children were 3, 6, and 9 months old, although it was most successfully applied at younger ages. Parents in families with more organized, integrated alliances reported no clinical symptoms in their children in an interview conducted when the children were 4 years old, whereas parents in families with less organized alliances indicated that their children evidenced behavior problems (Fivaz-Depeursinge et al., 1996); however, the groups did not differ on behavior problems measured by the CBCL.

Complicated interrelationships among family members have been revealed using the above method that would not be evident or necessarily predicted by studies of dyadic parent-child interaction. During triadic play, even 3-month-old infants appear particularly engaged by positive affective states of fathers and subsequently behave more positively toward mothers (Shapiro, 1999; Von Klitzing, Simoni, & Buergin, 1999a; Von Klitzing, Simoni, & Buergin, 1999b). On a general level, mothers may arbitrate the degree of contact that fathers have with their children. However, once fathers are part of the interaction, evidence increasingly points to the pivotal role that fathers occupy as a catalyst for behavioral and emotional exchanges for family processes as a whole.

Convergence in parenting. Finally, a number of studies have centered on an indirect measure of the parenting partnership, congruence between mothers' and fathers' parenting beliefs, values and attitudes. Parental disagreements about discipline have been shown to be related to lower marital satisfaction for parents of girls, but not boys (Stoneman et al., 1989), and congruent childrearing philosophies when children were 3 ½ significantly discriminated between couples who were still married versus those who were divorced 10 years later (Block, Block, & Morrison, 1981). In addition, when mothers reported more frequent disagreements related to childrearing issues, they also reported more behavior problems in their three-year-old boys; in fact, the frequency of childrearing disagreements was a better predictor of behavior problems than marital adjustment (Jouriles et al., 1991b). Similarly, child behavior problems were predicted by mothers' reports of spousal disagreements over childrearing issues (Snyder, Klein, Gdowski, Faulstich, & LaCombe, 1988). Congruence as opposed to disagreement over childrearing values and discipline tactics may serve as a marker of a more successful parenting partnership; however, congruence should more appropriately be conceived of as a predictor of coparenting quality, while disagreements over childrearing issues are likely to be an outcome of weak coparenting alliances.

Men, women, and coparenting. The findings described above across multiple methods of assessing the parenting partnership provide support for other research suggesting that marriage and parenting are inextricably intertwined for

fathers (Belsky, Rovine, & Fish, 1989; Belsky et al., 1991; Brody et al., 1986; Easterbrooks & Emde, 1988; Feldman, Nash, & Aschenbrenner, 1983; Goldberg & Easterbrooks, 1984; Howes & Markman, 1989; Lindahl et al., 1997; Owen & Cox, 1997). The social construction of women as caregivers and nurturers may encourage women to perceive the parenting role as a given, regardless of the state of the marriage (Lindahl et al., 1997). Men's participation in parenting, however, has traditionally been more discretionary, contingent on successful dyadic relationships with their wives. Therefore, men who are happier in their relationships with their wives are more interested in parenting and more satisfied coparents, whereas men who express dissatisfaction with their marital relationships tend to be distanced parents and to feel burdened in the coparenting role. Furthermore, mothers typically spend far more time with children apart from the father than fathers spend alone with the child; in other words, for fathers, time with the child is more likely to be whole-family time, whereas mothers participate in distinct dyadic mother-child and whole-family contexts (Lim & Clements, 1999). It may be more difficult, therefore, for fathers to make a distinction between individual parenting, coparenting, and marital relationships, since all tend to occur in the context of the whole family.

Comparison of subjective and objective parenting partnership evaluations. The above review highlights a gap in the existing parenting partnership literature, in that no published research has addressed the relationship between the subjective

experience of the parenting relationship and coparenting interactions. However, Laub (1990), in an unpublished master's thesis, found an association for mothers, but not for fathers, between self-reports of the parenting partnership and observations of the couple's problem-solving behaviors. Although the problem-solving discussion centered around a specific child discipline problem, problem-solving and conflict resolution are also an integral component of marital interactions. Marital quality was not accounted for, so that the parenting relationship and marital relationship may have been confounded. One goal of the current study was to assess coparenting and marital quality by multiple methods, and to then attempt to differentiate between the two in order to extend the evidence supporting the construct validity of the parenting partnership.

Change in the Parenting Alliance

Another aim of the study was to delineate the average trajectory of perceptions of the parenting alliance in the initial months of parenthood. Within the constraints of this study (i.e., observations of the parenting alliance at three timepoints), which recommended the use of a linear rather than curvilinear model, three possibilities exist, all of which seem equally plausible. On the one hand, perceptions of the parenting alliance may increase over time, as men and women negotiate and solidify their respective parenting roles and become better skilled at cooperative parenting. Two studies of observed family behavior provide some indirect support for this hypothesis. Fivaz-Depeursinge et al. (1996) determined

that the type of triadic alliance families displayed when the child was 3 months of age remained fairly consistent when the child was 6 and 9 months old. However, of the 12 families, none deteriorated and four, those with more problematic alliances, ultimately improved. Gable et al. (1995) found that among parents of 15-months-olds assessed again at 21 months, supportive coparenting exchanges remained stable, but unsupportive exchanges declined by a third. Given the differences in parenting demands relative to this study (i.e., toddlerhood versus early infancy), one cannot directly extrapolate from the Gable et al. results. However, they do hint at flexibility and reorganization of the coparenting partnership over time. How the behavioral changes in the above studies might be reflected in parenting alliance perceptions is unclear, but they suggest that greater satisfaction in coparenting over time is a viable possibility.

Conversely, new parents might be subject to what Karney and Bradbury (1997) referred to as "disillusionment" in their investigation of marital change in newlyweds; in short, nascent feelings of warmth and mutuality in the parenting partnership may decline as the realities of childcare set in, infants become more active and require more monitoring, and mothers return to work. These factors may well promote greater stress, which might be manifested by a decrease in the parenting alliance over time. Indirect support comes from the marital literature in a comparison of marital satisfaction assessed during pregnancy and at 1 and 6 months post-birth (Wallace & Gotlib, 1990). Results revealed that marital

adjustment peaked at 1 month, followed by a steep decline by 6 months. This study suggests an initial "honeymoon period" in the marriage may occur immediately following the birth of the child, which may be reflected in the parenting alliance.

Finally, it is possible that perceptions of the parenting alliance remain unchanged over the first six months. From a developmental contextual perspective (e.g., Lerner, 1993), the parenting alliance is likely to be fairly stable as children remain within developmental stages (e.g., infancy, toddlerhood, school-age, adolescence). However, parenting demands, emphases, and challenges depend to some extent on the child's developmental stage, which may precipitate perturberations to the system. According to this model, the parenting partnership may need renegotiation, therefore, as the child moves between developmental stages, but should appear consistent during infancy, the period measured during this study. Both the Fivaz-Depeursinge et al. (1996) and Gable et al. (1995) studies discussed in the context of an improving parenting alliance can also be construed as evidence for the stability of the parenting partnership. In the Fivaz-Depeursinge investigation, two-thirds of the couples did not change in type of triadic alliance over the child's first year; notably, all of the stable couples displayed the most favorable category of alliance according to the researchers' classification scheme. In the Gable et al. study, supportive coparenting exchanges remained stable and unsupportive exchanges decreased. If perceptions of the

parenting alliance are more strongly representative of supportive coparenting behaviors, we would expect parenting alliance ratings to remain stable; however, if experiences of the parenting partnership are a corollary of unsupportive coparenting behaviors, increasing satisfaction with the parenting alliance would be more likely.

Although one purpose of this study is to identify an average parenting alliance trajectory, this average can be misleading (Belsky & Rovine, 1990). It is probable that individual differences will contribute to substantial variation in the initial level and trajectory of change in the parenting alliance over the first 6 months, as certain factors may systematically contribute to perceptions of the parenting alliance as more or less successful. The following section reviews variables that are hypothesized to be meaningful predictors of the development of the parenting alliance.

Potential Predictors of the Parenting Alliance

Characteristics of individual spouses and of their dyadic relationship prior to the child's birth can be presumed to "set the stage" for the development of a successful or problematic parenting partnership. Adaptive personality characteristics, attitudes, and expectations, and constructive, organized relationships exemplify resources that can nurture the development of successful coparenting relationships, even, perhaps, in the face of marital dissolution.

In addition to pre-birth variables that predict the subsequent development

of the parenting alliance, factors that change over time may concurrently affect or be affected by the changing parenting alliance. Belsky and Hsieh (1998) neatly illustrated the distinction between what might be termed stable predictors and more process-oriented variables in a study of marital change in families with a 10-month-old son who were reassessed when the boys were 27, 36, and 60 months of age. Presumably stable personality characteristics such as neuroticism, agreeableness, and extraversion distinguished between marriages that remained consistently good or poor; however, deteriorating marriages were marked by a relatively high percentage of unsupportive coparenting exchanges, which the authors interpreted as dynamic relationship processes. Thus, stable characteristics were associated with consistent relationship quality, and process characteristics were associated with relationship change.

For the current study, stable (predominantly pre-birth) and process (post-birth) factors hypothesized to be associated with individual differences in parenting alliance experiences were identified. To date, few longitudinal predictors of the coparenting partnership have been specified. Since the parenting partnership is presumed to share variance with the marital relationship and individual parenting abilities, variables that relate to marital adjustment and individual parenting may also predict the parenting alliance; some may even be shown to have no relationship with marital and individual adult variables once the parenting alliance is accounted for. The marital and parenting literature was used,

therefore, to identify potential predictors of the parenting alliance.

Differences between mothers and fathers. Men's and women's differential marital and parenting experiences are well documented (e.g., Levy-Shiff, 1994; Thompson & Walker, 1989), as are their separate experiences of the transition to parenthood (Cowan et al., 1985; Woollett & Parr, 1997). The first task, therefore, was to determine whether the typical parenting alliance trajectories were similar or distinct for mothers and fathers. First-time mothers experience more pervasive life changes and shoulder greater burdens for housework and childcare (Belsky & Pensky, 1988; Belsky, Spanier, & Rovine, 1983; Cowan, Cowan, Coie, & Coie, 1978; Cowan et al., 1985; Hoffman, 1978), particularly in the first 6 months (Cowan & Cowan, 1988a), than do fathers. I hypothesized that mothers would consistently experience less satisfaction with the parenting alliance, but would also report increasing satisfaction over time in response to the more active involvement that fathers evidence as infants grow older (Rustia & Abbott, 1993); conversely, I hypothesized that fathers' perceptions of the parenting alliance would be consistently higher than mothers' and would either remain stable over time or decrease as more involvement in caretaking was expected. As an analytic strategy, if, as expected, different trajectories for each sex were specified, subsequent predictors would be examined separately for men and women.

Beyond sex differences, which might act as a marker for a multitude of social, cognitive, and/or biological variables, several other predictors were

assessed. Belsky (1984) has presented a model of the determinants of parenting which, although directed toward dyadic parent-child relations, should also be applicable to the coparenting relationship. Using this model, coparenting quality is determined by three sources: individual psychological or personality characteristics, contextual characteristics in which the coparenting partnership is embedded, and characteristics of the individual child. Belsky also hypothesizes differential degrees of influence for each parenting determinant, with individual parent characteristics comprising the most important factor; however, this will not be explicitly assessed in the current study.

Individual parent characteristics. One determinant of coparenting suggested through this model is the psychological resources of the individual parent. Stable pre-birth psychological factors have been shown to relate to more successful parenting and marital relationships. For example, mothers' adaptation, competence, and capacity for positive relationships reported before the birth of their child related to their perception of general family adjustment and to their responsiveness to the infant (Heinicke, Diskin, Ramsey-Klee, & Given, 1983; Heinicke & Guthrie, 1992). Additionally, mothers' capacity for impulse control related to less decline in marital adjustment as they became parents (Levy-Shiff, 1994).

These studies suggest that ego development, a construct discussed by Loevinger (1976; Loevinger & Wessler, 1970), and considered one measure of

socioemotional maturity, may contribute to the development of a successful parenting alliance. Ego development is conceptualized as encompassing one's perspective of the self and world and includes cognitive complexity, impulse control, and interpersonal differentiation. According to the revised edition of the Washington Sentence Completion Test manual (Hy & Loevinger, 1996), there are seven codable stages: a) Impulsive, characterized by black and white thinking, little psychological insight, lack of understanding of cause-and-effect relations, and an orientation toward immediate satisfaction of desires; b) Self-Protective, characterized by a desire to avoid punishment, a preoccupation with issues around control, and simplistic perceptions of self and others; c) Conformist, marked by an increasing concern with social norms, perceptions of the world in terms of cliches, and decreasing egocentricity; d) Self-Aware, with a greater ability to conceive of an inner life, a distinction between the self and the group, and comprehension of alternative possibilities; e) Conscientious, distinguished by self-evaluated standards rather than blind adherence to societal rules, an awareness of people as complex and differentiated, and an appreciation for others' perspectives; f) Individualistic, characterized by a sense of individuality, tolerance for differences in others, and an understanding of psychological causation; and g) Autonomous, demonstrating recognition of autonomy needs in others, respect for the rights of others to make their own mistakes, and a quest for self-fulfillment. A final stage, h) Integrated, is extremely rare and thus is not well-studied, but is hypothesized to

represent the self-actualized person. Higher levels of ego development have been linked to a greater sense of responsibility and propensity to nurture others (Hauser, 1978; Helson & Wink, 1987; Westenburg & Block, 1993) , characteristics that would be important for the development of a sound coparenting partnership. In addition, ego development assessed prior to the transition to parenthood has been related to more sensitive parenting for mothers and to less marital conflict and more positive attitudes toward the infant and the parenting role for fathers (Cox et al., 1989; Owen & Cox, 1997).

Theoretically, individuals at higher levels of ego development should have a greater capacity for sustaining sensitive, fulfilling, and organized relationships. A few investigations have examined the relation between ego development and marital quality at a single point in time, with mixed results. For example, one study found that among women, but not men, ego development is related to the ability to develop more open, intimate relationships (White, Houlihan, Costos, & Speisman, 1990). On the other hand, Nettles and Loevinger (1983) found no differences in ego level between couples in distressed marriages in comparison to those in nondistressed marriages. Furthermore, in a cross-sectional study of ego development in couples over different stages of the life cycle, only among older couples did higher levels of ego development result in significantly greater expressions of love (Swensen, Eskew, & Kohlhepp, 1981). To complicate matters, a group in India found that higher levels of ego development were associated with

less marital harmony (Agarwal & Srivastava, 1989), as did the Mills study of middle-aged American women (Helson & Wink, 1987). Barring possible cultural variations, presumably, high-level individuals would be more likely to acknowledge contradictions and problems in the couple relationship than those at more conformist levels, while still evidencing positive coparenting behaviors. This opens the possibility that ego development and the subjective experience of the parenting alliance may relate in a curvilinear manner, with conformist individuals reporting the highest satisfaction with the parenting alliance.

Little research has addressed the contribution of ego development to relationship change; one study, however, examined change in marital quality during a stressful transitional period from relative health to patient status (cancer diagnosis). Based on retrospective reports, patients at higher levels of ego development indicated that their marriages had become stronger since their illness (Fuller & Swensen, 1992). The difference between this transition and the transition to parenthood, as well as the use of retrospective reports of marital functioning, make extrapolation of the results from the Fuller study to predictions of coparenting change extremely tentative. Nonetheless, couples functioning at higher levels of ego development presumably have a greater likelihood of tolerating and working through differences in each spouse's individual parenting decisions, eventuating in increasing satisfaction with the coparenting experience over time.

A second individual characteristic that may predict the development of the parenting alliance is the degree to which the parent has assimilated, or internally incorporated, the idea of being a parent. Mebert (1991) views the transition to parenthood as a process that, for some couples, begins not upon the delivery of the child, but much earlier, in some cases even prior to the child's conception. Parents who have planned their pregnancy, have strong cultural codes about childrearing roles, or strongly anticipate parenting may have an "internal working model," or a set of expectations that provides a framework for parenting. Parents in this mode (which Mebert terms "assimilation") are likely to have discussed and problem-solved about many of the potentially conflictual issues that parents who are less cognitively prepared (the "accommodation" mode) may find surprising and stressful. Operationalizing the assimilation mode as a strong motivation for parenthood, Mebert (1991) found support for her hypothesis in that more highly assimilated women had fairly stable perceptions of their marital quality over the period before and after the baby's birth, and that their pre-birth expectations of their infant's temperament were highly correlated with their post-birth perceptions. In contrast, women who were less assimilated had much less stable perceptions of the marriage and the child's difficulty. It appears that women who have assimilated the parental role may have a more organized internal working model or set of preconceived notions that contribute to the experience of continuity over the transition to parenthood. Interestingly, the pattern of

correlations was not particularly different for more assimilated versus less assimilated husbands and were generally lower than for mothers. This supports the idea that women have a more central and considered idea of themselves in the parenting role than do fathers (Bielby & Bielby, 1989; Duxbury & Higgins, 1991; Hoffman, 1983) and suggests that the process of becoming a parent may have less of an immediate psychological impact on fathers than mothers.

A third individual variable hypothesized to relate to the couple's success in developing an effective parenting partnership is each person's experiences in the family of origin. Retrospective reports of positive relationships with parents have been associated with self-reports of more satisfied marriages and, to a lesser extent, with marital interactions, with stronger associations for women than for men (Frosch, Mangelsdorf, & McHale, 1998). Belsky and Isabella (1985) explored the association between retrospective reports of perceptions of parenting styles and marital quality in the family of origin and change in the marital adjustment in couples by the time the first child was 9 months old. The researchers found that women who experienced more accepting, nurturing relationships with their parents, and men who evaluated their parents' marriages as more successful, reported less decline in their marital quality over the transition to parenthood. Furthermore, when the family of origin was rated as cold and rejecting and the parents' marital quality was judged poor, couples reported the greatest degree of negative change in their own marriages. Similarly, men and women who described

the family of origin as more healthy reported better marital adjustment than those who rated the family of origin in a negative manner (Lane, Wilcoxon, & Cecil, 1988).

These findings about the effect of the perceived family of origin on the marital relationship can be extended to the development of the parenting partnership. Individuals who have had the opportunity to observe a competent parenting partnership may have a more functional framework with which to foster their own parenting alliance. Some support was provided by Paley et al. (1999), who demonstrated that husbands rated as having an insecure attachment status as adults were more susceptible to problematic coalitions among family members, but only when they and their spouses tended to engage in escalating patterns of marital conflict.

One construct derived from the treatment process and outcome literature but of interest as a predictor of relationship development is the personality trait reactance. Reactance is described as an internal force which motivates the individual to maintain and restore personal freedoms (Brehm, 1966); high levels of reactance, therefore, denote a lack of susceptibility to the influence of others. Research on personality correlates has delineated a portrait of reactant individuals as having high levels of anger and impulsivity, and, especially among males, being judgmental and intolerant of others' beliefs (Beutler, Sandowicz, Fisher, & Albanese, 1996; Dowd & Wallbrown, 1993; Dowd, Wallbrown, Sanders, &

Yesenosky, 1994; Frank et al., 1998). Findings have been inconsistent with regard to self-image, with some studies indicating that reactant individuals are more susceptible to depression (Hong & Faedda, 1996; Joubert, 1990), but others finding higher levels of self-esteem (Hellman & McMillin, 1997; Hong & Faedda, 1996). People high in trait reactance tend to be more avoidant and distanced in relationships and less likely to affiliate with others (Beutler et al., 1996; Dowd & Wallbrown, 1993; Frank et al., 1998), but also more lonely (Joubert, 1990). They have strong needs for control and independence and are less concerned than most with social approval (Beutler et al., 1996; Dowd et al., 1994). Despite this constellation of potentially maladaptive traits, Dowd and Wallbrown (1993) postulated that highly reactant people might also make effective, persistent leaders.

Still, given the qualities described above, reactant individuals may have difficulty compromising or taking spousal requests into consideration. For example, individuals in violent relationships have been shown to be highly reactant (Hockenberry & Billingham, 1993). Since most studies in non-clinical samples find that men are more highly reactant than women (e.g., Hellman & McMillin, 1997; Hong & Faedda, 1996; see Hong, 1990, and Hong & Page, 1989, for exceptions), this may play out in the development of the parenting partnership through greater dissatisfaction on the part of wives as a result of husband's lack of cooperation, or through husbands' irritation at wives' demands for participation in

infant care. The relations are likely to be complex, as illustrated by a study evaluating the association between reactance and outcome after a marital enrichment program (Oliver, Mattson, & Moore, 1993). For men, reactance was not related to outcome status. However, men evidenced both increasing reactance over time and a lack of response to treatment. Women, on the other hand, did significantly improve on average as a result of the intervention; but highly reactant women showed less response to treatment. In general, greater reactance is hypothesized to be predictive of a more problematic parenting alliance.

Ego development level, assimilation of the parenting role, and reactance are all proposed as stable pre-birth predictors of the parenting alliance. Other individual characteristics emerge as a result of the child's birth and, along with the parenting alliance, may be subject to change over time. One of these process variables, the individual parent's self-perception of competence as a parent, might be expected to reciprocally determine his/her perceptions of the parenting partnership. Parental efficacy can be conceptualized as both an outcome of previous coparenting experiences and a predictor of the subsequent parenting alliance, which would thus suggest a separate but related developmental trajectory. Mercer and Ferketich (1995) provide support for this contention in a comparison of inexperienced mothers and experienced mothers over the first 8 months after a child's birth. Whereas experienced mothers showed no differences in their parental efficacy over time, first-time mothers moved from feeling less

competent at 1 month to more competent by 4 and 8 months. Another study of the transition to parenthood corroborated these results over the first 6 months (Woollett & Parr, 1997). In a corollary study with fathers, Ferketich and Mercer (1995) found that the parental competence trajectory of inexperienced fathers did not differ from that of experienced fathers; both groups of fathers had similar trajectories to inexperienced mothers (in the Woollett & Parr, 1997, study, first-time fathers' parenting confidence remained high and stable). For first-time mothers and fathers, parenting efficacy was predicted by a sense of internal locus of control, as well as by better family functioning for fathers (Ferketich & Mercer, 1995; Mercer & Ferketich, 1995).

A well-functioning parenting alliance might be expected to enhance individual parenting efficacy as each parent receives support for childcare decisions and is validated in his/her parenting role. Furthermore, the importance of family harmony for fathers in predicting more successful parenting is once again highlighted, underscoring the prospect that the parenting alliance is a particularly critical feature of the parenting process for men. Teti and Gelfand (1991), in a study of mothers only, determined that maternal efficacy around infant care mediated the relationship between social-marital support and observed parenting competence. However, the association between social-marital support and parenting behavior did approach significance ($p < .055$) in this sample of 89 mothers. It remains to be investigated whether both a direct and an indirect effect

might emerge in a larger sample (as well as if the marital relationship were assessed as a separate indicator rather than in conjunction with other forms of social support) and the manner in which these effects might evolve over time.

The nature of the relationship between the parenting partnership and parenting efficacy over time is an interesting question: Does a successful alliance elicit greater parenting confidence, does a more efficacious parent promote a more effective partnership, or is the interrelationship even more complicated? Floyd et al. (1998) found a nonreciprocal relationship: Among parents of school-age mentally retarded children, declines in ratings of the parenting alliance predicted feelings of low parenting competence 18 to 24 months later; however, perceptions of one's self as an ineffective parent were unrelated to subsequent satisfaction with the parenting alliance (but did predict declining marital satisfaction among mothers). Ironically, fathers who were more satisfied with their marital relationships also reported feeling less confident as parents in the face of spousal criticism. Thus, more distanced fathers appeared to be buffered, while involved fathers were more vulnerable.

A final individual process variable examined in the current study relates to the division of labor, which has received a fair amount of attention in investigations of change in the marital relationship over the transition to parenthood. Regardless of the pre-birth division of labor, roles become increasingly traditional after the transition to parenthood, with mothers assuming

the majority of childcare and household responsibilities (Belsky & Pensky, 1988; Belsky et al., 1983; Cowan et al., 1978; Cowan et al., 1985; Hoffman, 1978; Kluwer, Heesink, & Van De Vliert, 1997; Moss, Bolland, Foxman, & Owen, 1986; Sanchez & Thomson, 1997). This is especially apparent in the first 6 months (Cowan & Cowan, 1988a), and occurs even among couples consciously committed to an egalitarian approach (Cowan et al., 1985). In fact, for mothers, "fathers' daily involvement in housekeeping responsibilities and childcare is considered the central source of ecological support during the post-birth period" (Feldman, Greenbaum, Mayes, & Erlich, 1997, p. 153). Problematically, both mothers and fathers perceive their share of household tasks to be greater than their partners give them credit for (Cowan et al., 1985), thereby setting the stage for resentment and conflict.

Actual involvement in tasks appears to be a less salient predictor of declining marital quality than either satisfaction with or expectations about involvement. For example, pregnant mothers typically overestimate the amount of childcare assistance they will receive from their spouse, and the more help they expect, regardless of the amount they actually receive, the more difficult their adjustment to motherhood (Kalmuss, Davidson, & Cushman, 1992). Additionally, individuals (especially wives) whose post-birth experiences in a variety of domains were more negative than expected reported a greater decline in marital quality and poorer adjustment to parenthood (Belsky, 1985; Kach & McGhee,

1982; Kalmuss et al., 1992). Violated expectations of labor, measured even before the couple marries, are related to higher levels of depression for both mothers and fathers of young children (Strazdins, Galligan, & Scannell, 1997)

Different relations are revealed depending on whether expectations of childcare or household chores are violated. Cowan and Cowan (1988a) found that men who were satisfied with the household division of labor reported higher levels of marital satisfaction, while men who were more satisfied with the childcare division of labor experienced less parenting stress. Similarly, among women, violated expectations around the division of housework were associated with feeling less close to their husbands, but violated expectations around the division of childcare did not affect their perceptions of their spousal relationship (Ruble et al., 1988). These authors suggest that childcare may be more intrinsically rewarding than household tasks; thus, despite the fact that more time was spent in childcare than expected, it did not elicit the resentment that assuming an unexpected proportion of housework might. Since the division of labor changes over at least the first 2 years after the child's birth (Cowan & Cowan, 1988a), assessment of violated expectations at a single timepoint would be misleading. Violated expectations of childcare and housework are, therefore, assessed multiple times after the child's birth.

Contextual characteristics. A second category of coparenting determinants proposed is contextual characteristics, which includes demographic factors (e.g.,

age, socioeconomic status) and relational factors (i.e., variables related to the couple's existing dyadic relationship into which the child enters). Demographic contextual variables that have been shown to relate to marital satisfaction and/or more positive parenting are older parental age, longer duration of marriage, and higher socioeconomic status (Maccoby, 1984; Moss et al., 1986; Wright, Henggeler, & Craig, 1986). However, findings are particularly mixed regarding the influence of age. Whereas several studies have found a positive relationship between age and successful marital and parenting outcomes, others show no relation (Frosch et al., 1998) , and Gable et al. (1995) found that older parents evidenced fewer supportive coparenting behaviors than younger parents. Why the results for parental age are inconsistent is unclear, but may be related to the specific way coparenting is measured, to the developmental stage of the child, or because of an indirect link with the marriage, which is likely to be of a longer duration for older parents.

Among wedded couples, the marital relationship constitutes the relational context most germane to the development of the parenting partnership. Ample research, described throughout this chapter, attests to the overall link between marriage and coparenting. It seems plausible that the marital relationship, measured prior to the child's birth, would provide a barometer of the couple's ability to constructively interact and emotionally sustain one another. Few longitudinal studies exist to test the prediction that pre-birth marital adjustment

relates to the post-birth coparenting partnership. However, those that have been conducted uphold the association, at least in part. For example, families in which fathers display marital withdrawal prior to the child's birth have poorer interactions and are more prone to forming coalitions during whole-family play tasks when the children are age two (Paley et al., 1999). Furthermore, Lindahl and colleagues (Lindahl et al., 1997; Lindahl et al., 1998) found that families were more likely to present themselves as a warm family unit and to show more adaptive maternal coparenting behavior five years after the child's birth when mothers evidenced better pre-birth subjective and observed marital adjustment. The same associations did not hold, however, for fathers' pre-birth marital quality. Instead, only concurrent paternal marital satisfaction was related to family outcomes, and only to dyadic father-child interactions. These inconsistent results necessitate further investigation into the validity of pre-birth marital quality as a predictor of parenting partnership.

The discussion has heretofore conceived of the marriage as a stable context from which the parenting alliance unfolds. The marital relationship itself is, however, a mutable entity, and the transition to parenthood appears to be a landmark in its development. Both self-reports and observations of marital adjustment consistently reveal small but significant declines over the transition to parenthood, particularly for wives (e.g., Belsky, Lang, & Rovine, 1985; Belsky & Rovine, 1990; Belsky et al., 1991; Cowan & Cowan, 1992; Cowan et al., 1985;

Crohan, 1996; Engfer, 1988; Levy-Shiff, 1994; Miller & Sollie, 1980; Moss et al., 1986; Ruble et al., 1988; Tomlinson, 1987; Waldron & Routh, 1981; Woollett & Parr, 1997)[1]. However, investigations of patterns of marital relationships over time reveal that although some marriages do indeed grow worse after the child's birth, many maintain the status quo and others actually improve in systematic ways (Belsky & Rovine, 1990; Lewis, 1988).

These changes in marital quality may depend on a number of factors, including parental sex and age. Cowan and Cowan (1988b) found that over the transition to parenthood, women's marital dissatisfaction peaked at 6 months after the child's birth, but husbands reported the greatest declines between 6 to 18 months post-birth. In addition, older couples were more likely to experience change than younger couples (Cowan & Cowan, 1992), possibly because longer-standing, fixed patterns of interaction were more vulnerable to disturbance in response to a new infant (Frosch et al., 1998); younger parents are often simultaneously in the process of establishing stable patterns of marital interaction and may in some ways tolerate the addition of a new family member better.

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[1]It must be noted, however, that most studies of the transition to parenthood assess couples in the third trimester and then after the child's birth, and may only be tapping change that naturally occurs in all married couples over time. Evidence from prospective studies of newlyweds has been inconclusive, with some researchers finding that marital adjustment declines regardless of whether children are born (Karney & Bradbury, 1997; Lindahl et al., 1998), and others finding significantly less decline in childless couples (Belsky & Pensky, 1988; Crohan, 1996).

Most likely, the interrelationship between change in the parenting alliance and change in the marital relationship as a process variable will vary among families. The parenting alliance may function as a buffer to minimize or even reverse the post-birth decline in marital adjustment. However, Belsky and Hsieh (1998) suggest that marital decline is caused by the coparenting relationship, and specifically by a disproportionate frequency of unsupportive coparenting behaviors. As they describe, a lack of spousal support in parenting decisions and disagreement over parenting goals is likely to be reflected in decreasing experiences of marital satisfaction, although they also note that these influences are probably reciprocal and perhaps self-perpetuating. Another possibility, therefore, is that change in the parenting alliance may exacerbate difficulties in the marital relationship over time. Belsky and Hsieh (1998) measured coparenting processes at only one point in time. This study aims to expand upon previous research by assessing both the parenting alliance and the marital relationship as time-varying variables, and examining associations between the two trajectories.

Another stable relational factor that sets the context for parenting partnership development is differences in childrearing philosophy, or the degree to which parents agree or disagree regarding the appropriate way to raise children. Naturalistic study in the home revealed that in families of toddlers, disagreements over childrearing attitudes and styles of parenting were the most common catalyst for critical, unsupportive coparenting exchanges (Gable et al., 1995). Nonetheless,

there was no relation in this sample between differences in childrearing philosophy and frequency of supportive or unsupportive coparenting (Belsky et al., 1995). Other investigations have found that greater similarity between parents regarding childrearing values was not related to perceived marital quality (Kolak, 1999; Russell & Russell, 1994). Many studies, however, do find significant associations between attitudes about childrearing and family outcomes. For example, an index of parental agreement around childrearing orientations assessed in parents of 3-year-olds predicted both child behavior problems at age 5 and marital dissolution by the time the children were age 13 (Block et al., 1981).

Some evidence suggests that wives' marital satisfaction may be more vulnerable to disagreements resulting from divergence in childrearing philosophies. In one study, disagreement regarding childrearing orientations significantly contributed to the prediction of women's marital satisfaction beyond the influence of parental effectiveness (Deal, Halverson, & Wampler, 1989). In addition, parental disagreement on childrearing has been linked not only to level, but to change in wives' marital adjustment over the transition to parenthood. Greater disagreement regarding traditional childrearing beliefs was related to decreases in wives' marital intimacy ratings between 1 month and 3 years after the child's birth; these effects were primarily attributable to the period from 15 months on (O'Brien, Peyton, & Roy, 1999). Most likely, as children become more active and demand greater autonomy and thereby require more limit setting,

interparental conflicts would be increasingly likely to occur. The process by which these conflicts translate into decreasing satisfaction among wives with their spousal relationships is not clear. It may be that as husbands become increasingly involved with children as they grow older (Rustia & Abbott, 1993), their opinions regarding appropriate methods of childrearing impinge on mothers' heretofore primary judgments.

Deal et al. (1989) examined the issue of parental agreement in greater detail: They concluded that parental agreement was fundamentally an additional index of functional parenting, along with such characteristics as authoritative attitudes, warmth, and sensitivity. In fact, the mothers and fathers who agreed appeared to reference a general standard of good parenting, in that they were effective parents who agreed not only with one another, but also with the other "good" parents in the sample. According to this line of thinking, these would also most likely be parents with high ratings of the parenting alliance. In contrast, mothers and fathers who did not agree were ineffective parents who disagreed both with their spouses and the other parents; in short, as a group, they appeared to lack a well-organized reference point from which to base their philosophy of childrearing. Moreover, and as might be expected, attitudes toward desirable child behaviors are less controversial than toward undesirable behaviors. Kolak (1999) found when parents had disparate perceptions of the parenting partnership, they were also significantly more likely to disagree about what constitutes undesirable

child behaviors. Without common criteria for acceptable parenting practices when faced especially with discipline issues, even if those criteria are less child-centered than the current social ideal, mothers and fathers who disagree seem exceptionally susceptible to conflict, criticism, and lack of support or even attempts thwart parenting efforts.

Most researchers have investigated the influence of agreement on childrearing philosophy in parents of toddlers, focusing on issues of authoritative versus authoritarian control. Among parents of young infants, however, control is a less consequential concern than are care and protectiveness. Belsky et al. (1996) postulate evolutionary differences in male-female attitudes toward protectiveness of young children. They describe such examples as a father who stimulates a baby by tossing it into the air while the mother anxiously cautions him to be careful, or a mother who, when faced with a child who has fallen, says "Oh, that really hurts, doesn't it," while the father makes light of the pain or tries to divert the child's attention. For the current study, which examines families of infants up to the age of 6 months, parental differences in protectiveness, as opposed to authoritative or authoritarian philosophies (Baumrind, 1967) are postulated to be most predictive of unsuccessful parenting partnerships.

Child characteristics. A third determinant of parenting, according to Belsky (1984), is comprised of attributes of the child. The current wave of whole-family research points to the unique influence of the child on dyadic and triadic

interaction (Fivaz-Depeursinge et al., 1994; Von Klitzing et al., 1999b; Vuchinich, Emery, & Cassidy, 1988). The literature is inconclusive regarding the effect of the child's sex on the parenting partnership. In the few studies of coparenting, most have either not addressed child gender or have examined only boys. However, in a study of the subjective experience of the parenting alliance, Floyd and Zmich (1991) found no differences related to the sex of the child. Alternatively, McHale (1995) discovered differential patterns of coparenting relationships among maritally distressed couples according to child gender, with parents of boys evidencing high levels of competition and parents of girls showing a pattern of high maternal involvement and low father involvement. One possibility is that behavioral variations associated with child sex are not reflected in global self-reports of the parenting alliance. However, particular items on parenting alliance instruments may be more predictive of these differences, as may differences between mothers and fathers in parenting alliance ratings.

Finally, child difficult temperament has demonstrated a consistent negative association with marital and parenting quality, particularly for women (however, see Tomlinson [1987] for an exception). For example, wives reporting less marital satisfaction have children with more difficult temperaments as rated by both mothers and observers (Sheeber & Johnson, 1992; Wright et al., 1986). More difficult observed infant behaviors have also been related to a decrease in women's marital satisfaction over the transition to parenthood (Levy-Shiff, 1994),

although they were no longer predictive once parental interactions with the infant were taken into account. Infant temperament has been shown to improve the ability to discriminate marriages that declined and improved in quality across the transition to parenthood (Belsky & Rovine, 1990). Lastly, the child's soothability at one month of age predicted the mothers' responsiveness at one year (Heinicke et al., 1983) and related to higher maternal efficacy (Ahuja et al., 1999). A fussy baby is likely to heighten stress levels, as well as require parents to make more judgments about how to care for and soothe the infant. Coparenting may suffer as stress takes its toll and relatively few rewarding experiences enable the development of a supportive relationship. Since perceptions of the infant's temperament are likely to vary over the first few months (Rothbart, 1981), probably improving, temperament is conceptualized as a process variable.

HYPOTHESES

This study addresses four issues: a) The construct validity of the parenting partnership as a relationship associated with but distinct from the marital relationship; b) Change in the parenting alliance over the first 6 months after the first child's birth; c) Stable, pre-birth predictors of the developing parenting alliance; and d) The relationship between the parenting alliance and other time-varying process variables that may affect and be affected by the developing parenting alliance. It must be noted that given the variable nature of previous research on the parenting partnership, particularly regarding issues of change and development, these hypotheses must be considered conjectural and exploratory.

The following hypotheses will be tested.

1. Construct validity will be demonstrated as mother and father self-reports and observed coparenting behaviors will form one latent variable, and self-reports of marital satisfaction and observed marital interactions will form a distinct but related latent variable while simultaneously accounting for the method effects of maternal self-report, paternal self-report, and observational ratings.
2. A specific hypothesis regarding the trajectory (increasing, decreasing, or stable) of the average parenting alliance was not made. It is hypothesized, however, that there will be a significant amount of variability in the level

(e.g., the degree to which the parenting alliance is perceived as stronger or weaker overall) and change in parenting alliance, denoting substantial individual differences. Therefore, the average growth curve will provide a summary of the early parenting alliance trajectory (and will enable comparison to other studies examining group means). Parent sex is predicted to contribute to individual differences in parenting alliance level and change, with mothers expected to rate the parenting alliance as poorer, but as increasing over time, and fathers expected to rate the parenting alliance as better, but as decreasing or remaining stable over time. The following hypotheses will examine additional predictors of individual level and change in the parenting partnership for mothers and fathers separately, unless no parental sex differences emerge.

3. Stable individual, contextual, and child characteristics will predict individual differences in the development of the parenting alliance. Specifically, the development of a stronger parenting alliance (higher mean level and/or increasing rate of change) will be predicted by:

   a. Individual characteristics of the mother and father:

      i. Higher levels of ego development

      ii. Greater assimilation of the parental role

      iii. Retrospective reports of a stronger parenting partnership in one's family of origin

iv. Lower levels of reactance

b. Contextual characteristics:

i. Older age and higher socioeconomic status

ii. Greater pre-birth marital satisfaction

iii. More positive and fewer negative marital interactions

iv. More agreement on childrearing philosophies, particularly toward child protectiveness

c. Child characteristics:

i. Child sex will be examined in relation to the parenting alliance, but no specific relation is hypothesized

4. Level and change in the parenting alliance will relate in meaningful ways to level and change in individual, contextual, and child process variables that vary over time:

a. Level and change in the parenting alliance and marital adjustment will be positively related; thus, a positive relationship will indicate that they are both strong or both wead and/or change in the same direction.

b. Level and change in the parenting alliance and violated expectations for the division of labor will be negatively related; that is, a better parenting alliance will be marked by less violated expectations, and an increase in parenting alliance will be accompanied by a decrease

in violated expectations. This is expected to hold particularly for violated expectations around childcare, but not necessarily for violated expectations around housework.

c. Level and change in the parenting alliance and parenting efficacy will be positively related.

d. Level and change in the parenting alliance and perceptions of difficult infant temperament will be negatively related.

METHODS

Participants

Participants were 101 couples recruited from childbirth preparation classes[2] in central Michigan over the period from September 1997 to October 1998, and their first-born infants (49 boys, 52 girls). Approximately 51% of couples recruited agreed to participate[3]. Previous research indicates that parenting variables can be affected differently for delayed and premature children as well as for children of multiple births (Floyd & Zmich, 1991; Harrison, 1990; Lytton, Watts, & Dunn, 1987) relative to singletons and typically developing children. Couples were eligible, therefore, if: a) pregnant with their first child and neither partner had other children; b) married (M = 3.53 years, SD = 2.69, range = 2 weeks to 13 years); c) it was not a multiple birth; d) the pregnancy was normal and healthy. All infants were healthy and nearly all were full-term; two infants were born approximately one month early, but weighed over 2500 grams at birth and did not require special care.

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[2]Recruitment fliers were also placed in most obstetricians' offices in the Lansing/East Lansing area, as well as at the WIC office and the Department of Public Health, without success. Two couples entered the study after reading a newspaper editorial about the project research.

[3]Demographic information was also requested from couples who were eligible to participate but declined to do so. Some couples may not have completed this information, inflating acceptance rates. However, most or all eligible, non-participating couples appeared to provide demographic data.

Characteristics of the sample. Table 1 details the demographic characteristics of the sample. Both men and women ranged in age from 19 to 42 years (M = 30.55 years for men, SD = 4.90; M = 28.97, SD = 4.58 for women). A wide range of educational levels were represented, with some parents having not finished high school and others holding advanced degrees; for both mothers and fathers, the median educational level was a 4-year college degree; however, more than a third of the sample had at least some graduate training. The average occupational level, measured using the Duncan index (Stevens & Featherman, 1981), denoted the professional/technical occupations. About 54% of the sample reported a family income (average yearly gross) of between $30,000 and $69,999, but income ranged from less than $10,000 to over $100,000. Ninety percent of the sample was Caucasian and 10% were ethnic minorities. In short, this can generally be described as a predominantly white, middle-class, well-educated sample. Most couples indicated that they had planned their pregnancies, but about 8% reported that the pregnancy was unplanned and 20% described it as not specifically planned but not avoided.

Non-participants. Information on age, education, and income was collected from individuals who declined to participate and who completed a brief demographic questionnaire (168 wives, 131 husbands, sometimes from the same couple but more often from different couples–in retrospect it became apparent that often one spouse was designated to complete the form) to determine whether

Table 1

Characteristics of the Sample

Characteristic	Mother			Father		
	M	SD	Range	M	SD	Range
Age	28.97	4.58	19-42	30.55	4.90	19-44
Occupation[a]	52.61	24.56	0-88.4	56.59	22.53	0-88.4
Years married (mother report)	3.53	2.69	2 weeks-13 years			
	Frequency		%	Frequency		%
Education						
Less than high school				2		2.0
High school graduate	7		6.9	9		8.9
Some college	22		21.8	28		27.7
Bachelor's degree	34		33.7	27		26.7
Some graduate school	12		11.9	13		12.9
Advanced degree	26		25.7	22		21.8
Ethnicity						
White, non-Latino	89		88.1	92		91.1
African American	5		5.0	4		4.0
Latino	2		2.0	2		2.0
Asian	5		5.0	1		1.0
Other[b]				2		1.0

(Cont.)

Table 1 (cont.)

Characteristic	Frequency		%	
Income (father report)				
Less than $10,000		2		2.0
$10,000-$29,999		23		22.8
$30,000-$49,999		34		33.7
$50,000-$69,999		21		20.8
$70,000-$99,999		13		12.8
$100,000 and up		8		7.9
	Mother		Father	
Plannedness of pregnancy				
Planned	73	72.3	72	71.3
Unplanned	8	7.9	9	8.9
Unplanned, but not avoided	20	19.8	20	19.8
	Males		Females	
Child sex	49		52	

[a]Occupation measured using Duncan scores.

[b]Other includes Native American and Palestinian.

differences existed between those who volunteered and those who did not. Characteristics of non-participants are presented in Table 2. Men ranged in age from 20 to 44 years ($\underline{M}$ = 29.40, $\underline{SD}$ = 4.63), and women ranged in age from 17 to 43 years ($\underline{M}$ = 28.01, $\underline{SD}$ = 4.52). Median educational level for women was some college attendance and for men was split about equally between some college attendance and a bachelor's degree; only about 12% of non-participants reported graduate training. Family income was in the $30,000 to $59,999 range for about 54% of the sample. Approximately 7% of women and 12% of men were ethnic minorities.

Independent groups t-tests were used to determine whether participants differed from non-participants in age, education and income. Age and income were similar between the two groups; however, both women and men who participated were significantly more educated than those who did not (for sample as a whole, $\underline{t}$ = 6.89, $\underline{p} < .0001$). In addition, among women, the distribution of ethnic groups differed, with Asian females significantly more likely to participate (χ^2 (4, $\underline{N}$ = 254) = 14.32, $\underline{p} < .001$); in fact, all five Asian females recruited joined the study. Recruitment within a university community appears to have resulted in a sample that is more educated than the population at large, and although income did not differ between the groups, this is most likely due to the student status of several participants. This is the first study in the coparenting and transition to parenthood literatures to explicitly investigate the representativeness of

Table 2
Characteristics of Non-Participants

Characteristic	Mother			Father		
	M	SD	Range	M	SD	Range
Age	28.01	4.52	17-43	29.40	4.63	20-44
	Frequency		%	Frequency		%
Education						
Less than high school	1		.6	2		1.4
High school graduate	18		10.7	20		14.5
Some college	70		41.7	48		34.8
Bachelor's degree	59		35.1	51		37.0
Some graduate school	11		6.5	10		7.2
Advanced degree	9		5.4	7		5.1
Ethnicity						
Anglo American	141		93.4	106		88.3
African American	4		2.4	7		5.8
Latino	2		1.3	2		1.7
Asian						
Other	4		2.6	5		4.1
Income	Frequency			%		
Less than $10,000	5			3.7		
$10,000-$29,999	33			24.3		
$30,000-$49,999	34			25.0		
$50,000-$69,999	39			28.7		
$70,000-$99,999	17			12.5		
$100,000 and up	8			5.9		

participants, and, as suspected, reliance on volunteers increased the risk of bias toward more affluent and educated, and possibly more motivated and better-functioning, couples. Despite such limitations, similar samples (e.g., Belsky & Rovine, 1990; Cowan et al., 1985) have been sufficiently varied so as to allow for the investigation of individual differences. Nonetheless, the potential biases inherent in this sample must be noted in considering the generalizability of the study results.

Missing data. Of the couples recruited, nine agreed to participate but either had their babies prior to the first assessment (n = 8) or lost the infant to intrauterine death (n = 1). Two additional couples completed the initial assessment and subsequently dropped out of the study, citing time constraints or discomfort with the questions. The sample size of 101 is based on all remaining couples. Camera malfunction precluded coding four of the pre-birth interviews and one of the post-birth interviews. Six families relocated during the study; all completed the questionnaire measures and returned them by mail, but were unavailable for the 6-month videotaped interview and coparenting play session. In addition, one couple separated and reunited during the course of the study; whereas the mother completed the 6-month questionnaire assessment, the father did not, nor did the couple complete the 6-month observations. The sample size is slightly smaller, therefore, for analyses that include observational ratings. Missing data is otherwise minimal. Two couples and one father (described above) did not

complete one assessment, all at different timepoints.

Incentives. In order to encourage participation, a congratulations card, including the newspaper birth announcement if available, was sent to each family. When the infants were 5 months old, a newsletter that described the progress of the study, introduced the research team members, and provided information on infant development and parenting was mailed to each family (see Appendix A). At the end of the study, couples were presented with an infant t-shirt and a copy of their videotaped interviews and play session. Twelve families, drawn at random, received either a $50 or $100 savings bond in the child's name.

Procedure

Assessments were conducted during the third trimester of the pregnancy, and 1, 3, and 6 months after the child's birth. Measures included questionnaires and coded videotaped observations of marital and coparenting interactions.

Third trimester. An interviewer (either the author or one of three trained senior undergraduate research assistants) visited each home during the third trimester, typically 4-6 weeks before the baby's due date. The interviewer reviewed the informed consent (see Appendix B), answered any questions, and obtained each spouse's signature. Subsequently, three questionnaires most likely to be affected by the interview topics (marital adjustment, division of labor, and motivations around parenthood) were administered so that responses would not be contaminated by couple discussion of these issues. Couples were asked to

complete the questionnaires (randomly ordered) separately and not to discuss their answers with each other. The interviewer was available to answer questions and read items if necessary.

Next, a semi-structured interview with the couple was conducted, using a procedure described in McHale (1995). This interview, typically 30-40 minutes long, was videotaped and served as the sample of behavior from which marital interaction ratings were coded; ratings were based on the interactions between the couple during the interview, not the content of the couple's response to the interview questions. To begin, couples were asked a standard question (*I'd like you to describe how you anticipate the baby will change your life*) and instructed to discuss the answer between themselves. The interview was subsequently guided by the following questions based on an interview developed by Chavez et al. (1987) which was used in McHale (1995) for couples with children and modified for this study to be relevant to pre-birth couples:

1. Mother's return to work (scripted questions: *How do you plan to deal with that? At what point did you make the decision to return or not return to work? What issues came up for each of you during the decision-making process?*)
2. Child care (scripted questions: *Do you plan to put your child in child care? What are the arrangements? Who made them? What issues and concerns have each of you had in deciding about child care? How happy are you*

with this decision?)

3. Role arrangements (scripted questions: *How will you decide who attends to the baby when you're home together? What problems might come up around the division of responsibilities?*)
4. Time for the self (scripted questions: *How do you plan to get enough time for yourselves after the baby is born? Do you anticipate any difficulty? What issues and concerns have each of you had about how things might change around this?*)
5. Time for the couple relationship (scripted questions: *How do you anticipate the baby changing your relationship as a couple? How will you try to spend time together? What do each of you see as getting in the way of your spending time together?*)

Two types of probes were used. The first explored conflicts in responses between partners (e.g., *Do you see this the same way he/she does?*), and the second examined decision-making processes (e.g., *Are the two of you able to discuss this? What usually happens when this topic comes up?*). The goal of the interview was to obtain a representative sample of behavior within the context of the marital dyad; probes were, therefore, designed to encourage couples to discuss issues together rather than simply answer the interviewer. Although all topics were addressed, the order and amount of time spent on a specific topic varied with each couple depending on their responses.

After the interview, a second set of questionnaires, measuring ego development, perceptions of coparenting in the family of origin, reactance, and childrearing philosophy, was given to each partner and completed during the visit. The entire visit typically took 1½ to 2 hours.

One and three months post-birth. For the Time 2 and Time 3 assessments, undergraduate research assistants visited participants with questionnaire packets. Data gathered at this time included information on the perceptions of the parenting alliance, the marital relationship, the division of household labor and childcare, parenting efficacy, and perceptions of infant temperament. The research assistant cared for the child while the parents completed the questionnaires, usually within 20-45 minutes.

Six months post-birth. An interviewer, accompanied by a research assistant, made the final home visit at a time when all three family members were present. Questionnaires assessing perceptions of the parenting alliance, the marital relationship, the division of household labor and childcare, parenting efficacy, perceptions of infant temperament, and reactance were mailed to the couple one week prior to the visit so that they could be completed before and returned during the assessment.

In most cases, unless the child was asleep when the research team arrived, the first activity during the home visit was a 10-minute videotaped play interaction, modeled on McHale's (1995) protocol for 9-month-olds and modified

for use with 6-month-olds. The infant was placed in between the two parents (infants who were not yet able to independently sit up were propped by pillows), and a toy, changed every few minutes, was placed on the ground equidistant from both parents. Toys were chosen to be interesting but slightly above the developmental level of an average 6-month-old infant. First, a soft book was presented, and parents were instructed to "try to teach ____ how to turn the pages" (3 min). Second, a crayon and paper was given, and parents were instructed to "try to teach ____ how to scribble on the paper" (3 min). Finally, two toys, a set of keys with different activities on each key, and a "clacker" toy, were presented, and parents were instructed to "play with these toys any way you want" (4 min). Parents received no further direction during the interaction.

Next, couples completed their questionnaire packets if they had not already done so. The post-birth counterpart of the Time 1 marital interaction was then conducted. While the research assistant cared for the infant, couples were videotaped participating in the original interview from McHale (1995) with a modified procedure. Couples were asked a standard question (*I'd like you to describe a typical week at home since the birth of the baby*) and asked to discuss the question between themselves before answering the interview. The interview was subsequently guided by the following questions (the probes remain the same):

1. Mother's return to work (scripted questions: *How is that working for the two of you? At what point did you make the decision to return or not return*

to work? What issues came up for each of you during the decision-making process?)

2. Child care (scripted questions: *Is your child currently, or will he or she soon be, in child care? What are the arrangements? Who made them? What issues and concerns have each of you had in deciding about child care? How happy are you with how things are going?*)
3. Role arrangements (scripted questions: *How do you decide who attends to the baby when you're home together? What problems have come up around the division of responsibilities?*)
4. Time for the self (scripted questions: *Are each of you getting enough time for yourselves these days? What things, realistically, would need to change in order for you to get the time you need?*)
5. Time for the couple relationship (scripted questions: *Are you getting any regular time together as a couple these days? What do each of you see as getting in the way of your spending more time together?*)

At the end of the visit, parents were presented with t-shirts for their infants. The entire visit took approximately 1½ hours on average.

The schedule for data collection is shown in Table 3.

Measures

All measures are presented in Appendix C.

The parenting partnership. The parenting partnership measures assess both

Table 3

Schedule for Data Collection

Variables	Third trimester	One month	Three months	Six months
Parenting relationship		• Parenting alliance	• Parenting alliance	• Parenting alliance • Coparenting interactions
Individual characteristics	• Ego development • Assimilation • Family of origin • Reactance • Division of labor	• Parenting efficacy • Division of labor	• Parenting efficacy • Division of labor	• Parenting efficacy • Division of labor
Demographic contextual variables	• Age • Education • Occupation • Income • Length of marriage			
Relational contextual variables	• Marital adjustment • Marital interactions • Differences in childrearing philosophy	• Marital adjustment	• Marital adjustment	• Marital adjustment • Marital interactions
Child characteristics		• Perceptions of infant temperament • Infant sex	• Perceptions of infant temperament	• Perceptions of infant temperament

the individual subjective experience of the parenting alliance between the two partners and the behavioral interactions between the partners as they engage in parenting the child.

1. Parenting alliance. The General Alliance subscale of the Family Experiences Questionnaire (Frank, Jacobson, & Avery, 1988) was given at 1, 3, and 6 months post-birth to assess each parent's perceptions of the parenting partnership. Thirty-one items are rated from 1 (strongly disagree) to 4 (strongly agree). The scale assesses the degree to which the parent respects the partner's parenting judgments, feels supported by the partner in parenting decisions, is satisfied with the partner's contribution to parenting, and feels that parenting has increased the degree of cohesiveness in the relationship. Internal reliability for the parenting alliance scale was high, with the average coefficient alpha over the three administrations at .93 for fathers and .94 for mothers. Frank and Tuer (1988) reported a three-week test-retest reliability coefficient of .86 for a sample of parents of older adolescents. Construct validity for the scale has been demonstrated through associations with parental reports of greater father participation in child care (Pirsch, 1990), better interparental interactions and parent-child interactions (Floyd et al., 1998; Laub, 1990), decreased parenting stress (Frank et al., 1991) and more parenting competence (Floyd et al., 1998), and less severe ratings of child behavior problems (Floyd & Zmich, 1991).

2. Coparenting behaviors. The coding system developed by McHale

(1995) was used to assess coparenting interactions videotaped at 6 months post-birth. Research assistants received 25 hours of training in the form of reviewing videotapes and discussing the coding system with the primary investigator, then practicing coding with protocol videotapes of family interactions. Raters were blind to all other information about the participants.

Videotapes were coded for five dyadic dimensions and two individual parent-child dimensions. A manual described behaviors characteristic of each value for all dimensions. For the dyadic dimensions, a five-point Likert-type scale was anchored at 1 and 5, with higher numbers connoting more conflictual, indifferent, or parent-centered interactions. The scales included: a) behavioral competition (actively interfering with or sabotaging the partner's initiatives and interventions with the child); b) cooperation between partners (working as a team, actively supporting the partner's interventions with the child); c) verbal sparring (exchanging critical, sarcastic, and/or hostility-tinged remarks during play with the child); d) warmth between parents (level of warm, positive affect shown toward the partner during play with the child); and e) child (vs. adult) centeredness (pace and flow of session dictated exclusively by baby as opposed to pace and flow of session dictated exclusively by parents.

The two individual parent-child dimensions were rated on 7-point scales: f) investment, assessing the parent's participation in play and reflecting withdrawal versus overinvolvement, ranged from 1 (extremely involved, possibly enmeshed,

child's performance appears to be reflection of parent's self) to 7 (completely disengaged); and g) warmth toward child, which had a scale of 1 (extremely expressive; use of speech, touch, active eye contact to convey warmth may appear gushy) to 7 (stiff, wooden parent who fails to smile or speak in warm tones). In order to avoid bias generated by comparing one partner to the other, three raters coded each tape; one rated the five dyadic dimensions, one rated the two mother-child dimensions, and one rated the two father-child dimensions (the two latter coders alternated rating mothers and fathers). Twenty videotapes were coded by a second rater in order to assess interrater reliability. Intraclass correlations were .81 for behavioral competition (M = 2.93, SD = .99), .56 for cooperation between partners (M = 2.86, SD = .97), .64 for verbal sparring (M = 1.99, SD = 1.27), .80 for warmth between parents (M = 3.09, SD = .94), .62 for child-centeredness (M = 3.42, SD = 1.00), .82 for mother investment (M = 3.11, SD = .91) .74 for father investment (M = 3.49, SD = .95), .80 for mother warmth (M = 2.90, SD = 1.05), and .74 for father warmth (M = 3.26, SD = 1.03). All scale points were used for all scales except the lowest extreme (7) for mother and father warmth and father investment, and the two lowest extremes (5 and 6) for mother investment.

Two discrepancy scores, investment discrepancy and warmth discrepancy, were calculated using the absolute difference between the mother's and father's ratings. Greater discrepancy scores thus tap withdrawal or less positive affect toward the child on the part of one parent relative to the other parent. Both

discrepancy scores ranged from 0 to 3 (maximum possible = 6). The mean warmth discrepancy was 1.16 (SD = .82) and the mean investment discrepancy was .98 (SD = .92).

In a factor analysis of the coparenting variables, McHale (1995) derived three factors which were replicated in the current study. A principal components analysis with varimax rotation of behavioral competition, cooperation between partners, verbal sparring, warmth between parents[4], child-centeredness, and the two discrepancy scores resulted in a three-component solution that accounted for 65% of the variance (loadings are presented in Table 4). The coparenting harmony factor was comprised of the cooperation between partners and warmth between parents scores, and accounted for 25% of the variance; the hostility-competitiveness factor was comprised of the behavioral competition, verbal sparring, and child centeredness (reversed) scales, and accounted for 21% of the variance; and the parenting discrepancy factor was comprised of the warmth and investment discrepancy scores, and accounted for 19% of the variance. Scale scores were calculated by summing the standardized scores for each coded variable's primary loading on their respective factors. Alphas for the three scales were .75, .50, and .43 for coparenting harmony, cooperation-competitiveness, and

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[4]McHale (1995) included a composite variable called family warmth comprised of dyadic warmth, mother warmth, and father warmth in the factor analysis. Since the purpose of the current study was to examine coparenting rather than whole-family interactions, and since the family warmth variable overlapped with the warmth discrepancy variable (both included individual warmth ratings), only the dyadic warmth variable was entered into the factor analysis.

Table 4

Loadings for Coparenting Behavior Principal Components Analysis (N = 94)

Scale	1	2	3
Cooperation between parents	**.89**	.03	.10
Warmth between parents	**.84**	.12	.11
Verbal sparring	.04	**.83**	-.17
Competition between parents	.46	**.62**	.06
Child-centeredness (R)	.06	**.59**	.20
Investment discrepancy	.01	.18	**.82**
Warmth discrepancy	.22	-.11	**.74**

Note. Boldface denotes the primary loading for each scale; R = reverse scored.

parenting discrepancy, respectively.

McHale (1995) reports that construct validity was demonstrated by comparing the coparenting factors to independent staff ratings of similar behaviors assessed during waiting room assessments, with self-reports of play time, home coparenting, and satisfaction with own and spouse coparenting involvement. Hostile-competitive coparenting was also related to marital distress in families of boys, while large discrepancies in parenting involvement were related to marital distress in families of girls (McHale, 1995). The cooperation scale has been related to parental control strategies and child compliance (Gorvine, 1999).

Individual psychological resources. Measures have been chosen to reflect the individual partner's contribution to the development of parenting (Belsky, 1984), and more specifically, to the parenting partnership.

1. Ego development. The Washington University Sentence Completion Test (SCT; Hy & Loevinger, 1996; Loevinger, 1985; Loevinger, Wessler, & Redmore, 1970) is a semiprojective measure of personality given at the first assessment. The original SCT was comprised of 36 items with alternate male and female forms. However, the two halves of the 36-item SCT were designed to meet criteria for parallel forms in order to provide a shorter version if necessary (Loevinger, 1985); Novy and Francis (1992) confirmed that the two forms are equivalent. The revised 18-item version of the SCT used in the current study (Form 81-2) was created to make the items more comparable for men and women (although the forms continue to be sex-specific). Participants were instructed to complete each sentence stem but were given no further instruction. A scoring manual (Hy & Loevinger, 1996) was used to code each response and denote a developmental level based on the cognitive complexity, perspective-taking abilities, and psychological awareness of the individual. Response frequencies may then be used to derive a total protocol rating (TPR) based on a frequency ogive, or each level may be given a numerical rating and the ratings then summed to form an item sum score. Because the item sum score is usually more reliable than TPR ratings and designated cutoffs for the item sum score are usually

equivalent to TPR ratings (Hy & Loevinger, 1996), the item sum score was used in the current study.

All protocols were transcribed and coded by the primary investigator. To assess interrater reliability, 40 protocols were coded by a second rater. Interrater reliability as assessed by an intraclass correlation was .94. The short SCT has demonstrated an internal reliability of .84 and .81 for the first half and second half of Form 81, respectively, with a correlation (corrected for unreliability) between the two halves of .96 (Novy & Francis, 1992). For the current sample, alphas were .90 for mothers and .83 for fathers. No test-retest information is available for the revised SCT, but the original SCT has demonstrated test-retest reliability coefficients of .64 to .91 (Redmore & Waldman, 1975). The construct validity of the SCT is supported by theoretically consistent relations with sex differences, interpersonal behavior, behavior problems, and family environment (e.g., Cohn, 1991; Hauser et al., 1984; Noam et al., 1984).

For purposes of description, the distribution of ego levels using cutoffs suggested by Hy and Loevinger (1996) is presented in Table 5. No participants were categorized below the conformist level, and most were classified as conscientious, although a large proportion of fathers were also classified one level below in the self-aware category. Three participants were classified at the highest and rarest level, integrated. Mothers ($\underline{M}$ = 97.36, $\underline{SD}$ = 8.20) had significantly higher item sum scores than fathers ($\underline{M}$ = 93.31, $\underline{SD}$ = 8.55), $\underline{t}$ = 3.99, $\underline{p}$ < .000.

Table 5

Distribution of Ego Levels for Mothers and Fathers

Ego level	Mothers	Fathers
Conformist	1%	8%
Self-Aware	17%	32%
Conscientious	53%	43%
Individualistic	17%	14%
Autonomous	12%	2%
Integrated	1%	2%

2. Degree of assimilation of the parental role. Parents who are highly motivated to become parents or intensely concerned about parenthood are likely to have considered, discussed, and researched issues related to parenthood, thus forming a set of expectations of the demands involved in the parental role (e.g., have an "internal working model" of parenthood). These parents might be considered more "assimilated" into the notion of parenthood. Thus, pre-birth motivations for the positive aspects of parenthood and pre-birth concerns about the problems of parenthood were used to measure the degree to which parents are assimilated into the parental role. The Childbearing Questionnaire (CBQ; Miller, 1981; Miller, 1995) has two scales that assess the degree to which the parent is focused on positive and negative aspects of childbirth and the parenting process.

The Positive Childbearing Motivation (PCM) scale contains 28 items and includes subscales labeled: (a) joys of pregnancy, birth, and infancy; (b) traditional parenthood; (c) satisfactions of child rearing; (d) feeling needed and connected; and (e) instrumental values of children. The Negative Childbearing Concerns (NCC; originally labeled Negative Childbearing Motivations) scale consists of 21 items that tap: (a) discomforts of pregnancy and childbirth; (b) fears and worries of parenthood; (c) negatives of childcare; and (d) parental stress. Items are rated on a 4-point scale anchored at very desirable consequences and not desirable consequences. Miller (1995) investigated the psychometric properties of the CBQ in two groups of married couples; couples in one group were experiencing parenthood for the first time, while the couples in the other group were childless. Both scales related as expected to childbearing desires and intentions, and the PCM scale was associated with attempts to conceive (Miller, 1995). Mean test-retest correlations for 2 weeks, 1 year, and 3 years were .92, .72, and .66 for the PCM scale and .82, .59, and .54 for the NCC scale, respectively (Miller, 1995). In the current study, internal consistency coefficients for mothers and fathers were .92 and .89 for the PCM scale and .83 and .78 for the NCC scale, respectively. Mean scale scores between the two scales were essentially uncorrelated (for mothers, $r = -.13$; for fathers, $r = .06$).

3. Family of origin experiences. To assess each spouse's recollection of his/her own parents' coparenting partnership, participants completed the

Perceptions of Parent Conflict Scale (PPCS; Frank, 1988) at the first assessment. Scales include Positive Parenting Partnership (6 items), Triangulation (vs. boundary maintenance; 4 items), and Marital Harmony (6 items). Items in the original measure assess current perceptions of the parental relationship; items were reworded to tap memories of parental behaviors in the family of origin. The scale ranges from 1 (never true) to 4 (very true). The PPCS was found to mediate the relationship between parent marital status and college students' experiences of connection and autonomy (Frank & Burke, 1992), and moderates the relationship between separation-individuation in college students and their insecurities in relation to their parents (Frank, Poorman, & Charles, 1994). Coefficient alphas for women and men, respectively, were .79 and .85 for Positive Parenting Partnership, .81 and .80 for Triangulation, and .86 and .87 for Marital Harmony. Higher mean scores indicated more positive relationships.

4. Reactance. Individual reactance, or lack of susceptibility to influence by others, was measured in the third trimester and at 6 months by the Therapeutic Reactance Scale (TRS; Dowd, Milne, & Wise, 1991). Twenty-eight items are scaled from 1 (strongly disagree) to 4 (strongly agree). Internal consistency was .76 for mothers and .69 for fathers. High mean scale scores represented a stronger tendency toward reactance. High reactance as measured by the TRS is associated with anger, impulsivity, and avoidant relationships.

5. Parenting efficacy. The Maternal Efficacy Questionnaire (MEQ;

Teti & Gelfand, 1991) is a 10-item self-report measure of efficacy around childcare tasks such as soothing the infant, understanding the infant's needs, and entertaining the infant. Items are rated on a 4-point scale with anchors that vary, but range from least competent to most competent; high mean scores indicate a greater sense of parenting efficacy. Designed for use with mothers, the instrument was also administered to fathers. Average coefficient alphas over the three timepoints were .81 for mothers and .74 for fathers. In a previous study, maternal efficacy scores correlated -.75 with the (reverse-scored) Parenting Stress Index (Abidin, 1986) parenting competence scores (Teti & Gelfand, 1991).

6. Violated expectations of the division of labor. Actual and expected division of labor was measured using a scale developed and modified by Ruble and colleagues (Hackel & Ruble, 1992; Ruble et al., 1988). Participants rated their perceptions of the division of household labor and childcare according to the percentage done by themselves and their spouse (e.g., wife = 80%, husband = 20%), so that each item is rated on a scale from 0-100%. The Household Tasks scale assesses labor around laundry, cleaning, cooking, shopping, and dishes. The Childcare Tasks scale taps labor around feeding the baby, changing the baby, playing with the baby, and soothing the baby when fussy. In the third trimester, husbands and wives independently completed the measure based on their expectations for division of labor after the birth of the child. At 1, 3, and 6 months following the child's birth, husbands and wives rated their perceptions of the

actual division of labor for housework and childcare. Alphas for expected division of housework were .63 for mothers and .73 for fathers and for expected division of childcare were .70 for mothers and .67 for fathers; average alphas, which were stable over time, over 1, 3, and 6 months for actual division of housework were .67 for mothers and .64 for fathers, and for actual division of childcare were .80 for mothers and .79 for fathers. Scores for the Household Tasks and Childcare Tasks scales were computed by subtracting actual division of labor at each of the post-birth assessments from the expected division of labor. Negative scores, therefore, represent more responsibility for labor than was expected prior to the child's birth; although positive scores also indicate violated expectations in that parents do less than they had expected, violated expectations in the direction of more responsibility (negative violations) are expected to be more pertinent to the development of the parenting alliance.

Contextual characteristics. Measures of the context are designed to tap the environmental system in which the parenting alliance develops.

1. Demographic context. At the third trimester, a brief questionnaire collected information from each partner on age, education, occupation (measured by the revised Duncan Socioeconomic Index ; Stevens & Featherman, 1981), family income, ethnicity, and years married. A composite SES variable was made by standardizing and summing scores for each partner for educational level, occupation, and income. Age and years married were analyzed separately.

2. Relational context.

A. Marital satisfaction. The Dyadic Adjustment Scale (DAS; Spanier, 1976), one of the most widely used self-report measures of marital adjustment, was administered at all four data points. The DAS has 32 items designed to tap each partner's perception of general satisfaction, consensus, cohesion, and affection in the marital relationship, resulting in a total dyadic adjustment score. Average internal consistency coefficients for the omnibus scale over the four timepoints were .89 for both wives and husbands. Test-retest reliabilities are reported to be above .70 (Belsky et al., 1983).

B. Marital interactions. The videotaped couple interviews were coded using the Interactional Dimensions Coding System (IDCS; Julien, Markman, & Lindahl [1989]) by senior undergraduate research assistants who completed 90 hours of training. Videotape samples were divided into three equal segments. Coders rated each partner's behavior individually for each consecutive segment (e.g., mother for segment 1, father for segment 1, mother for segment 2, father for segment 2, etc.) on nine dimensions (Conflict, Dominance, Denial, Withdrawal, Support/Validation, Communication Skills, Problem Solving, Positive Affect, and Negative Affect) on a 9-point scale. The three segment scores for each dimension were then averaged to form nine individual dimension ratings for each partner's ratings. Interrater reliability was assessed for each of the separate dimensions using the intraclass correlation coefficient, with reliabilities presented in Table 6. The

Table 6

Interrater Reliability (Intraclass Coefficients) for IDCS Marital Interaction Ratings

Dimension	Mother		Father	
	T1	T2	T1	T2
Conflict	.59	.50	.58	.71
Dominance	.76	.74	.52	.82
Denial	**.47**	.60	.52	.70
Withdrawal	**.29**	**.33**	.65	**.41**
Support/validation	.66	.56	.62	.72
Communication skills	.68	.69	.69	.71
Problem solving	.62	.69	.60	**.15**
Positive affect	.72	.53	.59	.66
Negative affect	.54	**.19**	.72	**.45**

Note. Boldface denotes interrater reliabilities less than .50 and subsequently removed from further analysis.

intraclass correlations ranged from .15 to .82 (M = .60). Th e coding system was originally used to rate a problem-solving interaction, and we had some difficulty getting adequate reliability on some scales due to low frequencies of particular behaviors. Because of the variable interrater reliabilities, all tapes were coded by two raters and the scores averaged. In addition, any scales in which interrater reliability fell below .50 at any point were removed from further analysis (denial, withdrawal, problem-solving, and negative affect).

A principal components analysis with varimax rotation was conducted for wives and husbands combined on the remaining Time 1 scales: conflict, dominance, support/validation, communication skills, and positive affect. Two components emerged with eigenvalues greater than 1 that accounted for 79% of the variance. Table 7 presents the final solution. The first component, labeled positive marital interactions (PMI), accounted for 49% of the variance and consisted of positive loadings for communication skills, support/validation, and positive affect. The second component, labeled negative marital interactions (NMI), accounted for 30% of the variance and is comprised of positive loadings for conflict and dominance. The solution was replicated when conducted separately for wife and husband ratings and for the 6-month ratings. Scale scores were calculated by averaging the individual scales for each component. Alphas were .86 for mother PMI, .85 for father PMI, .64 for mother NMI, and .53 for father NMI.

Table 7

Loadings for IDCS Marital Interaction Principal Components Analysis

Variable	1	2
Communication skills	**.87**	.27
Support/validation	**.89**	-.16
Positive affect	**.79**	-.05
Conflict	-.34	**.84**
Dominance	.34	**.84**

Note. Boldface indicates designated component for each variable.

3. Differences in childrearing philosophy. The Ideas About Parenting Questionnaire (Heming, Cowan, & Cowan, 1990) was used to assess each partner's childrearing attitudes and values prior to the child's birth. The measure has 46 items with a 9-point scale ranging from "very much agree" to "very much disagree" and is designed for parents of children from 0 to 18 months of age. Reliable subscales were not available for this version (although scales had been developed for a version designed for parents of children over 18 months; Hinshaw, Zupan, Simmel, Nigg, & Melnick, 1997). The items were therefore subjected to a principal components analysis with varimax rotation. Nineteen items that focused on gender differentiation, parental efficacy, or other domains not of interest to this study were eliminated prior to analysis. After three items with loadings less than .35 and one that loaded equally on multiple components

were removed, the most interpretable solution had three components that accounted for 28.6% of the variance, cohered with Baumrind's (1967) typology, and supported the findings of Hinshaw et al. (1997). The final solution is presented in Table 8. The first component, labeled Authoritative Beliefs, had 9 items and appeared to tap attitudes around the encouragement of emotional expression and curiosity, as well as a desire to provide security while avoiding overprotectiveness (12.2%; alphas = .65 for mothers, .58 for fathers). Component 2, labeled Authoritarian Beliefs, consisted of 5 items emphasizing strict control, suppression of emotion, and a punishment orientation (9.1%; alphas = .69 for mothers, .59 for fathers). The final component, labeled Permissiveness/ Protectiveness, had 9 items addressing child-centeredness, lack of directiveness, and provision of security (7.3%; alphas = .61 for mothers, .56 for fathers). The authoritative and authoritarian scales were negatively correlated ($r = -.29$, $p < .01$ for fathers, $r = -.28$, $p < .01$ for mothers), but neither was associated with the permissiveness/protectiveness scale (r's ranged from .05 to .11). Correlations between mothers and fathers were .23 for authoritarian beliefs and for permissive/protective beliefs and .20 for authoritative beliefs (all $p < .05$). Absolute differences between the spouses' mean scale scores were calculated, with high scores indicating greater differences in childrearing philosophies.

Table 8

Loadings for Ideas About Parenting Measure Components Analysis

#	Item	1	2	3
31	Children should be encouraged to express their anger as well as their more pleasant feelings.	**.66**	-.10	.10
34	I like to see a child have opinions and express them, even to adults.	**.59**	-.29	.05
29	There are times in the lives of small children when they need to be with people other than their mothers and fathers.	**.59**	.10	-.01
9	Babies should be held when they are upset so they will be secure in their parents' love for them.	**.50**	-.12	.19
42	One of the joys of parenthood is encouraging a child's natural curiosity.	**.46**	-.19	.09
46	A certain amount of frustration and upset is necessary for a child's emotional growth. Because of this, parents should not be too protective.	**.44**	.34	-.15
35	It's all right for parents to go on a vacation together and leave the baby with a good sitter.	**.41**	.05	-.23
1	Too much cuddling spoils a child.	**-.38**	.21	-.02
13	Babies wish their parents would stop fussing over them so much.	**-.38**	.10	-.08
15	A child should not talk back to a parent.	-.21	**.72**	-.01
19	When a child is called, he or she should come immediately.	.00	**.62**	.02
2	A parent should not allow his or her mind to be changed by a child.	-.33	**.56**	.14
44	A child should be punished for breaking his or her own toys in a fit of anger.	-.07	**.53**	.02

Table 8, cont.

#	Item	1	2	3
26	Good parents should keep a firm hold on their child's expression of angry feelings.	-.21	**.48**	.20
17	Parents should try to avoid open conflict with a child.	-.21	.26	**.57**
5	Children, one year old or younger, don't feel their parents are really "with them" if the parents are doing something else at the same time.	-.23	-.04	**.50**
8	If parents are ready to go out for the evening and their baby reacts by crying and screaming, it is best for them to cancel their plans.	-.23	-.24	**.57**
25	Since new babies are fragile and delicate, they must be handled with extreme care.	.15	.17	**.49**
32	I want to try to tell my child what to do as little as possible.	.13	.00	**.48**
43	Other people will probably think I am permissive with my child.	.06	-.30	**.44**
39	An infant's needs must always come before the parent's needs.	.17	.23	**.44**
41	I will try to anticipate situations which could cause my child pain or discomfort and help my child avoid them if at all possible.	.03	-.04	**.43**
23	Babies are frequently so demanding that their parents have no time for anything else.	.11	-.05	**.39**

Note. Boldface indicates designated component for each variable.

Child Characteristics:

1. Infant sex. Infant sex was recorded at the 1-month assessment.

2. Perceptions of infant temperament. The Fussy/Difficult subscale of the Infant Characteristics Questionnaire, 6-month version (Bates, Freeland, & Lounsbury, 1979), was completed by mothers and fathers at 1, 3, and 6 months. Six items on a scale from 1 to 7 (descriptors vary, but high scores denote more difficult temperament) assess the degree to which the infant is irritable and difficult to soothe. Parent reports on the Fussy/Difficult scale correlate with independent behavioral observations (Bates et al., 1979). Over the three timepoints, the average internal consistency was .87 for mothers and .82 for fathers, with little variability across time.

RESULTS

Two methods were used to test the hypotheses. To assess the construct validity of the parenting partnership as distinct from the marital relationship (Hypothesis 1), structural equation modeling with LISREL 8.20 (Jöreskog & Sorböm 1998) using a confirmatory factor analytic model was conducted. The development of parenting alliance trajectories (Hypotheses 2 through 4) was examined by implementing hierarchical linear modeling with HLM/2L, Version 4.03, software (Bryk, Raudenbush, & Congdon, 1996).

Missing Data Estimation

Structural equation modeling with the LISREL8.20 program does not allow missing data. Therefore, only couples with complete parenting alliance and marital data at 6 months were included in the LISREL analyses ($N = 94$). On the other hand, HLM allows data to be missing over time (at Level 1). If many observations were missing, estimates would be at risk of systematic bias. However, minimal data was missing over time and parameters should not be affected. HLM does require complete data at Level 2. Examination of the pre-birth data revealed 20 scale scores missing across 12 individuals. Most of the missing data was from the marital interaction data of families where the camera malfunctioned during the interview and the data could not be coded. In addition, six participants did not complete the SCT. To avoid discarding these couples from analysis, data

imputation was completed for all missing scale scores using regression equations based on variables predictive of those missing from couples with complete data. The amount of missing data was considered insufficient to require tests of differences between groups with and without missing data (HLM N = 101).

Construct Validity of the Parenting Partnership

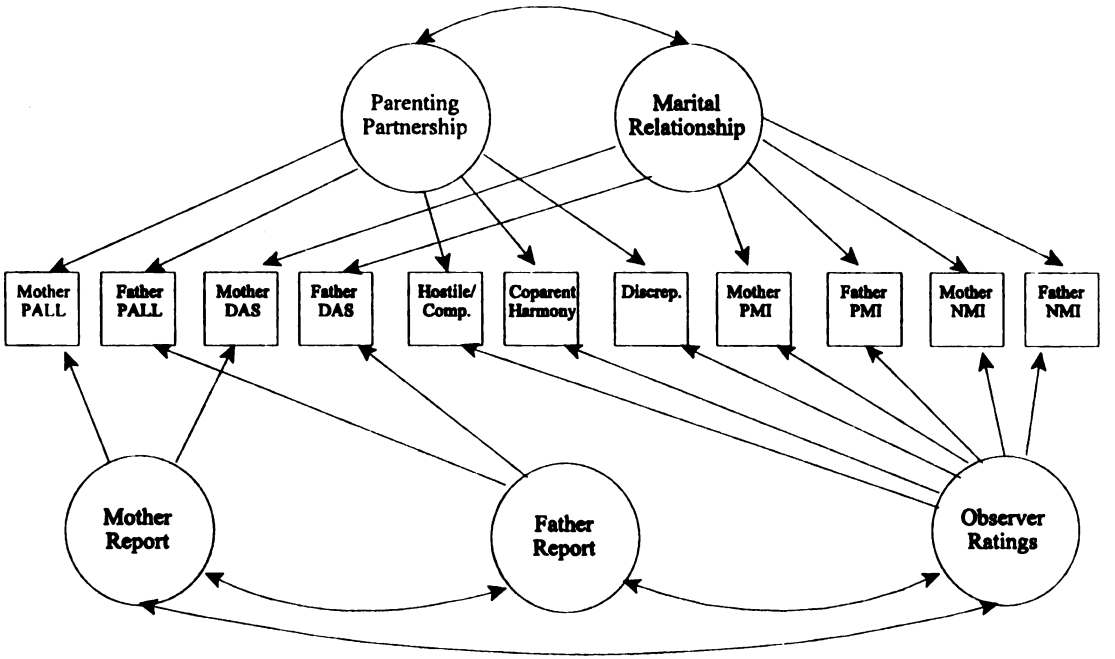
The first research question referred to the related but distinct nature of the parenting and marital relationships (Hypothesis 1).

Analytic strategy. Assessed by multiple methods and across multiple raters using cross-sectional data gathered 6 months after the birth of the child, structural equation modeling with LISREL 8.20 (Jöreskog & Sorböm, 1998) was used to test the appropriateness of a multitrait-multimethod model (Campbell & Fiske, 1969) with the parenting partnership and the marital relationship as traits and mother report, father report, and observer ratings as methods (Figure 1). Adequate model fit would confirm that the parenting partnership is a separate construct from the marital relationship while accounting for method effects. Alternatively, inadequate model fit would indicate that the model does not sufficiently encompass the interrelationships in the observed data; specific method effects may not be as specified, or the parenting partnership and the marital relationship may not be discriminable dimensions.

For the test of the hypothesized model, mother and father general alliance scores, DAS dyadic adjustment scores, positive and negative marital interaction

Figure 1

Hypothesized Model for Multitrait-Multimethod Model Testing Construct Validity of Parenting Partnership



Note. PALL = parenting alliance; DAS = Dyadic Adjustment Scale; Hostile/Comp. = hostility-competitiveness; Coparent. Harmony = coparenting harmony; Discrep. = parenting discrepancy; PMI = positive marital interactions; NMI = negative marital interactions.

ratings based on the marital interview, and hostility-competitiveness, coparenting harmony, and parenting discrepancy scores rated from the family interaction comprised the observed variables. Intercorrelations, means and standard deviations for the observed variables are displayed in Table 9. Four indices were used to evaluate model fit, with consistency across indicators heralding adequate fit: a) A nonsignificant χ^2 would indicate that the observed covariance matrix did not differ significantly from the hypothesized model; b) the goodness of fit index (GFI; Jöreskog & Sörbom, 1989, cf., Tanaka & Huba, 1985) compares how well the model fits relative to no model at all, with values that range from .00 to 1.00; values above .90 are considered adequate fit; c) the non-normed fit index (NNFI; (Bentler & Bonett, 1980) assesses the degree to which the model fits better than a model in which all variables are uncorrelated, or an independence model; although these values are designed to range from .00 to 1.00, they can exceed 1.00; and 4) the root mean square error of approximation (RMSEA; Steiger, 1990) accounts for the error of approximation of the estimate in the population per degree of freedom, with values .05 or less indicating good fit and .08 or less representing a reasonable fit (Browne & Cudeck, 1993).

Results for the hypothesized model. Maximum likelihood estimates of the hypothesized model via analysis of covariance matrices produced an inadmissable solution (i.e., standardized parameter estimates >1), with the problem appearing to be the result of misspecification of the relationships between the trait and method

Table 9

Intercorrelations, Means, and Standard Deviations for 6-Month Parenting Partnership and Marital Relationship Variables

Variables	1	2	3	4	5	6	7
1. Parenting alliance	.33**	.52***	.40***	-.33***	-.06	.19^{t}	-.06
2. Marital adjustment	.58***	.67***	.32***	.35***	-.05	.22*	-.13
3. Positive marital interactions	.28**	.16	.61***	-.25*	-.06	.20^{t}	-.03
4. Negative marital interactions	-.19^{t}	-.30**	-.26*	.33***	-.06	-.07	.21*
5. Hostile/competitiveness	-.05	-.15	-.21*	.25*	---	-.28**	.10
6. Coparenting harmony	.19^{t}	.24*	.23*	-.08	-.28**	---	-.23*
7. Parenting discrepancy	-.29**	-.12	-.09	.15	.10	-.23*	---
Mother M	3.41	147.37	5.42	5.28	.00	.00	.00
SD	.40	12.32	.78	.89			
Father M	3.58	150.09	5.44	5.08	2.12	1.79	1.60
SD	.32	10.10	.84	.77			

Note. Correlations for mothers are above the diagonal; correlations for fathers are below the diagonal; correlations between mothers and fathers are on the diagonal. For coparenting variable descriptives, means are on top, standard deviations are below.
$^{t}p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$

latent variables. That is, the problem did not converge as hypothesized. The model was assessed for mother and father variables separately, but the same problems emerged for each. Thus, using the most conservative test, Hypothesis 1 was not supported.

Post hoc analyses. Additional analyses were conducted in hopes of defining a more simplified model that would differentiate between coparenting and marital self-reports and observational measures. Mother and father data were analyzed separately to decrease error likely to exist due to sex differences. To test the hypothesis that coparenting and the marital relationship are related but distinct constructs, a two-factor model was specified in which the parenting partnership and the marital relationship were correlated latent variables. This model was tested against a one-factor model in which the coparenting and marital variables were hypothesized to form one "dyadic relationship" latent variable. The two competing models were examined separately for self-report data and for observations. For the self-report measures, the parenting partnership latent variable was comprised of two parallel subscales derived from the general alliance scale[5], and the marital relationship latent variable was comprised of the four DAS subscales, dyadic satisfaction, dyadic cohesion, dyadic consensus, and dyadic affectional expression. For the observational measures, the parenting partnership

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[5]The general alliance scale has 31 items. One item that did not have a matching item was dropped to equalize the number of items in each scale, resulting in two parallel scales of 15 items.

latent variable consisted of hostility-competitiveness, coparenting harmony, and parenting discrepancy, and the marital relationship latent variable was made up of positive and negative marital interactions. In all, four sets of analyses were conducted, with separate tests examined for mother and father self-reports and observations.

Fit indices for each of the models are presented in Table 10. Although support was generally provided for the hypothesis, results for the self-report data were the most conclusive. For both mothers and fathers, the two-factor model differentiating the parenting partnership and the marital relationship provided an excellent fit to the observed data. All factor loadings (shown in Figure 2) were significant, ranging from .48 to 1.00, $\underline{t}$s > 3.30, $\underline{p} < .001$, as were the correlations between the factors, mothers' $\underline{r} = .58$, $\underline{t} = 7.31$, $\underline{p} < .001$; fathers' $\underline{r} = .60$, $\underline{t} = 7.16$, $\underline{p} < .001$. No additional paths were suggested by modification indices. Furthermore, the two-factor model was a considerable improvement over the one-factor model, mothers' $\Delta \chi^2 (1, \underline{n} = 94) = 95.05$, $\underline{p} < .001$, fathers' $\Delta \chi^2 (1, \underline{n} = 94) = 67.03$, $\underline{p} < .001$. A simultaneous group analysis of the two-factor model for both parents with factor loadings allowed to vary determined that the model was comparable for both parents, $\chi^2 (23, \underline{n} = 94) = 29.91$, $\underline{p} = .15$, GFI = .94, NNFI = .98, RMSEA = .06.

The results for the observational variables were more equivocal. As with the self-report data, fit indices and a lack of modification indices indicated that the

Table 10

Fit Indices for Competing Two- and One-Factor Models of the Parenting Partnership and the Marital Relationship

	Two-factor				One-factor			
	χ^{2a}	GFI	NNFI	RMSEA	χ^{2b}	GFI	NNFI	RMSEA
Self-report								
Mother	12.59	.96	.97	.08	107.64***	.72	.57	.34
Father	12.26	.95	.96	.08	79.29***	.76	.61	.30
Observations								
Mother	4.07	.98	.98	.01	7.69	.97	.60	.08
Father	3.68	.98	1.01	.00	4.71	.98	.98	.00

Note. GFI = goodness of fit index.; NNFI = non-normed fit index; RMSEA = root mean square error of approximation.

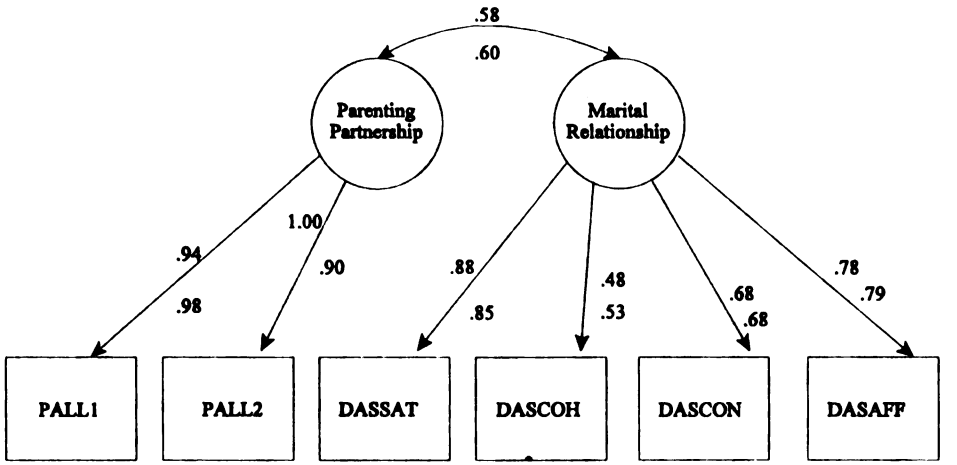
[a]For self-report measures, df = 8; for observational measures, df = 4; n = 94.

[b]For self-report measures, df = 9; for observational measures, df = 5, n = 94.

***p < .001.

Figure 2

Parameter Estimates for Two-Factor Model of Self-Reported Parenting Partnership and Marital Relationship



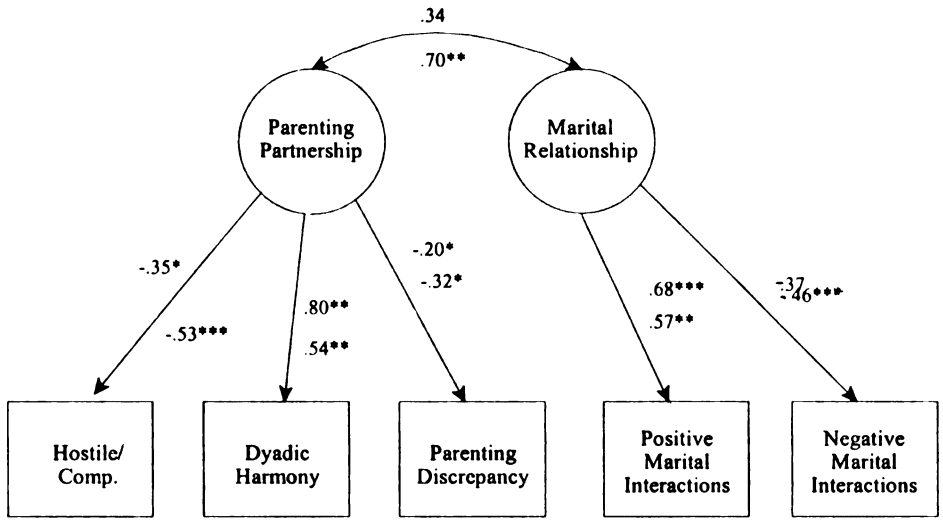
Note. PALL1 = parenting alliance measure 1; PALL2 = parenting alliance measure 2; DASSAT = dyadic satisfaction; DASCOH = dyadic cohesion; DASCON = dyadic consensus; DASAFF = dyadic affectional expression. Standardized coefficients for mothers are above, for fathers are below. All parameter estimates significant at $p < .001$.

two-factor model fit well for both parents. However, two of the six path coefficients in the mothers' model did not reach significance (parameter estimates shown in Figure 3). In addition, the one-factor model was less distinct from the two-factor model than had been the case for the self-report data. For mothers, although the NNFI of .59 indicated a poor fit, the other fit indices suggested that the one-factor model fit the data well. Moreover, the fit of the two models was not significantly different, although there was a trend in favor of the two-factor model, $\Delta \chi^2 (1, \underline{n} = 94) = 3.62$, $\underline{p} < .10$. For fathers, there were virtually no differences in fit between the one- and two-factor models, $\chi^2 (1, \underline{n} = 94) = 1.03$, ns. To determine which model could be applied better across both parents, simultaneous group analyses were used to evaluate each model for both parents, with factor loadings allowed to vary. Both models fit well across mothers (all factor loadings became significant) and fathers, two-factor model $\chi^2 (14, \underline{n} = 188) = 9.69$, ns, GFI = .98, NNFI = 1.16, RMSEA = .00; one-factor model $\chi^2 (15, \underline{n} = 188) = 16.42$, ns, GFI = .97, NNFI = .94, RMSEA = .03. A comparison of the models favored two factors over one, $\Delta \chi^2 (1, \underline{n} = 188) = 6.73$, $\underline{p} < .01$. On the basis of these results, it was concluded that the parenting partnership and the marital relationship formed separate but related constructs using both self-report and observational measures.

A final set of analyses examined whether self-reported perceptions and observed interactions were interrelated or separate aspects of the couple

Figure 3

Parameter Estimates for Two-Factor Model of Observed Parenting Partnership and Marital Relationship



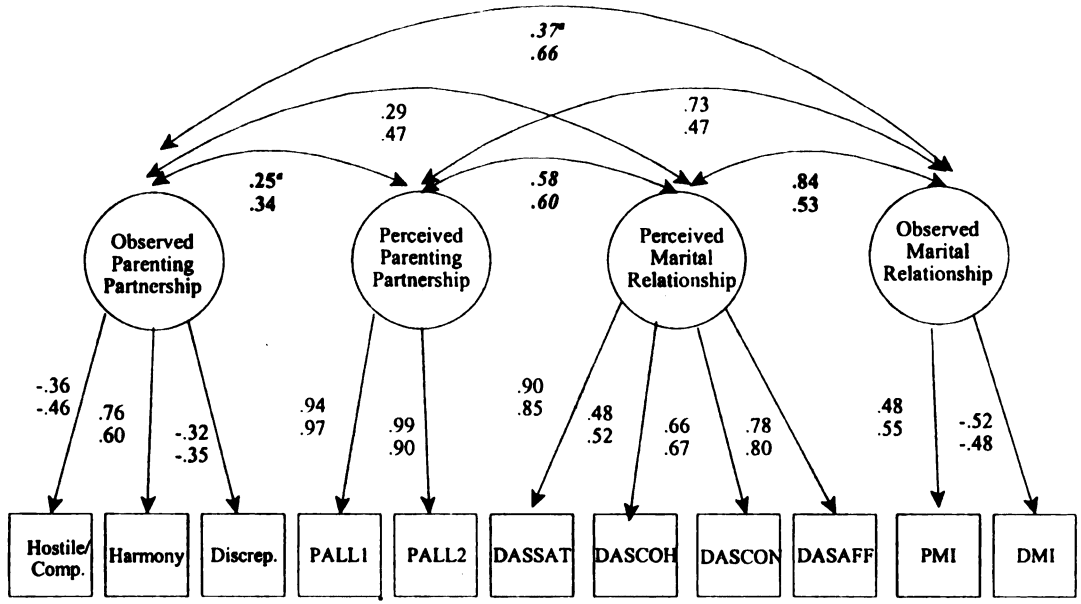
Note. Hostile/Comp. = hostility-competitiveness. Standardized coefficients for mothers are above, for fathers are below. *p < .05. **p < .01. ***p < .001.

relationship. A model was specified in which the four latent relationship variables, self-reported parenting alliance and marital adjustment and observed coparenting and marital interactions, were hypothesized to form different but related dimensions of the dyadic relationship. The solution (shown in Figure 4) fit well for both mothers, χ^2 (38, n = 94) = 42.76, ns, GFI = .92, NNFI = .98, RMSEA = .04, and fathers, χ^2 (38, n = 94) = 42.83, ns, GFI = .92, NNFI = .95, RMSEA = .04; all factor loadings in the measurement model were significant and no changes were suggested by modification indices. A simultaneous model for both mothers and fathers with factor loadings allowed to vary resulted in χ^2 (93, n = 188) = 103.80, ns, GFI = .89, NNFI = .97, RMSEA = .04. Although the GFI was just below the conventional cutoff of .90, in conjunction with the other measures of fit, which were excellent, the model was judged to confirm the adequacy of the factor structure across parents.

A series of models attempting once again to derive an overall method (self-report or observation) and/or trait (parenting partnership or marital relationship) factor all resulted in inadmissable solutions. Inspection of the intercorrelations among the latent variables provided a probable explanation. Although some associations were as expected, others were not; in addition, the pattern of correlations differed for mothers and fathers. For both parents, the two self-report measures were moderately related (mothers' r = .58, fathers' r = .60, p < .001), but the observational measures were strongly associated only for fathers (mothers' r =

Figure 4

Parameter Estimates for Four-Factor Model of Dyadic Relationship



Note. PALL1 = parenting alliance measure 1; PALL2 = parenting alliance measure 2; DASSAT = dyadic satisfaction; DASCOH = dyadic cohesion; DASCON = dyadic consensus; DASAFF = dyadic affectional expression; Hostile/Comp. = hostility-competitiveness; Discrep. = parenting discrepancy; PMI = positive marital interactions; NMI = negative marital interactions. Boldface roman indicates trait correlations hypothesized to be significant; boldface italic indicates method correlations hypothesized to be significant. [a]$p > .05$; all other estimates significant at a minimum $p < .05$

.37, ns, fathers' r = .66, p < .001). Whereas the marital variables were more highly correlated with each other for mothers (mothers' r = .84, fathers' r = .53, p < .001), the coparenting variables were not strongly related to each other for either parent (mothers' r = .25, ns, fathers' r = .34, p < .001). Thus, there was only partial evidence for the hypothesized trait and method effects. Furthermore, correlations that should have been small according to the hypothesized model were quite high (e.g., between self-reported parenting alliance and marital observations and between self-reported marital adjustment and coparenting observations, rs ranged from .29 to .73).

Overall, the results suggest that each of the latent variables comprised a particular dimension of the dyadic relationship. More satisfied perceptions of those aspects of the relationship related to coparenting were likely to be accompanied by greater happiness with the marriage, and, especially for mothers, were reflected in more positive marital interactions. However, perceptions of the parenting alliance were not particularly strongly related to how the couple actually behaved when playing together with their child. Furthermore, warm, cooperative couple behaviors in the context of the child were accompanied by more positive marital interactions for fathers, but appeared to be a separate aspect of the relationship altogether for mothers.

Parenting Alliance Trajectories

The remaining hypotheses explored the longitudinal development of the parenting alliance. The overall aim was to specify trajectories using data gathered at 1, 3 and 6 months after the baby's birth, and to explain individual differences in these trajectories using stable pre-birth factors and time-varying process factors.

Analytic strategy. Growth curve modeling (Bryk & Raudenbush, 1992; Duncan, Duncan, & Hops, 1996; Duncan, Duncan, Strycker, Li, & Alpert, 1999; Karney & Bradbury, 1995; McArdle & Epstein, 1987; Raudenbush, Brennan, & Barnett, 1995; Willett & Sayer, 1994) provides a conceptual model for examining specific aspects of longitudinal trajectories. Unlike traditional methods of examining change, which utilize information from only two points in time via analysis of residual change or difference scores, growth curve modeling incorporates information from all data points. For each person, a within-person, or Level 1, model was specified that characterized his/her individual trajectory and was potentially comprised of three parameters: an intercept, representing the level of parenting alliance at the midpoint of the study; a slope, indicating the linear rate of change in the parenting alliance over time; and a quadratic function representing a curvilinear component estimating the rate of acceleration or deceleration in change. The parameters for the Level 1 model were estimated for each person and used to specify an overall average parenting alliance trajectory (Hypothesis 2), or baseline model, by the following equation:

$$Y_{it} = \pi_{0i} + \pi_{1i}(\text{rate})_{it} + \pi_{2i}(\text{curve})_{it} + e_{it} \quad ,$$

where Y_{it} was the parenting alliance trajectory for Participant i and Time t.

Orthogonal polynomial contrasts were used to define the linear and quadratic functions, with 1, 3, and 6 months weighted as -1, 0, and 1 for the linear and -.333, .667, and -.333 for the quadratic (Kurdek, 1998)). Equal weighting over time was considered defensible in light of the relatively equal spacing of the timepoints (2 and 3 months apart). In addition, measurement error was estimated by using the two previously derived parallel measures of the parenting alliance, so that each person had two scores for each timepoint that represented a true latent parenting alliance score at each assessment plus measurement error (Raudenbush et al., 1995). Typically, in a study with three timepoints, the three observations per person would allow only an intercept and a slope parameter to be estimated, plus the estimation of the within-person error variance. The construction of parallel measures (previously utilized to in post-hoc analyses for Hypothesis 1), however, resulted in six observations per person and enabled the quadratic to be estimated. Raudenbush and colleagues (1995) note that when data are limited to three timepoints, the best interpretation of the quadratic may be as an indicator of the temporal instability of the trajectory (i.e., a marker of the degree to which the parenting alliance fluctuates versus develops as a consistent linear function). The estimation of these three parameters saturated the model, so that the within-person error was an index of the internal consistency of the general alliance scale. The

elements were then defined as:

π_{0i} = average initial level of parenting alliance;

π_{1i} = average rate of change in Y for Participant i over all timepoints;

π_{2i} = average temporal instability in Y for Participant i; and

e_{it} = random within-person measurement error.

These three parameters (π_{0i}, π_{1i}, π_{2i}) defined each individual's parenting alliance trajectory across time and became the outcome variables in subsequent analyses exploring between-person differences. That is, the specification of growth parameters at the level of the individual resulted in distributions of intercepts, slopes, and quadratics which were then regressed onto stable between-person predictors (termed Level 2 variables) to attempt to account for individual differences in specific aspects of the growth curve trajectory (Hypothesis 3) in an explanatory model:

$$\pi_{0i} = \beta_{00} + \beta_{01}(\text{predictor } 1)_i + \ldots \beta_{0j}(\text{predictor } j)_i + u_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}(\text{predictor } 1)_i + \ldots \beta_{1j}(\text{predictor } j)_i + u_{1i}$$

$$\pi_{2i} = \beta_{20} + \beta_{21}(\text{predictor } 1)_i + \ldots \beta_{2j}(\text{predictor } j)_i + u_{2i}$$

Because trajectories from mothers and fathers were likely to be dependent upon one another within a particular couple, an extended model that accounted for the nesting of persons within couples was also defined. This combination of a longitudinal model for individual change with a cross-sectional hierarchical model for matched pairs resulted in a longitudinal model of change in matched pairs

(Barnett, Raudenbush, Brennan, Pleck, & Marshall, 1995; Karney & Bradbury, 1997; Kurdek, 1998; Raudenbush et al., 1995). The Level 1 baseline couple model then became:

$$Y_{it} = \text{(female)}_{it}[\pi_{f0i} + \pi_{f1i}(\text{rate})_{it} + \pi_{f2i}(\text{curve})_{it}] + \text{(male)}_{it}[\pi_{m0i} + \pi_{m1i}(\text{rate})_{it} + \pi_{m2i}(\text{curve})_{it}] + e_{it} \quad ,$$

in which two intercepts, two slopes, and two quadratics were specified, one for each parent, that took into account the covariation of the other partner's parameters. The Level 2 model took the same form as above for six πs rather than three as in the baseline model for the entire sample without differentiation between mothers and fathers.

Explanatory models were also developed that examined the interrelationship between the parenting alliance trajectories and other time-varying variables (Hypothesis 4) (Raudenbush et al., 1995). Using self-reported marital adjustment as an example, this method separated the relationship between parenting alliance trajectories and post-birth marital adjustment into two components. The time-varying, or Level 1, component, represented the degree to which changes in marital adjustment were associated with changes in the parenting alliance; scores used in analysis were the deviation of the marital rating at each timepoint from the person's mean marital adjustment across the three assessments. The time-invariant, or Level 2, component provided the relationship between the individual's mean marital adjustment over the three timepoints and

his/her mean level of parenting alliance. This Level 1 model was then:

$$
\begin{aligned}
Y_{it} = \quad & (\text{female})_{it}\ [\pi_{f0i} + \pi_{f1i}(\text{rate})_{it} + \pi_{f2i}(\text{curve})_{it} \\
& + \pi_{f3i}(\text{female marital rate})_{it} + \pi_{f4i}(\text{male marital rate})_{it}] + \\
& (\text{male})_{it}\ [\pi_{m0i} + \pi_{m1i}(\text{rate})_{it} + \pi_{m2i}(\text{curve})_{it} \\
& + \pi_{m3i}(\text{male marital rate})_{it} + \pi_{m4i}(\text{female marital rate})_{it}] + e_{it} \quad .
\end{aligned}
$$

For example, π_{f3i} indicated the expected increase in a mother's parenting alliance rating per unit increase in her marital rating. Because the six parameters estimated in the baseline couple model saturated the model, leaving no degrees of freedom available for estimation of additional parameters, the four coefficients representing the temporal component of marital adjustment were constrained to have fixed effects. The Level 2 model for the 10 parameters became:

$$
\begin{aligned}
\pi_{f0i} &= \beta_{f00} + \beta_{f01}(\text{female marital mean})_i + \beta_{f02}(\text{male marital mean})_i + u_{f0i} \\
\pi_{m0i} &= \beta_{m00} + \beta_{m01}(\text{male marital mean})_i + \beta_{m02}(\text{female marital mean})_i + u_{m0i} \\
\pi_{f1i} &= \beta_{f10} + u_{f1i} \\
\pi_{m1i} &= \beta_{m10} + u_{m1i} \\
\pi_{f2i} &= \beta_{f20} + u_{f2i} \\
\pi_{m2i} &= \beta_{m20} + u_{m2i} \\
\pi_{f3i} &= \beta_{f30} \\
\pi_{m3i} &= \beta_{m30} \\
\pi_{f4i} &= \beta_{f40} \\
\pi_{m4i} &= \beta_{m40}
\end{aligned}
$$

This model was particularly applicable to research questions related to systemic family relationships because it assessed not only the effects of the spouse's own perceptions on family relationships, but considered the effects of the partner's perceptions as well.

Hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992) has a number of advantages over alternative methods of growth curve analysis, such as structural equation modeling (Bryk & Raudenbush, 1992; Karney & Bradbury, 1995). First, HLM does not assume that the data are collected simultaneously from all participants at equal intervals (i.e., perfectly balanced). Because HLM uses all available data from each individual to compute the trajectory, missing data is allowed (for this study, individuals were required to have multiple measurements). Second, individual parameter estimates are weighted by their precision; trajectories that can be estimated more precisely are weighted more heavily than those estimated less precisely. These Bayesian estimates result in more conservative estimates of variance than traditional optional least squares (OLS) methods. Third, HLM simultaneously estimates effects for each timepoint, so that each parameter is controlled for when estimating other parameters.

Growth curve analysis via hierarchical linear modeling was conducted using HLM/2L, Version 4.03, software (Bryk et al., 1996). First, a baseline model for the entire sample without predictors specified an average parenting alliance trajectory. Next, the longitudinal model for matched pairs tested a baseline couple

model to examine whether men and women differed in their parenting alliance trajectories. A number of explanatory models were then identified. In explanatory model A, the influence of stable pre-birth factors on parenting alliance trajectories was investigated. In explanatory models B1 through B5, interrelationships between the parenting alliance and time-varying factors, including the marital relationship, the division of labor, parenting efficacy, and perceptions of infant temperament, were assessed.

The Baseline Trajectory of the Parenting Alliance

Average parenting alliance ratings were 3.50 (SD =.30) at one month, 3.51 (SD = .28) at three months, and 3.48 (SD = .38) at six months, indicating virtually no change in level across time. On the one hand, the remarkable consistency of these means might suggest that attempts to define a slope parameter would be fruitless. Nonetheless, one purpose of the current study was to describe the trajectory of the initial parenting alliance more precisely according to specified parameters, regardless of whether they were significant. Furthermore, individual differences in the change parameters might make the baseline trajectory misleading. To illustrate, one possibility is that the parenting alliance is a stable relationship that remains unchanged over time for most couples; in this case, the change parameters would have little variance. On the other hand, some parents may report increasing satisfaction with the parenting alliance, while others become more unhappy. This scenario could also result in a stable baseline

trajectory, but would also leave significant variance to be explained in the change parameters. The HLM analyses were therefore considered a suitable next step.

Assumptions and reliability of the parameter estimates. HLM procedures assume that variables are normally distributed and that the Level 1 variances are homogeneous. Descriptive statistics and plots indicated that all variables were within the bounds of normality, and a test of the Level 1 variances confirmed homogeneity, $\chi^2(194, N = 1202) = .32$, ns. In addition, the reliability of the parameter estimates was assessed. In the context of growth curve analysis, the reliability of a parameter estimate is defined as "the proportion of observed variance in a parameter that can be treated as true variance" (Karney & Bradbury, 1995, p. 1101). This definition of reliability differs from internal reliability as assessed by coefficient alpha, for which higher values are generally preferred. As a guideline, Bryk and Raudenbush (1992) recommend that when reliabilities are less than .05, the variance of the parameter is essentially zero. For this study, baseline model reliabilities were considerably higher, estimated at .98 for the intercept, .88 for the slope, and .82 for the quadratic. These reliabilities indicate that nearly all the variance in the intercept and the majority of variance in the change parameters can be construed as true variance, and imply that residual variance should be able to be explained if the correct covariates are identified.

Model specification. The overall parenting alliance trajectory was determined by specifying an unconditional between-person model in which the

parameters of the within-person model were allowed to vary randomly, providing unbiased estimates of the population mean and population variance of the intercepts, slopes, and quadratics. t-tests assessed the hypothesis that each parameter estimate was different from zero. This hypothesis is meaningless in the case of the intercept, which must differ from zero because it is based on an arbitrary scale of 1 to 4. However, if the slope and quadratic are significantly different from zero, change is indicated in the parenting alliance over time. Additionally, the significance of variation among the parameters was examined using the chi square statistic; significance indicates that variation in the parameter remains to be explained, so that the average slope may not be a good representation of rate of change in the sample as a whole.

Restricted maximum likelihood estimates of the baseline parenting alliance trajectory described a trajectory in which the parenting alliance is quite strong and unchanging, with estimates, standard deviations, and t and χ^2 statistics presented in Table 11. Effect sizes are also provided to facilitate interpretation, with .10, .30, and .50 indicating small, medium, and large effects, respectively (Cohen, 1988).

Despite the apparent lack of change over time, significant variation was evident around all three parameters. Figure 5 illustrates the individual parenting alliance trajectories for all individuals in the sample. This figure demonstrates that whereas on average, parenting alliance scores were high and remained stable over the 6-month period, individuals differed substantially in their coparenting

Table 11

Parameter Estimates for Baseline Model

	Parameter estimates				
Parameter	Unstand. coeff.	SD	Effect size r	t(203)[a]	χ^2 (196)[b]
Level	3.51	.11	---	147.47***	10023.70***
Rate	-.01	.15	.05	-.86	1573.02***
Curve	.01	.20	.04	.70	1082.05***

Note. Unstand. coeff. = Unstandardized coefficient.

[a] Refers to significance of the parameter estimate.

[b] Refers to significance of the variance component.

***$p < .001$.

experiences, with both increasing and decreasing trajectories resulting in the appearance of no change over time at the group level. The variation in change is highlighted by the distributions of the slope (Figure 6) and quadratic (Figure 7) estimates for individual participants. Using two cutoffs for comparison, Table 12 presents the percentages of parents whose perceptions of the alliance increased, remained unchanged, or decreased between 1 and 6 months post-birth. Using a change in parenting alliance score of ½ SD (.15) from month 1 to month 6 as the criterion, about half of the sample did report a stable parenting alliance, but the rest were equally divided between increasing and declines. When a cutoff of 1 SD (.30) was used, three-fourths were consistent over time, with 11% reporting

Figure 5

Individual Parenting Alliance Trajectories

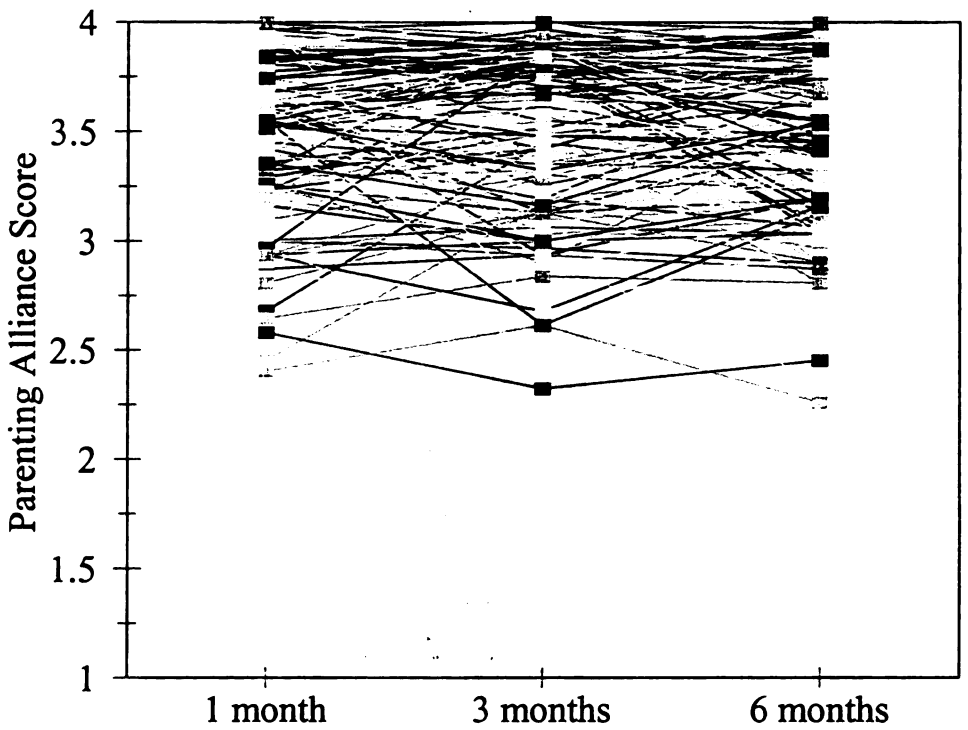


Figure 6

Distribution of Slope Estimates for Baseline Model

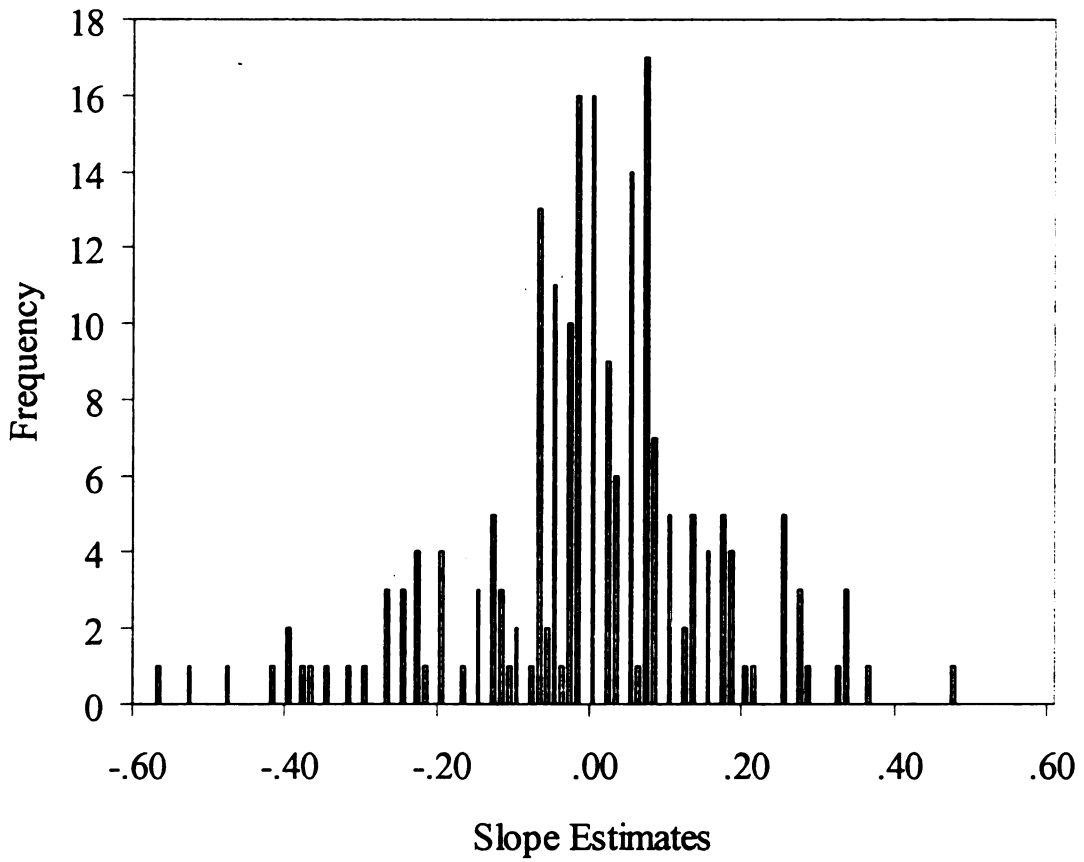


Figure 7

Distribution of Quadratic Estimates for Baseline Model

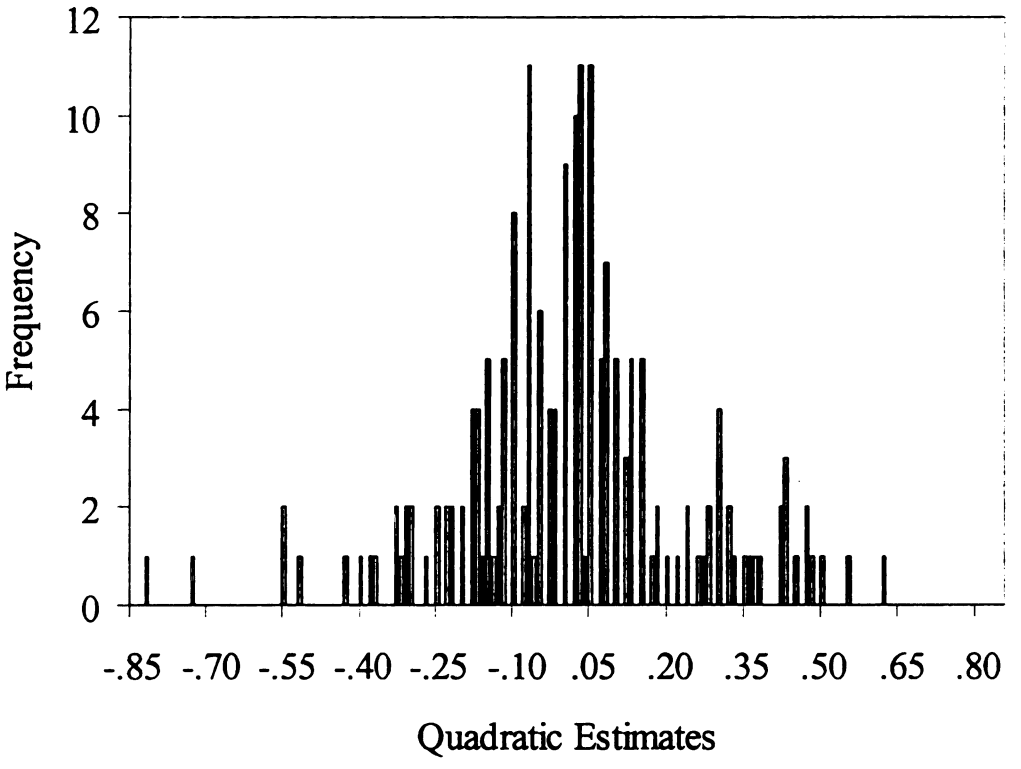


Table 12

Percentage of Parents Whose Parenting Alliance Ratings Changed From 1 to 6 Months Post-Birth

	Percentage	
Direction of change	Changed by ½ SD	Changed by 1 SD
Increased	25%	11%
Stayed the same	53%	75%
Decreased	23%	14%

increasing satisfaction and 14% decreasing satisfaction.

The three parameters were found to be unrelated. The correlation between level and rate was .07, between level and the curvilinear component was .03, and between rate and curve was .07. Overall, then, individuals who reported more satisfaction in the parenting alliance were not prone to greater declines, nor were they more likely to maintain their satisfaction, than those who rated the parenting alliance as lower.

Baseline Couple Parenting Alliance Trajectories

Means and standard deviations for mothers' and fathers' parenting alliance scores at each of the three timepoints are presented in Table 13 and suggest that fathers and mothers differ in the level of parenting alliance, with mothers less satisfied than fathers. Mothers' and fathers' parenting alliance ratings were correlated within each timepoint, $r = .43$, $p < .01$ at one month, $r = .25$, $p < .05$ at

Table 13

Mean Parenting Alliance Scores Over Three Timepoints for Mothers and Fathers

Parent	1 month	3 months	6 months
Mothers			
M	3.38	3.39	3.39
SD	.41	.39	.41
Fathers			
M	3.59	3.59	3.57
SD	.32	.31	.34

three months, and $r = .3$, $p < .01$ at six months.

To define separate parenting alliance trajectories for mothers and fathers while accounting for the nesting of parents within couples, an unconditional between-couples model was specified in which within-couple parameters were allowed to vary randomly. All parameter estimates, shown in Table 14, were highly reliable, although the change parameters were slightly less so for fathers. The parameter estimates for the baseline couple model are presented in Table 15. The baseline couple model replicates the findings of the overall baseline model in that the two trajectories did not change over time. However, a multivariate test indicated that mother and father trajectories differed, $\chi^2(3, N = 101) = 17192.07$, $p < .000$. Follow-up univariate tests confirmed that although the mother and father rates and curves were equivalent (i.e., no change was apparent in either group),

Table 14

Reliabilities for Baseline Couple Model Parameter Estimates

	Reliability	
Parameter	Mother	Father
Level	.98	.98
Rate	.91	.81
Curve	.87	.70

fathers rated the parenting alliance as significantly higher than did mothers, $\chi^2(1, N = 101) = 17133.85, p < .000$.

Furthermore, although all six parameter estimates continued to have significant residual variance, indicating that individual differences exist in the degree of change and in the stability of the parenting alliance, each parameter varied to a greater extent for mothers than for fathers. Inspection of Table 16 reveals that mothers were more prone to change in experiences of the parenting alliance than were fathers. These differences in variance are shown in Figure 8, which depicts individual trajectories for mothers and fathers separately, and Figures 9 and 10, which display the distributions of the slope and quadratic parameters for each group. The couple model was a significant improvement over the general baseline model, $\Delta\chi^2(15, N = 101) = 68.70, p < .000$, indicating that a model accounting for the different experiences of mothers and fathers represents

Table 15

Parameter Estimates for the Baseline Couple Model

Parameter	Unstand. coeff.	SD	Effect size r	t(100)[a]	χ^2(93, N = 101)[b]
Mothers					
Level	3.41	.34	---	98.58***	5389.25***
Rate	-.00	.18	.01	-.29	1038.94***
Curve	.00	.24	.01	.22	731.69***
Fathers					
Level	3.60	.29	---	121.35***	3681.88***
Rate	-.01	.12	.10	-1.10	521.16***
Curve	.02	.15	.09	1.03	322.61***

Note. Unstand. coeff. = unstandardized coefficient.

[a]Tests the significance of the parameter estimate from zero.

[b]Tests the significance of the residual variance from zero.

***$p < .0001$.

Table 16

Percentage of Mothers and Fathers Whose Parenting Alliance Ratings Changed From 1 to 6 Months Post-Birth

	Percentage			
	Changed by ½ SD		Changed by 1 SD	
Direction of change	Mothers	Fathers	Mothers	Fathers
Increased	31%	18%	16%	6%
Stayed the same	40%	63%	68%	78%
Decreased	29%	16%	17%	12%

the observed data better than one which does not.

Within couples, the level of parenting alliance was correlated between mothers and fathers ($r = .42$, $p < .01$), as were the quadratic functions ($r = .26$, $p < .05$), suggesting that parents tended to experience unstable trajectories together. Surprisingly, between-spouse slopes were unrelated ($r = .12$, ns), indicating that change in perceptions of the parenting alliance in one parent was not concurrently dependent upon change in the other parent. Subsequent analyses control for the dependency of the parameter estimates within couples. The level of the parenting alliance was not associated with either of the change parameters (the correlation between level and rate was .07 for women and .10 for men, and between level and curve was -.02 for women and .12 for men).

Slopes and quadratics were correlated for both women and men, but in different directions ($r = .21$ for women, $p < .05$, $r = -.26$ for men, $p < .01$).

Figure 8

Individual Parenting Alliance Trajectories of Mothers and Fathers

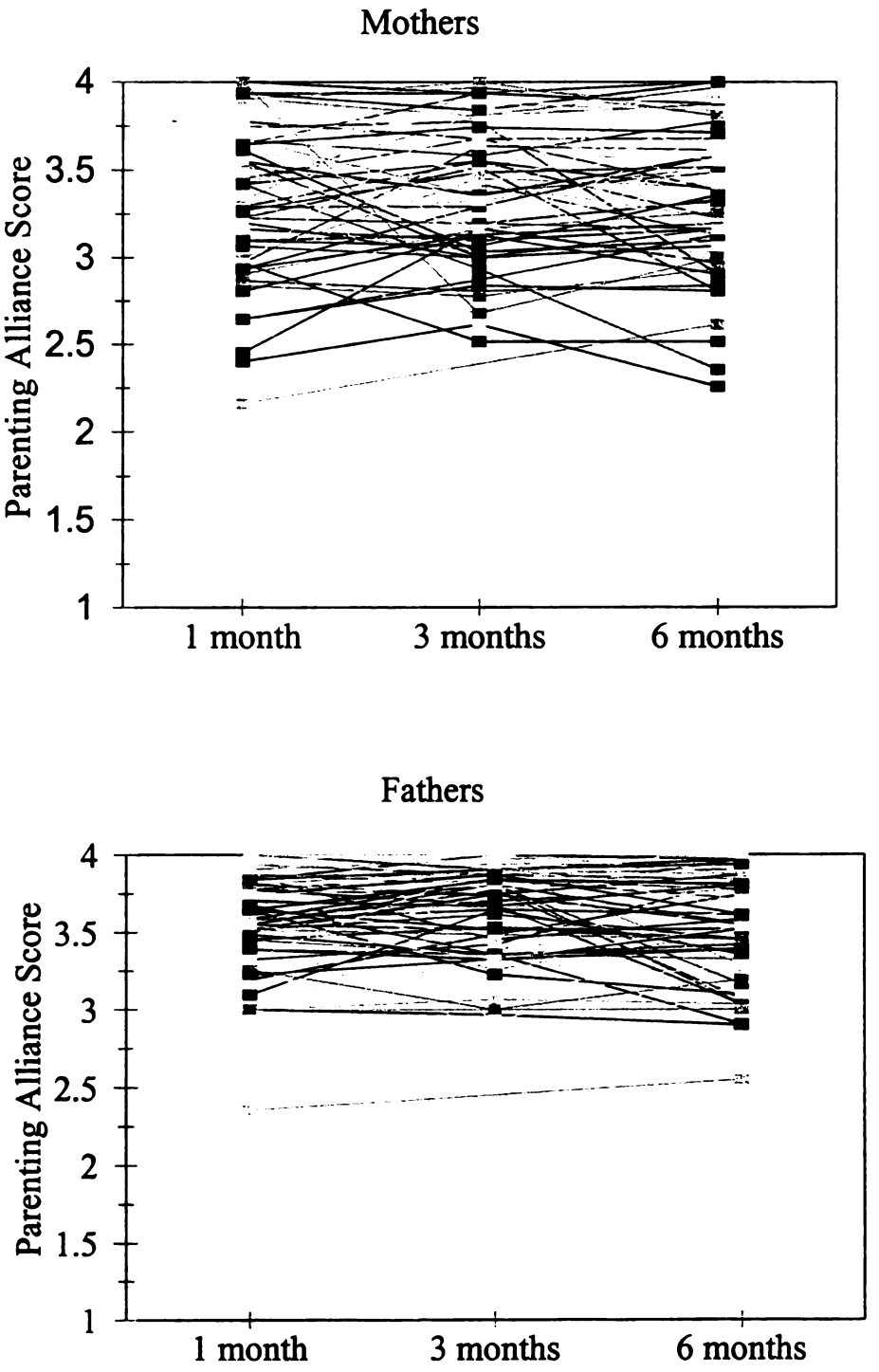
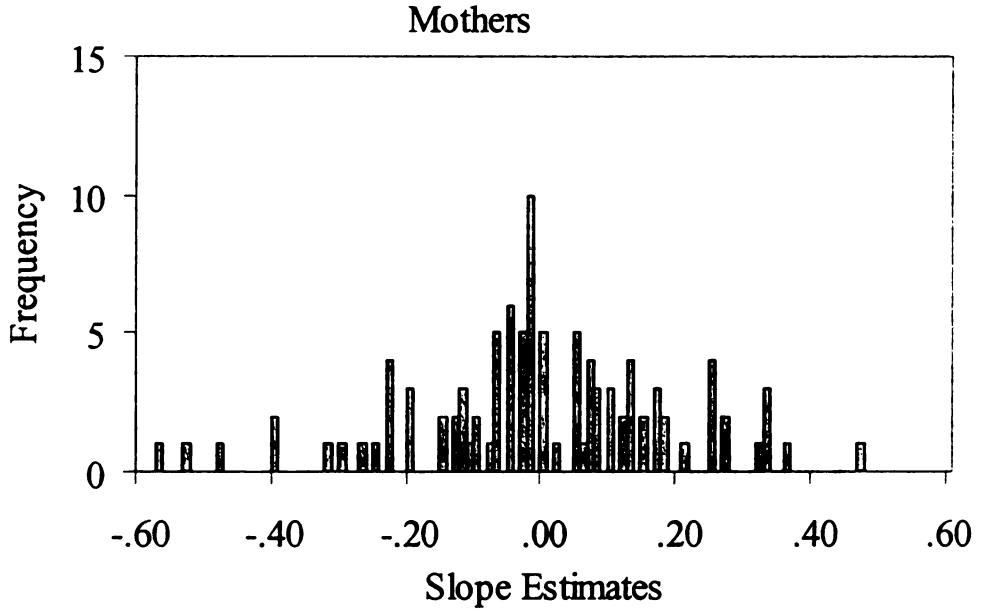


Figure 9

Distribution of Slope Estimates for Mothers and Fathers



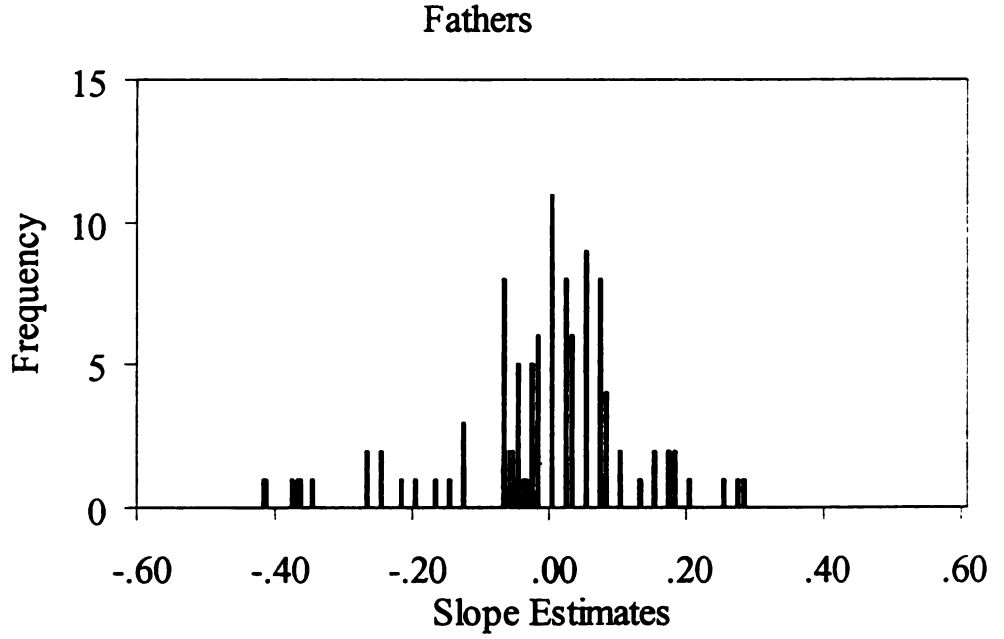
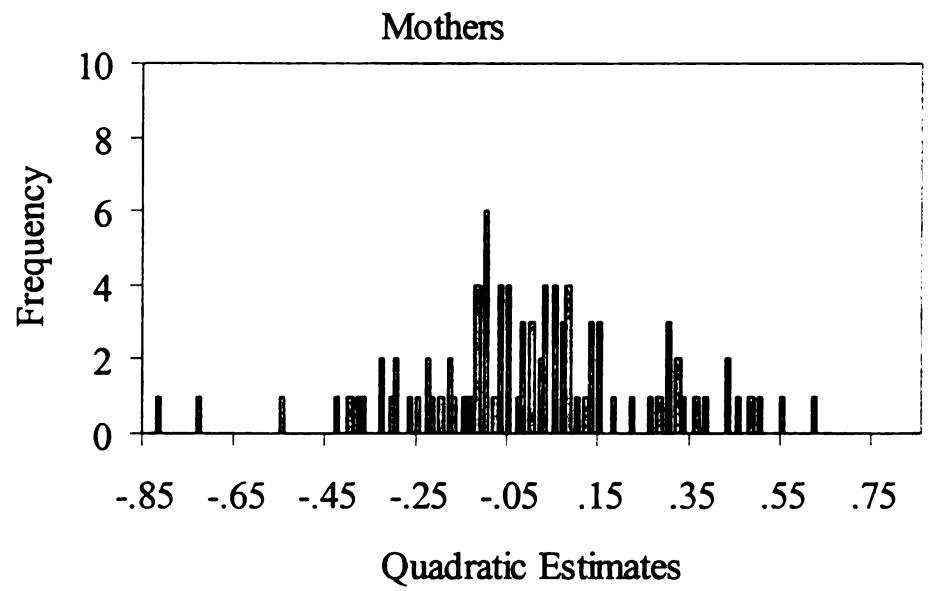
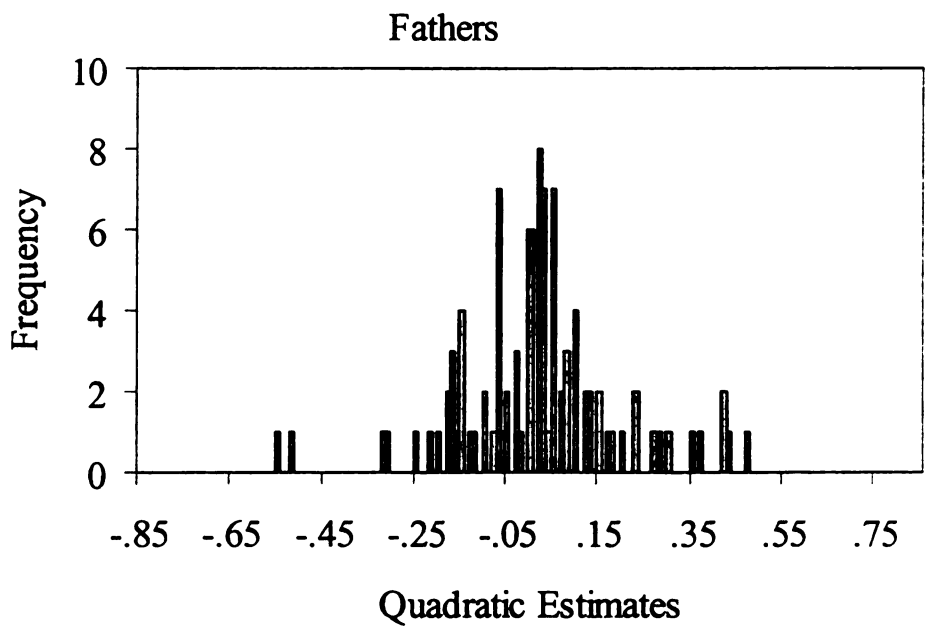


Figure 10

Distribution of Quadratic Estimates for Mothers and Fathers





Because there are only three timepoints, these correlations cannot be interpreted as an index of the relationship between rate of change and acceleration or deceleration. Rather, they suggest that change is associated with some instability in trajectories; individuals tend not to follow a straight linear path, but instead may, for example, rate the parenting alliance as higher at 3 months than at 1 or 6 months. However, the differing directions for men and women do indicate that the greatest discrepancy between men and women's parenting alliance scores is at 3 months post-birth, which is supported by the finding that the lowest correlation between mother and father ratings is at 3 months.

Explanatory Model A: Stable Predictors of the Parenting Alliance

Because the above results provided evidence for different trajectories for mothers and fathers, subsequent explanatory models built on the baseline couple model. The first explanatory model evaluated Hypothesis 3 by using stable pre-birth factors (as well as infant sex, which, although not a pre-birth variable, is also a stable predictor) to attempt to account for individual differences in parenting alliance trajectories. Means and standard deviations for and intercorrelations among the predictor variables are presented in Tables 17 through 20. Because of the large number of predictors, the variables were clustered into distinct subsets in order to use the strongest predictors in the final model (Bryk et al., 1996).

Results for the separate analyses used to identify the most likely predictors are presented in Appendix D. Based on these analyses, variables were selected for

Table 17

Intercorrelations and Means Among Pre-Birth Individual Characteristic Predictor Variables for Mothers (upper half) and Fathers (lower half)

Variables	1	2	3	4	5	6	7
1. Ego development	.26**	-.04	.12	-.01	.06	.11	.09
2. Positive childbearing motivation	-.04	.13	-.10	.08	.05	.01	-.29**
3. Negative childbearing concerns	-.05	.03	-.04	.01	.04	.04	-.00
4. FO positive parenting partnership	.01	-.11	-.02	.04	-.49***	-.57***	-.17
5. FO triangulation	-.05	.06	-.03	-.62***	.01	.74***	.15
6. FO marital harmony	-.06	.10	.04	-.58***	.71***	.05	.20*
7. Reactance	.20*	.05	-.09	-.33***	.23*	.33***	.16
Mother M	97.36	3.08	2.34	3.04	1.58	2.24	2.42
Mother SD	8.20	.49	.45	.66	.70	.78	.23
Father M	93.31	3.03	2.83	3.08	1.58	2.10	2.44
Father SD	8.55	.44	.41	.66	.74	.75	.22

Note. FO = family of origin. Correlations for mothers are above the diagonal; correlations for fathers are below the diagonal; correlations between mothers and fathers are on the diagonal. *p< .05. **p< .0. ***p< .001.

Table 18

Intercorrelations and Means Among Pre-Birth Contextual Characteristic Predictor Variables for Mothers (upper half) and Fathers (lower half)

Variables	1	2	3	4	5	6	7	8
1. Age[a]	---	.38***	-.05	.05	-.11	.10	-.07	-.00
2. SES[b]	.38***	---	.10	.11	-.21*	-.08	-.12	-.05
3. Self-reported marital adjustment	-.01	.01	.49***	.25*	-.43***	-.14	.06	.09
4. Positive marital interactions	.14	.23*	.23*	.45***	-.03	.07	-.10	.07
5. Negative marital interactions	.06	-.05	-.15	-.06	.30**	.10	.07	-.05
6. Authoritarian differences	.10	-.08	.00	.08	.08	---	.11	-.03
7. Authoritative differences	-.07	-.12	-.13	-.17	-.07	.11	---	-.00
8. Permissive/protective differences	-.00	-.05	.07	-.14	.03	-.03	-.00	---
Mother M	29.76	0.00	150.73	5.54	5.33	1.24	.95	.98
Mother SD			9.67	.70	.82			
Father M	4.51	.67	150.89	5.34	5.02	.97	.75	.65
Father SD			9.61	.82	.77			

Note. Correlations for mothers are above the diagonal; correlations for fathers are below the diagonal; correlations between mothers and fathers are on the diagonal.

[a] Age is the mean of mother and father age. [b]SES is a composite of education, occupation, and income.

*p< .05. **p< .01. ***p< .001.

Table 19

Correlations Among Mothers' Pre-Birth Individual and Contextual Characteristic Predictor Variables

Variables	Age[a]	SES[b]	Self-reported marital adjust.	Positive marital interact.	Negative marital interact.	AUT diff.	AUV diff.	PERM diff.
1. Ego development	-.05	.00	-.03	.01	.08	-.04	-.04	.01
2. Positive childbearing motivation	-.15	-.07	.26**	-.01	-.10	-.18	.07	-.10
3. Negative childbearing concerns	.07	.08	-.14	-.09	.08	-.14	-.10	-.10
4. FO positive parenting partnership	-.04	-.07	.05	.03	-.01	-.03	.02	-.11
5. FO triangulation	-.11	-.10	-.10	-.05	.07	.03	-.06	.10
6. FO marital harmony	-.17	-.07	-.11	-.10	-.04	.08	.05	.02
7. Reactance	.15	-.01	-.30**	.02	.10	.24*	.05	.02

Note. FO = family of origin; adjust. = adjustment; interact. = interactions; AUT = authoritarian; AUV = authoritative; PERM = permissive/protective; diff. = differences.

[a]Age is the mean of mother and father age.

[b]SES is a composite of education, occupation, and income.

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

Table 20

Correlations Among Fathers' Pre-Birth Individual and Contextual Characteristic Predictor Variables

Variables	Age[a]	SES[b]	Self-reported marital adjust.	Positive marital interact.	Negative marital interact.	AUT diff.	AUV diff.	PERM diff.
1. Ego development	.11	.10	-.02	.37***	.20*	-.13	-.02	-.05
2. Positive childbearing motivation	-.17	-.19	.16	-.09	-.00	.14	.17	.01
3. Negative childbearing concerns	.01	-.11	-.05	-.04	-.08	.09	.11	-.10
4. FO positive parenting partnership	-.02	.04	.33***	.18	-.02	-.02	.05	-.18
5. FO triangulation	-.05	-.15	-.24*	-.18	.07	-.10	.14	.10
6. FO marital harmony	-.03	-.10	-.36***	-.20*	-.04	-.01	.23*	-.06
7. Reactance	-.12	-.05	-.19	.17	.05	-.11	-.02	.10

Note. FO = family of origin; adjust. = adjustment; interact. = interactions; AUT = authoritarian; AUV = authoritative; PERM = permissive/protective; diff. = differences.

[a]Age is the mean of mother and father age.

[b]SES is a composite of education, occupation, and income.

*$p < .05$. ***$p < .001$.

further investigation if $p < .10$. Potential predictor variables are listed in Table 21. As might be expected, these individual analyses indicated that the marital variables were the most robust predictors of the parenting alliance trajectory, but only for the level (e.g., whether the parenting alliance was perceived as stronger or weaker in general). Similar findings emerged for SES, although there was a trend for SES to predict the maternal quadratic parameter as well. Ego level was associated with fathers' parenting alliance level, but not mothers'. Childbearing motivations and concerns were also consistently related to the parenting alliance trajectory, but to slope and quadratic functions, depending on the parent, in addition to the intercept. Differences in childrearing authoritative and permissive/protective childrearing philosophy were associated only with mothers' perceptions of the parenting alliance, but fathers' perceptions of the family of origin predicted both mothers' and fathers' parenting alliance curves. Finally, maternal reactance predicted the maternal curve parameter. Child sex, parental age, fathers' childbearing concerns and negative marital interactions, mothers' family of orgin variables, and differences in authoritarian beliefs were unrelated to all parenting alliance parameters.

Selected variables were examined simultaneously, thereby controlling for the influence of one another, and entered only for the parameter(s) with which the preliminary exploratory analyses indicated they were associated. This procedure resulted in most of the trends at the preliminary exploratory level becoming

Table 21

Variables Selected for Further Exploration Through Preliminary Analyses

Variable	Mother		Father
Individual			
Ego development			X
Assimilation			
Positive childbearing motivations	X		X
Negative childbearing concerns	X		
Family of origin			
Triangulation			X
Positive parenting			X
Marital conflict			X
Reactance	X		
Demographic context			
Age			
SES		X	
Relational context			
Marital relationship			
Self-reported marital adjustment	X		X
Positive marital interactions	X		X
Negative marital interactions	X		
Differences in childrearing philosophy			
Authoritarian			
Authoritative		X	
Permissiveness/protectiveness		X	
Infant sex			

insignificant (e.g., all father family of origin variables, even when entered individually, and differences in authoritative philosophies). In addition, decisions were required regarding which marital variables to retain, as both mother and father variables and self-report and observational variables tended to be associated with each parent's trajectory and thereby cancel one another out. The decision was made that when both mother and father versions of the same variable were related, variables based on report or observations of the same parent whose parenting alliance rating was being predicted would be retained. Similarly, when both self-report and observational variables were associated but suppressed one another, the self-report measure was be retained since a method effect would be expected to make self-reported parenting alliance and marital quality related. A number of different explanatory models were possible, and despite the choices made for the final model, it could be argued, that a more interesting approach would be to keep in the observational measures or the partner's perceptions, thereby decreasing the chance of a method effect and examining cross-parent systemic influences.

The final explanatory model, based on the above criteria, for stable pre-birth predictors for parenting alliance trajectories for each parent, controlling for the associations with the other parent, is presented in Table 22 (one trend is included for mothers and two for fathers). Overall, more pre-birth predictors were associated with mothers' rather than fathers' parenting alliance trajectories. Furthermore, prediction of parenting alliance level was more successful than of

Table 22

Final Explanatory Model A for Stable Pre-Birth Predictors

Parameter	Unstand. coeff.	t(100)	Effect size r
Mothers			
Level	3.41	126.55***	----
SES	.18	4.67***	.47
MMARNEG	-.14	-4.18***	.42
MCONCERNS	-.18	-3.13**	.31
FDAS	.01	2.85**	.29
Rate	-.00	-.09	.01
PERMDIFF	-.08	-3.17**	.32
MMOTIV	.06	1.70^{t}	.17
Curve	.00	.06	.01
PERMDIFF	-.12	-3.34***	.33
MREACT	.23	2.23*	.22
AUTVDIFF	.06	1.98*	.20
Fathers			
Level	3.60	147.55***	----
FDAS	.02	6.33***	.63
SES	.10	2.78***	.28
FEGO	.01	2.39*	.24
Rate	-.01	-.95	.10
FMOTIV	-.05	-1.88^{t}	.19
Curve	.02	.94	.09
MMOTIV	.06	1.91^{t}	.19

Note. Unstand. coeff. = Unstandardized coefficients. M__ and F__ denote mother and father report, respectively; CONCERNS = negative childbearing concerns; DAS = Dyadic Adjustment Scale; MARNEG = negative marital interactions; MOTIV = positive childbearing motivations; EGO = ego development; AUTVDIFF = differences in authoritativeness; PERMDIFF = differences in permissiveness/protectiveness; MARPOS = positive marital interactions. $^{t}p < .10$. *$p<.05$. **$p<.01$. ***$p<.001$.

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change parameters. For the most part, effect size rs for parenting alliance level were solidly in the medium range, but were small to medium for the change parameters. After taking parental sex into account, among mothers, the sets of predictor variables accounted for 40% of the variance in level, 11% in the slope, and 18% in the quadratic, and among fathers, predictors accounted for 33% of the variance in level, 2% in the slope, and 6% in the quadratic. Individual and contextual characteristics did not differentially predict parenting alliance parameters (i.e., neither was specific to a particular type of parameter), confirming their use as a heuristic convention rather than as a meaningful method of distinguishing between levels of influence.

For the level of the parenting alliance, higher SES was related to more positive perceptions of the parenting alliance for both mothers (effect size r = .47) and fathers (effect size r = .28). In addition, both self-report and observational marital variables predicted parenting alliance levels. Interestingly, better pre-birth marital satisfaction for fathers was associated with a more satisfactory parenting alliance after the birth for both parents, although the association was particularly strong for fathers (effect size r = .29 for mothers and .63 for fathers). Even when mothers' DAS ratings were used instead of fathers' ratings to predict maternal parenting alliance levels, the estimate only reached the trend level (effect size r = .18). For both parents, positive marital interactions were unrelated to parenting alliance trajectories after accounting for paternal marital satisfaction. However,

mothers, but not fathers, who exhibited more pre-birth negative marital behaviors rated the parenting alliance as significantly weaker (effect size r = .42). Among mothers only, negative childbearing concerns were related to a less satisfactory parenting alliance (effect size r = .31), and among fathers only, higher ego development was associated with a more satisfactory parenting alliance (effect size r = .24).

Significant predictors of change were found only for mothers, with differences in childrearing philosophy and reactance emerging as the critical variables. When one spouse endorsed a more indulgent, child-centered (permissive/protective) stance toward parenting relative to the other spouse, mothers were more likely to feel that the parenting alliance deteriorated over time (effect size r = .32). Moreover, the greater the differences in permissiveness/ protectiveness or in authoritative philosophies, the more likely mothers were to experience fluctuations in their perceptions of the parenting alliance (effect size r = .33 for permissiveness/ protectiveness, .20 for authoritativeness). Greater maternal reactance was also predictive of instability in maternal parenting alliance ratings.

In addition to these significant findings, three trends emerged for positive motivations for childrearing as a predictor of change for both parents. Among mothers, the more positively pregnant women anticipated the birth of children and focused on the rewards of childrearing, the more likely it was that their parenting

alliance would become increasingly satisfactory over time (effect size r = .17) and that fathers would report fluctuations in their ratings of the parenting alliance (effect size r = .19). A trend for fathers' reports of childrearing motivation suggested that more eager fathers may experience a decrease in the parenting alliance by 6 months post-birth (effect size r = .19).

Explanatory Models B: Process Variables and Parenting Alliance Trajectories

The effects of post-birth time-varying variables on parenting alliance trajectories were examined for marital adjustment, violated expectations for the division of childcare and housework, parenting efficacy, and temperament. Means and standard deviations for the predictors at 1, 3, and 6 months are presented in Table 23. To the baseline couple model, between-couple time-invariant scores, denoting the mean score of the predictor variable across the three timepoints, were added at Level 2. At Level 1, the time-varying component, assessed by deviation scores at each timepoint from the individual's mean, was included as a fixed effect. Results are shown in Tables 24 through 28. Significant effects emerged for all variables except perceptions of fussy temperament, which evidenced a single trend.

Post-birth marital adjustment showed the largest effects on the parenting alliance. As predicted, each parent's overall mean marital quality was positively related to his/her own level of parenting alliance (effect size r = .44 for both parents). There was also a trend (p = .053) for fathers' level of parenting alliance

Table 23

Means and Standard Deviations for Post-Birth Predictor Variables by Assessment

	1 month		3 months		6 months	
Variable	M	SD	M	SD	M	SD
Marital adjustment						
Mother	150.64	10.33	149.17	12.11	146.52	13.20
Father	150.96	11.09	150.62	11.06	149.43	11.70
Violated expectations for childcare						
Mother	-32.33	47.59	-28.43	48.22	-15.26	52.56
Father	43.28	42.29	31.61	46.99	18.47	51.15
Violated expectations for housework						
Mother	-9.69	88.09	-26.59	72.50	-28.81	76.99
Father	47.50	86.31	73.81	83.07	69.11	89.46
Parenting efficacy						
Mother	3.23	.38	3.49	.29	3.53	.29
Father	3.06	.34	3.24	.32	3.34	.32
Fussy temperament						
Mother	3.27	1.01	2.87	1.00	2.67	.94
Father	3.36	.88	3.02	.86	2.88	.87

Table 24

Explanatory Model B1: Relationships with Post-Birth Marital Adjustment

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level	3.41	118.97***	----
MDAS mean across time	.02	4.43***	.44
FDAS mean across time	.00	.95	.10
Rate	.03	1.53	.15
Curve	.00	.06	.01
Fathers			
Level	3.60	154.83***	-----
MDAS mean across time	.01	1.93^{t}	.19
FDAS mean across time	.01	4.35***	.44
Rate	-.00	-.33	.03
Curve	.02	1.09	.11
Father's change in DAS	-.01	-5.26***	.53
Mother's change in DAS	-.01	-6.57***	.66
Father's partner's change in DAS	-.00	-.58	.06
Mother's partner's change in DAS	-.00	-.18	.02

Note. DAS = Dyadic Adjustment Scale; MDAS = mother report; FDAS = father report.

$^{t}p < .10$. ***$p<.001$

Table 25

Explanatory Model B2: Relationships with Post-Birth Violated Expectations for Division of Childcare

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level	3.41	102.38***	----
MVIOC mean across time	.00	2.62*	.26
FVIOC mean across time	.00	.01	.00
Rate	-.03	-1.82^{t}	.18
Curve	.01	.40	.04
Fathers			
Level	3.60	127.24***	-----
MVIOC mean across time	-.00	-.57	.06
FVIOC mean across time	.00	2.56*	.26
Rate	-.01	-.75	.08
Curve	.02	.98	.10
Father's change in VIOC	-.00	-.26	.03
Mother's change in VIOC	-.00	-3.02**	.30
Father's partner's change in VIOC	.00	.82	.08
Mother's partner's change in VIOC	.00	2.12*	.21

Note. VIOC = violated expectations for division of childcare; MVIOC = mother report; FVIOC = father report.

$^{t}p < .10$. *p<.05. **p<.01. ***p<.001

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Table 26

Explanatory Model B3: Relationships with Post-Birth Violated Expectations for Divison of Housework

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level	3.41	98.12***	----
MVIOH mean across time	.00	.07	.01
FVIOH mean across time	-.00	-1.00	.10
Rate	.00	.07	.01
Curve	.01	.28	.03
Fathers			
Level	3.60	120.16***	-----
MVIOH mean across time	.00	.88	.09
FVIOH mean across time	.00	.93	.09
Rate	-.01	-.87	.09
Curve	.02	1.13	.11
Father's change in VIOH	.00	.14	.01
Mother's change in VIOH	-.00	-2.56*	.26
Father's partner's change in VIOH	-.00	-.92	.09
Mother's partner's change in VIOH	-.00	-.83	.08

Note. VIOH = violated expectations for division of housework; MVIOH = mother report; FVIOH = father report.

*p<.05. ***p<.001

Table 27

Explanatory Model B4: Relationships with Post-Birth Parenting Efficacy

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level	3.41	102.75***	----
MEFF mean across time	.36	2.92**	.29
FEFF mean across time	.18	1.48	.15
Rate	-.03	-1.23	.12
Curve	-.01	-.26	.03
Fathers			
Level	3.60	130.71***	-----
MEFF mean across time	.22	2.20*	.22
FEFF mean across time	.33	3.49***	.35
Rate	-.01	-.45	.05
Curve	.02	1.10	.11
Father's change in EFF	.05	.89	.09
Mother's change in EFF	-.10	-1.28	.13
Father's partner's change in EFF	-.00	-.03	.00
Mother's partner's change in EFF	-.07	-.84	.08

Note. EFF = parenting efficacy; MEFF = mother report; FEFF = father report.

*p<.05. **p<.01. ***p<.001.

Table 28

Explanatory Model B5: Relationships with Post-Birth Perceptions of Infant Fussy Temperament

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level	3.41	97.75***	----
MFUSS mean across time	-.02	-.43	.04
FFUSS mean across time	-.00	-.07	.01
Rate	-.02	-.88	.09
Curve	.00	.08	.01
Fathers			
Level	3.60	124.87***	-----
MFUSS mean across time	-.01	-.25	.03
FFUSS mean across time	-.10	-1.88^{t}	.19
Rate	-.01	-.77	.08
Curve	.02	1.05	.11
Father's change in FUSS	.02	.85	.09
Mother's change in FUSS	.04	1.26	.13
Father's partner's change in FUSS	-.02	-1.13	.11
Mother's partner's change in FUSS	.00	.10	.01

Note. FUSS = perceptions of infant fussy temperament; MEFF = mother report; FEFF = father report.

$^{t}p < .10$. ***$p<.001$

to be predicted by mothers' marital satisfaction. Unexpectedly, however, change in each parent's marital adjustment was negatively related to change in his/her own perceptions of the parenting alliance, with stronger effects for mothers (effect size $r = .66$) than fathers (effect size $r = .53$), χ^2 (1, $N = 101$) = 75.93, $p < .000$. That is, increases in the parenting alliance were accompanied by decreases in marital satisfaction after controlling for change in the partner's relationship quality. The partner's marital satisfaction was not related to either the level or change in the parenting alliance.

As expected, violated expectations for the division of childcare showed stronger associations than for the division of housework, with small- to medium-sized effects. For both mothers and fathers, more violated expectations in a negative direction (i.e., doing more than anticipated) for childcare overall were related to more negative perceptions of the parenting alliance (effect size $rs = .26$ for both parents). However, change in violated expectations for childcare was associated only with change in mothers' parenting alliance. Increases in mothers' violated expectations predicted a decrease in maternal perceptions of the parenting alliance (effect size $r = .30$), and increases in fathers' violated expectations predicted an increase in maternal perceptions of the parenting alliance (effect size $r = .21$). Notably, after taking into account change in violated expectations for childcare, the rate of parenting alliance change begins to approach significance for mothers, suggesting a possible decline in satisfaction with the parenting alliance

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over time that is masked by increasing satisfaction with the division of childcare as the infant ages. Change in violated expectations for childcare did not predict change in fathers' parenting alliance. For violated expectations for the division of housework, only one significant effect was evident, with mothers' increases in violated expectations predicting a decline in perceptions of the parenting alliance (effect size r = .26). Change in fathers' parenting alliance and level of parenting alliance for both parents was not related to violated expectations for housework.

In partial support of the hypothesis, parenting efficacy was associated with level of parenting alliance, but not with change, and resulted in small to medium effects. For mothers, greater maternal efficacy predicted a better parenting alliance (effect size r = .29). For fathers, the efficacy of both parents was positively related to parenting alliance (effect size r = .22 for maternal efficacy, .35 for paternal efficacy), with stronger effects for father's self-efficacy, χ^2 (1, N = 101) = 20.12, p < .000. The effect of mother efficacy on mother parenting alliance was stronger than the effect of mother efficacy on father parenting alliance χ^2 (1, N = 101) = 9.54, p < .01, but less than the effect of father efficacy on father parenting alliance, χ^2 (1, N = 101) = 20.24, p < .000. Perceptions of infant difficult temperament were not strongly related to parenting alliance trajectories, with the exception of one trend in the expected direction: Father perception of infant fussiness tended to be associated with lower paternal parenting alliance ratings (effect size r = .19).

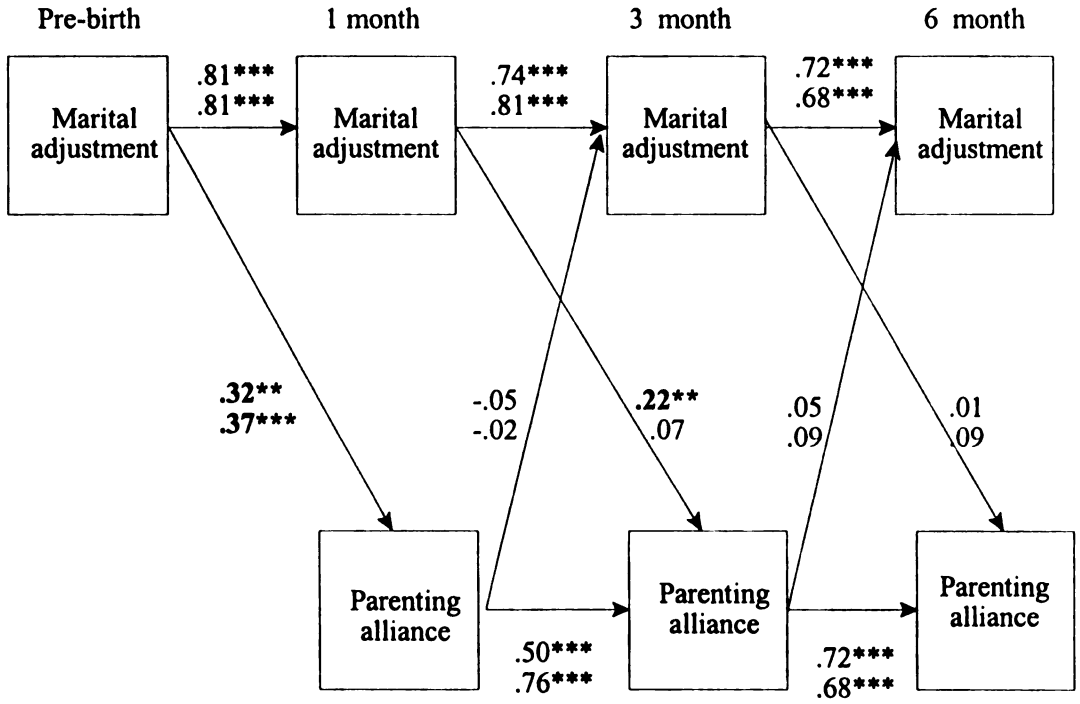
Post hoc analyses. The growth curve analyses demonstrated that in some cases, change in the parenting alliance and change in other process variables were related, but did not address causality within those change relationships. To examine causal effects in the development of the parenting alliance over time, structural equation modeling was used to test a cross-lagged stability model for each of the significant change relationships identified in the HLM analyses (i.e., parenting alliance and marital adjustment for both parents, and parenting alliance and violated expectations for childcare and housework for mothers only). The model controls for the stability of each variable and assumes that the residuals of the criteria at 6 months are uncorrelated, so that associations between the factors at 6 months are completely accounted for by earlier predictors (Rogosa, 1979).

Initially, an attempt was made to use latent variables formed from the two parallel parenting alliance scales and the four DAS scales, but problems with error variances prevented an admissible solution. Instead, the single general alliance and overall DAS dyadic adjustment scores for each timepoint were analyzed. Furthermore, as might be expected, constraining the correlation between parenting alliance and marital adjustment to zero resulted in admissible solutions but poor overall model fit. Nonetheless, this analysis should still enable the evaluation of causal paths.

Figures 11 through 14 display the coefficients associated with each path (N = 95 mothers, 94 fathers). Of the five analyses, only the model testing the

Figure 11

Cross-Lagged Stability Model for Parenting Alliance and Marital Adjustment for Mothers (above) and Fathers (below)

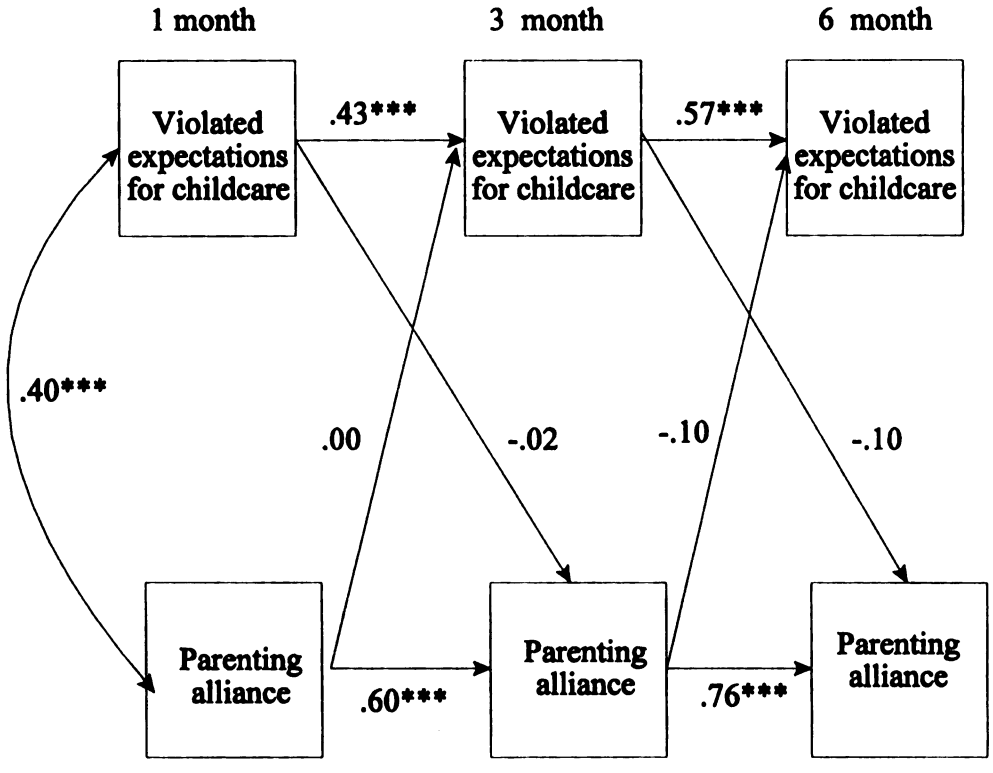


Note. Standardized coefficients for mothers are above, for fathers are below. Boldface denotes significant direct causal effects.

**p < .01. ***p < .001.

Figure 12

Cross-Lagged Stability Model for Parenting Alliance and Violated Expectations for Childcare for Mothers

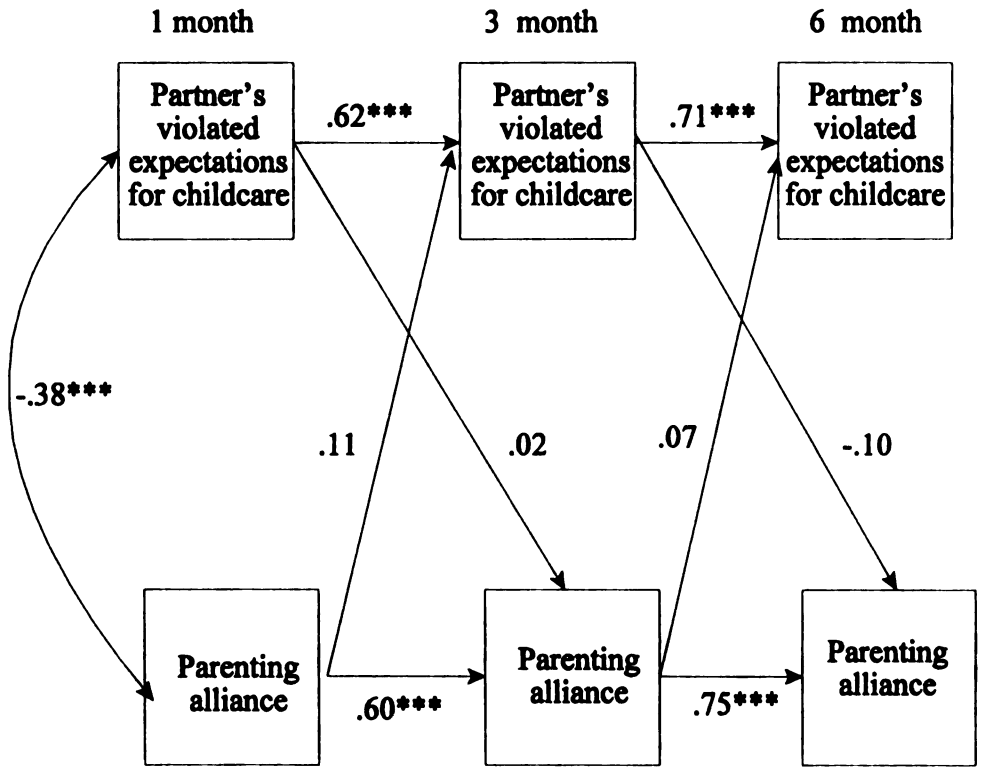


***p < .001.

Figure 1.3

Figure 13

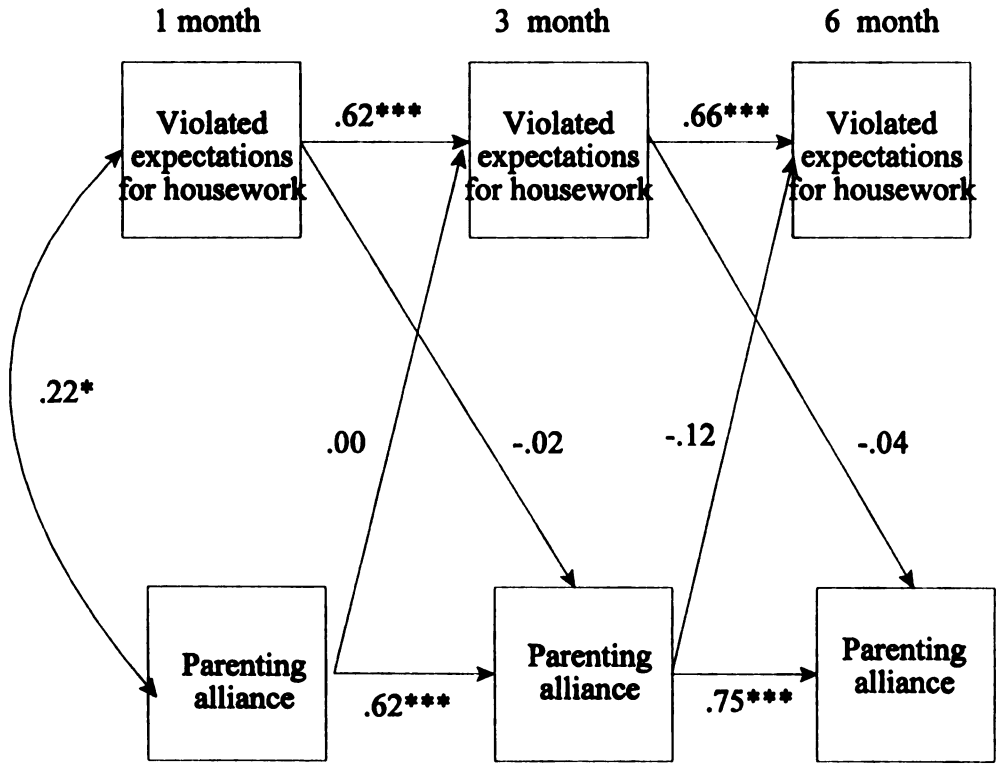
Cross-Lagged Stability Model for Parenting Alliance and Partner's Violated Expectations for Childcare for Mothers



***p < .001.

Figure 14

Cross-Lagged Stability Model for Parenting Alliance and Violated Expectations for Housework for Mothers



*p < .05. ***p < .001.

relationship between the parenting alliance and marital adjustment showed significant causal paths. For both mothers and fathers, better pre-birth marital quality predicted more positive initial perceptions of the parenting alliance. In addition, for mothers, marital quality at 1 month also predicted the parenting alliance at 3 months. However, no instances emerged in which the parenting alliance predicted marital adjustment. These results suggest that the quality of the marriage prior to the child's birth does indeed set the stage for the development of the parenting alliance, and that for mothers in particular, marital quality in the first month continues to affect their satisfaction with the coparenting relationship. By three months, however, the parenting alliance appears to become less vulnerable to change in the marital dyad. Notably, at no point does the parenting alliance affect marital satisfaction, nor does a direct causal effect at any time appear between the parenting alliance and the division of labor.

DISCUSSION

The current study is an exploratory and descriptive account of the development of the parenting partnership from its initiation, the birth of the first child, through the ensuing 6 months. Using multiple measures of coparenting and marital quality, the specificity of the parenting partnership construct and the nature of the association between the coparenting and marital relationships were examined. In addition, paralleling the 20-year literature on marital change over the transition to parenthood, developmental trajectories for the subjective parenting alliance over the first 6 months were investigated. First, average parenting alliance trajectories for the sample as a whole and then for mothers and fathers separately were defined. Factors measured prior to the child's birth were subsequently used to account for individual differences in the level and change in perceptions of coparenting. Finally, associations between change in perceptions of the parenting partnership and change in post-birth time-varying factors were examined and an attempt was made to determine causal relationships.

Because this research was conducted with a comparatively well-educated and ethnically restricted sample whose attitudes and knowledge about parenting, relationship qualities, and resource availability may differ from those of other groups, it is best considered as a starting point for further investigation. When the findings for the present study are considered as a whole, however, four related

points emerged that suggest a number of avenues for future research with both similar and more diverse groups. First, although undeniably linked to issues nonspecific to the child, the results of both the CFA and HLM analyses confirm that the parenting partnership is a separate component of the couple system from the marital relationship, with different trajectories and correlates. Second, although the parenting partnership and the marital relationship were confirmed as specific aspects of the couple relationship, the marital context was shown to provide a fundamental framework for the development of the initial coparenting relationship, consistently evidencing the strongest effects among all variables investigated. Third, different pathways and correlates of coparenting development, as well as distinctive associations among relationship dimensions, attest to the specificity of relationship experiences for men and women. In particular, the results suggest that men tend to experience an overall relationship quality that generalizes across multiple subsystems of the family, but that women's perceptions of familial relationships are more contingent upon the specific context. Fourth, this study highlights the dynamic process of the couple relationship as an interacting system of two individuals' expectations, perceptions, and personalities. Both mothers' and fathers' parenting alliance trajectories were found to be related to certain characteristics of the other parent, and some coherence was evident in these cross-parent relations. Moreover, the results suggest that the mother provides the impetus for the specific development of the

parenting partnership, at least in the early months, directly as well as indirectly through couple interactions. Specific findings that support these conclusions, and their implications, are discussed below.

The Construct Validity of the Parenting Partnership

The essential question in establishing the construct validity of the parenting partnership is whether aspects of the couple relationship specific to mutual parenting can be distinguished from those that exist regardless of the couple's parenthood status (e.g., finances, intimacy, dealings with family and friends). Prior research has evaluated whether self-reported parenting alliance ratings are distinct from self-reported marital satisfaction (Abidin & Brunner, 1995; Floyd et al., 1998; Floyd & Zmich, 1991; Frank et al., 1986) or have reported correlations between coparenting and marital observations (Katz & Gottman, 1996; McHale, 1995), but none have simultaneously included subjective and objective assessments of both relationship variables. To address this issue, Hypothesis 1 of the current study assessed the validity of the parenting partnership as a distinct but related construct from the marital relationship using both self reports and observer ratings.

The results generally supported the hypothesis, although not by the means originally stipulated. In the context of a multitrait-multimethod confirmatory factor analysis of the four relationship measures at 6 months post-birth, the parenting partnership and marital relationship trait factors were not separable from

the three method factors of father report, mother report, and observer ratings. On the other hand, adoption of a simpler approach enabled perceptions and observations of coparenting and marital quality to be discriminated. From this perspective, a four-factor model, comprised of subjective and objective coparenting and subjective and objective marital quality, provided a good fit to the observed data. These results suggested that each measure assessed a differentiated aspect of the couple relationship, with the four factors best conceptualized as multiple dimensions within the overall dyadic relationship.

Although four separate dimensions were identified, significant correlations among several of the factors uphold the linkage between the coparenting and marital relationships. Indeed, inspection of the factor intercorrelations reveals the difficulty in partitioning out the hypothesized trait and method variance, which was further compounded by different patterns of association for mothers and fathers. With respect to the hypothesized traits, self-reports and observations of the parenting partnership had been postulated to form a distinct latent variable. However, the coparenting variables were significantly correlated only for fathers, and the degree of correlation was weak. This suggests that the two measures tapped quite different aspects of coparenting, with satisfaction with the parenting endeavor not necessarily reflected in warm, cooperative dyadic interactions during play with the child. More consistency was manifested between the two marital relationship dimensions, particularly for mothers; nonetheless, the CFA results

indicated that the marital self-reports and observations also were more appropriately conceived as separate dimensions.

The method of assessment also showed parent-specific relations. Whereas ratings of the parenting alliance and marital adjustment were positively associated for both parents, pointing to a potential method bias in the use of self-reports, the observational measures revealed striking differences. Coparenting and marital observations were strongly related for fathers, but not significantly correlated for mothers. Thus, when parents behaved harmoniously in the coparenting context, fathers were strongly disposed to display warmth, support and communicativeness during the marital interview; yet mothers' behavior in one setting was unrelated to their behavior in the other setting.

The consistency of the model structure across parents confirms that mothers and fathers experienced and displayed similar markers of relationship quality. On the other hand, the different patterns of factor intercorrelations suggest that they comprehended the complexities of the post-birth couple relationship in different ways. Mothers tended to perceive both aspects of the dyadic relationship congruently; happiness with the parenting alliance was accompanied by satisfaction with the state of the marriage. Furthermore, how mothers felt about either dimension of the couple relationship was mirrored in their marital interactions, with correlations among the three dimensions ranging from .58 to .84. Thus, mothers were likely to feel similarly about both aspects of their couple

relationship and behave in a way that was compatible with those feelings when alone with their spouse. These findings replicate those of Floyd and Zmich (1991), although the pattern of results held for both parents in that study. Coparenting behaviors (which were not assessed in the Floyd and Zmich study), however, appeared to be separate and unrelated to other maternal feelings and behaviors (correlations ranged from .25 to .37 and none reached significance); whether mothers enjoyed either aspect of the couple relationship and communicated this to their spouse within the marital context were not consistently related to the degree of positivity expressed toward the spouse during family play. The four dimensions were far less distinct among fathers, with correlations, all significant, ranging from .34 to .66 and supporting previous research (Abidin & Brunner, 1995; Floyd & Zmich, 1991; Frank et al., 1986). The strongest associations for fathers were between the two self-report dimensions and between the two observational dimensions, suggesting that fathers were more prone to a general method effect than were mothers. Put otherwise, fathers tended to feel about their dyadic relationship one way, and act in the context of that relationship during marital and family interaction tasks in a way that was relatively consistent with but not identical to their subjective experience.

Taken as a body, the results point to the importance of examining the parenting partnership and the marital relationship, and in multiple ways, to reveal a fuller picture of dyadic functioning in the family context. This study confirms

that aspects of the couple relationship defined by childrearing are both different from and linked to those that are nonspecific to parenting (Abidin & Brunner, 1995; Cohen & Weissman, 1984), and are experienced somewhat differently by mothers as compared to fathers, but additional research is necessary to delineate particular correlates of each domain.

Parenting Alliance Trajectories

Whereas Hypothesis 1 included observations of coparenting behaviors, the remainder of the study, which examined trajectories of the parenting partnership over the first 6 months, focused exclusively on self-reported perceptions of the parenting alliance. The first step was to identify an overall developmental trajectory for the sample as a whole, based on assessments at 1, 3, and 6 months post-birth. Lacking precedent, Hypothesis 2 did not presuppose a specific direction for change, but postulated that significant residual variance would remain for further exploration of individual differences. Not surprising in this group of well-functioning adults, the parenting alliance was generally considered to be very satisfactory and remained so across all three assessments. No evidence emerged for an initial honeymoon period followed by disillusionment and dissatisfaction with the coparenting relationship, nor did couples appear especially prone to conflicts during the newborn period and subsequently negotiate more effective parenting partnerships.

These results contrast with the body of research on marital adjustment over

the transition to parenthood, in which small but consistent declines in marital functioning are the rule (Belsky et al., 1985; Belsky & Rovine, 1990; Belsky et al., 1983; Levy-Shiff, 1994; Miller & Sollie, 1980; Waldron & Routh, 1981). Notably, marital satisfaction did indeed decline significantly in this group, albeit only for mothers. Additional support is provided, therefore, for the distinctiveness of the coparenting and marital components of the couple relationship, especially for women. Why do perceptions of marital quality decline while the parenting alliance remains consistent? "Transition" may consist of different events for different aspects of family relationships. The marital relationship, as an existing relationship with established patterns, may be vulnerable to destabilization in the event of a child's birth; thus, for the marital relationship, the first-time parenthood actually is a transition from one set of organized processes to another. In contrast, the parenting partnership emerges upon the first child's birth. Having no organization prior to the child, the transition to parenthood is not a transition per se for the coparenting aspect of the couple relationship. Instead, we can conjecture that the parenting alliance is stable within developmental periods (e.g., infancy, toddlerhood, and so forth), but becomes less stable during transitions from one period to another as parents encounter different challenges and demands. Thus, we might expect to see a stable parenting alliance until a relevant developmental transition that should require parents to renegotiate the coparenting system, such as the move into toddlerhood, is encountered.

Despite the remarkable consistency of the average parenting alliance, support for Hypothesis 2 was apparent as significant variance remained to be predicted in the level, rate of change, and degree of variability over time. The mean parenting alliance trajectory was therefore misleading; depending on the cutoff used to delimit change, as many as half of the parents reported either an increase or decline in their ratings of the parenting partnership over the course of the study. In addition, many of the trajectories deviated from a straight linear progression. In the context of this short-term study, the quadratic or curve parameter indexes instability in the new relationship. The finding that fluctuating perceptions were fairly common supports the expectation that experiences of the parenting alliance might be especially marked in the first few months after the infant's birth as the inexperienced mother and father engage in the process of negotiating their parenting partnership.

Furthermore, cross-time correlations indicated that parents showed the greatest disparity in their ratings when children were 3 months old, suggesting that parents' perceptions of the coparenting relationship may have been moving in opposite directions since the 1-month assessment. A couple of factors are likely to contribute to this shift. For one, many mothers return to work within the period between 1 and 3 months after birth. Employed mothers continue to assume the majority of the childcare and housework, as husbands of working women are no more likely to do housework than husbands of nonworking women (Shelton &

John, 1993). The process through which this reorganization takes place is unclear, but is likely to affect evaluations of coparenting support. In addition, changes that take place in the infant around 3 months of age, including greater alertness and an enhanced ability to interact socially, make this period a landmark for parents. Fathers may desire more extensive contact with the increasingly interesting infant, but renegotiation of coparenting roles may be required, since babies are often virtually the sole responsibility of their mothers, who can be reluctant to relinquish their favored position (De Luccie, 1995).

Even among these couples, in which fathers were observed as a rule to be quite enthusiastic and involved in parenting, mothers and fathers reported different levels of parenting alliance. Although more pleased than not with the parenting alliance, mothers were less likely than fathers to feel that parenting was a mutual endeavor, confirming Floyd and Zmich's (1991) findings with parents of both typically developing and mentally retarded children. This is unsurprising, as mothers typically have the majority of responsibility for the child's care, especially during the period of early infancy (Cowan & Cowan, 1988). Fathers were considerably more confident that their spouse would provide assistance and support in meeting the child's needs, as well as opportunities to take a break from parenting, than were mothers. Additionally, far more variability was evident in all parameters for mothers than fathers, whose trajectories tended to take a more constrained path and imply a potential ceiling effect for their ratings. To illustrate,

as many as 60 percent of mothers' parenting alliance ratings changed over the course of the study, compared with only 34 percent of fathers' ratings. Several mothers could actually be considered somewhat dissatisfied with the parenting partnership; in contrast, only one father reported real unhappiness with coparenting. These results provide more evidence that mothers and fathers experience the parenting relationship in different ways, and hint that maternal evaluations of coparenting are more determined through a more complex process than are paternal perceptions.

Pre-Birth Predictors of the Parenting Alliance

The finding that significant residual variance existed around all parenting alliance parameters enabled the evaluation of Hypothesis 3, which addressed the influence of factors measured prior to the child's birth in predicting coparenting trajectories. These variables were conceptualized as providing a relatively stable context in which the parenting alliance develops. Although the predictor variables were classified into individual and contextual characteristics, the categories did not differentially predict particular aspects of the trajectories. Instead, both individual and contextual factors were related to parenting alliance level and change, and all factors will be discussed from here on without regard to their heuristic classification.

Partial support was found for Hypothesis 3, with six domains measured before the child's birth emerging as most critical in predicting subsequent

parenting alliance trajectories: the marital relationship, socioeconomic status, differences between parents in childrearing philosophy, ego development, reactance, and assimilation into the parenthood role. However, for the most part, the level of the parenting alliance was associated with different influences than was change. Specifically, for both parents, marital quality and SES predicted level (as did assimilation for mothers only and ego development for fathers only), differences in childrearing philosophy and reactance predicted change for mothers and assimilation tended to predict change for both. The short-term nature of the study and the composition of the sample may have restricted variability, and systematic individual differences in overall satisfaction with the parenting partnership were more easily discernable than in the rate of change or in instability; approximately two to three times as much variance was accounted for by the predictors in the level parameter as in either of the change parameters. Predictors of change may be more identifiable in the context of a longer study period.

Whether the parenting alliance was perceived as more or less successful was most contingent, as expected, on the pre-birth marital relationship. For fathers, out of all the pre-birth variables, self-reported marital adjustment was the strongest predictor of parenting alliance level. For mothers, however, both marital self-reports and interactions independently predicted parenting alliance level. Furthermore, it was fathers' reports of marital satisfaction that predicted mothers'

perceptions of the parenting alliance; even when examined separately, mothers' reports of marital adjustment reached only the trend level. Preliminary analyses indicated that mothers' perceptions of the marriage were strongly related to parenting alliance reports; the nonsignificant results were most likely due to covariance with maternal negative marital interactions. Mothers who manifested conflictual, dominating behaviors prior to the child's birth were more likely to rate the parenting alliance as weaker. These results confirm a prior study by Laub (1990), wherein couples in which the mother was dominant during a problem-solving interaction reported the most unsatisfactory parenting alliances.

The strong relationship between the extant marital relationship and the parenting alliance was anticipated; the question instead becomes, why do maternal negative interactions independently predict mothers' parenting alliance, and why are paternal negative interactions completely unrelated? Perhaps the answer lies in what is considered normative behavior for men and women. Women tend to communicate more clearly, display higher levels of positive affect, and be more responsive during interactions with their spouse (Klinetob & Smith, 1996; Noller & Fitzpatrick, 1991; Thompson & Walker, 1989). Thus, relatively frequent positive marital interactions would be more normative for women than for men. Conversely, for men, confrontation, assertiveness, and domination are expected relatively more than for women (Lips, 1997). Certainly, men exhibit positive interactions; nonetheless, "negative" behaviors are more normative for men than

for women.

This explanation may also account for the finding that only fathers' ego development was predictive of parenting alliance level. In the preliminary analyses for fathers, both ego development and positive marital interactions separately predicted parenting alliance level. However, the correlation between the two resulted in only one being retained in the final solution. Ego development is conceptualized as an underlying cognitive and personality characteristic that guides behavior. Thus, more positive marital behaviors are likely to be evidenced by fathers who have a greater capacity for perspective-taking and more investment in mutuality; in short, who are at a higher level of ego development. These behaviors are more expected of women; moreover, as a group, the women in this study displayed higher levels of ego development than did the men, although a meta-analytic investigation showed no sex differences in adults overall (Cohn, 1991). Thus, in some ways, those men with higher ego levels may have been distinguished in a variety of ways from the general group.

When partners interact in nontraditional or unexpected ways, perceptions of the parenting alliance may be affected. In particular, openly negative women may be more critical of their partners and willing to voice this unhappiness when addressing coparenting issues, although it is unclear whether this is due to a general negativity in personality, the influence of depressive symptoms, or a realistic view of problems that exist within the couple. Conceivably, negative

behaviors by women may mark a marriage that is more at risk than most, in that these women may be less invested in the facilitative, organizational functions that maintain the couple relationship and are the greater responsibility of women (Gottman, 1994; Strazdins et al., 1997). Withdrawal is another marital behavior that has been found to mark family problems, especially when displayed by men (Paley et al., 1999). However, it was not included in the index of negative marital behaviors in this study due to poor interrater reliability. Possibly, if withdrawal had been included in the negative marital interaction score, father negative behavior might also have predicted parenting alliance development.

It must also be reiterated that because the marital variables were related across measure and across parent, the model described herein is only one of several possible solutions. When compared to the results of the preliminary analyses, the problems of using multiple domains to predict the parenting alliance become clear. Had this study concentrated on the predictive effects of pre-birth marital interactions, the results would have been quite different. In the exploratory analyses, both parents' perceptions of the parenting alliance were associated with mothers' positive and negative interactions, as well as with fathers' positive interactions. In short, only negative interactions from fathers were unrelated to parenting alliance level. However, in conjunction with variables correlated with marital interaction quality, only maternal negative interactions independently predicted parenting alliance level.

In addition, the final solution reported herein was most conservative. The decision criteria specified that when correlated variables effectively suppressed one another's influence, self-reports would supersede observational variables and, following O'Brien et al. (1999), variables based on one's own reports and behaviors would supersede reports and behaviors obtained from the partner. A case could be made for incorporating variables that are theoretically important from a systems perspective; for example, marital observations could be used to predict the parenting alliance rather than self-reported marital quality, and one partner's marital adjustment could be used to account for variance in the trajectory of the other partner's parenting alliance. Furthermore, a model might be appropriate in which the relationship between marital behaviors and the parenting alliance is mediated by the evaluations of marital quality.

In addition to the marital relationship, for both parents, SES was predictive of level, but not change. In other words, more educated, affluent parents rated the parenting alliance as higher than did lower-SES parents, but were neither more nor less likely to experience alterations in their coparenting evaluations over time. More education and greater freedom from financial burden are likely to promote an overall sense of satisfaction. Furthermore, these parents may have additional resources, such as access to outside help and money for a babysitter, that decrease the need to rely solely upon one another. Parental age, on the other hand, did not independently predict parenting alliance ratings; younger parents were as likely to

be pleased with their coparenting as older parents. The previous literature has been inconsistent with regard to the relationship of age with parenting variables. In this sample, which included a number of university students, the higher education level of some of the younger participants may have obscured relations that may be apparent in a more varied sample.

Whereas the marital relationship and SES predicted the level of parenting alliance, the magnitude of the differences between spouses in parenting philosophies were related to parenting alliance change. Specifically, differences around permissiveness and protectiveness promoted an overall decrease in maternal, but not paternal, parenting alliance ratings over time. Moreover, differences in both permissiveness/protectiveness and authoritativeness were related to instability in mothers' perceptions of the parenting alliance. The permissiveness/ protectiveness dimension focused on putting the child's needs before the parents, and included items such as "If parents are ready to go out for the evening and their baby reacts by crying and screaming, it is best for them to cancel their plans." The authoritativeness dimension addresses similar issues, but centers more on providing a child with security while encouraging autonomy. Perhaps permissiveness and security is less an issue during the period of early infancy; parents are likely to concur that the primary goal is to cater to the infant's needs and protect him/her at all costs. Over time, however, parents who differ in their attitudes of child-centeredness versus parent-centeredness may find

themselves at odds if one spouse wishes to devote more time to the couple relationship while the other continues to disregard mutual time in the service of the child. As the infant grows older, therefore, feelings of mutuality and support in parenting issues would be likely to lessen. Notably, mothers and fathers in this study did not differ in their attitudes toward permissiveness/protectiveness, despite the contention of Belsky (Belsky et al., 1996) that evolutionary sex differences related to protectiveness exist in coparenting. Why, then, were only mothers' parenting partnership ratings affected by differences in childrearing philosophy? On the one hand, mothers have been shown to carry greater responsibility for the "emotional work" in the family (Strazdins et al., 1997). Conflict over differences in childrearing might, therefore, predominantly affect mothers' well-being and be reflected in perceptions of the parenting alliance. On the other hand, the present study only measured attitudes and perceptions, and provides no information about ways in which conflicts were resolved. If, as seems likely, women were more likely to acquiesce to their husband's preferences, whether to be more or less child-focused, they would certainly be prone to experience greater dissatisfaction with coparenting as a whole.

The findings for differences in childrearing philosophy may be linked to the findings for maternal reactance, the other predictor of maternal parenting alliance instability. Trait reactance is conceptualized as the need to maintain personal freedom and can be manifested by resistance to influence by others

(Dowd et al., 1994). In the context of a reactant mother, the coparenting relationship would seem particularly vulnerable to problems when fathers attempt to make caregiving decisions, particularly if parents do not agree about their childrearing philosophy. Whereas it is likely that many new mothers are somewhat protective of their special role as the child's primary caregiver, a reactant mother may feel personally invaded or attacked if her judgments are not accepted and may even engage in behavior designed to limit fathers' contact with the child (De Luccie, 1995). However, maternal reactance was not related to overall level or linear change in perceptions of the parenting alliance, only to fluctuations, and not to fathers' parenting alliance ratings. Thus, it appears that more reactant mothers do not consistently feel threatened by fathers' involvement, but attempt to negotiate ways to manage coparenting cooperatively with varying success over the first 6 months. Reactance may become even more critical among parents of older infants. During infancy, fathers are on the whole more likely to defer to mothers' childcare judgments; but as fathers grow confident in their ability to parent, which occurs as children age (Ferketich & Mercer, 1995) and wish to join in decision-making, individuals with more reactant traits may find it more difficult to compromise and cooperate in the service of functional coparenting.

Finally, the degree to which an individual had assimilated the notion of him/herself as a parent prior to actually becoming a parent was associated with both level and change. For the purposes of this study, assimilation was

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operationalized in two ways: as negative concerns and as positive motivations about birth and childrearing. First, concerns were related only to parenting alliance level, and only for mothers. Mothers who expressed strong concerns about potential problems such as painful childbirth, temperamental difficulties, and altered post-birth lifestyles reported a weaker coparenting relationship. This was a somewhat surprising finding, as it was hypothesized that individuals who had anticipated problems would hold a more realistic view of the vicissitudes of parenthood and would thereby experience greater assimilation. However, the results of this study suggest otherwise, at least for women. One possibility is that women who report high levels of concerns hold a generally pessimistic outlook that is also manifested in their parenting alliance ratings. A related alternative is that strong pre-birth maternal concerns are a mark of excessive anxiety. Several researchers have reported that pre-birth maternal anxiety, measured globally, is related to later insensitivity in mother-child interactions and places infants at risk for insecure attachment (Bosquet, 1999; Cox et al., 1989; Feldman et al., 1997; Heinicke et al., 1983; Leifer, 1977). Anxiety specific to the parenting endeavor appears to contribute, or at least mark, dissatisfaction in subsequent coparenting as well. The current research does not indicate whether maternal concerns also influence actual coparenting behaviors, but one reasonable hypothesis is that anxiety may be directly linked to poor parent-child interactions, as well as indirectly linked through difficulties in the coparenting partnership.

Concerns about childrearing were related to parenting alliance level, but positive motivations tended to be associated with parenting alliance change. Although all three results for positive motivations were at the trend level, their consistency in predicting change parameters in both parents warrants discussion, and it is recommended that further research examine this issue in greater detail. For mothers who eagerly anticipated the joys and rewards of parenthood, perceptions of the parenting partnership tended to grow increasingly more positive across the course of the study. However, the husbands of these motivated mothers were prone to greater instability in their perceptions of the parenting alliance. In many ways, the initial months of parenthood are relatively unrewarding compared to later, when infants are more social and interactive; yet it is likely that when pregnant women envision parenthood and family life, it is these older, more responsive babies with whom they see themselves. Thus, although these expectations may be unrealistic immediately after the baby's birth, greater fulfillment occurs as infants develop, with concomitant increases in the mutuality of parenting. In addition, highly motivated mothers may be more committed to and successful at involving their spouses, and thereby enjoy coparenting that much more. These results, pending further investigation, suggest that childrearing motivation may be a more appropriate measure of assimilation than childrearing concerns, at least for women, with the caveat that mothers may be assimilated into the notion of parenting a slightly older infant; perhaps it is impossible to prepare

adequately for the experience of the first newborn!

The trend for instability of the parenting alliance for the husbands of highly motivated mothers is interesting, and may be linked to the fact that new fathers look to mothers, who may be just as inexperienced, for direction regarding how to behave with an infant. Husbands who have wives with unrealistically high expectations for the rewards of parenting in the first months may experience greater confusion in parenting than those whose wives have more moderate expectations, which may be then reflected in fluctuating assessments of the coparenting partnership. Furthermore, fathers who were themselves more excited about the prospect of parenthood tended to rate the parenting alliance progressively lower over the study period, suggesting that childrearing motivation may function differently for mothers and fathers. Two explanations come to mind. One possibility is that the realities of parenthood begin to coincide with mothers' expectations by the time infants reach 3 months of age, but that eager fathers may have a longer time period in mind when they anticipate parenting rewards . For example, they may look forward to fatherhood with a child who can play, run, roughhouse, and converse. As infancy progresses and children, although certainly more interesting, are far from achieving the abilities of a toddler, fathers may find parenting less involving than they had anticipated and coparenting not particularly satisfying. An alternative possibility that speaks more directly to parenting alliance outcomes is that highly motivated fathers may be denied the parenting

involvement at the level they would prefer, as mothers implement "gatekeeping" behavior (De Luccie, 1995). Feelings of exclusion would be likely to cause fathers to report the parenting alliance as decreasing over time, especially as children become more interesting and exciting to play with and as fathers become more sure of their caregiving abilities (Ferketich & Mercer, 1995).

Several variables were not included in the final model of pre-birth parenting alliance predictors. For fathers, perceptions of triangulation, positive coparenting, and marital conflict in the family of origin predicted parenting alliance level in both parents during the preliminary analyses, but were unrelated when analyzed in conjunction with marital satisfaction. That is, fathers who perceived their parents to be successful coparents were happier in both their marital and coparenting relationships and had wives who perceived coparenting as more supportive. Thus, it is incorrect to conclude that the family of origin is unrelated to coparenting for fathers; rather, family life appears to contribute to the general relationship quality that men experience when developing families of their own and that expands into their wife's perceptions. Furthermore, these (non)findings provide more support for the contention that mothers differentiate various aspects of relationships, whether related to parenting, the marriage, or the family of origin, more so than do men.

In addition, differences in authoritarian childrearing attitudes were unrelated to the parenting alliance. Potentially, this variable may become more

salient as children encounter new developmental tasks. For example, as hypothesized, differences in permissiveness/protectiveness were associated with parenting alliance development during infancy, when children are solely dependent on the investment and abilities of their caregivers for survival. As children become toddlers and issues of separation, autonomy, mastery, and control arise, parental differences with respect to authoritarian childrearing attitudes are likely to become increasingly important. Infant sex also did not directly affect parenting alliance development. It may, however, have a moderating effect in conjunction with other variables (see McHale [1995] for the differential effect of child sex in the coparenting interactions of maritally distressed couples).

The Parenting Alliance in a Changing Context

Changing post-birth factors were also associated with individual differences in parenting alliance trajectories, in partial support of Hypothesis 4, depending on the parameter being predicted. Once again, marital quality was the most consistent predictor; but whereas pre-birth marital adjustment was related only to parenting alliance level, post-birth marital adjustment was related to both level and change. As expected, parents who were generally more satisfied with the state of the marriage after the transition to parenthood also reported a stronger parenting alliance. Contrary to expectations, however, change in marital satisfaction and change in the parenting alliance were negatively related, so that declines in marital quality were accompanied by increases in ratings of the

coparenting partnership and vice versa. This finding may indicate that one aspect of the couple's relationship is maintained at the expense of the other. Thus, a couple could experience a more cooperative coparenting relationship, but the cost might be less time together unaccompanied by the child. Conversely, the couple may place a priority on maintaining the quality of their pre-birth marital relationship, but devote less effort to coparenting endeavors; in this case, a tenable hypothesis would be that there may be more discrepant individual parent-child involvement, most likely with mothers expending greater effort in parenting than in fathers. Given the suggestion that mothers are more pivotal in contributing to variability in couples' experiences of coparenting, additional research might also explore whether mothers determine which aspect of the couple relationship becomes a couple priority.

Post hoc analyses conducted in an effort to delineate causal relations between the parenting alliance and marital quality shed little light on this unexpected association, as no significant negative cross-dimension correlations emerged. Nonetheless, the cross-lag analyses did demonstrate processes through which marital satisfaction affects the development of the parenting alliance. The quality of the marriage prior to the child's birth appeared to determine whether the parenting alliance was perceived as more or less successful. Among fathers, this pre-birth influence was the primary factor in predicting subsequent coparenting satisfaction, but for mothers, 1-month marital adjustment continued to predict the

parenting alliance at 3 months. By 6 months, however, the marital quality rating from the previous time was no longer directly associated with perceptions of the parenting alliance.

It appears, therefore, that the quality of the marriage before the child was born did indeed set the stage for the parenting alliance. Particularly for fathers, how they feel about the couple's relationship before the transition to parenthood is a good indicator of how they will feel after the transition. For mothers, however, reorganization of the marital system resulting from the entry of a new person continues to reverberate, impacting perceptions of the parenting alliance beyond the first month. By midway through the child's first year, perceptions of the coparenting relationship appear to have become independent of marital fluctuations, instead arising primarily from prior evaluations. Although change in the parenting partnership and change in marital satisfaction may happen concurrently, it is not clearly attributable to causal relations. No significant cross-parent effects were found; only the parent's self-reported marital quality predicted his/her own parenting alliance. A positive trend emerged, however, between mothers' mean post-birth marital satisfaction and fathers' level of parenting alliance. If replicated, this would indicate that fathers who were more satisfied with coparenting had more happily married wives. This finding would then suggest that fathers were not simply satisfied with the parenting partnership because their wives shouldered most of the parenting burdens, which would most

likely be reflected in wives' lower ratings of the parenting alliance.

Violated expectations of the division of labor also emerged as an important post-birth predictor of parenting alliance development, and manifested the hypothesized stronger effects for childcare tasks than for housework. Each parent's own violated expectations for childcare were associated with the level of their parenting alliance ratings, so that parents who did less childcare than they had anticipated reported greater satisfaction with respect to the coparenting partnership. It should be noted, however, that whereas both mothers' and fathers' expectations were violated, mothers typically did more and fathers less than anticipated. Both parents' childcare responsibilities became increasingly compatible with their pre-birth expectations over the course of the study; that is, mothers did proportionally less childcare, while fathers did more. It follows, then, that only for mothers was change in these violated expectations for childcare related to change in the parenting alliance. As mothers' expectations became less violated, and as their husbands took on more of the childcare responsibilities, their assessment of the parenting alliance improved. Fathers might be expected to then perceive the parenting alliance in a worse light over time as they assume a greater proportion of childcare, but this was not the case. Although fathers' relative contribution increased by 6 months, mothers were still responsible for the majority of caregiving. Furthermore, fathers' expectations were not violated in a negative direction; rather they simply converged with the amount of work fathers initially

anticipated for themselves. Although logic dictates that changes in violated expectations would causally affect changes in parenting alliance perceptions, the cross-lag analyses did not identify significant causal paths between violated expectations and the parenting alliance at any point. This lack is difficult to explain, but suggests the presence of a third variable that covaries over time with both violated expectations and the parenting alliance. Still, violated expectations around the division of labor has been identified as a pivotal factor in marital decline over the transition to parenthood (Hackel & Ruble, 1992; Ruble et al., 1988). The current study is the first to describe the role of childcare expectations in coparenting development over the transition to parenthood.

As expected, violated expectations around housework were less relevant to parenting alliance development than childcare. In fact, the only significant finding was between change in mothers' violated expectations for housework and change in the parenting alliance. On average, mothers did more housework and fathers less over time, in direct contrast to the changes in childcare. Thus, as mothers' expectations for housework became increasingly violated in a negative direction, their evaluations of the parenting alliance grew poorer. In families with young children, the amount of housework increases as children become more active and mobile; clothes are easily dirtied and toys become permanently scattered, and the move to solid food requires more cooking and dishes. Women usually bear greater responsibility for these types of household tasks, so even as the division of

childcare becomes more equitable, the division of housework grows increasingly traditional. Thus, it is not surprising that change in violated expectations for housework and change in the parenting alliance were associated. Nonetheless, parents appeared to associate childcare and housework with different aspects of the couple relationship. The finding that childcare division of labor shows several specific associations with the parenting alliance, while housework division of labor is less related, provides additional evidence for the construct validity of the coparenting partnership. Conversely, Ruble et al. (1988) demonstrated that violated expectations for housework, but not childcare, were related to declines in marital satisfaction over the transition to parenthood. As with the childcare variable, violated expectations for housework did not exhibit causal relations with parenting alliance reports, and change in both may be the result of the influence of a third variable.

The final post-birth factor related to parenting alliance development was parenting efficacy. As expected, for both mothers and fathers, greater self-confidence in one's own parenting was associated with a more satisfactory parenting alliance; in addition, fathers were more satisfied with the parenting alliance when mothers felt efficacious. The results suggest that mothers were responsible for guiding coparenting efforts. Although fathers' parenting efficacy increased over the 6-month period, it remained consistently lower than that of mothers. Apparently, mothers were relatively unconcerned about, and may even

have expected, fathers' comparatively tentative feelings about their caregiving abilities. However, if mothers lack confidence in their own parenting, their partners may feel directionless; fathers are aware of and react to mothers' evaluations of their parenting abilities, and are more involved when they feel mothers have confidence in them (McBride & Rane, 1998). Furthermore, if mothers are insecure about parenting, greater weight falls on fathers' parenting abilities. Social attitudes about father involvement in parenting have become more equitable, but mothers are still the primary caregivers, and fathers are likely to feel resentful when mothers do not "do their job." Although efficacy showed change over time, this change was unrelated to change in the parenting alliance.

Of the hypothesized post-birth predictors, only perceptions of infant temperament were unrelated to parenting alliance evaluations despite the fact that infants were rated as progressively less difficult across the course of the study. This is rather surprising, particularly in light of the significant effects for efficacy, since parenting efficacy and temperament have been shown to be significantly related, both in previous studies (Ahuja et al., 1999) and in the current investigation. The single trend was in the expected direction, and indicated that fathers who perceived their babies are more difficult tended to rate the parenting alliance as poorer. Pending further investigation, this suggests that fathers may feel less efficacious and desire greater support than is forthcoming from the mother when faced with an irritable infant. On the other hand, in the context of a

difficult baby, mothers may seek greater support from fathers, who may feel impinged upon. Regardless, the lack of significance may indicate that relatively few infants were fussy enough to cause high levels of stress.

Summary and Implications

The results of this study point toward four general conclusions that confirm and extend the existing literature on the parenting partnership and the transition to parenthood, and suggest a number of avenues for further research. First, the parenting partnership and marital relationship are confirmed as related but separate aspects of an overall relationship dimension. However, the coparenting construct is broad and not yet well defined. The use of multiple measures is highly recommended, therefore, to assess the intricate complexity of family relationships, since both self reports and observational ratings add important information in evaluating family functioning (Floyd & Zmich, 1991; Hayden et al., 1998). To illustrate, the results of the construct validity analyses demonstrated that alternative ways to conceptualize dyadic relationship variables can reveal major group differences, in this case, between mothers and fathers; it remains to be seen which domains are most critical for which processes and outcomes. Nonetheless, the evidence presented in this study adds to the body of work indicating that one can coparent successfully in the context of an unhappy marriage and vice versa (Abidin, 1992; Cohen & Weissman, 1984).

Second, although the parenting partnership and the marriage are different

aspects of the relationship, the importance of the marital context for the development of coparenting cannot be overestimated. The ways in which spouses have organized their feelings about one another, attitudes regarding potentially conflictual issues, need for affection and intimacy, and behaviors in dyadic interactions set the context for whether they will be able to successfully organize the new parenting relationship, or whether it will tend toward hostility, resentment, and miscommunication. It was notable that even among these high-functioning couples, problematic coparenting behavior patterns could be prospectively identified from quite subtle variations in the pre-birth marital relationship.

Third, the results of this study highlight the specific relationship experiences of men and women, and identify pathways and correlates that differentiate the development of coparenting for each. Whereas the pre-birth relationship sets the stage for fathers' perceptions of coparenting in a relatively permanent manner, for mothers, the influence of marital quality persists after the child's birth. These findings support the research of many other investigators, who find different pathways to child outcomes and parenting for mothers and fathers (e.g., Katz & Gottman, 1996; Levy-Shiff, 1994; Thompson & Walker, 1989).

In addition, mothers distinguish between coparenting actions and the marital relationship to a greater extent than do fathers. For example, what mothers actually do in a family play situation bears little relation to how they feel about the

couple or behave when alone with their husband; for mothers, coparenting behaviors comprise a relatively separate domain of family functioning. On the other hand, fathers' perceptions and behaviors across both relationship milieus are more difficult to disentangle; if fathers feel positive about the marriage, they tend to be satisfied with the parenting partnership and act supportively in both the coparenting and marital contexts. Consideration of the paradigm used to elicit coparenting behaviors encourages speculation regarding the basis for these differences. The family play situation involved both parents on the floor with the infant, directed to teach the infant how to complete a task. Within the home environment, as they engage in the daily business of running a household, few families are likely to participate in mutual play; more frequently, one parent is responsible for monitoring the baby while the other completes household tasks. Furthermore, most mothers are likely to have had greater responsibility and have cared more frequently for their child as opposed to fathers. Thus, when placed in the family play situation, mothers are more likely to drive the interaction. They may focus on the infant and attempt to complete the teaching task, or they may sit back and actively encourage fathers to interact with the baby, but for mothers, coparenting is in many ways an extension of individual parenting behavior, with the focus on the infant. Fathers, on the other hand, center on their wife's behavior; coparenting is more about the relationship with the wife than the infant. Thus, for mothers, coparenting behaviors become distinct from other aspects of the couple

relationship, but for fathers, marital, couple, and family time is more indistinct.

An attempt to identify subdimensions of the general alliance scale in analyses not presented here suggest that mothers and fathers perceived coparenting in distinctive ways. Both the number of factors and the items that clustered together differed substantially across men and women. It is possible that when men and women provide their perceptions of the parenting alliance, their answers are based on quite disparate points of reference. In this study, the decision was made to retain the full scale, which evidenced high internal consistency for both parents, to measure the parenting alliance, but future work would be enhanced by elaborating on the similarities and differences in maternal and paternal perceptions of what comprise dimensions of coparenting in the early months and over the course of parenthood.

The fourth and final point is that the couple relationship is an interacting system of maternal and paternal attitudes, expectations, and behaviors. Fathers' parenting alliance trajectories tended to be influenced by individual characteristics of mothers, such as their anticipation of parenthood and their self-perceptions of maternal parenting competence. These factors are likely to promote emotional instability in the first months of parenting, which may be problematic for many fathers, who are less accustomed to coping with the affective domain (Strazdins et al., 1997). Mothers, on the other hand, were more affected by more paternal factors that potentially could cause conflict over childrearing decisions, such as

differences in childrearing philosophy and their contribution to childcare, as well as by fathers' general feeling of marital well-being. However, it should be noted that differences in childrearing philosophy, violated expectations for childcare, and marital satisfaction are also dependent on maternal reports: childrearing differences because both parents' attitudes are taken into account, violated expectations because as fathers' expectations were positively violated, mothers' were negatively violated, and the marital relationship due to the covariance between mother and father perceptions. Thus, it can be hypothesized that maternal characteristics are pivotal in parenting alliance development, affecting fathers' trajectories directly, while fathers' characteristics affect the parenting alliance of mothers only through interactions with maternal variables. This has critical implications not only for the study of typical family development, but also raises questions regarding the amplified role of maternal psychopathology on child outcomes, as well as regarding the function of mothers in families in which paternal psychopathology (e.g., paternal alcoholism) places children at risk of emotional and behavioral problems.

These research findings must be considered in light of the current social construction of parenthood. LaRossa and colleagues note that "conventional wisdom has it that America is in the midst of an unprecedented revolution in men's paternal role expectations–that popular attitudes about what fathers can and should do are changing in ways not dreamed of before " (LaRossa, Gordon,

Wilson, Bauran, & Jaret, 1991, p. 994). Although fathers have increased their involvement with children over the past decades (Pleck, 1997), couples consistently fall into traditional patterns after the birth of the first child. Many of the couples in this study were raised with the expectation that male and female parenting is equivalent and planned to share all childrearing responsibilities. However, most reverted to more traditional roles despite frequently explicit intentions not to do so (Levy-Shiff, 1994; McBride & Rane, 1998). Thus, for this generation, the transition to parenthood, although rewarding, is primed for difficulties during the development of the parenting partnership.

Limitations and Future Directions

The exploratory nature of this study provided an initial description of coparenting in the first months of the transition to parenthood, but raised many more intriguing issues. Foremost is a problem that exists in most studies of the transition to parenthood and in the family relationship literature in general: The current sample was comprised of married, predominantly white, middle-class volunteers for a 4-wave longitudinal study who received little compensation for their participation; even among people who attended childbirth classes, highly educated individuals were overrepresented. In addition, at no point did any participant's DAS score approach the clinical cutoff of 100; the lowest score across four timepoints was 112. The composition of this sample has benefits: The results are likely to be comparable to those of previous research in this domain,

which has, for the most part, been based on similar samples. Furthermore, the fact that these high-functioning families demonstrated a moderate range of coparenting attitudes and behaviors suggests that negative effects may be amplified in at-risk families. Nonetheless, the limited generalizability of the study findings must be considered when incorporated into theory building and research design. Different mechanisms of parenting partnership development may well operate in less affluent, culturally diverse, or distressed groups, and research must be undertaken to identify similarities and differences in coparenting in the population as a whole.

Furthermore, the current study spanned only a brief period, which, although sufficient for the goal of examining the development of the parenting partnership over the potentially unstable first months of parenthood (Parke et al., 1994), may have limited long-term relevance. Thus, follow-up research on this sample, or the initiation of a long-term longitudinal study of coparenting is necessary to investigate processes and outcomes over the entire period of family development. Outcomes of particular interest center on the relation between coparenting and child social adjustment, emotional regulation, and psychopathology, as well as the identification of differences in coparenting interactions that can identify couples at risk of separating.

The findings for perceptions of the parenting alliance beg the question as to whether systematic pre-birth and post-birth predictors of coparenting behavior can also be identified, and if so, how they vary from self-reports. Since the 6-month

coparenting behavioral ratings showed relatively little relation to concurrent parenting alliance reports, differences in the patterns of association are probable. Still, investigation of this question is an important next step. Additionally, the relationship between the parenting partnership and the marriage should be more intensively explored. The present study described interrelations between the two in a rudimentary fashion, but an important advance would be to specify trajectories for marital quality as well as the parenting partnership, and to determine whether the pre-birth and post-birth predictor variables differentially relate to the two relationship trajectories. If separate models were required to predict each dimension of the couple relationship, evidence for the construct validity of the parenting partnership would be even more compelling.

The issue of dyadic versus whole-family interaction must be considered (Fivaz-Depeursinge & Corboz-Warnery, 1999; Fivaz-Depeursinge et al., 1996). The coparenting relationship has been conceptualized as a triadic interaction because it is manifested because of a third person, the child. In actuality, however, coparenting as operationalized in this and many other studies is a dyadic relationship; one that occurs in the context of a third (or more) person, but a dyadic relationship nonetheless. An empirical question is the relative importance of dyadic interactions, including coparenting and individual parent-child relations, in comparison to ratings of the whole-family environment in predicting outcomes. Some researchers have attempted to measure whole-family variables (McHale et

al., 1996; Paley et al., 1999). However, the question becomes further complicated because almost all studies that have explored relations among more than two family members have limited their investigation to three members (for an exception, see Kreppner [1988]). There is every reason to believe that the addition of a second child (or more) will once again destabilize the parenting partnership. Anecdotally, most parents, many of whom found the transition to one child more difficult than anticipated, report being even more overwhelmed by the presence of two children. This suggests the hypothesized effects of additional children on the parenting partnership are multiplicative rather than additive or nonexistent.

On a broader note, as a fairly new research domain, coparenting is not yet well nor consistently operationalized, a critical venture in promoting a common language and useful application of disparate research findings (Sabatelli & Waldron, 1995). Several issues must be addressed to solve this problems: What comprises coparenting? Who can be coparents? How does coparenting change over developmental time? First, this study operationalized the parenting partnership in two ways: as the subjective feelings of support and mutuality encompassed in the parenting alliance, and as specific patterns of competitive or cooperative behavior that might be manifested during family play. Yet a comprehensive conception of coparenting involves much more, even without taking into consideration variations that are certain to exist across cultures. It includes the ways that couples go about parenting within their own homes,

amongst the demands of family, friends, work, and individual needs. It is evidenced when couples assume responsibilities for direct physical care and feeding (in fact, the division of childcare could itself be considered one measure of coparenting) as well as organizational functions such as ensuring immunizations are current, buying clothing, and arranging daycare. Coparenting also plays a role in more distal and abstract functions like teaching how to express and regulate emotion and behave in socially appropriate ways (Katz & Gottman, 1996). Coparenting can even occur when a parent is alone with a child, as when the representation of the other parent is invoked, whether in a positive, threatening, or derogatory way (McHale, 1997; McHale & Rasmussen, 1998). As defined here, coparenting is much more than simply co-caregiving, but is instead an essential part of a child's physical, emotional, and social security.

Who, then, can be coparents? The present sample was limited to heterosexual married partners, but in fact, coparenting occurs whenever two individuals form a bond in the service of a child's needs. Thus, coparenting can occur between divorced, unmarried, and/or gay partners as well (Loukas, Twitchell, Piejak, Fitzgerald, & Zucker, 1998; Silverstein & Auerbach, 1999). Single parents may coparent with a wide variety of partners, including romantic partners, close friends, siblings, older children, and, particularly in the case of adolescent mothers, their own mothers. Each of these coparenting configurations may have different mechanisms and processes through which more or less

successful outcomes occur, and none have been sufficiently investigated.

Finally, do definitions of coparenting change during different developmental periods? No research has yet attempted to investigate how coparenting tasks and demands are altered as children progress through developmental stages; all studies to date have focused on children of one age group, usually toddlers. However, coparenting toddlers is considerably different from coparenting infants. For infants, physical care and security are paramount, but for toddlers, emerging needs for control and autonomy, as well as the development of language, promote the initiation of discipline tactics, emotion management strategies, and alternative methods of stimulation. Each age group has its special characteristics, and without defining what continuities and differences are demanded of coparenting across child development, the field is likely to find it difficult to integrate disparate research findings into a coherent picture of family development.

APPENDIX A

Newsletter

MSU Parenthood Project ☺

Hello again, everybody!

The MSU Parenthood Project Team wants to congratulate our project families once again on the birth of all their beautiful babies. We've had a wonderful time meeting all the new children, and we hope you've enjoyed having another group of people to show off to! We're taking this opportunity to introduce the team members, update you on the project, and give you a little information on some of the issues that might apply to your baby at this age.

Project Team Members :

You may have met one or several of our team members. Currently, we have 11 people on the MSU Parenthood Project Team:

Laurie Van Egeren, Principal Investigator and head of the project. Laurie is finishing her doctoral work in developmental psychology at MSU. She has a 2-year-old daughter, Tess, and a 7-month-old daughter, Theo (two families from the study were giving birth at the same hospital and at the same time as Laurie!).

We have several research assistants returning from last semester: **Beth Robinson, Junna Mita, Dyane Hawkins** (herself a mother of two, ages 13 and 9), **Rene Teper, Marina Nelson, Rick Lower, Donna Jones, Marcy Hoopingarner,** and **Heather Fountain**. You have probably met at least one of these project staff before.

You may have met **Renee Verysee, Emalee Fields, Kristine Kolarovic, Adrienne Auten, Beth White, Kristen Sturman, Sarah Davis, Alicia Dawson,** or **Joan Cook,** former project team members. They truly enjoyed getting to know the families that they visited, and were very sorry they couldn't come on the final visits to see "their" babies one last time!

Project Update . . .

As of this mailing, the last baby has just been born; in all, we have 103 families in the project. And we really do have half boys, half girls (well, 51 boys, 52 girls). Amazingly, everyone has named their baby a unique name; we haven't had any repeats! Most of our families are in the greater Lansing area, but some are in Grand Rapids, Detroit, Ann Arbor, and even Texas, New York, Washington, D.C., and the West Coast.

What's Next?

In about a month, we'll be contacting you to set up the final visit, where we'll ask you about how life has changed since the baby was born, as well as doing a brief play session with you and the baby. Since Laurie will be out of commission for a few months, **Dyane** or **Marina** will probably be calling you; the student who has been visiting with you in the meantime may also want to come along to say good-bye. We'll see you soon!

Fun and Games

Some games your baby will love to play:

- ***Sit and hit:*** Dangle a toy within baby's reach, so he/she can punch or grasp it.
- ***Grab and shake:*** Offer rattles, dolls, socks, keys (especially keys).
- ***Kick toys***: Attach balloons, rattles, or bells to baby's ankles; let him/her kick.
- ***Rolling:*** Lay baby over a large ball and roll it slowly back and forth (will help with balance.
- ***Pulling games:*** Hold a thin bar or your fingers in front of baby's chest. Let him/her grab on and slowly pull up.

Five-Month Milestones

At 5 months of age, you can look forward to your baby beginning to:

- Roll over
- Reach for objects
- Smile a great deal
- Grasp objects

Immunization Schedule

We all know this isn't fun, but...

4 months:	DTP[1], OPV, Hib[1]
6 months:	DTP, Hib[4]
6 to 18 months:	OPV, HBV[4]

How Baby Changes

As your new family member approaches his or her 5-month birthday, here are some big events that you can look forward to:

Sitting up (with some aid): Prop baby up with pillows on all sides. They love it!

Teeth: usually emerge between 3 and 12 months. Common signs:

- drooling
- increased night waking
- face rash
- low fever
- irritability

Solid food: real-people food is generally encouraged beginning between 4 and 9 months.

Here are some good choices for beginners: Rice cereal, squash, carrots, green beans, peas, yogurt, applesauce, peaches

Pediatricians commonly suggest that you start with one new food at a time, serving it for a whole week, in order to identify potential food allergies.

Will We Ever Sleep Normally Again?

Babies who are around 5 months of age sleep an average of 14 ½ hours per day. However, this 14 ½ hours often does not happen as we might prefer.

Some tips that might help your baby sleep more during the night:

- Keep daytime naps less than 3 hours
- Make nighttime feedings boring and brief
- Begin a nightly ritual (sing a lullaby, read a story, give a bath before bed)
- Put baby to bed awake so he/she learns to soothe him/herself to sleep

And expect night wakings to increase as baby approaches major milestones in development, such as sitting up, beginning to crawl, and teething.

For Computer-Buff Parents . . .

Check out these websites:

Parent Soup: http://www.parentsoup.com

Parent Q&A by pediatricians and psychologists: http://www.parenting-qa.com

National Parent Info Network: 1-800-583-4135 (okay, you don't have to have a computer for this one)

To Contact the MSU Parenthood Project:

Telephone: (517)353-8807
Email: vanegere@pilot.msu.edu
Address: Department of Psychology
Michigan State University
East Lansing, MI 48824
c/o Laurie Van Egeren

APPENDIX B

Informed Consent

Transition to Parenthood Study
Informed Consent Agreement

We are asking you to participate in a study to examine changes that take place in couples' relationships as they become parents. Becoming a parent can be both exciting and stressful, and we think it important to understand how couples negotiate this period of their lives. Information that you provide through questionnaires, interviews, and play sessions will be used for this study. Please carefully review the information below. If you have any questions at all, be sure to ask the person who is requesting your participation so that you fully understand the procedures involved. If you decide to participate, as a token of our appreciation, at the end of the project you and your spouse will receive an infant t-shirt and a certificate for your baby, both of which will state that he/she has been a member of the MSU Transition to Parenthood study. You also have the opportunity to win a savings bond in your baby's name.

By signing this agreement, you are indicating that you have been fully informed of the purposes and procedures of the study in which you are agreeing to participate. You have been informed of and understand each of the following points:

1. By signing this agreement, you are giving permission for the following activities to be conducted:
a) During the third trimester of pregnancy, a member of the research team will interview you and your spouse for approximately 30 minutes. You will also complete a set of questionnaires, which will take approximately 90 minutes.
b) When your baby is 1 month old, you will complete a set of questionnaires, which will take approximately 30 minutes.
c) When your baby is 3 months old, you will complete a set of questionnaires, which will take approximately 30 minutes.
d) When your baby is 6 months old, a member of the research team will again interview you and your spouse for approximately 30 minutes. You will also complete a set of questionnaires, which will take approximately 30 minutes. Finally, you, your spouse, and your child will participate in a 12-minute play session.

All information will be collected in your home (unless you prefer to come to the MSU campus). At each of the four points, a research team member will telephone you to set up an appointment at a time when you and your spouse will both be available. The team member will be available during the visit to answer any questions and assist in childcare.

2. Upon completion of the study, you and your spouse will receive an infant t-shirt and a certificate for your infant, both of which will indicate that the baby has been a member of the MSU Transition to Parenthood study. You will also receive the MSU Transition to Parenthood newsletter. Six couples will win a lottery to receive a $100 or $50 savings bond in their child's name.

3. You have the right to decide not to participate in the study, or to decline to answer any specific question(s) that you are asked, or to discontinue your participation at any time.

4. You understand that the interviews and play session will be videotaped. No one other than members of the research team will have access to these tapes, which will be identified on the outside by a code number only. The tapes will be kept in a locked file cabinet in the project research office.

5. Any information you provide in the questionnaires will be transformed into numbers and entered into a computer data file. The written record will then be destroyed. All tapes will be labeled with a code number. You also understand that the researchers are obligated to report to the appropriate authorities any information that you might provide that suggests that your child or another minor is being subjected to or has been subjected to physical or sexual abuse.

6. If you have any questions or concerns about the study or you would like to receive any publications that might result from the study, you can contact Laurie Van Egeren at the Department of Psychology at Michigan State University by calling (517) 353-8807, writing to Department of Psychology, Michigan State University, East Lansing, MI 48824, or through e-mail at vanegere@pilot.msu.edu.

_____ _____

Signature Date

APPENDIX C

Measures

Information Questionnaire (T1)

1. What is your sex: Male ___ Female___

2. How old are you? _____

3. What is the highest level of education you have completed? (circle one)
   1. Less than high school
   2. High school graduate
   3. Some college/associate's degree/vocational degree or certificate
   4. Bachelor's degree
   5. Some graduate school
   6. Master's degree
   7. Ph.D, J.D., M.D.

4. What is your occupation?_____

5. What is your combined (you and your spouse) annual income? (circle one)
   1. Less than $5,000
   2. $5,000-$9,999
   3. $10,000-$19,999
   4. $20,000-$29,999
   5. $30,000-$39,999
   6. $40,000-$49,999
   7. $50,000-$59,999
   8. $60,000-$69,999
   9. $70,000-$79,999
   10. $80,000-$89,999
   11. $90,000-$99,999
   12. $100,000 or greater

6. What is your primary ethnic group?

_____

7. How long have you been married? _____

8. When is your due date? _____

9. How far along are you now? _____

10. Did you plan this pregnancy?

Yes ____ No _____ No, but we weren't trying to avoid it either ____

Information Questionnaire (T2, T3, T4)

1. What is your baby's sex? Male____ Female ____

2. What percentage of time have you been breastfeeding versus bottlefeeding your baby?

   Breastfeeding _____%

   Bottlefeeding _____%

   Total = 100 %

3. How many hours per week does your child spend with a caretaker besides you and your spouse? ("0" if you and your spouse take care of your child full-time)

   _____ hours

4. What type of childcare are you using? (circle one)
   1. None
   2. Family member
   3. Babysitter in my home
   4. Babysitter in their home
   5. Family daycare
   6. Group daycare
   7. Other _____

5. What is your current employment status?
   1. Stay-at-home mom
   2. Part-time (if part-time, indicate how many hours per week _____)
   3. Full-time

Parenting Alliance Questionnaire

This questionnaire asks for information concerning your parenting experience and about how you and your partner work together as parents.

INSTRUCTIONS: Using the scale described below, circle the letter that indicates how much you agree with each of the following statements.

SD=Strongly Disagree D=Disagree A=Agree SA=Strongly Agree

1.	Parenting has brought my spouse and me closer together.	SD	D	A	SA
2.	My spouse tries to have the last word in how we raise our baby.	SD	D	A	SA
3.	My spouse is a good parent.	SD	D	A	SA
4.	My spouse and I feel that we are growing and maturing together through our experiences as parents.	SD	D	A	SA
5.	My spouse is willing to make some personal sacrifices in order to help with the parenting.	SD	D	A	SA
6.	My spouse tries to make sure I get some time for myself away from the baby.	SD	D	A	SA
7.	When there is a crisis with the baby, my spouse doesn't help me as much as I would like.	SD	D	A	SA
8.	I have learned that if my baby needs something important, I can rely on my spouse to help provide it.	SD	D	A	SA
9.	My spouse does not really enjoy being alone with the baby .	SD	D	A	SA
10.	After my spouse or I have handled a difficult situation with the baby, we discuss it and try to figure out what we could have done better.	SD	D	A	SA
11.	My spouse likes to play with the baby, but then leaves the dirty work to me.	SD	D	A	SA

SD=Strongly Disagree D=Disagree A=Agree SA=Strongly Agree

12.	I appreciate how much my spouse tries to be a good parent.	SD	D	A	SA
13.	My spouse resents that I have to give so much of my time to the baby.	SD	D	A	SA
14.	My spouse and I like to imagine together what our baby will be like when he/she grows up.	SD	D	A	SA
15.	When the baby is sick, I can turn to my spouse for support.	SD	D	A	SA
16.	My spouse and I agree on our ideas, guidelines, and rules for raising our baby.	SD	D	A	SA
17.	My spouse has a good feel for the baby and what he/she might need.	SD	D	A	SA
18.	My spouse does not live up to my idea of a good parent.	SD	D	A	SA
19.	Parenting has given my spouse and me a focus for the future.	SD	D	A	SA
20.	My spouse helps out with the parenting whenever possible.	SD	D	A	SA
21.	My spouse and I work closely together as parents.	SD	D	A	SA
22.	My spouse makes too many demands on me as a parent.	SD	D	A	SA
23.	I often think my baby would be better off with one parent (me) than with the both of us.	SD	D	A	SA
24.	I do not feel that parenting is as much of a sharing experience with my spouse as I hoped it would be.	SD	D	A	SA
25.	I feel closer to my baby than to my spouse.	SD	D	A	SA
26.	My spouse and I agree on how much time we should spend with the baby.	SD	D	A	SA

SD=Strongly Disagree D=Disagree A=Agree SA=Strongly Agree

27.	Sometimes I feel like my spouse is another child instead of my partner.	SD	D	A	SA
28.	My spouse pays too little attention to the baby.	SD	D	A	SA
29.	My spouse still wants to "do his or her own thing" instead of being a responsible parent.	SD	D	A	SA
30.	My spouse preaches a lot about how to be a good parent, but rarely puts it into practice.	SD	D	A	SA
31.	Having a baby has helped me to see positive qualities in my spouse that I never noticed before.	SD	D	A	SA
32.	My spouse sees parenting as my responsibility.	SD	D	A	SA
33.	I worry about the baby's safety when he/she is alone with my spouse.	SD	D	A	SA
34.	My spouse has unreasonable expectations for the baby.	SD	D	A	SA
35.	My spouse is too self-centered to be a good parent.	SD	D	A	SA
36.	I feel over-burdened as a parent because my spouse is often too involved with other things to carry a fair share of the load.	SD	D	A	SA
37.	When I feel at my wits end as a parent, my spouse gives me the extra support I need.	SD	D	A	SA
38.	My spouse and I often talk together about what is best for our baby.	SD	D	A	SA

Dyadic Adjustment Scale

Instructions: For the following questions, please indicate how often you and your spouse do the following things.

How often would you say the following events occur between you and your spouse?

	Never	Less Than Once a a Month	Once or Twice Month	Once or Twice a Week	Once a Day	More Often
1. Have a stimulating exchange of ideas	_____	_____	_____	_____	_____	_____
2. Laugh together	_____	_____	_____	_____	_____	_____
3. Calmly discuss something	_____	_____	_____	_____	_____	_____
4. Work together on a project	_____	_____	_____	_____	_____	_____

5. In general, how often do you think that things between you and your spouse are going well?

_____ All of the time
_____ Most of the time
_____ More often than not
_____ Occasionally
_____ Rarely
_____ Never

6. Do you confide in your spouse?

_____ All of the time
_____ Most of the time
_____ More often than not
_____ Occasionally
_____ Rarely
_____ Never

7. How often do you and your spouse "get on each others' nerves?"

_____ All of the time
_____ Most of the time
_____ More often than not
_____ Occasionally
_____ Rarely
_____ Never

8. How often do you and your spouse quarrel?

_____ All of the time
_____ Most of the time
_____ More often than not
_____ Occasionally
_____ Rarely
_____ Never

9. How often do you or your spouse leave the house after a fight?

_____ All of the time
_____ Most of the time
_____ More often than not
_____ Occasionally
_____ Rarely
_____ Never

10. Do you ever regret that you married?

_____ All of the time
_____ Most of the time
_____ More often than not
_____ Occasionally
_____ Rarely
_____ Never

11. How often do you discuss or have you considered divorce or separation?

_____ All of the time
_____ Most of the time
_____ More often than not
_____ Occasionally
_____ Rarely
_____ Never

12. Do you kiss your spouse?

_____ Every day
_____ Almost every day
_____ Occasionally
_____ Rarely
_____ Never

13. Do you and your spouse engage in outside interests together?

_____ Every day
_____ Almost every day
_____ Occasionally
_____ Rarely
_____ Never

14. The dots (*) on the following line represent different degrees of happiness in your relationship. The middle point, "happy", represents the degree of happiness of most relationships. Please circle the dot which best describes the degree of happiness, all things considered, of your relationship.

-------*---------*---------*---------*---------*---------*---------*-------

Extremely unhappy	Fairly unhappy	A little unhappy	Happy	Very happy	Extremely happy	Perfect

15. Which of the following statements best describes how you feel about the future of your relationship?

_____ I want desperately for my relationship to succeed, and would go to almost any length to see that it does.

_____ I want very much for my relationship to succeed, and will do all I can to see that it does.

_____ I want very much for my relationship to succeed, and will do my fair share to see that it does.

_____ It would be nice if my relationship succeeded, but I can't do much more than I am now to help it succeed.

_____ It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.

_____ My relationship can never succeed, and there is no more that I can do to keep the relationship going.

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your spouse for each item on the following list.

1=Always agree
2=Almost always agree
3=Occasionally disagree
4=Frequently disagree
5=Almost always disagree
6=Always disagree

16. Handling family finances _____
17. Matters of recreation _____
18. Religious matters _____
19. Demonstrations of affection _____
20. Friends _____
21. Sex relations _____
22. Conventionality (correct or proper behavior) _____
23. Philosophy of life _____
24. Ways of dealing with parents _____
25. Aims, goals, and things believed important _____
26. Amount of time spent together _____
27. Making major decisions _____
28. Household tasks _____
29. Leisure time, interests and activities _____
30. Career decisions _____

These are some things about which couples sometimes agree and sometime disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks.

	YES	NO	
31.	_____	_____	Spending too much money.
32.	_____	_____	Being too tired for sex.
33.	_____	_____	Not showing love.
34.	_____	_____	Not sharing household chores.

Current Division of Household Tasks

Instructions: Using the scale provided, please indicate what percentage of the following tasks are currently done by you and your spouse.

None 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

	You	Your Spouse	Total %
Laundry			100
Cleaning			100
Dishes			100
Cooking			100
Shopping			100

Expected Division of Household Tasks

Now, complete the same questions with regard to how you expect tasks to be divided after the baby is born:

None 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

	You	Your Spouse	Total %
Laundry			100
Cleaning			100
Dishes			100
Cooking			100
Shopping			100

Expected Division of Childcare Tasks

Instructions: Using the scale provided, please indicate what percentage of the following tasks you expect to be done by you or your spouse.

None 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

	You	Your Spouse	Total %
Feeding the baby			100
Changing the baby			100
Playing with the baby			100
Soothing the baby when fussy			100

Family Situations Checklist

Instructions: Use the scale shown below to answer each statement in terms of your own parents' (or parent's and stepparent's) relationship when you were growing up.

never true	occasionally true	fairly true	very true
1	2	3	4

1.	My parents argued with each other in front of me.	1	2	3	4
2.	My parents held grudges for a long time when fighting.	1	2	3	4
3.	My parents fought verbally with each other.	1	2	3	4
4.	My mother tried to get me to side with her when she fought with	1	2	3	4
5.	My parents fought about money and possessions.	1	2	3	4
6.	My parents were able to work out disagreements fairly quickly.	1	2	3	4
7.	My father tried to get me to side with him when he fought with my mother.	1	2	3	4
8.	I enjoyed being with my father.	1	2	3	4
9.	My parents talked together about my future.	1	2	3	4
10.	My mother said negative things about my father.	1	2	3	4
11.	My parents were able to discuss and work out their disagreements.	1	2	3	4
12.	My parents worked together as parents.	1	2	3	4
13.	My father said negative things about my mother.	1	2	3	4
14.	My parents fought about childrearing and discipline.	1	2	3	4
15.	We did things together as a family.	1	2	3	4
16.	My parents were both involved in taking care of the children.	1	2	3	4

17. How well do you think your parents got along with each other in their marital relationship?

1	2	3	4	5
very well				badly

18. How well do you think your parents got along with each other in their parenting relationship?

1	2	3	4	5
very well				badly

19. How often did your parents get angry with one another?

1	2	3	4	5
never				all the time

Ideas About Parenting

These statements describe a number of different ideas about raising children. Please indicate how much you agree with each statement by using the following scale:

1	2	3	4	5	6	7	8	9
very much agree		moderately agree		neither agree nor disagree		moderately disagree		very much disagree

____ 1. Too much cuddling spoils a child.

____ 2. A parent should not allow his or her mind to be changed by a child.

____ 3. There is a special bond between mothers and their infants which fathers may even be jealous of.

____ 4. Infants and children should have a daily schedule which they can count on.

____ 5. Children, one year old or younger, don't feel their parents are really "with them" if the parents are doing something else at the same time

____ 6. I would feel quite comfortable buying a doll for my son and a truck for my daughter.

____ 7. Fathers have a special knack for raising sons.

____ 8. If parents are ready to go out for the evening and their baby reacts by crying and screaming, it is best for them to cancel their plans.

____ 9. Babies should be held when they are upset so they will be secure in their parents' love for them.

____ 10. Even the best parents feel some disgust when cleaning up their infant's diapers.

____ 11. It is just as important for a girl to be self-assertive and well educated as it is for a boy.

____ 12. It is best for a preschool child to be cared for almost entirely by his or her own parents.

____ 13. Babies wish that their parents would stop fussing over them so much.

____ 14. It is all right for the mother of an infant to work half-time or more as long as she has good childcare.

____ 15. A child should not talk back to a parent.

____ 16. New parents will feel uncomfortable the first time they wash their baby's genitals.

____ 17. Parents should try to avoid open conflict with a child.

____ 18. I won't insist that my child eat food that he or she really dislikes.

____ 19. When a child is called, he or she should come immediately.

____ 20. A mother just naturally knows when to pick up her crying baby.

____ 21. Little boys can be expected to cry as much as little girls.

1	2	3	4	5	6	7	8	9
very much agree		moderately agree		neither agree nor disagree		moderately disagree		very much disagree

____ 22. A child gets a sense of security from a strong father and a sense of comfort from a warm and loving mother. If a child doesn't have a strong father or a warm and loving mother, that child loses out on these basic feelings.

____ 23. Babies are frequently so demanding that their parents have no time for anything else.

____ 24. A six-month-old baby can tell you exactly what he or she wants if you watch and listen.

____ 25. Since new babies are fragile and delicate, they must be handled with extreme care.

____ 26. Good parents should keep a firm hold on their child's expression of angry feelings.

____ 27. It is terribly frustrating to take care of a newborn because the infant can't let you know what he or she needs.

____ 28. Breastfeeding is more satisfying to a child than bottlefeeding.

____ 29. There are times in the lives of small children when they need to be with people other than their mothers and fathers.

____ 30. Taking care of a baby is much more work than pleasure.

____ 31. Children should be encouraged to express their anger as well as their more pleasant feelings.

____ 32. I want to try to tell my child what to do as little as possible.

____ 33. Young children are only as curious about the world as their parents permit them to be.

____ 34. I like to see a child have opinions and express them, even to adults.

____ 35. It's all right for parents to go on a vacation together and leave the baby with a good sitter.

____ 36. Fathers have a special knack for raising daughters.

____ 37. Although it's not always easy to do, the best way of handling a child's temper tantrum is to ignore it.

____ 38. Parents can expect to see differences in a boy or girl child no matter how they try to raise them alike.

____ 39. An infant's needs must always come before the parents' needs.

____ 40. A child of three who is cared for by the parents at home is better off than one who is sent to daycare.

____ 41. I will try to anticipate situations which could cause my child pain or discomfort and help my child avoid them if at all possible.

____ 42. One of the joys of parenthood is encouraging a child's natural curiosity.

____ 43. Other people will probably think I am permissive with my child.

____ 44. A child should be punished for breaking his or her own toys in a fit of anger.

____ 45. A mature person seldom gets angry at a child.

____ 46. A certain amount of frustration and upset is necessary for a child's emotional growth. Because of this, parents should not be too protective.

Sentence Completion (M)

Please complete the sentence for each item.

1. Crime and delinquency could be halted if_____

_____

2. Men are lucky because_____

_____

3. I just can't stand people who_____

_____

4. At times he worried about_____

_____

5. I am_____

_____

6. A woman feels good when_____

_____

7. My main problem is_____

_____

8. A husband has a right to_____

_____

9. The worst thing about being a man_____

_____

10. A good mother_____

_____

11. When I am with a woman_____

_____

12. Sometimes he wished that _____

_____

13. My father_____

_____

14. If I can't get what I want_____

_____

15. Usually he felt that sex_____

_____

16. For a woman a career is_____

_____

17. My conscience bothers me if_____

_____

18. A man should always_____

_____

Personal Attitude Inventory

Instructions: Please answer each item by circling the appropriate answer.

SD = Strongly Disagree D = Disagree A = Agree SA=Strongly Agree

1. If I receive a lukewarm dish at a restaurant, I make an attempt to let that be known.	SD	D	A	SA
2. I resent authority figures who try to tell me what to do.	SD	D	A	SA
3. I find that I often have to question authority.	SD	D	A	SA
4. I enjoy seeing someone else do something that neither of us are supposed to do.	SD	D	A	SA
5. I have a strong desire to maintain my personal freedom.	SD	D	A	SA
6. I enjoy playing "devil's advocate" whenever I can.	SD	D	A	SA
7. In discussions, I am easily persuaded by others.	SD	D	A	SA
8. Nothing turns me on as much as a good argument.	SD	D	A	SA
9. It would be better to have more freedom to do what I want on a job.	SD	D	A	SA
10. If I am told what to do, I often do the opposite.	SD	D	A	SA
11. I am sometimes afraid to disagree with others.	SD	D	A	SA
12. It really bothers me when police officers tell people what to do.	SD	D	A	SA
13. It does not upset me to change my plans because someone in the group wants to do something else.	SD	D	A	SA
14. I don't mind other people telling me what to do.	SD	D	A	SA
15. I enjoy debates with other people.	SD	D	A	SA
16. If someone asks a favor of me, I will think twice about what this person is really after.	SD	D	A	SA

17. I am not very tolerant of others' attempts to change me.	SD	D	A	SA
18. I often follow the suggestions of others.	SD	D	A	SA
19. I am relatively opinionated.	SD	D	A	SA
20. It is important to me to be in a powerful position relative to others.	SD	D	A	SA
21. I am very open to solutions to my problems from others.	SD	D	A	SA
22. I enjoy "showing up" people who think they are right.	SD	D	A	SA
23. I consider myself more competitive than cooperative.	SD	D	A	SA
24. I don't mind doing something for someone, even when I don't know why I'm doing it.	SD	D	A	SA
25. I usually go along with others' advice.	SD	D	A	SA
26. I feel it is better to stand up for what I believe than to be silent.	SD	D	A	SA
27. I am very stubborn and set in my ways.	SD	D	A	SA
28. It's very important for me to get along well with the people I work with.	SD	D	A	SA

Motivations About Childbearing

Part I

Instructions: Please circle the answer that best represents your feelings about each of the following consequences of having a child.

1	2	3	4
Very desirable	Moderately desirable	Slightly desirable	Not at all desirable

1. Feeling a baby move and kick inside my wife.	1	2	3	4
2. Having a child who will carry on my family traditions.	1	2	3	4
3. Having my child be a success in life.	1	2	3	4
4. Feeling needed and useful through my baby.	1	2	3	4
5. Knowing that I am fertile.	1	2	3	4
6. Giving my wife the satisfaction of motherhood.	1	2	3	4
7. Being the center of a large, active family.	1	2	3	4
8. Playing with my child.	1	2	3	4
9. Having my child provide me with companionship and support later in life.	1	2	3	4
10. Having my family and friends admire me with my baby.	1	2	3	4
11. Helping my wife give birth to a baby.	1	2	3	4
12. Strengthening our marriage through a child.	1	2	3	4
13. Having my child contribute to society.	1	2	3	4
14. Having a helpless baby to love and protect.	1	2	3	4
15. Having a son.	1	2	3	4
16. Bottlefeeding a baby.	1	2	3	4
17. Fulfilling my religious feelings about family life.	1	2	3	4

1 Very desirable	2 Moderately desirable	3 Slightly desirable	4 Not at all desirable

18. Guiding and teaching my child.	1	2	3	4
19. Feeling more complete as a man through my baby.	1	2	3	4
20. Having a daughter.	1	2	3	4
21. Holding and cuddling a baby.	1	2	3	4
22. Providing my parents with a grandchild.	1	2	3	4
23. Sharing childraising with my wife.	1	2	3	4
24. Living a fuller, more enriched life through my child.	1	2	3	4
25. Devoting myself and much of my time to raising children and being a father.	1	2	3	4
26. Fulfilling my potential to have children.	1	2	3	4
27. Experiencing the special love and closeness that a child provides.	1	2	3	4

Part II

Instructions: Please circle the answer that best represents your feelings about each of the following consequences of having a child. Also, please note that "1" is now "Very undesirable."

1 Very undesirable	2 Moderately undesirable	3 Slightly undesirable	4 Not at all undesirable

28. Seeing my wife experience the discomforts of pregnancy.	1	2	3	4
29. Having an unhappy and poorly adjusted child.	1	2	3	4
30. Having my wife kept from her career or job by a baby.	1	2	3	4
31. Straining our marriage with a baby.	1	2	3	4
32. Seeing my wife experience the pain of childbirth.	1	2	3	4

1 Very undesirable	2 Moderately undesirable	3 Slightly undesirable	4 Not at all undesirable

33. Worrying about the health and safety of my child.	1	2	3	4
34. Being responsible for a needy and demanding baby.	1	2	3	4
35. Having a baby who strains my wife's health.	1	2	3	4
36. Having a baby who is born deformed.	1	2	3	4
37. Spending time and energy involved in childcare.	1	2	3	4
38. Having a child who is a burden to my wife.	1	2	3	4
39. Worrying about whether I am raising my child the right way.	1	2	3	4
40. Having to put up with the mess and noise that children make.	1	2	3	4
41. Having a child who makes it necessary for my wife to have a job.	1	2	3	4
42. Having a child who embarrasses or disgraces the rest of the family.	1	2	3	4
43. Taking care of a baby who is disagreeable and irritating.	1	2	3	4
44. Feeling guilty or inadequate as a parent.	1	2	3	4
45. Burdening our family finances with a child.	1	2	3	4
46. Taking care of a sick child.	1	2	3	4
47. Having a baby who takes away my freedom to do other things.	1	2	3	4

Infant Characteristics Questionnaire

Instructions: What is your perception of your baby's personality? Circle the number that is most typical of your baby. "About average" means how you think the typical baby would be scored.

1. How easy or difficult is it for you to calm or soothe your baby when he/she is upset?

1	2	3	4	5	6	7
very easy			about average			difficult

2. How easy or difficult is it for you to predict when your baby will go to sleep and wake up?

1	2	3	4	5	6	7
very easy			about average			difficult

3. How easy or difficult is it for you to predict when your baby will become hungry?

1	2	3	4	5	6	7
very easy			about average			difficult

4. How easy or difficult is it for you to know what's bothering your baby when he/she cries or fusses?

1	2	3	4	5	6	7
very easy			about average			difficult

5. How many times per day, on the average, does your baby get fussy and irritable--for either short or long periods of time?

1	2	3	4	5	6	7
never	1-2 times per day	3-4 times per day	5-6 times per day	7-9 times per day	10-14 times per day	more than 15

6. How much does your baby cry and fuss in general?

1	2	3	4	5	6	7
very little; much less than the average baby			average amount; about as much as the average baby			a lot; much more than the average baby

7. How did your baby respond to his/her first bath?

1	2	3	4	5	6	7
very well-- baby loved it			neither liked nor disliked it			terribly-- didn't like it

8. How did your baby respond to his/her first solid food?

1	2	3	4	5	6	7
very favorably-- liked it immediately			neither liked nor disliked it			very negatively-- didn't like it at all

9. How does your baby typically respond to a new person?

1	2	3	4	5	6	7
almost always responds favorably			responds favorably about half the time			most always responds negatively at first

10. How does your baby typically respond to being in a new place?

1	2	3	4	5	6	7
almost always responds favorably			responds favorably about half the time			almost always responds negatively at first

11. How well does your baby adapt to things (such as in items 7-10) eventually?

1	2	3	4	5	6	7
very well, always likes it eventually			ends up liking it about half the time			almost always dislikes it in the end

12. How easily does your infant get upset?

1	2	3	4	5	6	7
very hard to upset-- even by things that upset most babies			about average			very easily upset by things that wouldn't bother most babies

13. When your baby gets upset (e.g., before feeding, during diapering, etc.), how vigorously or loudly does he/she cry and fuss?

1	2	3	4	5	6	7
very mild intensity or loudness			moderate intensity or loudness			very loud or intense, really cuts loose

14. How does your baby react when you are dressing him/her?

1	2	3	4	5	6	7
very well-- likes it			about average-- doesn't mind it			doesn't like it at all

15. How active is your baby in general?

1	2	3	4	5	6	7
very calm and quiet			average			very active and vigorous

16. How much does your baby smile and make happy sounds?

1	2	3	4	5	6	7
a great deal, much more than most infants			an average amount			very little much less than most infants

17. What kind of mood is your baby generally in?

1	2	3	4	5	6	7
very happy and cheerful			neither serious nor cheerful			serious

18. How much does your baby enjoy playing little games with you?

1	2	3	4	5	6	7
a great deal, really loves it			about average			very little, doesn't like it very much

19. How much does your baby want to be held?

1	2	3	4	5	6	7
wants to be free most of the time			sometimes wants to be held; sometimes not			a great deal-- wants to be held almost all the time

20. How does your baby respond to disruptions and changes in everyday routine, such as when you go to church or a meeting, on trips, etc.?

1	2	3	4	5	6	7
very favorably, doesn't get upset			about average			very unfavorably, gets quite upset

21. How easy is it for you to predict when your baby will need a diaper change?

1	2	3	4	5	6	7
very easy			about average			difficult

22. How changeable is your baby's mood?

1	2	3	4	5	6	7
changes seldom, and changes slowly when he/she does change			about average			changes often and rapidly

23. How excited does your baby become when people play with or talk to him/her?

1	2	3	4	5	6	7
very excited			about average			not at all

24. Please rate the overall degree of difficulty your baby would present for the average parent.

1	2	3	4	5	6	7
super easy			ordinary, some problems			highly difficult to deal with

Parenting Efficacy Questionnaire

We'd like to get a general idea of how you usually handle different situations with your baby. We realize no one is always effective or always ineffective. We all do better in some situations than others. We'd like you to think about some situations that all parents encounter.

1. When your baby is upset, fussy, or crying, how good are you at soothing him or her?

1	2	3	4
not good at all	not good enough	good enough	very good

2. How good are you at understanding what your baby wants or needs. For example, do you know when your baby needs to changed or wants to be fed?

1	2	3	4
I do not understand my baby	I understand my baby some of the time	I understand my baby most of the time	I understand my baby all of the time

3. How good are you at making your baby understand what you want him/her to do? For example, if you want your baby to eat dinner or play quietly, how good are you at making him/her do that?

1	2	3	4
not good at all	not good enough	good enough	very good

4. How good are you at getting your baby to pay attention to you? For example, when you want your baby to look at you, how good are you at making him or her do it?

1	2	3	4
not good at all	not good enough	good enough	very good

5. How good are you at getting your baby to have fun with you? For example, how good are you at getting your baby to smile and laugh with you?

1	2	3	4
not good at all	not good enough	good enough	very good

6. How good are you at knowing what activities your baby will enjoy? For example, how good are you at knowing what games and toys your baby will like to play with?

1	2	3	4
not good at all	not good enough	good enough	very good

7. How good are you at keeping your baby occupied when you need to do housework? For example, how good are you at finding things for the baby when you need to do dishes?

1	2	3	4
not good at all	not good enough	good enough	very good

8. How good do you feel you are at feeding, changing, and bathing your baby?

1	2	3	4
not good at all	not good enough	good enough	very good

9. How good are you at getting your baby to show off for visitors? For example, how good are you at making your baby smile or laugh for people who visit?

1	2	3	4
not good at all	not good enough	good enough	very good

10. In general, how good a parent do you feel you are?

1	2	3	4
not good at all	not good enough	good enough	very good

APPENDIX D

Preliminary Analyses for Explanatory Model A: Stable Predictors

APPENDIX D

Preliminary Analyses for Explanatory Model A: Stable Predictors

To determine which variables best contributed to an explanatory model of stable pre-birth predictors, sets of variables were tested separately to assess their influence independent of their intercorrelations. Several aspects of this strategy must be noted. First, assimilation, as measured by the PCM and NCC scales, was tested with both scales entered for both parents simultaneously, but for ease of presentation, the results are described in two tables, one for mother and father PCM (Table F2) and one for mother and father NCC (Table F3). In addition, family of origin variables were correlated within each parent. These variables were therefore tested separately to determine which, if any, was most influential in prediction (Tables F4 through F6). For self-reported marital adjustment and for ego development, mother and father ratings were related and were tested separately, but are presented in one table (Tables F1 and F9) to facilitate comparison. Finally, the two marital interaction scales were correlated across parents. Preliminary analyses were conducted first assessing the contribution of the parent's own marital interactions (Table F10) and then the partner's marital interactions (Table F11).

Table F1

Preliminary Explanatory Model A: Ego Development

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
MEGO	-.00	-.24	.02
FEGO	.00	.47	.05
Rate			
MEGO	-.00	-.29	.03
FEGO	-.00	-.82	.08
Curve			
MEGO	.00	.22	.02
FEGO	.00	.39	.04
Fathers			
Level			
MEGO	**.01**	**1.89[t]**	**.19**
FEGO	**.01**	**1.86[t]**	**.19**
Rate			
MEGO	-.01	-1.10	.11
FEGO	-.00	-1.01	.10
Curve			
MEGO	.00	1.25	.13
FEGO	.00	1.00	.10

Note. MEGO = Mother ego development. FEGO = Father ego development. Boldface indicates variables retained for further investigation.
[t] $p < .10$.

Table F2

Preliminary Explanatory Model A: Positive Childbearing Motivations

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
MPCM	.04	.54	.05
FPCM	**-.16**	**-2.00***	**.20**
Rate			
MPCM	**.08**	**2.15***	**.22**
FPCM	-.01	-.10	.01
Curve			
MPCM	.02	.28	.03
FPCM	.09	1.43	.14
Fathers			
Level			
MPCM	.05	.81	.08
FPCM	.00	.01	.00
Rate			
MPCM	-.00	-.13	.01
FPCM	-.04	-1.47	.15
Curve			
MPCM	**.07**	**2.01***	**.20**
FPCM	.01	.28	.03

Note. MPCM = Mother report of positive childbearing motivations. FPCM = Father report of positive childbearing motivations. Boldface indicates variables retained for further investigation.
*$p < .05$.

Table F3

Preliminary Explanatory Model A: Negative Childbearing Concerns

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
MNCC	**-.21**	**-2.71****	**.27**
FNCC	-.03	-.39	.04
Rate			
MNCC	.06	1.50	.15
FNCC	.05	1.21	.12
Curve			
MNCC	.07	1.07	.11
FNCC	.03	.49	.05
Fathers			
Level			
MNCC	-.06	-.94	.09
FNCC	.05	.67	.07
Rate			
MNCC	.02	.67	.07
FNCC	.03	.96	.10
Curve			
MNCC	-.01	-.29	.03
FNCC	.04	.86	.09

Note. MNCC = Mother report of negative childbearing concerns. FNCC = Father report of negative childbearing concerns. Boldface indicates variables retained for further investigation.

**$p < .01$.

Table F4

Preliminary Explanatory Model A: Triangulation in Family of Origin

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
MTRIANG	-.02	-.28	.03
FTRIANG	**-.08**	**-1.79[t]**	**.18**
Rate			
MTRIANG	-.03	-1.20	.12
FTRIANG	.01	.38	.04
Curve			
MTRIANG	.02	.40	.04
FTRIANG	.03	.80	.08
Fathers			
Level			
MTRIANG	.03	.61	.06
FTRIANG	**-.07**	**-1.72[t]**	**.17**
Rate			
MTRIANG	.01	.81	.08
FTRIANG	-.02	-1.01	.10
Curve			
MTRIANG	.02	.68	.07
FTRIANG	.01	.63	.06

Note. MTRIANG = Mother report of triangulation in family of origin. FTRIANG = Father report of triangulation in family of origin. Boldface indicates variables retained for further investigation.

[t] $p < .10$.

Table F5

Preliminary Explanatory Model A: Positive Parenting in Family of Origin

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
MPOSPAR	-.04	-.86	.09
FPOSPAR	.09	1.63	.16
Rate			
MPOSPAR	.00	.12	.01
FPOSPAR	-.02	-.77	.08
Curve			
MPOSPAR	.02	.42	.04
FPOSPAR	-.01	-.24	.02
Fathers			
Level			
MPOSPAR	.00	.04	.00
FPOSPAR	**.10**	**2.25***	**.23**
Rate			
MPOSPAR	-.01	-.61	.06
FPOSPAR	.01	.41	.04
Curve			
MPOSPAR	.00	-.03	.00
FPOSPAR	-.01	-.47	.05

Note. MPOSPAR = Mother report of positive coparenting in family of origin. FPOSPAR = Father report of positive coparenting in family of origin. Boldface indicates variables retained for further investigation.
*$p < .05$.

Table F6

Preliminary Explanatory Model A: Marital Conflict in Family of Origin

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
MPFIGHT	-.01	-.13	.01
FPFIGHT	-.05	-1.09	.11
Rate			
MPFIGHT	-.03	-1.11	.11
FPFIGHT	.02	.64	.06
Rate			
MPFIGHT	.03	.86	.09
FPFIGHT	.04	.99	.10
Fathers			
Level			
MPFIGHT	.01	.24	.02
FPFIGHT	**-.07**	**-1.87[t]**	**.19**
Rate			
MPFIGHT	.00	.40	.04
FPFIGHT	-.02	-1.00	.10
Curve			
MPFIGHT	.03	1.33	.13
FPFIGHT	-.00	-.15	.02

Note. MPFIGHT = Mother report of marital conflict in family of origin. FPFIGHT = Father report of marital conflict in family of origin. Boldface indicates variables retained for further exploration.

[t] $p < .10$.

Table F7

Preliminary Explanatory Model A: Reactance

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
MREACT	-.03	-.19	.02
FREACT	-.14	-.83	.08
Rate			
MREACT	.01	.09	.01
FREACT	.00	.00	.00
Curve			
MREACT	**.21**	**1.78[t]**	**.18**
FREACT	.09	.69	.07
Fathers			
Level			
MREACT	-.04	-.33	.03
FREACT	.01	.10	.01
Rate			
MREACT	.02	.29	.03
FREACT	-.06	-.95	.10
Curve			
MREACT	-.03	-.37	.04
FREACT	.02	.20	.02

Note. MREACT = Mother report of reactance. FREACT = Father report of reactance.
[t] $p < .10$.

Table F8

Preliminary Explanatory Model A: Demographic Contextual Variables

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
Age	.01	1.57	.16
SES	**.17**	**3.29*** **	**.33**
Rate			
Age	-.00	-.14	.01
SES	-.03	-.88	.09
Curve			
Age	.01	.92	.09
SES	**-.07**	**-1.69^{t}**	**.17**
Fathers			
Level			
Age	-.01	-1.31	.13
SES	**.14**	**2.94****	**.29**
Rate			
Age	.00	1.19	.12
SES	-.01	-.58	.06
Curve			
Age	-.00	-.25	.03
SES	-.00	.02	.02

Note. Parent ages were correlated .81, age is scored as the mean of both. SES is computed as the mean of the standardized scores for education and occupation scores for both parents and family income. Boldface indicates variables retained for further investigation. $^{t}p < .10$. **$p < .01$. ***$p < .001$

Table F9

Preliminary Explanatory Model A: Self-Reported Marital Adjustment

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
MDAS	**.01**	**4.03*** **	**.40**
FDAS	**.01**	**3.58*** **	**.36**
Rate			
MDAS	-.00	-.19	.02
FDAS	-.00	-.39	.04
Curve			
MDAS	-.00	-.21	.02
FDAS	-.00	-.39	.04
Fathers			
Level			
MDAS	**.01**	**3.10****	**.31**
FDAS	**.02**	**5.82*** **	**.58**
Rate			
MDAS	.00	.08	.01
FDAS	.00	1.23	.12
Curve			
MDAS	-.00	-.19	.02
FDAS	-.00	-.64	.06

Note. MDAS = Mother Dyadic Adjustment Scale. FDAS = Father Dyadic Adjustment Scale. MDAS and FDAS estimates are derived from separate analyses. Boldface indicates variables retained for further exploration.
**$p < .01$. ***$p < .001$.

Table F10

Preliminary Explanatory Model A: Mothers' and Fathers' Own Marital Interactions

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
MPMI	**.10**	**2.52***	**.25**
MNMI	**-.21**	**-5.67*****	**.57**
Rate			
MPMI	-.02	-.67	.07
MNMI	.02	.82	.08
Curve			
MPMI	.00	.09	.01
MNMI	.00	-.10	.01
Fathers			
Level			
FPMI	**.11**	**3.39*****	**.34**
FNMI	-.00	-.08	.01
Rate			
FPMI	-.00	-.11	.01
FNMI	-.00	-.14	.01
Curve			
FPMI	.00	.00	.00
FNMI	.01	.31	.03

Note. MPMI = Mother positive marital interactions. MNMI = Mother negative marital interactions. FPMI = Father positive marital interactions. FNMI = Father negative marital interactions. Boldface indicates variables retained for further investigation. *$p < .05$. ***$p < .001$.

Table F11

Preliminary Explanatory Model A: Partner's Marital Interactions

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
FPMI	**.09**	**2.28***	**.23**
FNMI	-.06	-1.28	.13
Rate			
FPMI	.01	.27	.03
FNMI	-.03	-1.22	.12
Curve			
FPMI	-.03	-.90	.09
FNMI	-.04	-1.22	.12
Fathers			
Level			
MPMI	**.08**	**2.04**	**.20**
MNMI	**-.09**	**-2.52***	**.25**
Rate			
MPMI	.01	.52	.05
MNMI	.01	.49	.05
Curve			
MPMI	-.02	-.87	.09
MNMI	-.01	-.63	.06

Note. MPMI = Mother positive marital interactions. MNMI = Mother negative marital interactions. FPMI = Father positive marital interactions. FNMI = Father negative marital interactions. Boldface indicates variables retained for further investigation. *$p < .05$

Table F12

Preliminary Explanatory Model A: Differences in Childrearing Philosophy

Parameter		Unstand. coeff.	t(100)	Effect size r
Mothers				
Level	AUTNDIFF	.03	.77	.08
	AUTVDIFF	-.05	-1.05	.11
	PERMDIFF	.02	.35	.04
Rate	AUTNDIFF	-.00	-.12	.01
	AUTVDIFF	.03	1.30	.13
	PERMDIFF	**-.08**	**-3.08****	**.31**
Curve	AUTNDIFF	-.00	-.12	.01
	AUTVDIFF	**.08**	**2.30***	**.23**
	PERMDIFF	**-.12**	**-3.18****	**.32**
Fathers				
Level	AUTNDIFF	.01	.38	.04
	AUTVDIFF	-.06	-1.38	.14
	PERMDIFF	.02	.35	.04
Rate	AUTNDIFF	.02	1.49	.15
	AUTVDIFF	.01	.65	.07
	PERMDIFF	.01	.50	.05
Curve	AUTNDIFF	.01	.75	.08
	AUTVDIFF	.01	.22	.02
	PERMDIFF	-.02	-.75	.08

Note. Unstand. coeff. = Unstandardized coefficient. AUTNDIFF = Differences in authoritarian beliefs. AUTVDIFF = Differences in authoritative beliefs. PERMDIFF = Differences in permissiveness/protectiveness beliefs. Boldface indicates variables retained for further analysis.
*$p < .05$. **$p < .01$.

Table F13

Preliminary Explanatory Model A: Infant Sex

Parameter	Unstandardized coefficient	t(100)	Effect size r
Mothers			
Level			
Infant sex	-.07	-1.07	.11
Rate			
Infant sex	.01	.22	.02
Curve			
Infant sex	-.01	-.22	.02
Fathers			
Level			
Infant sex	.04	.68	.07
Rate			
Infant sex	.01	.35	.04
Curve			
Infant sex	.03	.73	.07

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