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Understanding mother-adolescent conflict discussions: Concurrent and across-time prediction from youths' dispositions and parenting

Abstract

Adolescence is often thought of as a period during which the quality of parent–child interactions can be relatively stressed and conflictual. There are individual differences in this regard, however, with only a modest percent of youths experiencing extremely conflictual relationships with their parents. Nonetheless, there is relatively little empirical research on factors in childhood or adolescence that predict individual differences in the quality of parent–adolescent interactions when dealing with potentially conflictual issues. Understanding such individual differences is critical because the quality of both parenting and the parent–adolescent relationship is predictive of a range of developmental outcomes for adolescents.

The goals of the research were to examine dispositional and parenting predictors of the quality of parents' and their adolescent children's emotional displays (anger, positive emotion) and verbalizations (negative or positive) when dealing with conflictual issues, and if prediction over time supported continuity versus discontinuity in the factors related to such conflict. We hypothesized that adolescents' and parents' conflict behaviors would be predicted by both childhood and concurrent parenting and child dispositions (and related problem behaviors) and that we would find evidence of both parent- and child-driven pathways.

Mothers and adolescents ($N = 126$, M age = 13 years) participated in a discussion of conflictual issues. A multimethod, multireporter (mother, teacher, and sometimes adolescent reports) longitudinal approach (over 4 years) was used to assess adolescents' dispositional characteristics (control/regulation, resiliency, and negative emotionality), youths' externalizing problems, and parenting variables (warmth, positive expressivity, discussion of emotion, positive and negative family expressivity). Higher quality conflict reactions (i.e., less negative and/or more positive) were related to both concurrent and antecedent measures of children's dispositional characteristics and externalizing problems, with findings for control/regulation and negative emotionality being much more consistent for daughters than sons. Higher quality conflict reactions were also related to higher quality parenting in the past, positive rather than negative parent–child interactions during a contemporaneous nonconflictual task, and reported intensity of conflict in the past month. In growth curves, conflict quality was primarily predicted by the intercept (i.e., initial levels) of dispositional measures and parenting, although maintenance or less decrement in positive parenting, greater decline in child externalizing problems, and a greater increase in control/regulation over time predicted more desirable conflict reactions. In structural equation models in which an aspect of parenting and a child dispositional variable were used to predict conflict reactions, there was continuity of both type of predictors, parenting was a unique predictor of mothers' (but not adolescents') conflict reactions (and sometimes mediated the relations of child dispositions to conflict reactions), and child dispositions uniquely predicted adolescents' reactions and sometimes mothers' conflict reactions. The findings suggest that parent–adolescent conflict may be influenced by both child characteristics and quality of prior and concurrent parenting, and that in this pattern of relations, child effects are more evident than parent effects.

I. INTRODUCTION AND CONCEPTUAL FRAMEWORK

Adolescence, although no longer thought of as necessarily a period of “storm and stress” (Arnett, 1999), remains a period of heightened negative emotionality both in terms of individuals’ experience and in interactions with others, particularly with parents (Larson & Lampman-Petratis, 1989). Simultaneous with these increases in negativity are decreases in the closeness felt between parents and youths (Collins & Steinberg, 2006; McGue, Elkins, Walden, & Iacono, 2005; Smetana, Campione-Barr, & Metzger, 2006). Thus, adolescence continues to be thought of as a period during which the quality of parent–child interactions can be relatively stressed and conflictual. There are individual differences in this regard, however, with only approximately 5–15% of youths experiencing extremely conflictual relationships with their parents (Collins & Laursen, 2004; Smetana et al., 2006). Nonetheless, there is relatively little empirical research on factors in childhood or adolescence that predict individual differences in the quality of parent–adolescent interactions when dealing with potentially conflictual issues. Understanding such individual differences is critical because the quality of both parenting and the parent–adolescent relationship is predictive of a range of developmental outcomes for adolescents (see Collins & Steinberg, 2006).

The purpose of the research in this monograph was to examine child and parenting variables related to individual differences in the verbal and nonverbal emotional reactions of youths and their parents when discussing topics of disagreement. Briefly stated, our general hypothesis in this research was that individual differences in the intensity of mother–child conflict-related interactions in adolescence stem from childhood, as well as concurrent, quality of parenting and child dispositions. Thus, the quality of concurrent and longitudinal relations of emotion-related parenting, concurrent and prior youths’ temperament/personality, and recently occurring conflict were examined as correlates and predictors of parents’ and youths’ conflict reactions. (Note that here and throughout we use the terms “predict” and “predictors” to refer to relations across time, and not to imply causality.) Figure 1 provides a schematic for our conceptual framework in which prior levels of dispositional variables and quality of parenting (which affect one another over time), as well as change in these variables, are expected to predict subsequent parent–adolescent conflict reactions. In particular, we examined several issues: (1) the relation of quality of mothers’ and youths’ conflict reactions to children’s concurrent and previously assessed dispositional characteristics (i.e., regulation/control, negative emotionality, and personality resiliency) and externalizing problems, and whether the quality of conflict reactions was predicted from the initial levels 4 years prior and patterns of change in children’s dispositional characteristics; (2) the relation of quality of conflict reactions to quality of concurrent and prior parenting (i.e., parental positive affect and warmth), as well as recent parent–adolescent conflict, and whether the quality of conflict reactions was predicted from the initial levels and patterns of change in parenting; (3) the degree to which quality of both mothers’ and youths’ conflict reactions were uniquely predicted by child dispositional variables versus parenting quality; and (4) if parenting mediated the relations of child dispositions to the quality of conflict reactions or vice versa (i.e., if child dispositional variables mediated the relations of parenting to conflict reactions) over time. The latter issue concerns the degree to which the process tends to be child-driven or parent-driven across time, or both. We hypothesized that adolescents’ and parents’ conflict behaviors would be predicted by both childhood and concurrent parenting and child dispositions (and related problem behaviors) and that we would find evidence of both parent- and child-driven pathways. Longitudinal data from three assessments, each 2 years apart, were the bases of the analyses.

In the introduction of this monograph, we first discuss general findings on parent–adolescent conflict and the relation of individual differences in the quality of such conflict to adolescent outcomes. This review is to establish the importance of the topic and to provide a background for the study. Next we discuss theoretical approaches for conceptualizing patterns of change

from childhood to adolescence that affected our conceptual framework and predictions. Then we turn to issues that are more directly related to specific questions in this monograph, including the prediction of the quality of parent–child interactions from both parenting and children’s dispositional characteristics. As part of this discussion, the dispositional characteristics of children assessed in this study—control/regulation, personality resiliency, and negative emotionality—are defined and placed in a conceptual context; moreover, data on the continuity of such behavior from childhood into adolescence are briefly reviewed. Next, moderation of parent–adolescent conflict and related constructs by sex of the adolescent is examined. Finally, the present study and our hypotheses are outlined.

PARENT–ADOLESCENT CONFLICT: WHAT IS KNOWN AND WHY IS IT IMPORTANT?

As noted by Smetana et al. (2006) and Steinberg and Silk (2002), the nature and quality of adolescents’ relationships with their parents—including conflict and harmony—are among the most researched topics in the adolescent literature. Although there are plentiful data indicating that adolescence usually is not nearly as tumultuous as its reputation (Arnett, 1999), adolescence is perceived by parents as a challenging stage of child-rearing. Bickering and squabbling over everyday issues such as chores and responsibilities, household rules, school, autonomy, privileges, and standards of behavior are commonplace for parents and their adolescents, especially during early adolescence (Collins & Laursen, 2004; Laursen, 1995; Smetana, 1996). In contrast, frequent, high-intensity conflict is not normative during adolescence (Arnett, 1999; Steinberg & Silk, 2002). Nonetheless, although parents and youths tend to view their relationships with one another as supportive (Richardson, Galambos, Schulenberg, & Petersen, 1984), they report less frequent expressions of positive emotion and more frequent negative emotion in early to mid-adolescence than during the preadolescent period (Collins & Steinberg, 2006; Larson, Richards, Moneta, Holmbeck, & Duckett, 1996).

Using meta-analytic procedures, Laursen, Coy, and Collins (1998) examined changes in frequency and intensity of parent–child conflict as youths move into and through adolescence. They found that although the number of conflicts between parents and youths may actually decline across adolescence, there appears to be a mild increase in the negative-affective intensity of parent–child conflicts from early to mid-adolescence (also see Smetana et al., 2006). Additional analyses indicated that the small increase in conflict-related negative affect between early and mid-adolescence was reliably demonstrated only in the father–son dyad or for youths’, rather than parents’, reports of affect. Studies since the 1998 meta-analysis suggest that the increase in adolescents’ negative affect toward parents from early to mid adolescence during potentially conflictual discussions can be substantial (Kim, Conger, Lorenz, & Elder, 2001) and that disagreements, anger, and tension with parents increase from age 11 to 14, especially for girls (McGue et al., 2005), whereas positive parental affect declines substantially (Loeber et al., 2000).

Perhaps because adolescents’ relationships with their mothers tend to be closer than those with their fathers (Richardson et al., 1984), conflict between mothers and adolescents, especially mother–daughter conflict, tends to be more intense than conflict between fathers and adolescents (Laursen & Collins, 1994; Montemayor, Eberly, & Flannery, 1993; Steinberg & Silk, 2002; compare with Robin, Koepke, & Moye, 1990). McGue et al. (2005) found that girls, in comparison with boys, reported more positive relations (including less hostile, conflictual interactions) with parents at age 11, but that this difference evaporated by age 14; thus, it is possible that reports of greater conflict for parents and daughters are partly due to the more dramatic decline in the quality of their relationship from late childhood into adolescence. However, this pattern of gender differences has not always been found and was not evident in the Laursen et al. (1998) meta-analysis.

QUALITY OF THE PARENT–ADOLESCENT CONFLICTS AND ADOLESCENTS' SOCIOEMOTIONAL OUTCOMES

An important question for those wishing to study parent–adolescent conflict reactions is whether the degree of support, derogation, or hostility in parent–adolescent discussions when problem solving, decision making, or discussing potentially conflictual issues is related to important developmental outcomes for youth. The limited data suggest that the answer is yes, but depending on the intensity of the negativity or the quality of the ongoing relationship. High levels of parent–child conflict and negativity often have been linked to negative outcomes for youths (Forehand, Long, Brody, & Fauber, 1986; Kim et al., 2001; also see Ramos, Guerin, Gottfried, Bathurt, & Oliver, 2005), particularly when they occur within the context of contentious and hostile interchanges (Laursen & Collins, 1994; Kim et al., 2001; Steinberg & Silk, 2002). However, relations of conflict and parental negativity with negative developmental outcomes or behaviors generally are modest or nonsignificant when adolescents perceive their parents as supportive (Barrera & Stice, 1998; Galambos, Sears, Almeida, & Kolaric, 1995). In fact, it has been argued that moderate levels of parent–adolescent conflict that occur within a relationship characterized by harmony and cohesion may be associated with better adjustment than either no conflict or frequent conflict (Adams & Laursen, 2001; Cooper, 1988; Smetana et al., 2006). Moreover, the quality of the interactions during conflict interactions may be critical. As summarized by Steinberg and Silk (2002), “it may be the affective intensity of the conflict, rather than its frequency or content, that distinguishes adaptive from maladaptive parent–adolescent conflict” (p. 123).

For example, parental mutuality and relatedness during discussions that involve decision making and/or potential conflict—including behaviors that indicate support for, involvement with, and respect or validation of the other—have been positively associated with adolescents' identity exploration, ego development (which reflects adolescents' characteristic ways of imposing meaning upon their experiences and their relationships; Allen, Hauser, Bell, & O'Connor, 1994), and self-esteem (Allen, Hauser, Bell, & O'Connor, 1994; Grotevant & Cooper, 1985), as have adolescents' autonomy-relatedness communications toward their parents (i.e., behavior that involves negotiating differences in opinion, interest and attention to another's thoughts and feelings, independence of thought, and interest in, involvement in, and validation of another person's thoughts and feelings; Allen, Hauser, Bell, & O'Connor, 1994). Supportive rather than hostile parent–adolescent interactions during problem solving or potentially contentious discussions likely foster a sense of connection between adolescents and their parents, and connection with significant adults is believed to promote positive identity development (Grotevant, 1998).

Allen also found that individual differences in autonomy-promoting and relatedness communications were associated with youths' problem behaviors. Both parents' and youths' autonomy-relatedness communications when youths were age 14 (but generally not at age 16)—including expressing and discussing reasons behind disagreements, confidence in stating one's positions, validation and agreement with another's position, and attending to the other person's statements—were negatively related to youths' depressive mood at age 16 and externalizing symptoms at age 17. Adolescent-to-father and mother-to-adolescent inhibition of relatedness scores were positively related to youths' depressed affect at age 16. In contrast, youths' hostile and cutting off behaviors toward their mothers at age 16 predicted higher levels of externalizing problems at that age (Allen, Hauser, Eichholt, Bell, & O'Connor, 1994). Youths who were hostile toward their parent also tended to be low in autonomous relatedness in parent–adolescent discussions (Allen, Hauser, O'Connor, Bell, & Eichholt, 1996), whereas parental undermining of autonomy was linked to youths' concurrent hostility toward their parents and hostility with peers nearly a decade later (Allen, Hauser, O'Connor, & Bell, 2002).

In brief, Allen found associations of both autonomy-promoting behavior and relatedness or hostility during family discussions with a variety of developmental outcomes. Autonomy-promoting or autonomy-inhibiting verbalizations cannot be considered equivalent to hostile parent–adolescent communications, and in Allen’s research the overt expression of hostility has not been as consistently (or uniquely; Allen et al., 1996) related to youths’ prosocial behavior or psychosocial development as have autonomy-relatedness communications.

Consistent with the findings of Allen, Hauser, Eickholt et al. (1994), Henggeler, Hanson, Borduin, Watson, and Brunk (1985) found adolescent sons’ and mothers’ supportive statements during a joint decision-making task were significantly lower for dyads in which the adolescent was a felon. Conversely, observed adolescent aggressive communications, maternal defensive communications, and reports of conflict and observed conflict tended to be higher for nonviolent felons than for control youths, whereas violent felons appeared to have low levels of all types of communication with their mothers. Adolescents’ reports of attacking versus compromising during disagreements with parents also have been positively related to concurrent reports of youths’ misconduct, depression, and distress, whereas adolescents’ reports of avoiding talking during disagreements have been positively related to youths’ concurrent depression (youth-reported) and distress (parent- and youth-reported, combined; Rubenstein & Feldman, 1993). Moreover, consistent with other research demonstrating relations between the frequency of adolescent-reported conflict with parents and concurrent externalizing problems (e.g., Barrera, Chassin, & Rogosch, 1993), Burt, McGue, Krueger, and Iacono (2005) found that a composite measure of child-reported parent–child conflict at age 11 (including frequency and intensity of conflict) predicted youths’ self-reported externalizing behavior problems 3 years later, and vice versa. In this genetically informed twin study, reported conflict predicted youths’ externalizing problems through genetic, common environmental, and unique environmental factors. Thus, the results suggested that parent–child conflict partially resulted from parents’ responses to their child’s heritable externalizing problem behavior, while simultaneously contributing to their child’s externalizing problem via environmental mechanisms. Once genetic effects were statistically controlled, parenting (as perceived by adolescents) continued to exert an environmentally mediated influence (both family-wide and child-specific) on youths’ externalizing behavior.

In summary, initial research suggests that high levels of positive affect and support, and low frequency of intense conflict and/or low levels of hostility in parent–adolescent discussions/conflict are related to higher quality socioemotional functioning in adolescents. Thus, it is important to study factors that predict individual differences in both adolescents’ and parents’ affect communications when discussing potentially conflictual issues.

CONCEPTUAL FRAMEWORKS

There are several global conceptual models that seem to be particularly relevant to a discussion of normative change in parent–offspring conflict and prediction of individual differences in the quality of parent–adolescent conflict-related reactions from variables in childhood. However, relevant theories tend to differ in their emphasis on mean-level and differential continuity (e.g., De Fruyt et al., 2006). Mean-level continuity or stability refers to the extent to which the mean level of a variable is stable over time. Differential continuity refers to the degree to which relative rank–order differences among people remain invariant over time.

Especially in past decades, a quite common conceptual model has been that many aspects of adolescents’ biological and social functioning change fairly abruptly in adolescence. This perspective was partly derived from Hall’s (1904) now historic assertion that adolescence is a time of tumultuous change and stress, and partly from psychoanalytic theorists’ ideas regarding hormonal changes at puberty, resurrected oedipal feelings and conflicts (Freud, 1921/1955; see Collins & Laursen, 2004), and changes in adolescence due to ego identity development

and striving for autonomy (Blos, 1979; Erikson, 1950, 1968). More recently, some researchers have viewed transitions such as adolescence as turning points that provide opportunities for the emergence of new behaviors, the discontinuation of behaviors, the alteration of behaviors, or the re-patterning of behaviors, all in response to the contextual demands brought forth by the transition points (Graber & Brooks-Gunn, 1996). Alternatively, or in addition, the changes in adolescence may be viewed as due to either relatively abrupt biological changes (e.g., puberty) that affect the social context (see Laursen et al., 1998) or changes in youths' cognitive maturity and in social expectancies (Collins & Laursen, 2004). In addition, some theorists view adolescence as a time of transition and change for parents, who are starting to deal with limitations in their physical capacities, changes in their appearance, and often reductions in life opportunities at the same time as their children are on the threshold of life with seemingly endless choices and on the cusp of sexual and physical maturation (Silverberg & Steinberg, 1987; Steinberg & Silk, 2002; Steinberg & Steinberg, 1994).

Theorists who emphasize relatively abrupt changes in adolescence seem to focus more on mean-level stability (or the lack thereof) than differential stability because they often are interested in normative change rather than individual differences in patterns of change. They also tend to de-emphasize factors that provide continuity in functioning, and individual differences in this continuity, from childhood into adolescence. Thus, our thinking tends to be based more on models that focus primarily on differential stability.

Social Relationships Perspectives—Models of differential stability differ in the degree to which they view stability as due to stability in the quality of relationships or in characteristics of the parent or child, or in a combination of the two. One set of conceptual models focusing on the quality of relationships has been labeled as *social relationships perspectives*. In general, a social relationships perspective assumes that there is considerable stability in the quality of parent–child relationships and, hence, in the quality of their interactions, even as the child moves into adolescence (Collins & Laursen, 2004). Thus, youths with secure attachments and with warm, supportive relationships with their parents in childhood are expected to maintain those relations, at least to a moderate degree. In contrast, increased conflict and general deterioration of the relationship are more likely when the parent–child relationship was of poor quality in childhood, as youths express their growing dissatisfaction with how they are treated (Collins & Laursen, 2004). Consequently, from a social relationships perspective, it is likely that the degree of conflict in adolescence is related to parental supportive parenting in childhood, as well as with youths' negativity/positivity toward, and attachment with, parents in childhood. A social relationships perspective also suggests that there is some differential stability in the general quality of the parent–child relationship, that individual differences in mean level changes from childhood to adolescence are related to earlier quality of the relationship, and that the quality of the relationship in adolescence can be predicted from a range of relationship variables assessed in childhood.

Although limited in number, findings from longitudinal research provide some support for social relationships perspectives (Collins & Laursen, 2004; Conger & Ge, 1999; Kim et al. 2001; Loeber et al., 2000). For example, researchers have found some evidence of differential stability in parental punitiveness (Eisenberg et al., 1999), aversive discipline (Vuchinich, Bank, & Patterson, 1992), positive and negative expression of emotion in the home across childhood and into early (Eisenberg et al., 2005) and mid-adolescence (Michalik et al., 2007), and in parent–adolescent conflict discussions across adolescence (Conger & Ge, 1999; Kim et al., 2001; McGue et al., 2005). Similarly, youths' negative affect toward parents in conflict situations tends to be correlated across time (Kim et al., 2001).

There are a variety of mechanisms that could account for the differential stability of the quality of parent–child relationships, including as reflected in the quality of parent–adolescent

emotional communications during potentially conflictual discussions. As already mentioned, warm supportive relationships are likely to foster a pattern of interactions in a dyad that perpetuate positive-affective communication between parent and child. Moreover, when parents are warm and sensitive with their children, their children are likely to develop secure attachments (Thompson, 2006). Children with secure attachments tend to develop working models of relationships that are positive and constructive and these models are expected to influence the quality of their relationships and emotion communication in the future (e.g., Kochanska, Aksan, & Carlson, 2005). However, the stability of attachment status over time is modest, and children tend to maintain a secure attachment primarily when the family is not overly stressed and the parent remains sensitive to the child's needs (Thompson, 2006). Nonetheless, adolescents' security of attachment has been positively related to observed parent-child relatedness (validating statements, displays of engagement, and empathy with the other party and their statements) when discussing a past disagreement, as well as youths' perceptions of maternal supportiveness (Allen et al., 2003).

In adolescence and early adulthood, security of attachment (Kobak & Sceery, 1988; Mikulincer & Shaver, 2005) and parental positivity versus negativity (e.g., Eisenberg et al., 2005) have been linked to adolescents' regulation, which would be expected to affect the quality of youths' emotional experience and expressivity, as well as problem behaviors that involve affect regulation (e.g., externalizing and internalizing problems; Allen, Moore, Kuperminc, & Bell, 1998). Thus, the associations of relationship quality during childhood with adolescents' later behavior with their parents, as well as parents' reactions to their adolescents, may be partly mediated through aspects of children's socioemotional functioning (e.g., self-regulation, proneness to negative emotion; Eisenberg, Cumberland, & Spinrad, 1998). Other mechanisms by which supportive parents may foster children's positive expressivity are discussed shortly.

Perspectives Emphasizing Stability of Dispositional Characteristics—Whereas a social relationships perspective highlights continuity in development due to the stability of quality of relationships, the accentuation principle proposed by Elder and Caspi (1990) emphasizes continuity from childhood to adolescence due to the stability of personality and related behaviors (and could also explain mean levels of change for individuals with specific dispositions). According to Elder and Caspi (1990), adaptive responses are shaped by the requirements of new situations, but also vary based on the social and psychological resources individuals bring to new situations. They describe the accentuation principle as referring to “the increase in emphasis or salience of these already prominent characteristics during social transitions in the life course” (p. 294). Specifically, this perspective focuses on how pre-existing psychological dispositions are accentuated during times of stress and transition (such as the transition into adolescence) and foster differential continuity rather than discontinuity. The accentuation argument is that during times of challenge (such as transitions), people assimilate new experiences into their already existing behavior and coping repertoire (also see Block, 1982). Thus, for example, Elder et al. (Elder, Caspi, & Van Nguyen, 1986) found that already existing tendencies such as irritability or the tendency to explode when angered became more extreme during times of economic hardship.

Similarly, Caspi et al. (Caspi, Elder, & Bem, 1987, 1988) differentiated cumulative continuity and interactional continuity; these mechanisms are logically linked with the accentuation principle. *Cumulative continuity* refers to a person's dispositionally guided selection and construction of environments; the argument is that a person's dispositional characteristics can lead him or her to select or construct environments that reinforce and sustain those dispositions. For example, well-regulated people may select situations that provide sufficient structure or lack of distracting stimuli and thereby enhance their ability to focus attention and act in regulated ways. Caspi et al. (1987, 1988) suggested that cumulative continuity is responsible for many of the enduring individual differences across the life course.

In contrast, *interactional continuity* refers to continuity resulting from the reciprocal, dynamic transaction between a person and the environment. It reflects the continuing cycle of a person acting, the environment reacting, and the person reacting back. Caspi et al. argued that this general process can foster continuity through behavioral and cognitive mechanisms. They cited as examples Patterson's (1982) research demonstrating how family interactions can sustain a destructive and aversive patterns of behavior in children, and Dodge's work (see Dodge, Coie, & Lynam, 2006) on the tendency of aggressive children to expect others to be hostile, which leads to behavior that elicits hostility from others and sustains their own aggression. In their own work, Caspi et al. (1987, 1988) traced continuities into adulthood in the consequences of shy or ill-tempered children's behavior and argued that these continuities were due to both the progressive accumulation of their own consequences (cumulative continuity) and the tendency to evoke maintaining responses from others during social interactions (interactional continuity). Thus, both types of continuity are grounded in dispositional continuity, although interactional continuity is due partly to the influence of social interactions. However, the notion of interactional continuity, more than a social relationships view of continuity, emphasizes how the individual's characteristics and related behaviors elicit a pattern of social interactions that reinforces an existing pattern of functioning.

Evidence for the Stability of Temperament/Personality—Perspectives emphasizing the role of dispositional characteristics in continuity assume that there is considerable stability in aspects of personality and behavior. In fact, there is substantial differential stability in temperament and personality across childhood (e.g., De Fruyt et al., 2006; Murphy, Eisenberg, Fabes, Shepard, & Guthrie, 1999; Rothbart & Bates, 2006) and into early adolescence (De Fruyt et al., 2006; Raffaelli, Crockett, & Shen, 2005) and adulthood (Caspi et al., 1987, 1988). In a meta-analysis, Roberts and DelVecchio (2000) found that the estimated population correlation for personality from age 12 to 17.9 years was .43 (when controlling for the time interval of studies). In studies of children's temperament before the age of 12, differential consistency was .47 (when controlling for the time interval of studies) for temperamental task persistence, .46 for negative emotionality, .51 for approach, .52 for adaptability, .49 for rhythmicity, and .35 for threshold (also see McCrae et al., 2002).

There also appears to be mean-level stability in some dispositional characteristics (i.e., personality) in adolescence and change in mean level for others; findings likely differ somewhat depending on the time frame over which stability is examined. McCrae et al. (2002) found that conscientiousness, social vitality, agreeableness, and openness were stable between ages 10 and 18, whereas emotional stability and social dominance increased across this age span. De Fruyt et al. (2006) found a small decrease in the mean level of emotional instability in early adolescence (ages 10–11 and 12–13), as well as a small increase in conscientiousness. Murphy et al. (1999) found that a decline in negative emotionality and an increase in some measures of regulation from the late preschool years to age 10–12. Using growth curves to examine change from preschool age to adolescence, Wong et al. (2006) found behavioral control (equivalent to Block and Block's [1980] construct of ego control) increased with age and those with lower control in early childhood showed greater improvement over time. These findings suggest that self-regulation (which is linked to conscientiousness; Caspi & Shiner, 2006) and emotionality (as reflected in emotional instability) may change some in mean levels in adolescence, even though these characteristics generally show differential stability across time.

Heredity and Stability in Dispositional Characteristics and Parent–Adolescent Conflict—If, consistent with the accentuation principle, there is differential stability in personality, heredity is likely to account for some of this stability. There is considerable heritability in aspects of temperament/personality such as anger/frustration and self-regulation (e.g., Goldsmith, Buss, & Lemery, 1997; Yamagata et al., 2005), and genetic factors appear to

contribute to the stability in self-regulation and emotionality over time in adolescence (De Fruyt et al., 2006). Unshared environmental factors also were found by De Fruyt et al. (2006) to contribute to this continuity, whereas shared environmental factors did not.

Moreover, genetic factors may contribute to the nature and stability of parent–adolescent conflict. In a recent study, for example, McGue et al. (2005) found that heredity accounted for more of the variance in adolescent-reported parent–child conflict at age 14 than at age 11, and that genetic effects were highly overlapping for the two ages. However, as might be expected, there were individual differences in the strength of the estimates for heritable (and environmental) effects (e.g., between girls and boys). Such findings suggest that there is considerable continuity in reported parent–adolescent conflict across early adolescence due to heredity, and that differences in characteristics with a partly heritable basis (e.g., temperament/personality) might be one factor underlying both across-time stability in parent–adolescent conflict and individual differences in the quantity and/or quality of this conflict.

Summary of the Conceptual Models—In summary, some conceptual models emphasize stability from childhood into adolescence in behavior and/or psychological functioning whereas others propose that there is relatively dramatic change. Models pertaining to abrupt change tend to focus more (but not exclusively) on mean-level, normative stability versus instability, whereas models of continuity tend to be applied mostly to the examination of differential stability. Although sometimes less explicit in this regard, the various conceptual approaches also differ in their emphasis on the degree to which individual differences in relationships or personal characteristics are likely to predict quality of parent–child conflict-related reactions in adolescence.

Our focus on factors that predict individual differences in the quality of mothers' and adolescents' conflict reactions seems to be most compatible with models that emphasize differential stability. Based on a social relationships perspective, one is likely to hypothesize that the quality of parents' behaviors with their children during the first decade of life predicts the quality of parent–child interactions during adolescence. Such a finding also would not be inconsistent with the accentuation model if one assumes that children's personalities evoke predictable kinds of responses from people in their environment (interactional continuity; Caspi et al., 1988). Based on the accentuation principle, one is most likely to hypothesize that children's dispositional, temperamentally based characteristics during childhood predict both their own affective reactions and their parents' reactions to them during potentially conflictual discussions in adolescence; this is because children's personalities exhibit considerable differential stability over time and likely evoke reactions from their parents over time (e.g., Brody & Ge, 2001; Eisenberg et al., 1999). Nonetheless, such a pattern of findings would not undermine a social relationships perspective if one assumes that part of the differential stability in children's dispositions is due to the consistency of parents' behaviors over time and the quality of the parent–child relationships. Neither social relationships approaches nor an accentuation perspective has strong implications regarding normative mean-level stability in children's dispositional characteristics or in parenting behaviors over time, although as already noted, they lend themselves to hypotheses regarding prediction from individual differences in patterns of change in mean level of parenting or children's dispositional characteristics.

Although null findings are not conclusive or compelling, a lack of a relation between childhood parenting behaviors and the quality of parent–child interactions in adolescence would be inconsistent with a social relationships perspective, whereas a lack of a relation between children's dispositional characteristics and the quality of parent–child interactions in adolescence would not support an accentuation model or a model emphasizing continuity due to genetic contributions to temperament/personality or parenting. Although the accentuation model focuses on times of stress, the underlying assumption is one of personality continuity.

Moreover, if childhood measures of youths' dispositional characteristics and of parenting behaviors did not predict the quality of conflict-related interactions during adolescence, but concurrent adolescent indices of these constructs did, then the data would support a more discontinuous model in which contemporaneous variables, rather than prior parenting or child dispositions are important potential causal factors. In the present study, we hypothesized that adolescents' and parents' conflict behaviors would be predicted by both childhood and concurrent parenting and child dispositions (and related problem behaviors), a pattern that would be consistent with social relationships and accentuation models.

PREDICTION OF THE QUALITY OF PARENT–CHILD INTERACTION FROM PARENTING: EMPIRICAL FINDINGS

As previously discussed, based on a social relationships perspective, an obvious candidate for the prediction of individual differences in parents' and adolescents' conflict reactions is parental socialization-relevant variables. According to a social relationships perspective, a poor quality parent–child relationship, based in part on hostile, nonsupportive, or otherwise inadequate parenting, is likely to exhibit continuity across childhood and to contribute to later conflicted interactions and relationships. Research on relations of youths' and parents' conflict reactions to parenting disciplinary/teaching practices, parents' affect in the home and/or with their children, and the quality of the parent–child relationship is now reviewed.

Youths' Reactions to Their Parents

Prior research suggests that parental behavior is likely to predict the quality of youths' affective reactions and emotion-related behavior in interactions with parents. This pattern of association likely begins in early childhood; parents' insensitive, hostile, and negative responses to young children tend to be related to children's anger during family interactions (Conger, Neppl, Kim, & Scarmella, 2003; Snyder, Stoolmiller, Wilson, & Yamamoto, 2003). Conversely, when mothers express positive affect with their preschool children, their children are likely to respond in a positive manner (Kochanska, 1997).

In studies of adolescents, the quality of parenting or the parent–child relationship also has been associated with conflict-related behaviors. For example, Capaldi, Forgatch, and Crosby (1994) found that 8th-grade sons' hostility during the discussion of conflictual issues was negatively related to a high-quality parent–son relationship (as well as perceptions of adequate problem solving), whereas sons' humor was positively related. Capaldi et al. (1994) did not, however, examine the prediction of conflict reactions from parent behaviors assessed at an earlier time. Rubenstein and Feldman (1993) found that adolescents' reports of attacking their parents during a disagreement (e.g., expressing anger, sarcasm, or throwing something) were related to their earlier reports of parental rejection (but not family supportiveness), whereas family supportiveness (assessed with ratings and observations) was related to adolescents' reports of trying to compromise with parents and low avoidance of talking or holding in feelings during disagreements. Similarly, Allen et al. (2003) found that a dyadic measure of mother–adolescent relatedness during the discussion of conflictual issues was positively related to youths' concurrent reports of mothers' supportiveness outside the conflict context. In addition, Yau and Smetana (1996) found that low parental warmth was related to more conflict between Chinese adolescents and their parents (also see Smetana, 1996; contrast with Campione-Barr & Smetana, 2004, and Smetana, Metzger, & Campione-Barr, 2004).

In one of the few longitudinal studies on this issue, Kim et al. (2001) found that both parents' and adolescents' initial levels of negative emotion toward one another predicted the rates of growth and change in their expressed negative affect. Thus, parents' emotion predicted adolescents' emotion with their parents over time, but this relation was reciprocal. In addition, Overbeek, Stattin, Vermulst, Ha, and Engels (2007) found that a positive parent–child

relationship in childhood predicted reported parent–child conflict in adolescence. In contrast, in a study of African American families, Campione-Barr and Smetana (2004) did not find the degree of support when discussing a conflictual issue predicted parent- or adolescent-reported conflict intensity approximately 2 years later. Thus, in general, there seems to be a relation between the quality of affect expressed during conflicts or the amount of parent–child conflict and measures of quality of parenting, although relatively few of the findings are based on longitudinal data and the findings are sometimes inconsistent.

Findings of relations between the quality of the parent–child relationship and parent–child conflict-relevant behavior are congruent with the relations found between high parental expression of negative or positive emotion in the family and children’s expression of analogous emotion (with the association apparently increasing with age for negative parental expressivity; Halberstadt, Crisp, & Eaton, 1999). Also relevant is the finding that harsh parent-reported reactions to children’s expression of negative emotion were related to high levels of children’s externalizing emotions such as hostility (Eisenberg et al., 1999). In addition to hereditary factors that produce similarity between parents’ and children’s dispositional emotionality, it is likely that children model their parents’ emotional expressivity and reactions to others’ emotions.

Possible mediators of the relation between quality of parenting and children’s affectivity in the family and with parents (including during conflict) include children’s emotion understanding, negative emotionality, and emotion regulation. Supportive parents, and parents who tend to have positive relationships with their children, tend to take the time to teach children about emotions (including linking them to the child’s own experience) and to elaborate on emotions in discussions (Eisenberg, Losoya, et al., 2001; Farrar, Fasig, & Welch-Ross, 1997; Laible, 2004b; Laible & Thompson, 2000; Reese, 2002; Thompson, 2006). Thus, it is not surprising that warm, supportive parenting has been associated with children’s understanding of others’ emotions (Denham, 1998; Laible & Thompson, 1998; Ontai & Thompson, 2002; Thompson, 2006), as well as with children’s self-regulation (Brody & Ge, 2001; Eisenberg, Gershoff, et al., 2001; Eisenberg et al., 2005), both of which predict children’s emotional and social competence (Eisenberg, Gershoff, et al., 2001; Halberstadt et al., 1999; McDowell & Parke, 2005; see Parke & Buriel, 2006). Similarly, mothers’ mitigation and resolution of conflicts with young children—modes of positive parenting—predict children’s emotion understanding and prosocial behavior (Laible & Thompson, 2002). Moreover, there is mounting evidence, albeit mostly from studies of young children, that parents’ discussion of emotion in the family or with the child is associated with children’s subsequent understanding of emotion (Laible, 2004a, b; Thompson, 2006) and children’s self-regulation (Gottman, Katz, & Hooven, 1997).

Despite strong conceptual reasons to expect parents’ concurrent and prior parenting behaviors to be related to adolescents’ emotional reactions during the discussion of conflictual issues, there are few longitudinal studies in which the quality of parent–child affective exchanges has been predicted from parenting behaviors years earlier. In addition, with a few exceptions (e.g., Capaldi et al., 1994; Conger & Ge, 1999; Kim et al., 2001; Vuchinich, Angelelli, & Gatherum, 1996), parents’ and youths’ positive emotional reactions during conflicts have not been examined in relation to either concurrent or prior parenting behaviors. Based on the existing theory and on empirical findings (mostly from studies of younger children), it is reasonable to expect parents’ supportive reactions and attempts to help their children to understand emotion, and perhaps increases (and less of a decline) in supportive parenting, to be associated with youths’ regulated and relatively nonhostile responses to parents when discussing a conflictual issue.

Parents' Reactions to Their Adolescents

It is logical to expect measures of parents' prior parenting behaviors to predict not only their children's conflict reactions, but also their own reactions to their adolescent. As already noted, parents' expressivity and hostility versus warmth with their children tend to be somewhat stable overtime (Conger & Ge, 1999; Eisenberg et al., 1999), likely due to the influence of both parental heredity, prior learning, and the stability of children's characteristics and behaviors (see McGue et al., 2005). Indeed, negative or hostile parenting predicts the likelihood of similar parenting over time, whereas positive parenting predicts the continuity and growth of this type of parenting (Kim et al., 2001; McGue et al., 2005).

This continuity in hostile/punitive versus supportive parenting is likely to impact the quality of parents' relationships with their children and, hence, their behavior in conflictual contexts with their adolescent offspring. Some of the researchers already cited found that the quality of the parent-child relationship was associated with the parents' reactions during conflicts or with the degree to which conflict was intense (e.g., Allen et al., 2003; Smetana, 1996), which in turn would be expected to affect the ongoing parent-child relationship. Intensity of mother-child conflict also has been negatively related to mothers' sense of well-being (Silverberg & Steinberg, 1987); consequently, parent-child conflict may reduce mothers' psychological resources and undermine the quality of their parenting. Punitive and hostile parental behaviors are likely to foster a cycle of hostility and anger between parent and child (Brody & Ge, 2001; Conger & Ge, 1999; Eisenberg et al., 1999; Kim et al., 2001), undercutting feelings of attachment and trust. For example, Capaldi et al. (1994) found that mothers' and fathers' hostility when discussing high-conflict family issues were negatively related to a composite index of quality of the parent-adolescent son relationship, whereas humor and/or affection was positively related.

A hostile and eroding parent-child relationship is likely to affect the future quality of parenting—including parents' conflict reactions—for multiple reasons. Children are less likely to comply (Kochanska & Aksan, 1995) or to attend to (Hoffman, 2000) the expectations of hostile, negative parents, which would be expected to exacerbate parents' hostility and tendencies to react in a controlling and hostile or punitive manner. Moreover, interactions between parents and youths that are low in warmth/support and are coercive are associated with difficulties in family members' problem solving (Vuchinich et al., 1996; also see Kobak, Cole, Ferenz-Gillies, & Fleming, 1993), which in turn predict high levels of parent-adolescent disagreement (Rueter & Conger, 1995a) and adolescents' problem behavior (Coughlin & Vuchinich, 1996; Robin et al., 1990; Vuchinich, Wood, & Vuchinich, 1994; also see Dubow, Tisak, Causey, Hryshko, & Reid, 1991). The quality of the parent-child relationship and interactions has been linked to youths' adjustment (Rueter & Conger, 1998; Soenens, Vansteenkiste, Luyckx, & Goossens, 2006; Vuchinich et al., 1992; see Collins & Steinberg, 2006), and it is likely that problems in children's adjustment further evoke negative parenting and increases in parental hostility during conflict interactions (Patterson, 1982; see Dodge et al., 2006).

Thus, there likely is an escalating cycle of negative parenting that is linked to deteriorating parent-child relationships, problems in family problem solving, and associated problems in adolescents' adjustment. However, with the exception of the work of Conger or Vuchinich and their colleagues, there are few studies examining parenting behavior as a longitudinal predictor of parental (or adolescent) negativity during conflicts, and to our knowledge, none has examined quality of parenting before the children were age 11 or 12. As noted by Conger and Ge (1999), there is a need to study relations between parenting in childhood and parents' and youths' hostility and warmth with one another in adolescence.

DISPOSITIONAL CORRELATES OF PARENT–ADOLESCENT CONFLICT REACTIONS

In accordance with theories predicting that consistency in personality partly accounts for later social behavior during developmental transitions (e.g., Block, 1982), we expected that adolescents' personality/temperamental characteristics in childhood and in adolescence to predict both their own and their mothers' conflict reactions. In this study, we examined relations of adolescents' and their parents' conflict reactions with youths' self-control/regulation, personality resiliency, and negative emotionality. We label such characteristics "dispositional" in the recognition that they can be considered aspects of temperament and/or personality (Caspi & Shiner, 2006; Rothbart & Bates, 2006). In addition, we examined the relation of conflict reactions to children's externalizing behaviors, which themselves have been empirically associated with dispositional negative emotionality and lack of regulation (see Dodge et al., 2006; Eisenberg, Fabes, Guthrie, & Reiser, 2000; Eisenberg, Cumberland et al., 2001).

Dispositional Regulation, Control, Resiliency, and Negative Emotionality: The Constructs—Regulatory and control processes, as well as the predisposition to experience negative emotions, are viewed as having a temperamental basis and as part of personality (Caspi & Shiner, 2006; Rothbart & Bates, 2006). Rothbart and Bates (2006) defined temperament as "constitutionally based individual difference in reactivity and self-regulation, in the domains of affect, activity, and attention. ... By the term *constitutional*, we refer to the biological bases of temperament, influenced over time by heredity, maturation, and experience" (p. 100). In contemporary writings, distinctions between temperament and personality are breaking down, with temperament being viewed as relatively narrow, lower levels traits that contribute to personality, and personality as "including a wider range of individual differences in feeling, thinking, and behavior than in temperament" (Caspi & Shiner, 2006, p. 303). Although some researchers explicitly discuss temperament in late childhood or adolescence (e.g., Capaldi & Rothbart, 1992; Shiner, 1998), many researchers examining dispositional proclivities in adolescence label them as personality or simply focus on the specific characteristics or behaviors without labeling them as temperament or personality (see Caspi & Shiner, 2006).

In Rothbart's model (Rothbart & Bates, 2006), temperament is viewed as involving two major domains, reactivity and self-regulation. According to Rothbart and Bates, *reactivity* "refers to responsiveness to change in the external and internal environment. Reactivity includes a broad range of reactions (e.g., the emotions of fear, cardiac reactivity) and more general tendencies (e.g., negative emotionality) ..." (p. 100). Reactivity also includes action tendencies such as freezing, attack, and/or inhibition associated with emotion. Rothbart's construct of effortful control, which is intimately involved in self-regulation, is defined as "the efficiency of executive attention—including the ability to inhibit a dominant response and/or to activate a subdominant response, to plan, and to detect errors" (Rothbart & Bates, 2006, p. 129). It includes the abilities to willfully modulate (e.g., focus, shift) attention as needed (i.e., attention shifting and focusing), as well as the abilities to willfully inhibit and activate behavior when needed, even if the individual prefers not to do so (i.e., labeled inhibitory and activational control, respectively). Individual differences in effortful control are moderately stable across childhood and into adolescence (e.g., Eisenberg et al., 2005; Murphy et al., 1999).

Block and Block discussed a construct related to effortful control—ego control—which is defined as the "threshold or operating characteristic of an individual with regard to the expression or containment of impulses, feelings, and desires" (1980, p. 43). Ego undercontrol involves insufficient modulation of impulses, the inability to delay gratification, immediate and direct expression of motivations and affect, and vulnerability to environmental distractors. Conversely, ego overcontrol refers to the containment of impulses, delay of gratification, inhibition of actions and affect, and insulation from environmental distractors. Many measures

of ego control likely include elements of both reactivity (e.g., inhibition; Derryberry & Rothbart, 1997) and effortful control (Eisenberg & Morris, 2002; Derryberry & Rothbart, 1997). Regardless, measures of ego control typically tap over- versus undercontrol of behavior and tend to be moderately to substantially related with effortful control (e.g., Eisenberg et al., 2004). Like effortful control, measures of ego control (including impulsive undercontrol) exhibit correlational consistency across time (Block & Block, 2006; Murphy et al., 1999; Valiente et al., 2003).

Personality resiliency, another construct assessed in this study, is what Block and Block (1980) labeled as ego resiliency: “the dynamic capacity of an individual to modify his/her modal level of ego-control, in either direction, as a function of the demand characteristics of the environmental context” (p. 48). According to Block and Block (1980), high resilience involves resourceful adaptation to changing circumstances and flexible use of problem-solving strategies; low resilience involves little adaptive flexibility, an inability to respond to changing circumstances, the tendency to perseverate or become disorganized when dealing with change or stress, and difficulty recouping after traumatic experiences.

Ego resiliency (henceforth labeled resiliency for brevity and to avoid reference to psychodynamic terminology) is generally viewed as an aspect of personality (Block & Block, 1980) with a temperamental basis (Derryberry & Rothbart, 1997; Eisenberg et al., 2004). Effortful control tends to be positively related to resiliency (Eisenberg, Spinrad, & Morris, 2002; Spinrad et al., 2006), which is not surprising because children high in effortful control would be expected to have the ability to modulate their attention and behavior in a flexible manner. The relation of resiliency to ego control may be quadratic, such that moderate levels of ego control are most highly linked to resiliency (Eisenberg, Guthrie, et al., 1997; Wong et al., 2006). In structural equation models (SEMs), resiliency and effortful control are separate latent constructs (e.g., Eisenberg et al., 2004; Eisenberg, Valiente et al., 2003). Evidence of differential stability of resilience is modest and considerably weaker than that for effortful control and ego control in childhood (e.g., Eisenberg et al., 2004) and into early adolescence (Eisenberg, Valiente, et al., 2003). Using a somewhat more broadly operationalized measure of ego resiliency than Eisenberg, Block and Block (2006) found that it exhibited differential stability from preschool age until age 23 for boys. For girls, there was stability from age 7 to 11, and from 11 through adolescence. In a recent study, mean levels of resiliency did not change with age from preschool to adolescence (Wong et al., 2006).

Individual differences in negative emotionality, like effortful control, are clearly a part of temperament and personality, have a biological basis, and are relatively consistent across childhood and into early adolescence (e.g., Caspi, Henry, McGee, Moffitt, & Silva, 1995; Caspi & Silva, 1995; Lerner, Hertzog, Hooker, Hassibi, & Thomas, 1988; Murphy et al., 1999; Plomin & Stocker, 1989). However, relatively few investigators have examined the relation of dispositional negative emotionality in childhood to negative emotions expressed with parents in adolescence. Rather, the focus in the adolescent research has often been on mean-level change in children’s experience or expression of negative emotionality as the child moves into adolescence (e.g., Larson & Lampman-Petratis, 1989) or on negative emotion exhibited with family members in adolescence (e.g., Larson et al., 1996).

Relations of Youths’ and Parents’ Conflict Reactions to Children’s Concurrent and Prior Dispositional Characteristics—Adolescents who are unregulated and prone to experience negative emotions—especially intense ones such as anger—would be expected to lose control and express relatively high levels of hostility in conflict-related interactions with their parents. This is because they are likely to have a relatively low threshold in regard to hostility/anger and more difficulty appropriately modulating the experience and expression of such negative emotions when they do occur. Clearly, unregulated children and those prone

to negative emotions exhibit less socially competent behavior than their more regulated peers and are prone to behavioral problems (see Eisenberg et al. 2000, and Eisenberg & Fabes, 2006, for reviews). In addition, children's effortful regulation has been associated with relatively constructive coping with real-life negative emotion (Eisenberg, Fabes, Nyman, Bernzweig, & Pinuelas, 1994). Similarly, almost by definition, resilient youths, in comparison to less resilient youths, would be expected to modulate aversive bouts of negative emotion and to more readily maintain (or recover) positive emotion. As has been found for effortful control, resiliency has been associated with both low levels of problem behaviors (especially internalizing problem behaviors) and high social competence (e.g., Block & Block, 1980; Block & Kremen, 1996; Eisenberg et al., 2000, 2004; Huey & Weisz, 1997; Wong et al., 2006; also see Asendorpf & van Aken, 1999; Hart, Atkins, & Fegley, 2003; Robins, John, Caspi, Moffitt, & Stouthamer-Loeber, 1996).

Given the differential stability of dispositional constructs such as control/regulation, resiliency, and negative emotionality across time, it is reasonable to expect their levels in childhood, and change in level over time, to predict adolescents' hostile and positive conflict reactions (especially the former) with their parents. Furthermore, concurrent levels of dispositional control/regulation and negative emotionality logically should be especially related to adolescents' conflict discussion reactions.

It is also logical to expect parents to react to youths' temperamentally based characteristics, such that they are likely to be more hostile and less positive and supportive with children who are unregulated, prone to negative emotion, and low in resilience. Eisenberg et al. (1999) found a negative relation between children's level of effortful control and parents' subsequent reported punitive reactions to their children's expression of negative emotion. Similarly, Brody and Ge (2001) found that early adolescents' self-regulation predicted their parents' nurturant-responsive parenting a year later. Because externalizing problem behaviors are substantially associated with temperamental/personality characteristics (Caspi & Shiner, 2006; Dodge et al., 2006; Miller & Lynam, 2001), parents' conflict reactions may partly be a response to the problem behaviors associated with children's dispositional characteristics (Burt et al., 2005; also see Stice & Barrera, 1995).

Empirical research dealing explicitly with the relation of youths' temperamentally based characteristics to adolescents' and their parents' conflict-related reactions is sparse. In one of the few relevant studies, Rubenstein and Feldman (1993) asked adolescent males to report the degree to which they used attack (e.g., yelling, using sarcasm, saying or doing something to hurt their feelings), compromise (e.g., trying to reason, listen, or understand the parent, trying to work out a compromise), or avoidant (e.g., avoiding talking, holding feelings inside) strategies when they disagreed with a parent about something important to them. Boys' reported use of attack strategies was related to their self-reported proneness to distress (anxiety, depression, low self-esteem, low emotional well-being) and low levels of restraint (suppression of aggression and anger, consideration of others, impulsive control, and responsibility). In addition, youth-reported avoidance during parent-child conflicts was related to high distress 4 years earlier, whereas the use of compromise was related to high restraint 4 years before. Thus, Rubenstein and Feldman found longitudinal support for the hypothesis that adolescents' temperament/personality was related to their reactions to parents during conflict. However, their measure of restraint tapped sociomoral and nonaggressive behavior associated with self-regulation (responsibility, suppression of aggression, consideration of others) more than self-regulation per se or its temperamental bases (e.g., effortful control). In addition, the data for youths' personality and conflict reactions were both self-reported and, thus, associations between the two might partly reflect reporter biases.

Other researchers have examined the relations of youths' temperament to frequency of reported parent-child conflict (rather than conflict reactions). Galambos and Turner (1999) found that low adolescent temperamental adaptability (a construct conceptually related to resiliency) was associated with high adolescent-reported conflict (frequency and intensity combined) with parents, especially if fathers were also low in adaptability. Adolescents' activity level was positively related to mothers' reports of conflict if mothers were low in adaptability. Galambos and Turner reported some additional complex relations between youths' and parents' temperament and reported parent-adolescent conflict, but the results varied considerably with the reporter of conflict and sex of the child. In a somewhat similar study, Kawaguchi, Welsh, Powers, and Rostovsky (1998) found that 14-18-year-old boys' self-reported difficult temperament and relatively negative mood were positively related to the level of conflict (but not support) they perceived with their mothers, but not with their fathers. Girls' self-reported difficult temperament was associated with less support from fathers, but temperament was not related to girls' reports of conflict with parents.

Numerous other investigators have examined relations of children's temperament to the quality of the parent-child relationship, but have not focused explicitly on conflict. For example, Windle (1991) found adolescents with a difficult temperament perceived lower levels of parent support. Feldman, Rubenstein, and Rubin (1988) reported that sixth graders' self-reported restraint was related to their reports of better communication with their mother and family cohesion (i.e., emotional bonding among family members). Stoneman, Brody, and Burke (1989) found that parents' ratings of their 7-9-year-old daughters' (but not sons') challenging temperament (active, prone to negative emotion, short attention span, and difficult to distract) were related to mothers' and fathers' reports of a less positive family emotional climate and lower affection in the family. In numerous other studies, some already cited (e.g., Gottman et al., 1997; Valiente et al., 2006), parents' expression of emotion in the home or in response to children's emotions and/or parental discussion of emotion have been associated with children's temperamentally based regulation.

Although children's and adolescents' temperamentally based displays of emotion may affect the quality of their interactions with their parents (Cook, Kenny, & Goldstein, 1991), some data indicate that parenting practices or beliefs and parent-child closeness may also predict change in children's temperament (Belsky, Fish, & Isabella, 1991; Bezirgianian & Cohen, 1992; Eisenberg et al., 1999; Kiang, Moreno, & Robinson, 2004). And parenting, including parenting behavior during conflicts, may also predict youths' dispositions over time, which in turn might affect the quality of subsequent parent-child conflict reactions. Consistent with this view, Best, Hauser, and Allen (1997) found that parental encouragement of youths' autonomy/relatedness (e.g., expressing and discussing reasons for disagreements, validation of the other's position, attention to other's speech) when asked to resolve a dilemma and when discussing disagreements was positively related to youths' ego resiliency in early adulthood. Thus, children's dispositions and parenting may mutually affect one another over time, and in combination affect the quality of parent-adolescent reactions when dealing with conflicts. The nature of the relation between children's dispositions and parenting likely depends on the facet of temperament and other variables (see Paulussen-Hoogbeem, Stams, Hermanns, & Peetsma, 2007).

SEX DIFFERENCES IN CONFLICT-RELATED REACTIONS

There are both conceptual and empirical reasons to believe that there are some sex differences in the intensity, frequency, and correlates of parents' and adolescents' conflict-related reactions. For example, numerous theorists have talked about the need for adolescents to develop a sense of autonomy from their parents (Allen et al., 1996; Grotevant, 1998), which could sometimes lead to conflict between adolescents and their parents. This process may be

especially true and normative for daughters, who, compared with sons, tend to have relatively intense relationships with their mothers (Steinberg, 1987) and who, from a psychodynamic perspective, have been viewed as especially involved in the process of differentiating themselves from their mothers (Blos, 1979; Josselson, 1980; Graber & Brooks-Gunn, 1999).

In fact, there is fairly consistent evidence that adolescent daughters are more likely than sons to report conflicts with their mothers (Laursen, 1995; Smetana, 1989), although this has not always been found (Kawaguchi et al., 1998). Laursen (2005) reported that adolescent females reported not only more disagreements than sons with mothers but also more negative affect in disagreements with both mothers and fathers. Moreover, Conger and Ge (1999) found that adolescent girls showed greater hostility toward parents than did adolescent boys. McGue et al. (2005) did not find a higher level of conflict with parents reported by adolescent daughters than sons; however, daughters' reports of conflict increased more than sons' between age 11 and 14 years. This pattern of increasing conflict may create the perception that daughters and parents engage in more conflicts during adolescence than do sons.

Perhaps there are also more occasions for prolonged parent–daughter conflict in adolescence. In a study of parent–adolescent discussion of differences of opinion (Hauser et al., 1987), daughters spoke more frequently than sons, which may provide more opportunities for conflict and angry or hostile exchanges between parent and adolescent. However, these same investigators reported relatively few sex differences in youths' reactions to their parents during a variety of family discussion tasks. One reason that sons may report or exhibit less conflict-related anger is that their conflicts with parents are more often left unresolved (Smetana, Yau, & Hanson, 1991), perhaps due to sons' avoidance. Another is that the likelihood of girls taking their parents' conventional perspective on conflict issues declines as they move from preadolescence into adolescence, whereas the trajectory is stable for sons (Smetana, 1989).

Although one might expect parent–adolescent interactions when dealing with disagreements/problem solving to differ for sons and daughters, the data pertaining to this issue are mixed. Flannery, Montemayor, Eberly, and Torquati (1993) found that sons, compared with daughters, expressed more neutral and less positive affect in positive and conflictual (combined) interactions with parents. Vuchinich et al. (1996) found less positive behavior during problem solving in families with young adolescent daughters in comparison with sons, although there was no difference in the quality of problem solving. In contrast, Galambos and Almeida (1992) found little evidence of sex of adolescent effects in regard to parent- or adolescent-reported level of conflict. In other studies, the sample sizes were so small that sex differences were either not examined or not found, perhaps due to lack of power (e.g., Allen et al., 1996).

Even if there were no mean sex differences in the level of conflict or intensity of affect during conflict, the predictors or correlates of affective reactions during conflicts may differ for adolescent sons and daughters or their parents. For example, Galambos et al. (1995) found positive relations of reported parent–child conflict with youths' problem behavior for both sexes, but an association between conflict and having deviant peers was found only for male adolescents.

Galambos and Turner (1999) also found sex differences in the association between adolescents' temperament and conflict in parent–adolescent relationships. Daughters who were relatively low in adaptable temperament were more likely to perceive conflict with parents, especially if their fathers were also low in adaptable temperament. Mothers' perceptions of conflict with sons were highest when sons were low in activity and the mothers were low in adaptability (Galambos & Turner, 1999; also see Kawaguchi et al., 1998). Such complex interactions suggest that youths' sex may moderate some relations of parenting or child temperament/personality to parents' or children's affective conflict reactions.

In summary, it appears that there may be some sex differences in parent–adolescent conflict reactions. However, it is unclear if youths’ dispositional characteristics would be expected to relate to conflict reactions more strongly for one sex or the other; in relevant studies, findings have been complex or mixed (e.g., Galambos & Turner, 1999; Kawaguchi et al., 1998). Similarly, there are no strong conceptual or empirical reasons to expect socialization-relevant behaviors to relate differently to boys’ and girls’ conflict reactions, although some parenting behaviors such as parental expression of emotion seem to predict emotion-related outcomes (e.g., empathy-related responding) for daughters more often than sons (Eisenberg et al., 1991, 1992). If adolescent daughters’ relationships with their primary caregivers (usually mothers) are more intense than those of sons and were closer in childhood (McGue et al., 2005), one might expect parents’ socialization-relevant behaviors, both concurrent and in the past, to be more strongly and consistently related to daughters’ than to sons’ reactions to parents during conflicts. Alternatively, if relations with daughters change more than those with sons in terms of intensity in early adolescence (as some have argued; e.g., Steinberg & Hill, 1978; see McGue et al., 2005), relations between parent–daughter conflict reactions and parents’ socialization-relevant behavior might be relatively strong only for concurrent measures of the latter. Because of the lack of strong compelling theory or empirical data, the direction of any sex differences in the correlates of parents’ and adolescents’ conflict reactions was difficult to predict.

THE PRESENT STUDY

Building upon the previously reviewed literature, the purpose of the present study was to examine predictors and correlates of adolescents’ and mothers’ verbal and nonverbal emotional reactions to one another when discussing conflictual issues. In particular, we were interested in two types of predictors/correlates: youths’ dispositional characteristics (control/regulation, resiliency, and negative emotionality) or related behaviors (externalizing problems) and parents’ socialization-related behaviors (e.g., warmth, discussion of emotion, affect expressed in the home and when with the child; henceforth labeled as *parenting* or *socialization* variables for brevity). These two types of variables were assessed concurrently and/or approximately 2 and 4 years earlier. In addition, we were interested in whether proximal variables such as the intensity of conflicts in the recent past, the adolescents’ negative affect and regulation when alone shortly before the conflict interaction, and the affective quality of mother–adolescent interaction shortly before the conflict discussion were related to conflict reactions, as well as whether the quality of conflict reactions predicted parents’ and youths’ satisfaction with their discussion.

Our sample was from a longitudinal study that had been assessed several times in childhood (2 years apart), as well as once in adolescence. Data from the second, third, and fourth assessments were used in this paper; data from the first assessment were not included because we did not collect parenting variables or some of the dispositional variables at the first assessment. At the fourth assessment, adolescents and mothers were observed in the laboratory when they were asked to discuss issues that had been topics of conflict between them. Nonverbal and verbal reactions, positive and negative, were coded for both mothers and adolescents. Children’s control/regulation, negative emotionality, and resiliency were reported by parents and teachers in childhood and adolescence and some observational data (on negative emotionality and regulation) were obtained during adolescence. Parenting behaviors were assessed with both parents’ reports of positive and negative expressivity in the family and observations of parent–child interactions (once at each assessment, in addition to the conflict interaction). Parents and adolescents also reported on recent conflict in the home and evaluated the quality of the conflict discussion when it was concluded. Data on variables such as age, as well as past and concurrent levels of adolescents’ externalizing problems, were also obtained.

Externalizing problems do not clearly index dispositional characteristics or parenting but likely reflect the influence of both (Caspi & Shiner, 2006; Dodge et al., 2006).

Our major hypotheses concerned the relations of the adolescents' dispositional characteristics and the parenting variables to both mothers' and adolescents' conflict reactions. Because we hypothesized that both constitutionally based characteristics of youths and their home environments are related to the quality of mother-adolescent relationships and interactions, and based on the notion that social relationships are somewhat stable from childhood into adolescence, we expected childhood assessments of both types of variables to predict mothers' and adolescents' reactions during the conflict discussion. However, because both youths' dispositions and parenting change somewhat as children age and in response to contextual factors, we expect these associations to be relatively modest. In addition, we expected concurrent measures of youths' dispositional characteristics and parenting to be relatively consistently related to the quality of conflict interactions because of their proximity in time and their relevance to contemporaneous mother-adolescent conflict.

Specifically, in regard to children's dispositional characteristics, youths' lack of self-control/regulation and proneness to intense and frequent negative emotions, as well as associated externalizing problems, were expected to be predictors of both mothers' and adolescents' hostile and coercive reactions and low levels of participants' positive conflict reactions. We were unsure if there would be a consistent positive relation of adolescents' control/regulation to their own positive conflict interactions because emotionally positive children can be high in temperamental surgency, which includes high intensity, approach-related positive emotions and impulsivity (low control; Rothbart, Ahadi, Hershey, & Fisher, 2001). Moreover, children high in surgent-positive emotion sometimes have been found to be low in effortful control (Kochanska, Murray, & Harlan, 2000), which might dilute any positive relation between control/regulation and positive affect in the conflict situation. In contrast, youths' resiliency was expected to be a predictor of high levels of youths' and mothers' positive conflict reactions because resilient adolescents should deal better with stress and any negative affect expressed by parents. Youths' resiliency also was expected to relate negatively but more weakly to both parents' and adolescents' negative conflict reactions. A weak relation was expected because children's dispositional resiliency has been more consistently related to low levels of internalizing problems (e.g., Eisenberg et al., 2004) and to high social competence (e.g., Eisenberg, Fabes, et al., 1997, 2000) than to externalizing problems (Eisenberg et al., 2004). Children high on externalizing problems (e.g., aggression, defiance) and emotions (anger) may sometimes be relatively spontaneous and uninhibited and, thus, able to recover from some stressors, but they may also tend to react with hostility and anger during the conflicts with parents.

Based on prior research and theory on parental expressivity, warmth, and discussion of emotion (e.g., Eisenberg et al., 1998; Gottman et al., 1997; Halberstadt et al., 1999), we also predicted that warm, affectively positive parenting (including the expression of positive emotion by the parent in the child's presence), as well as mothers' attempts to try to teach their children about emotions, would be related to relatively positive rather than negative conflict reactions by adolescents and their mothers (the latter because discussion of emotion tends to be embedded in a larger pattern of supportive parenting; e.g., Gottman et al., 1997). We also predicted that positive rather than negative parental affect expressed in an interaction shortly before the conflict interaction would be associated with analogous emotional reactions from mothers and quite possibly from youths during the conflict. Conversely, youths' affect during that prior nonconflictual interaction was predicted to be related to mothers' subsequent conflict reactions.

In addition to correlations, we computed growth curves for the parenting and dispositional variables and then assessed the prediction of conflict reactions from these growth curves. In

initial growth curve analyses, we examined if parenting and children's dispositions changed in their mean levels from childhood into adolescence. If the slope was significant, the data provided evidence of mean-level change in a construct. We expected youths' regulation to increase with age and their negative emotionality to decline with age. Based on Wong et al.'s (2006) finding that resiliency was stable across childhood, resiliency might be expected to be stable in mean level across time, although it might also increase if regulation increased. Because the parenting context changed somewhat with age, we are reluctant to interpret patterns of mean level change in the growth curves for parenting.

In a second set of analyses, we examined if *individual differences* in the intercept (i.e., corresponding to the value of a variable at the first assessment in the analysis) or in the slope for a given predictor variable (i.e., relative change over time in parenting or children's dispositional characteristics) predicted quality of the parents' and adolescents' conflict reactions. We expected a relative increase in the mean level of youths' control/regulation or resiliency with age, or a relative decline in their negative emotionality over the 4 years, to predict less negative and more positive adolescent and maternal conflict reactions. Because the relation between a growth curve and conflict reactions still assesses stability in the ordering of individuals on two variables, findings of such relations would support assumptions of differential stability. In addition, consistent with a social relationships perspective, individual differences in the relative decline (or lack of increase) in parental warmth and expression of positive emotion from childhood into early adolescence were expected to predict negative rather than positive conflict reactions (even though the context changed somewhat over time, it changed in the same way for all dyads so relative position on parenting was still informative). Significant relations of the growth curve slopes for parenting or child dispositions with conflict reactions would be consistent with the view that change in the predictor variable from childhood to adolescence affected conflict reactions in adolescence, although causality cannot be proved because the analyses essentially involve correlational data.

Hypotheses about prediction of conflict reactions from the intercept values in the growth curves were expected to mirror the aforementioned hypothesized findings for the correlations between conflict reactions and childhood predictors (because the intercept is highly similar to the mean at the initial assessment). Significant prediction by the intercept of conflict reactions would be consistent with the conclusion that early levels of a variable (e.g., children's dispositions or parenting) predict conflict interactions in adolescence—a finding supporting continuity in developmentally relevant processes and influences, as well as social relationships and accentuation perspectives. If solely the intercept in a growth curve and not the slope predicted conflict reactions, the data would support the view that there was little change in the processes linked to mother–adolescent conflict in the late childhood/early adolescent years.

In a final series of SEM analyses using three waves of the data, we tested for the unique effects of parenting versus child dispositions when predicting mothers' and adolescents' conflict reactions. We also examined if the relations between parenting and conflict reactions were mediated by child dispositions or, alternatively, whether the relations between child dispositions and conflict reactions were mediated by parenting. Thus, we were interested in potential transactional relations between parenting and child dispositions when predicting conflict reactions. Based on our work with children (e.g., Eisenberg, Gershoff, et al., 2001; Eisenberg, Valiente, et al., 2003; Valiente et al., 2006), we expected parenting to affect children's dispositions, which in turn would predict conflict reactions; nonetheless, given that our children were adolescents and we believe that parenting and child characteristics affect one another over time, we tested whether parenting might mediate the relations of child dispositions to conflict reactions. Such analyses also provided information on the possible causal pathways, but because we could not control for initial levels of conflict reactions in childhood, these analyses were not as strong a test of causality as a model with early

assessments of all variables. Nonetheless, a three-wave test of causality is considered a superior test of potential mediating relations than are concurrent or two-wave tests of mediated relations (Cole & Maxwell, 2003). In addition, these analyses provided a test of the rank-order, differential continuity of our key constructs across three assessments. Such information is relevant to theories that propose continuity in social relationships or personality characteristics across time.

In addition, we examined a number of secondary issues. Consistent with the findings of other researchers (e.g., Conger & Ge, 1999; Cook et al., 1991; Kobak et al., 1993), we expected a match between the quality of parents' and adolescents' conflict reactions. We also expected more hostile conflict reactions if the dyad reported relatively high levels of conflict in the recent past and hypothesized that the predictors/correlates of reported intensity of recent conflict reactions would be similar to those for observed mother–adolescent conflict. Perceptions of the degree to which the issues were resolved and reports of satisfaction with the discussion were expected to be associated with positive rather than hostile conflict reactions by youths and parents. Based on prior findings already reviewed, we also expected hostile or controlling parent and adolescent conflict reactions to be associated with relatively high levels of concurrent externalizing problem behaviors, as well as problem behaviors in childhood. This association was hypothesized because of the relation between externalizing problems and temperament (see Rothbart & Bates, 2006) and the presumed ongoing reciprocal relations between negative parenting and children's difficult temperament and associated externalizing behaviors (Eisenberg et al., 1999; Patterson, 1982).

As already noted, it was difficult to make firm predictions regarding differences in the findings for girls versus boys. However, because of the previously reviewed sex differences in parent–adolescent conflict and its correlates, we computed correlations separately for sons and daughters as well as for the total sample and tested for sex differences in the growth curve analyses.

II. SAMPLE AND MEASURES

PARTICIPANTS

Parents and youths were participants in a longitudinal study of emotional and social development (Eisenberg et al., 1996; Eisenberg, Guthrie, et al., 2000; Eisenberg et al., 2005). At Time 1 (T1), 199 children (49% girls, age range = 64–125 months, M age = 89.5 months, $SD = 13.9$) and their parents participated in a laboratory visit. At T1, the percentages of children in kindergarten and in the first, second, and third grades were 20%, 31%, 24%, and 25%, respectively. At T1, 79% of the families reported that they were European American; a few reported at later follow-ups being from minority groups (i.e., Hispanic or American Indian; see below for breakdowns at T2, T3, and T4). The participants were mostly from working and middle-class families (mean family income at T1 = \$46,000, $SD = \$24,000$; mean years of education = 14.60 and 14.99 for mothers and fathers, respectively, $SDs = 2.00$ and 2.55). Of those who participated in the T1 study, 169 were assessed 2 years later (T2), 169 participated 4 years later (T3), and 157 participated in some manner 6 years later (T4). At T4, 17 participant families returned data by mail and 7 more had Questionnaire data from fathers or children, but not from teachers or mothers. Only 139 adolescents (70% of the original sample) participated in the conflict discussion task at T4. One additional participant (not counted in the 139) was dropped because the videotape of the key interactions was lost. In the present study, data from T2, T3, and T4 were used; T1 was not used because it did not include measures of parenting and some indices of children's dispositions.

Thus, at T4, 64 girls and 62 boys (M ages = 13 years, 4 months and 13 years, 6 months, $SDs = 14.37$ and 14.16 months) came to the laboratory with their mother and participated in the

parent–child conflict procedure. Thirteen additional participants (five boys and eight girls) came with their fathers and were removed from the major analyses. The 126 youths who came with their mothers at T4 were 11–16 years old, with the vast majority being 12–15. Of this group, 80.2% were non-Hispanic Caucasians; 12.7% were Hispanic; 2.4% were of Asian extraction; 2.4% were American Indian, and 2.4% were reported as “other” (most were partly Hispanic or American Indian). At T4, the modal family income was \$40,000–\$60,000 (28.60%); 5.6% earned <\$20,000 a year; 12.7% earned \$20,000–\$40,000; 19.8% earned \$60,000–\$80,000; 17.5% earned \$80,000–\$100,000; 13.5% earned >\$100,000 a year; and 2.4% did not report their income. In terms of maternal education at T4, 4.8% of mothers did not have a high school diploma; 7.1% had a high school diploma but no further schooling; 19.8% had some college but no degree; 11.9% had a 2-year degree of some sort; 38.9% had a college degree; 15.1% had a higher degree; and 2.4% did not report their education; analogous percents for the fathers were 1.6%, 16.7%, 17.5%, 11.1%, 20.6%, 24.6%, and 7.9%. Nineteen percent of the adolescents lived in single-parent homes; 73% lived in two-parent families; 4.8% lived in extended families; and 3.2% lived in some other type of family situation. Sample characteristics at T2 and T3 were reported elsewhere (Eisenberg, Losoya, et al., 2001; Eisenberg, Zhou, et al., 2003, 2005; Zhou et al., 2002).

In the SEM analyses, we used data on all participants aside from the 13 fathers who participated in the conflict discussion at T4. Thus, we had some data at T2 or T3 for 173 participants (86 girls, 87 boys) in the growth and structural equation models. We decided to drop the 13 families for which fathers came to the lab because father–adolescent conflict reactions might differ from mother–adolescent conflict interactions. Eight of these 13 fathers provided Questionnaire data or observed data at T2 and/or T3, so dropping them resulted in more homogeneous data.¹

The 139 youths with some conflict data were compared with the remaining youths who could not come to the laboratory (either because they had attrited altogether or because they only sent data by mail) on demographic variables, parenting, and dispositional temperament variables at T2 and T3 assessments (in separate MANOVAs for each assessment and reporter or type of measure). Although 13 of these families were dropped from the analyses because fathers participated in the conflict discussion, it seemed appropriate to use the entire T4 laboratory sample when computing attrition because those 13 families had not attrited from the laboratory assessments (and there were a few families in which fathers were the primary caregivers at earlier assessments). There were no significant differences between the 139 families and the remaining families in income, mother or father education, or any observed parenting variables, parent-reported child temperament, or child-reported temperament. There were significant differences for race; there was significant attrition of minority families, $\chi^2(5) = 21.44, p < .001$; in particular, there was a decline in the number of African American families.

PROCEDURES

At each wave, as part of the larger study, the primary care-giving parent and child came to the laboratory (155 at T2, 152 at T3, and 140 at T4). For families that moved out of town after the first assessment and for a few other families who could not come in, parent and child Questionnaire data were collected through mail (another 19 submitted Questionnaire data from parents and/or teachers by mail at T4). Because only data from mothers was used at T4, the actual *n* dropped to 126 for the T4 conflict-relevant variables.

¹For the 126 families with mother–adolescent conflict discussion data, seven fathers provided some data at T2 and/or T3 (only two did so twice), including three who filled out the Questionnaires at T2 or T3. We decided to keep those data because fathers could provide information on child characteristics and observations of these fathers might provide some insight into the quality of parent–child expressivity at younger ages. Moreover, the correlations with T2 or T3 variables were highly similar with and without fathers.

At all sessions, parents completed Questionnaires assessing children's dispositional effortful control (attention focusing and shifting, and inhibitory control), reactive control (i.e., ego control), resiliency, and negative emotionality. At T4, this was done on the computer, unless the parent preferred a paper copy of the Questionnaires. As part of the laboratory sessions, children participated in a behavioral task measuring effortful control at T4 (i.e., the origami task alone at T4).² Moreover, the parent and child participated in interactive tasks (the parent-child watching emotion-evocative slides at T2 and T3, parent-child joint origami task at T4, and the parent-adolescent conflict discussion at T4). Primary-care-giving parents usually completed the Questionnaires in the laboratory; they were provided with assistance in understanding the directions and in determining the meaning of specific items (if necessary). Because of the 126 families involved in the conflict interaction only three fathers filled out the Questionnaires at T2 or T3, we sometimes label the group of respondents as mothers in tables and in text. Missing data due to skipped questions or videotaping issues (e.g., the sound was too low to code verbalizations for one family) slightly lowered the N in some analyses. Parents, children, and teachers provided written consent and were paid for participation. The child's classroom teacher completed measures pertaining to children's regulation (effortful control), ego control, resiliency, and negative emotion late in the semester (*ns* at T4, T3, and T2 = 126, 121, and 120 of the 126 families who came to the laboratory at T4). Moreover, Questionnaires regarding externalizing problems were sent home to fathers to fill out and return by mail (*Ns* = 84, 89, and 105 at T2, T3, and T4 for the 126 T4 target adolescents). Payments differed at different assessments; when not taking into account payments for a subgroup who also kept diaries, payments to mothers and children ranged from \$35 to \$50 and \$5–\$10 for fathers. Teachers were typically paid \$25–\$30.

When the adolescents and a parent arrived at the laboratory, one of 19 same-sex, extensively trained experimenters (13 females and 6 males) at T4 served as the experiment working with the adolescent. Shortly into the session, the parent went to a separate room to complete Questionnaires while the adolescents engaged in a variety of activities. While separated, the parent identified issues about which the parent and adolescent disagreed in the past month (details are provided below). Later in the session, the parent and adolescent participated in a joint origami task and then the conflict discussion. Procedures were similar at T2 and T3 except some different tasks were used (see below and Eisenberg, Valiente et al., 2003; Zhou et al., 2002).

At T4, after the adolescent completed some Questionnaires and a physiological assessment, he or she identified the "hot" conflict issues he or she had with the mother and then participated in a challenging origami task while alone. Youths were told to follow illustrated instructions explaining how to fold a piece of paper into an origami frog and that they would earn points toward a prize if they completed the origami task in the allotted 5 minutes. This task was used to obtain a measure of regulation, as well as the adolescents' T4 negative emotion before the conflict task.

After the origami task, adolescents participated in another origami task in the presence of their mother. Mothers were instructed that they could help their children as much or as little as they wanted to on the origami task. Adolescents were told that they would receive another 10 points toward a prize if they completed this origami task in the allotted time. Mothers and adolescents were left with two pieces of paper and instructions on how to fold an origami bird.

After the parent-child origami task, mothers and adolescents were asked to participate in a conflict discussion task. Mothers and youths were given 6 minutes to discuss conflictual issues

²Regulation was assessed with a measure of persistence on a puzzle task at T2 and T3, but there were few relations of the conflict measures with this task.

(two were provided to them, based on their reports of conflictual topics) and their behavior was videotaped. Mothers and adolescents were asked to talk with each other about the “hottest” topic they identified for “5–10 minutes” (although the actual length was 6 minutes for all dyads). This topic and a second topic were identified by a graduate student who compared the two sets of responses and chose the topics rated highest, with the restriction that the mother had to see a given topic as conflictual. They were asked to discuss what the first issue was and try to come up with a solution. In case the dyad finished discussing the first issue before the end of the time, another issue was also listed. The topics most often chosen for discussion (in descending order of frequency) were cleaning up/chores, how family gets along, respect/manners, school, and free time because they tended to garner the highest “upset” ratings from both parents and adolescents (see results). The interaction was videotaped. After the discussion, the mother was taken to a separate room and both parent and adolescent completed a short Questionnaire evaluating aspects of the conflict discussion.

At T2 and T3, the origami task was not used; nor did the youths participate in a conflict discussion. Rather, the parents and children viewed slides depicting positive and negative emotions/events and parents were asked to discuss the slides with their children (details are provided below). The general structure of these sessions was similar to that at T4.

MEASURES

The primary dependent variables in this study were mothers’ and children’s verbal and affective reactions when they discussed conflictual issues at T4. Predictor measures were selected to assess children’s dispositional characteristics (control/regulation, resiliency, negative emotionality), children’s adjustment (externalizing problems), and reported parental affect in the family and parenting behaviors (i.e., observed parental warmth and positive affect, observed parental negativity, observed parental discussion of emotion). Some of these indices were from T4, whereas some were from T2 and/or T3. In addition, some were obtained from Questionnaire data, whereas others were behavioral assessments.

T4 Conflict Reactions—The conflict interaction at T4 included several procedures: identification of conflictual issues and computation of the intensity of recent conflict, the conflict interaction itself, postconflict reports, and coding of the actual nonverbal and verbal conflict behaviors.

Identification of Issues: To identify issues that had been sources of conflict between them, mothers and adolescents completed a modified version of the widely used Issues Checklist (Prinz, Foster, Kent, & O’Leary, 1979) in separate rooms. After completing these ratings for all 13 categories, the mother and adolescent were asked to go back and choose the three issues that made him or her “most upset.” The original 44 items were combined into 12 global categories with many of the individual 44 items as examples in each category: (a) cleaning up/chores (cleaning up bedroom, messing up the house, putting away clothes, helping out around the house, taking care of possessions/pets); (b) free time (telephone calls, TV/video games, picking books or movies, how to spend free time); (c) family rules (time for going to bed, what time to have meals, consequences parent set); (d) appearance/health (cleanliness, which clothes to wear, what child eats, how neat clothing looks, selecting new clothes); (e) respect/manners (cursing, lying, arguing/talking back, bad behavior or attitude, table manners); (f) noise (making too much noise at home, playing stereo, or radio too loudly); (g) how the family gets along (fighting with brothers/sisters, bothering parent when he/she wants to be alone, taking what doesn’t belong to him/her, going places with family, parent favoring other kids, amount of time parent spends with child); (h) supervision (going place without parent, coming home on time); (i) money (how money is spent, allowance, earning money, buying records, games, etc.); (j) smoking/alcohol (drinking beer or other liquor, smoking); (k) friends/dating (going

on dates, who should be child's friends, social activities); and (l) school (doing homework, getting to school on time, getting in trouble at school, getting low grades, getting up for school). An "other" category was also added in which a parent or adolescent could name a source of conflict not represented in the 12 global categories; however, only 10 mothers and 15 adolescents used this additional category.

For each category, the mother and adolescent were asked to indicate whether or not that category had been an issue between them in the last month. For those categories designated as issues, the mother and adolescent rated how upset the issue made him or her on a scale from 1 = *not at all upset* to 5 = *very upset*. After completing these ratings for all 13 categories, the mother and adolescent were asked to go back and choose the three issues that make them "most upset" (see Table 1).

The original 44-item measure has been found to have adequate test-retest reliability (Robin & Foster, 1984), as well as internal consistency, convergent validity, and discriminant validity (Gonzalez, Cauce, & Mason, 1996). With this sample, the condensed Issues Checklist had moderate-to-good internal consistency for mothers ($\alpha = 0.72$) and for adolescents ($\alpha = 0.65$).

Computation of Intensity of Recent Conflict Measure: As an index of the degree of conflict intensity in the past month, separately for both youths and mothers, we computed the mean ratings of how upset the mother and adolescent were in regard to all the various conflict issue categories on the list. In computing this composite, issues that were not rated as a problem in the last month were assigned a score of 0 to indicate no intensity of conflict (whereas ratings of upset ranged from 1 to 5 when a respondent reported at least some conflict; see Table 2).

Postconflict Questions Regarding Discussion Quality: After the discussion, the mother was taken to a separate room and both mother and adolescent completed a short Questionnaire adapted from the Problem Solving measure used by the Oregon Social Learning Center (D. Capaldi, personal communication, 1998). Mother and adolescent were each asked to evaluate "How much did you agree on a solution?" (1 = *definitely agreed*, 5 = *definitely disagreed*), "Do you think you solved this problem?" (1 = *yes, definitely*, 5 = *definitely not*), and "How satisfied were you with the discussion?" (1 = *very satisfied*, 5 = *not at all satisfied*). These three questions were substantially correlated in the total sample and for males and females (correlations ranged from 0.57 to 0.76 for mothers' reports and from 0.37 to 0.58 for the youths); thus, they were averaged to create scales for which high scores indicated dissatisfaction with the solution and lack of consensus (see Table 2). Alphas for these three-item scales were 0.84 for parents' reports and 0.74 for youths' reports.

Coding of Conflict Interactions: The mothers' and adolescents' ongoing affect and verbal content were coded from the split-screen videotapes. The codes were adapted in large part from three scoring manuals of parent-child interaction: ARCS (Autonomy and Relatedness Coding System; Allen, Hauser, Bell, Boykin, & Tate, 1994); Family and Peer Process Code (Stubbs, Crosby, Forgatch, & Capaldi, 1998); and KACS (Kahen Affect Coding System; Gottman, Katz, & Hooven, 1996, 1997).

Nonverbal affect: Mothers' and adolescents' nonverbal positive affect and anger were coded each 10-second interval across the 6 minutes (for a total of 36 ratings) on a 7-point scale from 1 = *low* to 7 = *high*. For the ratings of affect, coders considered participants' facial expressions, voice tone, and body language when judging the level at which each type of affect was present. Ratings of positive affect included, but were not limited to, smiling, laughing, animated expressions, warm or enthusiastic tone of voice, and physical affection. Anger included, but was not limited to, frowning, sarcastic or hostile voice tone, and threatening gestures or hitting. One coder, who was also reliable on Izard's Affex facial coding system (Izard, Huebner, Risser,

& Dougherty, 1980), coded all of the tapes for affect; 23% of participants were coded by a second coder for reliability. One coder was a female graduate student; the other was a female postdoctoral fellow. After discussing codes while watching dyads together, they started coding conflict discussions separately, meeting to discuss discrepancies in their coding. Finally, once reliable, they started coding the rest of the conflict discussion for reliability. Intraclass correlations across reporters for positive affect and anger were 0.93 and 0.74 for mothers and 0.92 and 0.71 for adolescents.³

Composites were formed for *positive affect* and *anger* for mother and adolescent by averaging the appropriate affect ratings across the 10-second intervals for which mother and adolescent were on task during the 6-minute conflict discussion (see Table 2 for means and *SDs*).⁴

Verbal content: The taped verbal discussion of conflictual issues was segmented into mother and adolescent conversational turns to the nearest second. Off-topic conversations (e.g., talk about what's for dinner) were not included. Agreement on this segmentation of conversation turns (computed for 30% of the tapes) between the main coder and a reliability coder was 0.91 (number of segments agreed on divided by total number of segments identified by either coder). The number of mothers' on-topic conversation turns ranged from 8 to 64, with a mean of 38 turns (*SD* = 12); adolescents' turns ranged from 11 to 64, with a mean of 39 turns (*SD* = 11).

Each mother and adolescent conversation turn was then coded for its verbal content (by a set of coders who did not score any other data). The content codes were not mutually exclusive; rather, any given conversation turn contained up to five content codes. The thirteen verbal content categories were: (a) validation/praise/endeavorment, (b) agree, (c) humor/tease, (d) elicit opinion of other, (e) discuss own feelings, (f) discuss other's feelings, (g) discuss emotions in general, (h) disagree/dispute/challenge, (i) put-down/derogate, (j) derisive humor/sarcasm, (k) coerce/assert dominance, (l) interrupt, and (m) change subject/stonewall discussion (see Table 3). These content categories were adapted from the ARCS, FPPC, and KAPS codes. The reliability coder rated 22% of the dyads and reliability was assessed through a kappa coefficient. A κ of 0.80 was found for the parent data and 0.83 for the youth data (matches of specific categories were required and if one person coded a category and the other did not, the latter was scored as a category labeled *no code*). The number of content codes represented in mothers' on-topic conversation ranged from 8 to 76, with a mean of 30 content codes (*SD* = 12); the number of content codes present in adolescents' on-topic conversation ranged from 0 to 55, with a mean of 20 content codes (*SD* = 12). Composites were formed for each verbal category, separately for mother and adolescent, by summing the number of content codes in each category. These sums were then converted to rates per minute of on-task discussion (see Table 3 for means). Adolescents' use of humor was skewed and transformed with a log 10 transformation.

Our goal was to construct a limited number of constructs that included verbalizations that were clearly negative/hostile or positive and were used with at least a minimal frequency. We first used exploratory factor analysis in Mplus 3.13 (before 4.2 was out; Muthén & Muthén, 2006) to help us understand how the verbal and affect categories could be grouped; later confirmatory factor analyses were computed. Based on EFAs run separately for mothers and adolescents, correlations among the individual verbal and affect categories, and the descriptives of those categories, we did not use some of the verbal categories for both mothers and

³Interrater reliabilities on the conflict coding were computed for all 139 families.

⁴In order to explore the possibility that peak affect (i.e., the highest rating of affect) might be more important than average affect, we compared correlations of peak affect and average affect with the other constructs in the study. The peak affect scores were generally comparable or somewhat weaker and the peak scores were based on only one value of the data rather than the average of many samples. In addition, average and peak negative and positive emotions were very substantially correlated for mothers and for youths. Thus, we used average affect in the analyses.

adolescents. First, several categories were used very infrequently by one or both members of the dyad and were dropped from consideration. *Validates other* was relatively frequent for mothers ($M = 0.34$), but was very low for adolescents ($M = 0.02$) and was dropped for the latter. *Attempt to change the topic or stonewall the discussion* was very infrequent for mothers ($M = 0.04$) and was dropped. Although it was somewhat less infrequent for youths ($M = 0.29$), results from the EFA indicated that it loaded negatively with the negative categories, although it was expected to load positively. We could not explain why that would have occurred (although changing the topic could be used to defuse a discussion) because preliminary analyses demonstrated that this variable correlated with other study variables (such as child dispositional characteristics) in a manner similar to the other negative categories, although more weakly. We therefore decided not to include youths' (or mothers') attempts to change the topic or stonewall the discussion in the analyses.

Discuss emotions in general was also extremely infrequent for both mothers ($M = 0.01$) and youths ($M = 0.01$) so it was dropped for both. Finally, three more categories had low frequency for adolescents—*elicit opinion* ($M = 0.09$), *discuss own feelings* ($M = 0.09$), and *discuss mothers' feelings* ($M = 0.03$)—and were dropped. Those same three categories were also dropped for mothers. Although they were not quite as low frequency as for adolescents (M s = 1.25, 0.19, and 0.20, respectively, for *elicit opinion*, *discuss own feelings*, and *discuss adolescents' feelings*), preliminary analyses indicated that the latter two were not correlated with other variables in the study. Elicit opinion correlated weakly and negatively with both negative and positive parental conflict reactions (e.g., humor, disagrees, and interrupts, as well as with nonverbal positive emotion) and created problems in obtaining a reasonable number of conceptually consistent factors in the factor analyses. In addition, for both parents and adolescents, simple statements of agreeing were not used in the factor analyses because they were not correlated with any other verbal category and often seemed to be used in a perfunctory manner. The remaining categories of verbal responding were those that were most clearly hostile or negative in content (i.e., interrupt, disagree/dispute/challenge, put-down/derogate, derisive humor/sarcasm, and coerce/assert dominance), or, alternatively, positive in tone (i.e., humor, validate for parents).

Aggregation of the reaction categories: We next computed confirmatory factor analyses using Mplus with the remaining verbal and facial affect categories. For adolescent conflict reactions, the eight categories were used as observed indices of three factors, one including positive reactions (positive nonverbal affect and humor), a second one including the negative verbal conflict reactions (the remaining five verbal conflict reactions), and a third factor including nonverbal anger. Although nonverbal anger loaded with verbal negative reactions if a single negative factor including verbal and nonverbal negative reactions was constructed, preliminary correlations indicated that anger and negative verbalizations often did not predict in the same manner or to the same degree. In addition, it seemed likely that adolescents would often express their negative affect nonverbally but not verbally. Thus, verbal and nonverbal negative reactions were separated in the CFA as described above. This model did not fit well because humor did not load with positive affect. However, when humor was put on its own factor separate from nonverbal positive affect, the model fit well, $\chi^2(15) = 13.87$, *ns*, comparative fit index (*CFI*) = 1.00, and root mean square error of approximation (*RMSEA*) < 0.001 (*CI* = 0.00–0.08). All indicators loaded significantly on their factors at $p < 0.01$ (*ts* ranged from 3.82 to 5.00). Based on the factor analysis, four composites were formed by summing the variables and weighting them according to their loading (unstandardized β s) from the CFA: (a) *positive affect* including nonverbal positive affect (1.00); (b) *nonverbal anger* (1.00); (c) *negative verbal*, including interrupt (1.00), disagree/dispute/challenge (1.74), put-down/derogate (0.82), derisive humor/sarcasm (0.71), and coerce/assert dominance (0.37); and (d) *humor* (1.0).

For parents, nine conflict variables were used (the same categories as for adolescents, as well as validate). As for mothers, because nonverbal anger often correlated most highly with the major predictors in the study and appeared to differ in an important way (conceptually and empirically) from negative verbalizations, we separated nonverbal anger from the negative verbal categories in the CFA. Furthermore, even though all five negative verbal conflict categories could load together on one single latent construct, the weights associated with each verbal category were very low (all loadings lower than unstandardized values of 0.30), which would result (after creating a combined composite using the weights from the CFA) in a composite that would be mostly driven by the variable set at 1.00 in the CFA (if no other loading was high). Moreover, the EFA indicated that the negative verbalizations loaded on two different factors in the best solution. Thus, we computed a CFA including the positive reactions (positive affect and the two positive verbal categories) in one category and separated the negative categories into three groups (one with nonverbal anger and two with the negative verbal categories). This model fit the data well, $\chi^2(22) = 27.43$, *ns*, *CFI* = 0.97, and *RMSEA* = 0.044 (*CI* = 0.00–0.091) and all indicators loaded at $p < .01$ or better (*ts* ranged from 3.78 to 4.78). Thus, the positive factor (labeled *positive affect/verbal*) included nonverbal positive affect (1.00), humor (0.17), and validate (0.33). One negative factor (labeled *hostile verbal*) included put down (1.00) and coerce (1.02) whereas the other negative factor (labeled *disharmonious verbal*) included disagree (1.00), derisive humor (0.13), and interrupt (0.24). Nonverbal anger was kept as a separate factor (1.00).

Youths' Characteristics—Children's negative emotionality, resiliency, and regulation/control were assessed at T2, T3, and T4. Alphas for Questionnaire data (and correlations among Questionnaires when aggregating) are reported for the entire sample, including the relatively small group of parents who returned their data by mail.

Children's Emotionality: The primary care-giving parent and teachers rated items assessing children's negative emotionality using two measures: (1) emotional intensity items at T2, T3, and T4 (Eisenberg et al., 1996) and (2) emotion (i.e., primarily negative emotion-related) items from the Block and Block's Q-sort (1980) at T2, T3, and T4. In addition, children's negative emotion was observed when working alone on an origami task at T4.

Adult-reported dispositional youth negative emotionality: At T2, T3, and T4, teachers and parents completed a measure of children's negative affect intensity adapted from Larsen and Diener's (1987) self-report measure for adults (Eisenberg et al., 1996; Eisenberg, Fabes, et al., 2000). Five items pertaining to negative emotional intensity were rated from 1 = *never* to 7 = *always* (e.g., "When my child experiences anxiety, it normally is very strong"). Alphas for parents and teachers, respectively, were 0.75 and 0.86 at T2, 0.86 and 0.87 at T3, and 0.79 and 0.86 at T4.

In addition, parents and teachers rated a number of items from the Block and Block (1980) Q-sort adapted for a Questionnaire format concerning children's negative emotionality or the lack thereof (e.g., "Tends to brood and ruminate or worry," "Cries easily, has rapid shifts in mood," "Is emotionally labile," "Is calm and relaxed, easy going" [reversed]). These items were selected by three experts before analyses based on their content (see Eisenberg et al., 1996). Parents were instructed to rate how descriptive of their child each item was, from 1 = *most undescriptive* to 9 = *most descriptive*. The *as* for the 11-item emotionality scale for parents and teachers were 0.84 and 0.86 at T2, 0.83 and 0.89 at T3, and 0.87 and 0.85 at T4, respectively.

Mothers' reports of negative emotional intensity and reports of emotion on the Blocks' items were significantly related at T4, $r_s(123, 114) = 0.75$ and 0.66 , $p_s < .001$, for mothers and teachers, and were standardized and averaged to form aggregate measures of negative emotionality for use in correlational analyses (indices were kept separate in growth curve and

structural equation models). The intercorrelations between the same variables at T2 or T3 ranged from 0.68 to 0.74 and aggregate scores were created in the same way at both T2 and at T3.

T4 behavioral measure of adolescents' emotion: The origami alone task described previously was videotaped and coded later for children's negative affect during the task. Two trained students (one a graduate student), neither of whom coded other data, rated children's negative affect and anger/frustration every 30 seconds. Anger/frustration was defined as anger, frustration, irritation, and annoyance. Cues included brows knit together, pursed lips, angry tone of voice when talking; it was rated on a 5-point scale (1 = *no anger/frustration*, 5 = *signs of anger/frustration most of the time*). Nonanger negative affect consisted of sadness, worry, anxiety, and distress. Facial cues included (but were not limited to) frowning, biting lip, and sad looks. Negative affect besides anger/frustration was rated on a 5-point scale (1 = *no negative affect*, 5 = *signs of negative affect most of the time*, or exhibits one or two particularly large displays). Nonanger negative emotion was quite infrequent and was averaged with anger/frustration (so the mean is considerably lower in Table 2 than if they were summed); 56 youths expressed some negative emotion. The intraclass reliability correlation for negative affect was 0.79⁵ (computed for 58 youths).

Resiliency: At T2, T3, and T4, parents (mostly mothers) and teachers completed a Questionnaire assessing children's ego-resiliency that was adapted from the Block Q-Sort measure (Block & Block, 1980) by Eisenberg et al. (1996) and then Cumberland-Li, Eisenberg, & Reiser (2004). On the basis of our prior work with this sample (e.g., Eisenberg, Zhou et al., 2003; also see Cumberland-Li et al., 2004), the resiliency composite used in this study included the 11 items that experts in the field rated as reflecting relatively pure resiliency (e.g., "Can bounce back or recover after a stressful or bad experience," "Freezes up when things are stressful, or else keeps doing the same thing over and over again" [reversed], "When under stress, he/she gives up and backs off" [reversed]). Parents were instructed to rate how descriptive of their child each item was, from 1 = *most unresponsive* to 9 = *most responsive*. The α s at T2, T3, and T4 were 0.78, 0.76, and 0.89 for parents and 0.81, 0.76, and 0.87 for teachers.

Dispositional Control/Regulation: Questionnaire measures of control/regulation included parents' (mostly mothers') and teachers' reports of the children's (1) ego control, (2) inhibitory control, (3) attention shifting, and (4) attention focusing at T2, T3, and T4. Alphas for Questionnaire data (and correlations among Questionnaires when aggregating) are reported for the entire sample, including the relatively small group of parents who returned their data by mail.

Adult-reported ego control: At T2, T3, and T4, teachers and parents (mostly mothers) rated youths' *ego control* with items selected from the Block and Block California Child Q-sort (1969, 1980) on a 9-point scale (1 = *most unresponsive* to 9 = *most responsive*). In this data set, we tried to create relatively pure and nonoverlapping measures of regulation, emotionality, and social functioning (see Eisenberg et al., 1996). Thus, Q-sort items that pertained primarily to emotion ("Tends to be sulky or whiny," "Is fearful and anxious") or antisocial or prosocial behavior ("Is aggressive," "Shows concern with moral issues, e.g., reciprocity, fairness, and the welfare of others"), and quality of relationships ("Develops genuine and close relationships," "Has transient interpersonal relationships; is fickle") rather than the purer concept of ego control as defined by the Blocks were not included. This procedure resulted in

⁵Positive emotion was also reliably coded. Because this was a frustrating task, positive emotion was quite low in frequency ($M = 1.06$). Although it related to a few variables, including parents' and youths' nonverbal positive conflict reactions, it was dropped because of its low frequency, the limited number of findings, and the need to reduce the number of predictors.

a 19-item ego-control scale (e.g., “Is physically cautious; is careful not to get hurt [physically],” “Is restless and fidgety; has a hard time sitting still” see Eisenberg et al., 1996). One additional item (item 42) was dropped from the scale because it was missing at T4. Cronbach’s α s at T2, T3, and T4 were 0.80, 0.82, and 0.81 for parents and 0.84, 0.89, and 0.88 for teachers, respectively. High scores on ego control indicate high levels of ego control (i.e., what the Blocks labeled as overcontrol), whereas low scores indicate what the Blocks called undercontrol.

Adult-reported effortful control: The inhibitory control, attention shifting, and attention focusing subscales from the Child Behavioral Questionnaire (Rothbart, Ahadi, & Hershey, 1994; Rothbart et al., 2001) were used to assess youths’ *effortful control* (i.e., regulation) at T2, T3, and T4. Parents and teachers rated each item on a 7-point scale (1 = *extremely untrue of my/this child*; 7 = *extremely true of my/this child*). The inhibitory control subscale consisted of 13 items assessing children’s abilities to regulate their behavior (e.g., “Can lower his/her voice when asked to do so,” “Has a hard time following instructions” [reversed] and “Has difficulty waiting in line for something” [reversed]). Four items from the teacher-reported inhibitory control subscale (i.e., “Is good at games like “Simon Says,” “Mother, May I,” and “Red Light, Green Light,” “Prepares for trips and outings by planning things s/he will need,” “Approaches places s/he has been told are dangerous slowly and cautiously,” and “Is not very careful and cautious in crossing streets and other potentially dangerous situations”) were dropped because more than 25% of the teachers at T2, 30% at T3, and 50% at T4 failed to respond to these items (likely because of a lack of opportunity to observe these very specific situations). The α s for the final nine-item teacher-reported inhibitory control scale at T2, T3, and T4 were 0.90, 0.90, and 0.82, respectively; the α s for the 13-item analogous parent-reported scale were 0.81, 0.86, and 0.85.

The attention shifting subscale consisted of 10 items assessing children’s ability to move attention from one activity to the next (e.g., “Has an easy time leaving play to come inside for school work,” and “Can easily quit working on a task or project if asked”); α s for teachers’ and parents’ reports = 0.87 and 0.78 for T2, 0.88 and 0.83 for T3, and 0.83 and 0.78 for T4.

The attention focusing subscale included 11 items assessing the ability to concentrate on a task when needed (e.g., “When drawing or reading a book, shows strong concentration,” “When working on a task, becomes very involved in what s/he is doing and works for long periods” α s for teachers’ and parents’ reports were 0.89 and 0.82 for T2, 0.86 and 0.86 for T3, and 0.90 and 0.84 for T4.

Aggregation of adult-reported ego and effortful control: Consistent with the common finding that inhibitory control, attention shifting, and attention focusing are all measures of effortful control (Rothbart et al., 1994, 2001), we aggregated (by averaging) indices of effortful control within time and within reporters at T2, T3, and T4 (correlations for the 126 families with mother-adolescent conflict interactions at T4 ranged from 0.27 to 0.64 for mothers’ reports at T4, 0.64 to 0.77 for teachers’ reports at T4, 0.36 to 0.68 for parents’ reports at T3, 0.65 to 0.81 for teachers’ reports at T3, 0.26 to 0.70 for parents’ reports at T2, and 0.51 to 0.79 for teachers’ reports at T2; $ps < .01$ for the correlation between parents’ attention shifting and focusing at T2 and T4, all other $ps < .001$). These aggregate measures of effortful control were significantly correlated with ego control (correlations ranged from 0.63 and 0.72) and, hence, were averaged with ego control (after standardizing) for use in correlations (the two measures were kept separate in the models). This composite is henceforth labeled mother or teacher T2, T3, or T4 control/regulation.

T4 observed behavioral measure of control: During the experiment session, adolescents were asked to complete an origami task of folding a frog with a piece of paper following the

directions in the instruction sheet. They were given 3 minutes to complete the origami task and were told they would get an attractive prize if they finished in time. Adolescents were told that they should not start working until a red light turned off (which was 30 seconds after the timer was started) and they should stop working when the red light came back on (which was 3.5 minutes after the light first came on). The adolescent was observed for another 30 seconds to assess cheating. An undergraduate and a graduate research assistant timed adolescents' time on task; interrater reliability was $r(65) = 0.99, p < .001$. Total time on task was recorded on the tape. A persistence rating was calculated by dividing the time on task by the total task time. Persistence on the task was high for most adolescents; none persisted less than 76% of the time.

Externalizing Problem Behavior: At T2, T3, and T4, mothers, fathers, and teachers rated children's externalizing problem behavior (1 = *never*, 4 = *often*) using the 24-item Child Behavior Checklist (CBC; Lochman and the Conduct Problems Prevention Research Group, 1995; e.g., "argues," "lies," "aggressive to adults"). All but one item ("set fires," which tends to be infrequent and also might be considered extreme and offensive by parents) were included. The α s for mothers, fathers, and teachers were above 0.90 at all times for all reporters.

Measures of Parent Behavior—Measures of parents' (nearly always mothers') behavior included parental report of expressivity in the home at T2 and T3; observed parental positive expressivity, warmth, and discussion of emotion at T2 and T3; and mothers' warmth and positive emotion during a task (joint origami) at T4.

Parent Emotional Expressivity in the Family (T2 and T3): At T2 and T3, primary care-giving parents completed a 34-item version of Halberstadt, Cassidy, Stifter, Parke, and Fox's (1995) Self Expressiveness in the Family Questionnaire (SEFQ) in which they indicated how frequently (1 = *rarely expresses feeling*; 9 = *frequently expresses feeling*) they express emotions with family members who are positive (e.g., "Expressing excitement over future plans," "Expressing gratitude for a favor" 14 items; α s = 0.88 and 0.88) negative dominant (e.g., "Quarreling with a family member" 10 items; α s = 0.77 and 0.81), and negative submissive (e.g., "Crying after an unpleasant disagreement" 10 items; α s = 0.70 and 0.71). Six additional positive expressivity items in the SEFQ that were not recommended for a short positive expressivity scale by Halberstadt et al. (1995) were dropped to save administration time. In addition, the item "Sulking over unfair treatment by a family member," which was coded as submissive negative emotion in Halberstadt (1986) but as dominant negative emotion in Halberstadt et al. (1995), was left as submissive negative emotion to be consistent with other reports of these data. Because submissive negative emotion is less conceptually relevant for hostile or positive conflict reactions than is dominant negative emotion, we dropped submissive negative emotion to reduce the number of variables.⁶

Parental Positive Expressivity and Warmth During the Slide Interactions (T2 and T3): At T2 and T3, the child and the parent viewed a series of eight slides (using a procedure similar to Buck, 1975), including four pleasant (e.g., children at a birthday party, a smiling girl) and four unpleasant slides (e.g., a crying child in a war scene, a man with a crying girl). Details regarding this task were reported elsewhere (see Eisenberg, Zhou, et al., 2003; Zhou et al., 2002). Parents were told to look at each slide and that they would have 45 seconds after each slide to explain to the child what was happening in it. Parents' positive facial expressivity was operationalized based on the intensity and valence of their facial reactions while initially watching the pleasant slides. As in procedures used by Buck (1975; Buck, Losow, Murphy, & Costanzo, 1992) to assess encoding of emotion, undergraduate observers (eight at T2 and six

⁶Correlations for negative submissive emotion to youths' conflict reactions were similar to those for dominant negative emotion, whereas significant correlations with mothers' conflict reactions were less frequent than for dominant negative emotion.

at T3) rated how they thought each slide made the parent feel on a 9-point scale ranging from unpleasant (from 1 to 3) to neutral (from 4 to 6) to pleasant (from 7 to 9) during the first 8 seconds of the procedure (when the parent was initially looking at each slide) or until the parent turned from the slide to the child (after this time, parents were likely to be talking to their children). Therefore, these scores reflected parents' positive versus negative facial expressivity in view of, but not directed toward, their child and are henceforth called positive expressivity to pleasant slides. The volume was turned off during the rating sessions to keep the observers naïve to the content of the slides. Observers were not provided with feedback about their rating. Another seven observers at T2 and six at T3 coded the parents' facial reactions to slides for reliability. Ratings across raters and across the four pleasant slides were averaged to create the composite for parental positive expressivity to pleasant slides; higher scores on the composite indicated more intense positive emotion. Intraclass reliabilities (r_s) between the main and reliability groups of coders were 0.83 at T2 and 0.88 at T3.

At both T2 and T3, the parents' overall warmth directed to the child (i.e., the degree of smiling, laughing, positive voice of tone, and verbal and physical affection) during the parent-child slide discussion was rated by a coder who had no other part in the study. The rater viewed the videotape of all eight slides (approximately 5–5.5 minutes per family) and then made one global rating on a 7-point scale (1 = *very low warmth*, 7 = *very high warmth*). The coder did not code warmth during the period when the parent initially was looking at the slide. A reliability coder scored 26% of the data at T2 and 19% of the data at T3 (intraclass r_s = 0.86 and 0.89 at T2 and T3). The above measures of parental positive expressivity and warmth have been related to low levels of children's unregulated expressivity and externalizing problems and high levels of their social competence (Eisenberg, Losoya, et al., 2001; Eisenberg, Zhou, et al., 2003; Zhou, et al., 2002).

Parents' verbalizations during the time they discussed each slide were also coded. Parents' discussion of the slides was coded independently into a variety of categories by two trained coders blind to the hypotheses of the study. The conversation was first transcribed; then the coders watched the videotape of the mother during the slides while reading the transcript. The two coders trained and refined their definitions of categories (with the input of several authors of this paper) for several months before beginning to code the data. Those categories of relevance to this study were as follows (see Eisenberg, Losoya et al., 2001): (a) *linking*: parent linked the slide subject matter to the child's own emotional experiences and memories (e.g., "Remember how much fun you had at *your* birthday party?"); (b) *self-report of emotion*: parent labels her own emotions (e.g., "That picture makes me feel sad."); (c) *discussion of emotion*: parent focused on the emotion of the people in the slide, often hypothesizing about events or reasons for the emotion (e.g., "Maybe she's sad because her dog died"); and (d) *teaching*: parent explicitly attempts to teach children about emotions (e.g., "People often feel sad if someone they care about is sad"). Coders noted each incidence of these utterances. Multiple categories could be coded for an utterance if they co-occurred (i.e., they were not mutually exclusive codes), although discussion of emotion was not coded if one of the other categories was coded and there was no additional discussion of emotion. Data at T2 were lost for six parents due to problems with videotaping or with understanding the parent (e.g., the parent mumbled or spoke in a different language). Scores for each category were summed across all eight emotion slides, regardless of emotional valence of the slide.

At T2, all of the categories were significantly intercorrelated (r_s ranged from 0.26 to 0.37) except for linking with teaching. At T3, all categories were at least marginally significantly related (r_s ranged from 0.15 to 0.46) except teaching (which occurred infrequently) with linking and self-report of emotion. To reduce the number of variables, and because all involved the parent's discussion of emotion, we summed the four categories to compute composite scores

of discussing emotion at both T2 and T3. Intraclass r s for these composites were 0.77 at T2 and 0.85 at T3.

T4 Mother Emotion and Warmth During the Joint Origami Task: At T4, shortly before the conflict interaction, adolescents were asked to complete an origami task—folding a bird with a piece of paper following guidelines in the instruction sheet—with their mother providing only verbal assistance. They were given 4 minutes and 30 seconds to finish this task and told that they should stop working when the red light came on (and remained on for 30 seconds). Adolescents had been told that they would win points toward a prize if they completed the task (see Eisenberg et al., 2005).

Both mothers' warmth and negative and positive affect during the origami task were coded by trained graduate students with extensive experience doing this kind of coding. Mothers' warmth was rated on a 7-point scale from a low degree of warmth to a very high degree of warmth. Warmth included displays of closeness, friendliness, encouragement, and positive affect (smiling and laughing), as well as physical affection and quality of the conversation (intraclass r based on 35% of parents = 0.71). The intensity and frequency of the Mothers' nonverbal negative displays also were rated on a 5-point scale (1 = *few or no nonverbal displays*, 5 = *frequent nonverbal displays*). Nonverbal negative displays included rolling eyes, sighing, and folding arms across chest and leaning back (intraclass r = 0.70).

Mothers' negative and positive affect were also rated every 30 seconds for a more micro index of emotion. Positive affect consisted of smiling and laughing, whereas negative affect consisted of sadness, anger, worry, and anxiety. Positive affect was rated on a 5-point scale (1 = *no positive affect*; 5 = *smiling and laughing for a majority of the time*). Negative affect also was rated using a 5-point scale (1 = *no negative affect*; 5 = *a couple of strong displays of negative affect or negative affect displays a majority of the time*). Both the intensity and duration of positive and negative affect were considered for the rating. Two composite scores were constructed by averaging the scores for positive and negative affect across the 30-second intervals. Intraclass reliabilities for mothers' negative and positive affect composites (for 48 parents) were 0.74 and 0.84, respectively. Although the mean for negative affect was low, 27% of parents of sons and 24% of mothers of daughters expressed some negative emotion.

The scores for global ratings of nonverbal negative displays and negative affect rated per 30 seconds were significantly related, $r(123) = .48, p < .001$, and were standardized and averaged to create an index of mothers' negative emotion with their child.

Adolescents' Emotion With the Mothers at T4 During the Joint Origami Task: As an index of the adolescent's emotion with their mother at T4 before the conflict interaction, the adolescent, like the mother, was rated on both negative and positive affect every 30 seconds during the joint parent-child conflict task by a different coder. Positive affect consisted of smiling and laughing, whereas negative affect consisted of sadness, anger, worry, and anxiety and was rated on a 5-point scale reflecting frequency, duration, and intensity (1 = *no positive affect*; 5 = *smiling and laughing for a majority of the time*). Negative affect toward the mother (not the task) also was rated using a 5-point scale (1 = *no negative affect*; 5 = *a couple of strong displays of negative affect or negative affect displays a majority of the time*). Intraclass reliabilities (based on data for 45 children) were 0.85 and 0.91 for positive and negative emotion. Although the mean for negative affect was low, 39% of boys and 50% of girls expressed some negative emotion. Both adolescents' and mothers' negative affect were skewed (based on the findings of Curran, West, & Finch, 1996) and were transformed using the procedures recommended by Tabachnick and Fidell (1996).

III. DESCRIPTIVE ANALYSES AND CORRELATIONS

The analytic plan included several sets of analyses. First we computed descriptive analyses, such as analyses of the main variables to age and sex, as well as sex differences in variability of the variables. In addition, descriptive information on the ratings of the seriousness of various conflict issues is presented. Then relevant descriptive correlations are provided so that the reader can understand the interrelations among conflict reactions and predictors or correlates of these reactions, including correlations among parenting variables (used as predictors) and among measures of children's dispositions/externalizing behaviors. Of more central relevance to the topic of this monograph are those correlations among the conflict reactions, within and across reporters, as well as correlations of both mothers' and adolescents' conflict reactions with the following measures: (a) intensity of recent conflict, (b) quality of mothers' and adolescents' affect and behavior during a recent nonconflictual interaction, (c) child dispositional characteristics and externalizing problems, and (d) parenting behavior. In the next chapter, growth curve and structural equation models are used to address a variety of questions, including the prediction of conflict reactions from change over time in children's dispositions, externalizing behavior, or parenting; the unique prediction of conflict reactions from children's dispositional characteristics versus parenting; and mediated relations between children's dispositions and parenting when predicting mothers' and adolescents' conflict reactions. Summaries and integration of the various types of analyses are provided in the discussion chapter.

RELATIONS OF AGE WITH THE MAJOR VARIABLES

To examine the relations of the key variables with age, age of adolescents at T4 (or the time of assessment) was correlated with all of the conflict-related variables, as well as with the various parenting and temperament variables (or composites thereof) used in the major analyses (i.e., the variables in Table 2). Only the participants involved in the conflict interactions at T4 were included in the following descriptive and correlational analyses. There were few significant relations with age, especially considering the number of correlations. Of note, age was unrelated to parents' or youths' conflict reactions. Moreover, the numbers of significant correlations between age and other T4, T2, or T3 variables were not above the number expected by chance.

SEX DIFFERENCES IN THE MAJOR VARIABLES

Sex differences in the major variables in this study were examined with a series of MANOVAs; separate MANOVAs were computed for parents' and for youths' T4 conflict reactions, for parenting and/or parent-child origami interaction emotion variables at T2, T3, or T4, for parents' reports of children's dispositional characteristics (separately at T2, T3, and T4), and for teachers' reports of children's dispositional characteristics (separately at each assessment). Different MANOVAs were computed for each reporter/actor and for each assessment to maximize the sample size in each analysis. There were no multivariate or univariate sex differences for adolescents' or parents' conflict reactions. Nor were there sex differences in how conflictual the discussed issues were rated by youths and their parents, or in parents' or youths' reports of intensity of recent conflict or postconflict satisfaction.

The multivariate F was significant for youths' (but not parents') emotion during the T4 joint origami task, $F(2, 122) = 5.59, p < .005$; daughters expressed more positive emotion than sons during this task, $F_s(1, 123) = 4.56, p = .03$ (see Table 2 for the means). The multivariate F was not significant for the T3 parenting variables, but was significant for the MANOVA that included T2 parental warmth, positive affect, parental discussion of emotion, positive expressivity in the family, and negative expressivity in the family, $F(5, 104) = 3.76, p < .004$. In univariate analyses, parents were warmer in the slide interaction, expressed more positive

emotion, and discussed emotion more with daughters than sons at T2, $F_s(1, 108) = 8.78, 7.82$, and $7.02, p_s = .01$ (see Table 2).

There were numerous sex differences in the MANOVAs for measures of children's control, resiliency, negative emotionality, and externalizing problems. In these analyses, we grouped by reporter and time of assessment. The multivariate F_s were significant for T3 and T4 (but not T2) mother reports, and for T2, T3, and T4 teacher reports, $F_s(4, 116; 4, 121; 4, 110; 4, 99; 4, 113) = 4.09, 3.65, 5.61, 3.91$, and $6.44, p_s = .004, .008, <.001, = .005$, and $<.001$, respectively. Parents reported that daughters were higher than sons in control/regulation at T3 and T4, $F_s(1, 117; 1, 124) = 6.44$ and $5.55, p_s = .012$ and $.02$, and lower in externalizing problems, $F_s(1, 117; 1, 124) = 4.95$ and $7.64, p_s < .028$ and $.007$ (see Table 2 for means). Teachers reported that girls were higher than boys in control/regulation at T2, T3, and T4, $F_s(1, 113; 1, 102; 1, 116) = 14.723, 10.53$, and $20.54, p_s < .001$, and lower in externalizing problems, $F_s(1, 113; 1, 102) = 19.71, 12.79$, and $17.78, p_s < .001$. At T2, teachers rated girls as lower in negative emotionality, $F(1, 113) = 8.05, p = .005$, (the same comparison was near significant at T3 and T4, $p_s = .061$ and $.07$). There were no sex differences in adults' reports of resiliency, in parents' reports of negative emotionality or, surprisingly, in fathers' reports of children's externalizing problems at T2, T3, or T4.

We also tested for differences in the variability of sons' and daughters' (and their mothers') conflict discussion reactions. Levene's tests of the equality of variances indicated that girls were more variable in their negative verbalizations than were boys, $F(1, 123) = 8.70, p = .004$. Boys and girls did not differ in the mean numbers of statements coded or variability in the number of statements coded. In regard to sons' versus daughters' negative emotionality, control/regulation, and resiliency, the one significant difference was that boys were significantly more variable than girls on teacher-rated control/regulation at T3, $F(1, 105) = 4.47, p = .04$.

In regard to observed parenting (maternal warmth and positive affect at T2, T3, and T4) and family expressivity (T2 and T3 positive, negative submissive, and negative dominant expressivity), Levene's test of equality of variances indicated that mothers of girls were more variable than mothers of boys in their display of warmth at T2, $F(1, 113) = 8.70, p = .004$.⁷

DESCRIPTIVE DATA ON THE RATINGS OF SERIOUSNESS OF VARIOUS CONFLICT ISSUES

Mean scores for the level of upset in the past month reported by parents and youths with regard to each of the 12 general types of conflict issues are presented in Table 1, as are the proportions of parents and youths who mentioned that a given topic was an issue in the past month (regardless of level of upset caused by it) and the percents of dyads for whom each issue was to be discussed first or second. Similar to the findings of Smetana and Gaines (1999), cleaning/chores was the most frequently mentioned issue for mothers; next was how the family is getting along. These two topics were also the highest for youths, although in the reverse order in regard to rated intensity of upset by the issue. Next in importance for mothers were respect/manners, followed by school-related issues, appearance/health, and then use of free time. For adolescents, school issues, respect/manners, and money were of next most importance (in that order). Issues that were mentioned relatively infrequently and were less heated were smoking/alcohol and friends/dating. Either cleaning/chores or how the family was getting along was chosen for discussion by at least 50% of families (as first or second choices; see Table 1), with school issues and respect/manners being the next most discussed topics.

⁷SES was computed by averaging mother and father education and averaging it with income (after standardizing both variables). This composite was not related to the mothers' or adolescents' conflict reactions or to the degree of reported conflict in the past month.

RELATIONS AMONG PARENTING VARIABLES

Relations among parenting variables are presented in Table 4. Within each construct, observed or reported T2 and T3 parenting variables were modestly to moderately positively related across time. In general, there were also some positive relations among different observed T2 and T3 indices of positive parenting. In addition, reported negative dominant family expressivity at T2 and T3 were negatively related to some measures of observed positive parenting, especially positive expressivity; reported positive expressivity was related to observed positive expressivity only at T3. Observed warmth and positive emotion at T4 were positively related to some T2 and T3 observed measures of the analogous constructs, especially with T2 and T3 warmth. Observed T4 negative maternal emotion was negatively related to T4 warmth and positive affect, and occasionally related to T2 or T3 measures of observed positive parenting.

RELATIONS AMONG CHILD DISPOSITIONAL/EXTERNALIZING BEHAVIOR VARIABLES

Relations among measures of child characteristics/behavior are presented in Table 5. In general, measures of the same construct were positively related, within and sometimes across reporters and/or time. Moreover, negative emotionality and externalizing problems tended to be positively related, as did reports of resiliency and control/regulation. In addition, the two reported measures of positive characteristics (resiliency and control/regulation) tended to be negatively related to the two constructs reflecting negative characteristics (negative emotionality and externalizing problems). Observed negative emotionality during the origami-alone task was unrelated to dispositional measures of negative emotionality; similarly, observed persistence on the puzzle task was unrelated to reported control/EC (although it did relate to some measures of resiliency).

CORRELATIONS AMONG CONFLICT REACTIONS WITHIN MOTHERS AND ADOLESCENTS

As is indicated in Table 6, nonverbal (i.e., facial, gestural, and vocal tone) and verbal indices of negative emotion were substantially related within actor for both mothers and youths. Youths' positive verbal and non-verbal affect also were substantially significantly related (these two variables factored together for mothers). The relation between mothers' hostile and disharmonious maternal verbal reactions was also sizable. Adolescents' humor and positive affect were not significantly related to their anger and negative verbalizations, whereas mothers' positive reactions were negatively related to their anger and disharmonious verbalizations.

PREDICTORS/CORRELATES OF MOTHERS' AND ADOLESCENTS' CONFLICT REACTIONS: CORRELATIONAL ANALYSES

A variety of potential correlates of both mothers' and youths' conflict reactions were examined. These included (a) relations between mothers' and adolescents' reactions during the conflict interaction, (b) relations of conflict reactions to the degree of mother–youth conflict in the past month, (c) within-actor relations of conflict reactions to affect expressed earlier in the T4 session (consistency of affect within actors on the same day in the two mother–adolescent interactions [origami and conflict]), (d) relations between conflict reactions and children's concurrent and prior characteristics (i.e., control/regulation, resiliency, and emotionality), and (e) relations of conflict reactions to parenting variables, including in the T4 origami interaction task (before the conflict interaction at the T4 session) and parenting variables from years prior. Sex differences in the correlations were tested with a test of differences in correlations for independent samples (using *r*-to-*z* transformed correlations) and are indicated in the tables. Below we merely summarize the most important correlational findings.

Relations Between Mothers' and Adolescents' Reactions During the Conflict Interaction

As would be expected, there were numerous relations among mothers' and youths' conflict reactions (see Table 6). Mothers' and youths' verbal and nonverbal negative conflict reactions were positively related to one another (r s ranged from 0.33 to 0.71, $ps < .001$), as were their positive reactions. Each participant's positive reactions were negatively related to the other's nonverbal anger but not negative verbalizations. Thus, the negative verbalizations of one partner tended to be relatively independent of the positive reactions of the other partner, although there generally was a correspondence between the valence of mothers' and youths' nonverbal and verbal affect.

Relations of Conflict Reactions to the Degree of Mother–Adolescent Conflict in the Past Month

To examine the relation of intensity of recent mother–adolescent conflict to observed conflict reactions, the composite scores for mothers' and youths' ratings of the upset they experienced in the past month over various conflictual issues (i.e., intensity of conflict) were correlated with mothers' and youths' observed conflict reactions (see Table 7). There were no sex differences in the mean values or variability of reports of intensity of recent conflict. Mothers were higher in disharmonious verbalizations and in nonverbal anger and lower in positive affect during the conflict discussion when they reported higher levels of conflict in the last month. Moreover, adolescents' reports intense conflict in the past month were correlated with relatively high levels of maternal anger and low levels of maternal positive reactions, both for daughters and the total sample.

In regard to youths' reports of intensity of conflict in the past month, youths' reports of the intensity of upset were related to higher levels of their own anger in the conflict interaction. Mothers' reports of relatively intense conflict in the past month were positively related to adolescents' anger and negative verbalizations.

Thus, mothers were relatively likely to interact in negative rather than positive ways when they or their child (especially for daughters) reported a high degree of upset about conflict in the past month. Youths expressed more negative verbal and nonverbal reactions during the conflict interaction if their mothers reported relatively intense recent conflict and exhibited more anger when they themselves reported intense recent conflict.

Relations of Conflict Reactions to Affect Expressed Earlier in the T4 Session in Mother–Adolescent Interactions: Within Actor Consistency in Affect

To examine within-actor consistency in the quality of responding across a conflictual and relatively nonconflictual situation during the T4 session, we computed correlations between affect during the mother–adolescent origami task (which occurred shortly before the conflict discussion interaction) and mothers' or youths' observed conflict reactions (see Table 8). Mothers' warmth and/or positive affect during the origami task were related to lower maternal nonverbal anger, disharmonious verbalizations, and higher positive maternal reactions during the conflict interaction. Conversely, mothers' negative affect during the origami task, which was relatively infrequent, was positively related to their hostile verbalizations, as well as with disharmonious comments with daughters. Thus, there was some continuity in mothers' affective behavior across the two contexts.

Although the origami and conflict interactions were coded by different sets of people, there also was considerable consistency in youths' behavior across contexts (see Table 8). Youths' positive affect during the origami task generally was positively related to their verbal and nonverbal positive affect during the conflict interaction, and negatively related to their nonverbal anger. Conversely, youths' negative affect during the origami task was positively related to their nonverbal anger and daughters' negative verbalizations and negatively related to sons' nonverbal positive conflict reactions.

Correlations Between Conflict Reactions and Children's Characteristics: Do Children's Control, Resiliency, and Negative Emotionality Predict Conflict Reactions?

—Correlations were computed between children's dispositional characteristics (negative emotionality, resiliency, and control/regulation) and both mothers' and youths' conflict reactions. Correlations between conflict reactions and adolescents' dispositional characteristics, especially across time, provide some insight into whether youths' temperamental/personality characteristics might contribute to their reactions to their mothers, and their mothers' reactions to them, when discussing conflictual issues. Below we highlight patterns of findings.

Recall that mothers' and adolescents' negative conflict reactions were hypothesized to relate to high levels of youth dispositional negative emotionality and low levels of youths' control/regulation (henceforth called control for brevity). In addition, mothers and youths were expected to display more positive conflict reactions when youths were high in dispositional resiliency and perhaps low in negative emotionality.

Mothers' Reactions: As can be seen in Table 9, when children were rated as high in negative emotionality by mothers and teachers, mothers tended to express more anger and, to a lesser degree, more negative verbalizations, but this pattern held only for daughters. Conversely, mothers were lower on positive conflict reactions if they viewed their daughters as prone to negative emotion or if their teachers viewed them as negative at T2. In addition, adolescents' negative emotion observed during the origami-alone task was related to higher levels of mothers' hostile verbalizations and anger during the conflict interaction.

Parents' (but not teachers') reports of youths' dispositional resiliency at T2, T3, and T4 were significantly correlated with mothers' positive conflict reactions and relatively low levels of anger (but not negative verbalizations) during the conflict interaction. Thus, mothers' perceptions of their child's resiliency were related to the affective tone of their conflict interactions, but not their hostile or disharmonious verbalizations.

There were numerous significant correlations between teachers' or parents' reports of youths' control/regulation and mothers' negative verbal and nonverbal conflict reactions, but in all cases the findings were primarily for daughters (and the findings for sons and daughters were at least near significantly different in 12 of 21 comparisons involving control/regulation and mothers' negative reactions; see Table 9). In addition, mothers' reports of their daughters' control at T2 were significantly positively related to mothers' positive conflict reactions.

In summary, low levels of daughters' but not sons' control/regulation, and high levels of daughters' negative emotionality, tended to be related to relatively negative maternal conflict reactions and somewhat fewer positive maternal reactions. Parent-reported youth resiliency was associated with positive maternal reactions rather than maternal anger during the conflict interaction, and this pattern reflected findings for the total sample.

Adolescents' Conflict Reactions: There were also correlations between adults' (parents and teachers at T2) reports of youths' dispositional negative emotionality and adolescents' negative conflict reactions, but primarily for nonverbal anger rather than negative verbalizations during the conflict interaction. The findings were in the same direction for sons and daughters, but significant only for daughters (see Table 10). In addition, only for girls, observed negative emotion at T4 during the origami-alone task was positively related to negative verbalizations and negatively related to verbal humor.

Mirroring the findings for mothers' conflict reactions, youths' parent-reported dispositional resiliency tended to be positively related to adolescents' humor and positive affect during the

conflict interaction and occasionally negatively related to youths' nonverbal anger (see Table 10). Moreover, parents' and teachers' reports of youths' control generally were negatively related to youths' anger displays during the conflict interaction and to daughters' negative verbalizations. Thus, somewhat parallel to the findings for mothers' conflict reactions, the degree to which adolescents were dispositionally negative and unregulated was related to youths' negativity when discussing conflictual issues with their mothers, whereas parent-reported resiliency was related to youths' positive conflict reactions with their mothers.

Relations of Conflict Interactions With Youths' Externalizing Problem Behaviors

—Another issue examined was whether youths' and mothers' reactions during the conflict discussion related to children's externalizing problem behaviors, as reported by mothers, fathers, and teachers. Externalizing problems have been found to be related to children's dispositional characteristics and parenting in this sample (e.g., Eisenberg et al., 1996, 1997, 2005; Valiente et al., 2003). Relations between T4 conflict reactions and earlier problem behaviors would suggest that the conflict reactions reflected, in part, continuities in children's adjustment or maladjustment and/or parental behaviors that foster externalizing problems in youths, although the pattern of causality cannot be determined with these data. Based on the previously reviewed findings, we expected youths' and mothers' negative conflict reactions to be associated with relatively high levels of concurrent and prior externalizing problem behaviors.

Mothers' anger and negative verbalizations during the conflict interaction were positively related to their own, fathers', and teachers' ratings of youths' externalizing, although usually the correlations were significant only for girls and/or for the total sample (see Table 11). Only for father-reported externalizing at T4 were the correlations with maternal nonverbal anger and disharmonious verbalization significant for sons. In addition, mothers' positive conflict reactions were negatively related to their own reports of daughters' externalizing behavior at T2, T3, and T4, and with teachers' reports at T2, and there were some significant and near significant sex differences in this pattern of relations.

Youths' conflict reactions were also related to their externalizing problems. Adults' ratings of children's externalizing problems were fairly consistently positively related to youths' anger expressed during the conflict and tended to be associated with youths' negative verbal conflict reactions.

CORRELATIONAL RELATIONS OF PARENTING MEASURES TO PARENTS' AND ADOLESCENTS' CONFLICT REACTIONS: DOES PARENTING RELATE TO CONFLICT REACTIONS?

The various measures of parenting behavior at T4, as well as at T2 or T3, were correlated with both mothers' and youths' T4 conflict reactions. At T4, the measures of parent positive affect and warmth were coded from the mother–adolescent joint origami task that occurred shortly before the conflict interaction. At T2 and T3, parental warmth, positive emotion, and discussion of emotion were assessed during the slide procedure and parents reported their expressivity in the family. Recall that in general we predicted that positive and warm parenting, positive parental affect, parental discussion of emotion, and low levels of parental dominant negative emotion, would relate to more positive and less negative conflict reactions, for both youths and their parents (albeit for somewhat different reasons).

Recall there was considerable within-actor (mother or adolescent) consistency between mothers' or youths' affect during the joint origami task and their own conflict reactions, especially for nonverbal affect (see Table 8). Because the joint origami task occurred shortly before the conflict interaction, we also report correlations of maternal affect/warmth during this task with youths' subsequent conflict reactions. In addition, we present correlations

between youths' affective responding during the origami task and their parents' subsequent conflict reactions. Significant correlations would be consistent with the view that the quality of the mother-child interaction in the nonconflictual setting carries over into the conflictual interaction; moreover, the correlations provide information on possible child effects on mothers' reactions during the conflict interaction.

Relations of T2/3 Parenting Measures to T4 Conflict Reactions—Mothers' and adolescents' conflict reactions at T4 were correlated with observed parent-child interactions while observing evocative slides at T2 and T3 and with mother-reported affect in the family at T2 and T3.

Mothers' Conflict Reactions: T2 and T3 maternal warmth and positive expressivity during the slide procedure were consistently negatively related to mothers' hostile (but not disharmonious) verbal conflict reactions, usually negatively related to their nonverbal anger, and often positively related to their positive conflict reactions (see Table 12). Moreover, mothers who were high in the discussion of emotion at T2 were less likely at T4 to use disharmonious verbalizations and to express nonverbal anger, and were more likely to exhibit positive reactions at T4 during the conflict interaction (with the latter two findings holding only for daughters). Maternal discussion of emotion at T3 was also negatively related to mothers' nonverbal anger during the conflict reaction with daughters but was unrelated to negative verbalizations or positive parental reactions.

Parent-reported dominant negative expressivity in the family was frequently correlated with mothers' T4 conflict reactions (see Table 13). In general, parental dominant negative expressivity was significantly, positively related to mothers' hostile verbalizations with daughters and nonverbal anger with sons. In contrast, reports of positive expressivity in the family were infrequently significantly correlated with mothers' conflict reactions.

In summary, parental observed interactions at T2 and T3 generally predicted mothers' anger, positive reactions, and hostile (but not disharmonious) verbalizations at T4. In addition, when parents reported relatively high expression of negative emotion in the family 2 and 4 years prior, mothers were relatively likely to express nonverbal anger with sons and to use negative verbalizations (especially with daughters) at T4 during the conflict interaction.

Adolescents' Conflict Reactions: There were relatively few significant relations between observed parental behaviors at T2 and T3 and youths' reactions during the conflict interaction (see Table 14), although T2 parental positive affect was negatively related to youths' nonverbal anger and daughters' negative verbalizations, whereas T2 parental warmth was negatively related to boys' anger. In addition, parental discussion of emotion at T2 was negatively related to youths' nonverbal conflict anger at T4, and parental discussion of emotion at T3 was negatively related to sons' negative verbalizations during the conflict. Similar to what was found for parents' conflict reactions, there also was a consistent positive relation between parent-reported dominant negative expressivity at T2 and T3 and youths' negative verbal and angry conflict reactions (see Table 13). Moreover, reports of positive expressivity in the family at T2 were positively related to daughters' positive conflict reactions. Thus, positive parenting years prior predicted youths' conflict reactions in adolescence, albeit primarily for T2 observed parenting and for parent-reported negative expressivity in the home.

Relations of Parents' and Adolescents' Behavior During the T4 Origami Task to Each Other's Subsequent Conflict Reactions—There was some relation between mothers' affect during the T4 origami task shortly before the conflict discussion and adolescents' conflict reactions and vice versa. Maternal warmth (but not positive affect) during the joint origami task predicted high levels of youths' humor during the conflict interaction,

whereas maternal negative affect during the origami task predicted relatively high levels of youths' nonverbal anger and negative verbalizations (the latter only for daughters; see Table 8). Moreover, adolescents' positive emotion during the origami task was related to lower levels of mothers' nonverbal anger and higher levels of mothers' positive reactions during the conflict interaction. In addition, sons' negative affect during the origami task was related to high levels of mothers' nonverbal anger and low levels of mothers' positive reactions during the conflict interaction. These findings for both adolescents and their mothers suggest that interactions during the initial, relatively nonconflictual task helped to set the tone for the conflict discussion.

PREDICTORS OF MOTHER- AND ADOLESCENT-REPORTED INTENSITY OF RECENT MOTHER-ADOLESCENT CONFLICT

The relations of youths' dispositional characteristics and parenting variables to reported intensity of recent mother-adolescent conflict (i.e., ratings of the degree to which recent conflicts were upsetting) were also examined to determine whether the pattern of findings was similar to that found for observed conflict reactions.

Dispositional Characteristics—Mothers' reports of intensity of recent conflict with their children were related to relatively high levels of mother-reported child negative emotionality and relatively low levels of resiliency and control/regulation at T2, T3, and T4 (see Table 15). A less consistent but similar pattern of relations was obtained for teachers' reports of children's dispositions, especially as reported at T2. Moreover, mothers' reports of recent conflict were consistently related to mother-, father-, and teacher-reported externalizing problems across assessments. Thus, mothers who reported more recent conflict upset were more likely to have children viewed as unregulated, negative, low in resilience, and prone to externalizing problems, concurrently and in the past. Youths' reports of recent conflict intensity were less frequently related to adults' reports of youths' dispositions. However, daughters who reported higher conflict intensity were reported to be relatively low in control/regulation by their parents at T2, T3, and T4. In addition, these girls were viewed by mothers and fathers as high in externalizing problems at multiple assessments.

Parenting—Mothers' reports of recent conflict upset usually were negatively related to observed warmth and their positive affect (but not discussion of emotion) for the total sample (see Table 16). In addition, mothers' reports of recent conflict intensity were positively related to their reports of parental expression of negative dominant emotion in the home at both T2 and T3. In contrast, youths' reports of recent conflict upset were infrequently related to measures of parenting, especially as observed at T2 (adolescent-reported intensity of recent conflict occasionally was negatively related to positive FE and T4 parental warmth or positive emotion).

PREDICTORS OF SATISFACTION WITH CONFLICT RESOLUTION

Mothers' and youths' perceptions regarding how successfully they resolved the problem(s) they discussed and how satisfied they were with the solution (a composite score) were expected to be associated with their conflict reactions. Mothers' and adolescents' ratings of their dissatisfaction with the conflict resolutions were significantly related, $r_s(59,56) = 0.63$ and 0.38 , $p < .001$ and $.003$, for daughters and sons. Moreover, mothers who reported a lack of satisfactory resolution of the conflict tended to have expressed more nonverbal anger with their daughters and more disharmonious verbalizations, and their children were relatively high in anger and negative verbalizations during the conflict (see Table 17). In addition, when youths reported a lack of resolution/satisfaction, they tended to be relatively high in anger and negative verbalizations and their mothers were more likely to express anger and less likely to enact positive conflict reactions. Thus, as expected, reports of low levels of satisfactory conflict resolution were associated with negative interactions during the conflict.

Mothers' reports of a satisfactory resolution were not related to either their own or their children's reports of intensity of recent conflict. In contrast, youths' reports of a lack of consensus/resolution were related to both mothers' and their own reports of intense recent conflict, $r_s(120) = .21$ and $.25$, $p_s < .02$ and $.001$. Thus, youths may have perceived a connection between how the conflict discussion was resolved and the degree of conflict with their mothers in the recent past.

BRIEF SUMMARY

The descriptive data and correlational analyses in this chapter provide basic information on relations among critical variables that is useful for interpreting the models that we report in the next chapter. In addition, findings for a number of variables that were not collected at multiple assessments (e.g., observed child control and negative emotionality), as well as for variables of secondary importance (e.g., information on the nature of conflictual issues discussed and relations of other variables with reported intensity of recent conflict and satisfaction with the resolution of the conflict discussion), were reported in this chapter. In general, the pattern of findings suggested that mothers' and their adolescents' conflict reactions were not only related to one another's reactions, but also to a range of variables including the intensity of recent conflict, the quality of the interactions shortly before the conflict discussion task, concurrent and prior child dispositional characteristics/problem behavior and quality of parenting, and satisfactory with the outcome of the conflict discussion. For some dispositional characteristics of the child (i.e., negative emotionality and control/regulation) and for mother- or teacher-reported externalizing problems, the pattern of findings was more consistent for daughters than sons; sometimes these gender differences were nearly significant or significant. Often, however, it was the pattern of significant findings for girls and nonsignificant findings for boys that was most evident.

The correlational analyses could not assess the relation of mothers' and adolescents' conflict reactions to change in children's dispositional characteristics or parenting over time; nor could they assess the unique contributions of children's dispositions and parenting to conflict reactions and potential-mediated relations in these pathways. Thus, latent growth curve and structural equation modeling were used to examine these issues.

IV. GROWTH CURVES, PREDICTION OF CONFLICT REACTIONS FROM GROWTH CURVES, AND TESTS OF MEDIATED RELATIONS

Latent growth curve analyses were used to address the next set of major research questions. This approach allows researchers to examine change in the mean levels of variables over time and if individual differences in change over time relate to predictors and outcomes (Singer & Willet, 2003). Using this method of analysis, we addressed four questions: (1) Do mean levels of control/regulation, negative emotionality, resiliency, externalizing problems, and positive parenting change over time (from early adolescence into adolescence)? (2) Do the patterns of change in means across time vary for sons and daughters? (3) Do individual differences in the intercepts (initial values) and slopes (change of mean level) for the trajectories predict parents' and adolescents' conflict reactions at T4? (4) Is such prediction of conflict reactions at T4 moderated by adolescents' sex? Addressing the first two questions provided basic information on the developmental change in key variables (and sex differences in trajectories) and provided the initial model structures used to test the next two questions, which were more central to this monograph.

The primary difference between modeling in the traditional structural equation framework and a growth curve framework is the inclusion of a model on the means for the observed variables, in addition to the variances and covariances. With growth curve models, one obtains estimates

of the trajectory of the mean values over time (mean rate of change or slope across all children) for the construct and the mean value of the construct at the starting point (i.e., T2, which is henceforth labeled the intercept or initial status). We do not report intercept values in the text because their mean values were always expected to be greater than 0 (often codes/values started at 1.0), and this was always true (see Table 19 for a list of the intercept values and their significance levels). If the estimate of the linear slope was significant, it indicated that, for example, control significantly increased or decreased (depending on the sign of the estimate) by the amount of the estimate between each unit change (here, between each assessment, each of which was 2 years apart). In some cases, a nonlinear slope fit the data better and was estimated. The model also includes variability for the intercept and slope across all children. If those variance estimates for the intercept or slope were significant, it indicated that children differed in their levels of control at the intercept and their rate of change for the developmental trajectory, respectively.

Separate latent growth curve models were estimated for each construct and for each reporter; only variables assessed at all three times could be used for growth curve analyses. Therefore, we initially estimated 11 growth curves: mothers' report of children's control/regulation, negative emotionality, resiliency and externalizing problems; teachers' report of children's control/regulation, negative emotionality, resiliency and externalizing problems; fathers' report of children's externalizing problems; and observed parental positive affect and warmth (see below for issues in interpreting the simple growth curve analyses for parental positive affect and warmth). For two of our constructs (control and negative emotionality), two indicators were available for each reporter at all three time points to estimate the model. For all other constructs, only one indicator was used. Initially we tried analyses with mothers' and teachers' reports of a predictor on the same latent construct, but many of these models either did not converge, demonstrated poor fit, or had error messages. Recall that in all the growth curve (and SEM) models, we included data from T2 and T3 from families without T4 conflict data, except for the 13 families dropped because the father was involved in the conflict interaction at T4. Under the missing at random assumption, inclusion of these families provides better estimation of model parameters when some data are missing.

Mplus 3.13 and 4.2 (Muthén & Muthén, 2006) were used to compute the growth curves. Only unstandardized composites were used in all latent growth curves and SEM models. As was reported in the methods section, the age of children at each time point ranged considerably (most children were within about 3 years of age, but there were some who were younger or older than the average for their grade). We therefore tested each model for research questions 1 and 3 with age added as a covariate of the intercept and slope of each of the growth curve models. There were no significant paths between age and the intercept and slope of the growth curve models and no significant changes in the prediction of the intercept and slope on the outcomes. Therefore, the models presented below do not include age as a covariate.

TRAJECTORIES FOR CONTROL/REGULATION, NEGATIVE EMOTIONALITY, RESILIENCY, EXTERNALIZING, AND PARENTING OVER TIME

We first computed growth curve models for each of the eligible constructs. Although developmental trajectories of the predictor variables were not a major focus of this study, we needed to compute such growth curves for each predictor before using them to predict mothers' and adolescents' conflict reactions. This enabled us to obtain the average value at T2 (the intercept) and the slope for the trajectory, as well as individual differences (variances) in the intercept and slope over time. In our growth curve models, we always set the intercept at T2 (i.e., the first time point of interest in this paper) when adolescents were, on average, 9.39 years old. There are no standards in the field regarding the symbols used to represent the means for the intercept and slope. We decided to use $\hat{\mu}$ to refer to the mean of the intercept or slope.

According to some statisticians, a model fits the data well if the χ^2 is not significant, the *CFI* is above 0.95, *RMSEA* is <0.05 and *SRMR* is <0.05 (Hu & Bentler, 1999). However, a *CFI* above 0.90, *RMSEA* <0.10 , and *SRMR* <0.10 are still considered a fair fit according to Browne and Cudeck (1993).

Second, to investigate whether the change over time for each observed variable differed significantly between girls and boys, we ran multigroup models. In a first set of models, we tested whether the mean intercept and mean slope significantly differed between sons and daughters by setting the means for intercept and slope factors for girls to zero. The mean for boys was then estimated relative to the girls, therefore providing an estimate of the difference as a contrast between boys and girls. A negative estimated value for either the intercept or slope indicates that boys were lower than girls and a positive estimate indicates that boys were higher than girls. If the contrast was significant, it indicated that there was a difference in the parameter (mean slope or mean intercept) for boys and girls. When a significant gender difference was found for a given variable in the first multigroup model, we computed a second model in which we freely estimated the intercept and slope for both boys and girls. This allowed us to estimate the actual values of these parameters, instead of simply a contrast. For models pertaining to negative emotionality or control/regulation (i.e., models with more than one indicator), we set the loadings to be invariant over time if they had been found to be invariant in the individual latent growth curve model run with the whole sample. Furthermore, in the multigroup models, we tested whether the indicators should be set equal across boys and girls. Using a χ^2 difference test, we found that in all models presented below with multiple indicators, the unconstrained models did not fit significantly better than the constrained models; thus, indicators were set to be invariant across boys and girls. A number of the growth curve models ran better—that is, without critical error messages—for mother-report data than for teacher-report data. This could be due, in part, to more missing data for teachers.

To avoid overwhelming the text with numbers, Table 18 summarizes the fit indices for all models presented in Chapter IV and Table 19 summarizes the estimates for intercepts and slopes and sex differences in the individual latent growth curve models.

Negative Emotionality—Two indicators of negative emotionality (the negative emotional intensity scale and emotion items from the Block and Block's Q-sort, 1980) were used to estimate the linear growth curve (LGC) models for mothers' or teachers' report of children's negative emotionality. Because more than one indicator was available at each time point, we tested the longitudinal invariance of the indicators of children's negative emotionality over time (i.e., if the estimates of the construct were the same across time). We estimated models with and without longitudinal constraints on the indicators of negative emotionality (i.e., constraining the values of the indicators to be the same across time). A χ^2 difference statistic was used to test the difference in fit ($\Delta\chi^2$) between the two models. If the unconstrained model fit significantly better than the constrained model, we report the findings for the former model (as well as the $\Delta\chi^2$) in which the indicators of negative emotionality were allowed to vary across time.

For mothers' reports, the model that was unconstrained across assessments did not fit the data significantly better than the constrained model, $\Delta\chi^2(2) = 1.02$, *ns*; therefore, the constrained model was retained, indicating that the loadings of the indicators did not differ significantly at the three time points. The constrained LGC model fit the data well. As can be seen in Figures 2 and 3, the estimated mean slope indicated that children's negative emotionality decreased significantly over time, $\hat{\mu}_{\text{slope}} = -0.15$, $p < .001$. The estimated variance components indicated that there were significant individual differences in children's negative emotionality at T2, but no significant individual differences in the rate of change over time. In summary, it appears that although there were individual differences in children's mother-reported negative

emotionality at T2, those individual differences remained stable over time (i.e., the rank order of individuals was similar over time) even though, overall, children's negative emotionality decreased by a rate of change of 0.15 from one time point to the next.

The multigroup model testing for a sex difference in the mother-report model fit the data well and the initial status (intercept) and trajectory of children's negative emotionality as reported by mothers did not differ across boys and girls.

For teachers' reports, the model with the indicators unconstrained over time fit the data significantly better than the constrained model, $\Delta\chi^2(2) = 9.25, p < .01$, indicating that the loadings of the indicators differed over time. The unconstrained LGC model fit the data well. The estimated linear mean slope was not significant. The variance component indicated that although there were significant individual differences in children's negative emotionality at T2, there was no significant individual variation in the growth rate of change over time. Therefore, the individual differences at T2 appeared to remain stable over time.

The multigroup model for teachers' report fit the data well. The intercept for boys was significantly higher than for girls, $\Delta\hat{\mu} = 0.68, p < .001$, and the slope for boys was marginally lower than for girls, $\Delta\hat{\mu} = -0.19, p < .10$ (see Figure 4). The second model in which the intercept and slope were freely estimated for boys and girls also fit the data well. The model-estimated slope was significantly higher for girls ($-0.02, ns$) than for boys ($-0.16, p < .10$), and although girls were stable on their negative emotionality across time, boys' negative emotionality decreased near significantly (by 0.16 per each unit change [i.e., 2 years]).

In summary, mother-reported negative emotionality declined over time, whereas teacher-reported negative emotionality did not, although there was a near significant sex difference, with teacher-reported negative emotionality declining marginally for sons but not daughters.

Resiliency—The model for mothers' reports of resiliency fit the data well. The estimated mean slope was nonsignificant. The variance estimates indicated that there were significant individual differences in children's resiliency at T2, but not in the rate of change over time. Therefore, the individual differences observed at T2 remained relatively stable from T2 to T4.

For mothers' report of children's resiliency, the multigroup model fit the data adequately on most indices of fit. The intercept and slope for boys and girls did not differ significantly.

In summary, there was no evidence of resiliency changing systematically with age. Moreover, there were no sex differences in the findings for parent-reported resiliency.

Control/Regulation—For control, two indicators were available for each reporter and at each time point: children's ego control and effortful control. Thus, we compared models that were constrained and unconstrained across time for the construct of control. For mothers' reports, the unconstrained model fit the data better than the constrained model, indicating that the loadings of the indicators of children's control/regulation differed over time, $\Delta\chi^2(2) = 13.03, p < .01$. The linear change model with unconstrained indicators fit the data well. The estimated mean slope was nonsignificant, indicating that there were not systematic individual differences in the pattern of mean-level change over time. The variance components indicated that there were significant individual differences in both children's control at T2 (i.e., the intercept) and in the rate of change over time.

The fit of the multigroup model testing for a sex difference in mothers' report of children's control was acceptable. The intercept was significantly lower for boys than for girls, $\Delta\hat{\mu} = -0.30, p < .01$, indicating that boys were rated as lower initially on control. No significant sex difference in the trajectory over time was found. The second model in which the intercept and

slope were freely estimated for boys and girls also fit the data adequately, and estimated girls' and boys' intercepts at 4.90 and 4.58, respectively.

Externalizing Problems—Three latent growth curve models were estimated in order to investigate the developmental trajectory of externalizing over time. For mothers' reports, the linear change model fit the data well. As can be seen in Figures 5 and 6, at the intercept, children's externalizing was estimated at 2.11 and decreased by a linear rate -0.05 , $p < .001$, from one time point to another. Significant variances for both intercept and slope indicated that there were individual differences in both children's externalizing level at the intercept and in the developmental trajectory.

For mothers' reports of externalizing behavior, the multigroup models showed some differences in the developmental course of externalizing problems for boys as compared with girls. The fit of the model was acceptable for some indices but not for others. A marginal difference in the slope, but not the intercept, was found between boys and girls, $\Delta\hat{\mu} = 0.05$, $p < .10$, such that the linear decrease over time of externalizing behavior was less for boys than for girls. The fit of the second model tested (in which the intercept and slope were freely estimated for boys and girls) was also relatively poor on some indices. Whereas girls' slope indicated a significant decline of externalizing behavior over the three time points, $\hat{\mu}_{\text{slope}} = -0.08$, $p < .001$, boys' slope was not significant, indicating that boys appeared to remain stable in their externalizing behaviors (as reported by mothers) over the three time points (see Figure 7). Because of the relatively poor fit of these models on some indices and the marginal difference in the slopes for boys and girls, the finding in regard to a gender difference in the slopes must be viewed with caution.

The linear growth model fit the data well for fathers' report of children's externalizing behavior. Children's externalizing behavior at T2 was estimated similarly to mothers' reports (see Table 19 for values), and father-reported externalizing behavior remained stable over time. There were individual differences in the intercept at T2, but the variance of the slope was nonsignificant.

The multigroup model for fathers' report of children's externalizing behavior fit the data well. Fathers tended to report that boys were slightly higher on externalizing behaviors at T2 (the intercept) than were girls, $\Delta\hat{\mu} = 0.16$, $p < .10$; there was not a sex difference in the slope. The second model fit the data similarly to the first model. Girls' and boys' intercepts were estimated at 2.00 and 2.15, respectively.

Finally, the fit of the linear change model for teachers' reports of children's externalizing behavior was acceptable. The estimated slope was significant and negative, $\hat{\mu}_{\text{slope}} = -0.14$, $p < .001$, indicating that children's externalizing behavior decreased over time. Although there were individual differences in the starting point of children's externalizing level behavior at T2, there was no individual variation in the rate of change over time. Thus, children showed a similar rate of decline in their level of teacher-reported externalizing over time, despite different starting points.

The multigroup model testing sex differences fit the data adequately for some indices but not for the *RMSEA*. At T2 (the intercept), boys were rated higher on externalizing behavior than girls, $\Delta\hat{\mu} = 0.51$, $p < .001$; however, there was no significant sex difference in the trajectory over time. The fit of the second model was better. The intercept for girls was estimated at 1.47, which was somewhat lower than the estimate for boys of 1.98.

In summary, there were differences in the developmental trajectories of children's externalizing behaviors depending on the rater (see Figures 5 and 6). Although mothers and

teachers both reported a decrease in externalizing problems over time, fathers did not. Furthermore, boys were rated by fathers and teachers (but not mothers) as being at least marginally higher in externalizing problems than girls at T2. Although children tended to differ in their level of externalizing at T2, only for mothers' reports of externalizing was there significant variability in the decline of externalizing problems across time and the model for this gender-related finding did not fit very well.

Parenting

Maternal Positive Affect: Positive affect was coded on a 9-point scale at T2 and T3 but was coded on a 5-point scale at T4. In order to model the developmental trajectories of parental positive affect, we transformed the variable at T4 so that positive affect at all three time points would be on the same scale (i.e., for a 9-point scale; new variable = old variable $\times$ 2–1).

For mothers' display of positive affect, the linear change model did not fit the data well. The loading for the slope at T3 was unconstrained, resulting in the estimation of a nonlinear model (see Figure 8). This model fit the data perfectly because it is a just identified model (i.e., there was zero degrees of freedom); thus, the fit could not be evaluated. The estimated nonlinear slope was significantly negative. As can be seen in Figure 9, for the range of our data, mothers' display of positive affect decreased over time by a nonlinear rate of change of -0.93 , $p < .001$. The decrease in positive affect was only -0.14 from T2 to T3 but became -1.71 from T3 to T4. These values were obtained by using the estimates from Mplus in the following equation: Predicted score at a certain time point = intercept estimate + slope estimate $\times$ slope loading (for the given assessment). For example, the predicted score of parents' positive affect at T3 = $5.72 + (-0.93) \times 0.15 = 5.58$. From the predicted scores at each time point, it is then possible to calculate the change from one time point to the next. The estimated intercept and slope variance indicated that although there were individual differences in parental positive affect at T2, there were not individual differences in the rate of change over time. Because maternal positive affect was coded during a somewhat different task at T4 than at younger ages, the nonlinear change in trajectory may be task-related (or could also stem from the differences in the number of points on the coding scales). Nonetheless, examining the relation between the pattern of change and conflict reactions (in the next set of analyses) was still useful.

The multigroup model testing sex differences in the nonlinear model fit the data well (the fit could be estimated due to the larger number of degrees of freedom than in the initial model). Mothers' positive affect at the intercept was significantly lower for boys than for girls, $\Delta\hat{\mu} = -0.36$, $p < .01$, and the nonlinear rate of change was more negative for girls than for boys, $\Delta\hat{\mu} = 0.17$, $p < .05$. The second multigroup model fit the data well. The model estimated intercepts were 5.87 and 5.55 for girls and boys, respectively, and the model estimated nonlinear slopes were -0.98 for girls and -0.86 for boys, $ps < .001$. The fact that there was a sex difference in the slopes suggests that there actually was some variability across individuals in the slope. For the range of our data, although positive affect decreased similarly for both sexes from T3 to T4, from T2 to T3 the decline was steeper for girls than for boys (see Figure 10).

Warmth: For mothers' display of warmth during the parent–child interactions, the linear trend model did not fit the data well. We tested a slightly different model in which we released the loading for the slope at T3, therefore allowing the shape of the trajectory to be nonlinear. The residual variance for parenting at T4 had to be fixed to zero, which is somewhat common in growth curve models (Muthén & Muthén, online discussion board, posted December 1999) and acceptable when the residual variance is nonsignificant. Although the model did not fit the data well, a model presented later (when sex differences were considered and when outcomes were added to the model) did fit the data well. We therefore decided to address the findings from this model, although we must interpret them with caution. As can be seen in Figures 8

and 11, the estimated nonlinear mean slope of 0.71 was significant, $p < .001$, indicating that mothers' warmth followed a quadratic U-shaped trajectory. For the range of our data, mothers' display of warmth decreased slightly (by -0.46) from T2 to T3 before increasing more rapidly (by 2.46 units) from T3 to T4. The variance component indicated that there were significant individual differences both in maternal warmth at T2 and in the rate of change over time. As for mothers' positive expressivity, because warmth was coded during a somewhat different task at T4 than at younger ages, the nonlinear change in trajectory is difficult to interpret and it is not possible to draw conclusions about developmental changes. Nonetheless, it is of interest that mothers differed in the degree of change in warmth across time and the individual differences in trajectories (e.g., whether and how much a parent increased in warmth or positive affect over the 4 years) still could predict outcomes in a meaningful manner.

The multigroup model fit the data much better than the aforementioned model and indicated that there were significant gender differences in mothers' warmth for both the intercept and slope, $\Delta\hat{\mu} = -0.64$ and 0.31 , $ps < .01$ and $.05$, respectively. Mothers of boys displayed less warmth at T2 (the intercept) than mothers of girls. Furthermore, the nonlinear rate of change was more positive for boys than for girls. As can be seen in Figure 12, for the range of our data, although mothers displayed similar amounts of warmth at T4 regardless of children's sex, the increase in maternal display of warmth from T3 to T4 appeared steeper for boys than for girls and the decrease from T2 to T3 appeared steeper for girls than for boys. Whereas the model with the intercept and slope for girls set at zero fit the data well, the model with the intercept and slope of girls and boys freely estimated did not fit the data well. Therefore, the estimates from the second model should be taken with caution, although from the first model it is clear that there were sex differences in the intercept and slope.

PREDICTION OF PARENT-ADOLESCENT CONFLICT REACTIONS AT T4 FROM THE INDIVIDUAL GROWTH CURVES

Next we used the latent growth curve models discussed above as predictors of mothers' and adolescents' conflict reactions at T4. We present models in which a single group growth curve was used to predict the eight conflict reactions (four for mothers, four for adolescents). The findings were highly similar when we conducted separate models for the four mother reactions and for the four adolescent reaction indices; thus, for simplicity, we present the findings from the model including all conflict reactions. Figure 13 shows an example of a LGC model in which the intercept and slope predicted the eight conflict outcomes at T4.⁸ Tables 18 and 20 contain a summary of the fit of the models, the betas for the intercepts and slopes predicting the conflict reactions, and the constraints applied to each model. Therefore, they are not repeated in the text. Sometimes models with marginal fits in the initial models fit better in the second set of models including conflict reactions.

In order to assess sex differences in the path coefficients, multigroup models were also computed. A given model was estimated once with all path coefficients to the conflict outcomes constrained to be equal across groups and once with all paths coefficients freed. A χ^2 difference test was used to determine whether freeing the paths significantly improved the fit of the model. If the unconstrained model fit better than the constrained model, there was a gender difference in the path to one or more T4 conflict reactions. The models presented earlier (in the previous section) were used as a basis for these multigroup models: The means and variances of the intercept and slope were constrained across boys and girls when no significant (or marginally significant) difference had been found in the individual latent growth curves by sex. In models

⁸In order to assess whether the conflict reactions could be predicted by both the parents' and teachers' growth curves for dispositional characteristics, we tested a model that included paths from the intercept and slope of both growth curves to the conflict discussion outcomes. This model did not converge; therefore, the models presented only include one growth curve—for either parent- or teacher-reported dispositional variables—predicting T4 conflict outcomes.

containing two indicators of a construct, indicators for boys and girls were constrained to be equal because none of the models without constraints fit better (see previous section). In addition, indicators were constrained to be equal across times if they had been found to be comparable in the models presented earlier.

Although most of these multigroup models did not indicate that there was a significant gender difference in the prediction of outcomes from the intercept and slope of the growth model, it appears that there might be undetected gender differences, perhaps as a result of the relatively low n in these models due to splitting the data in two groups, which reduced the power to detect significant differences between the two groups. Indeed, for several constructs, the significant paths to T4 conflict outcomes were evident primarily for girls and not for boys; we briefly note when this was the case.

Negative Emotionality—The model with mothers' reports of children's negative emotionality fit the data adequately. Children with higher mother-reported negative emotionality at the intercept (T2) displayed more nonverbal anger and had mothers who exhibited fewer positive reactions and more hostile reactions and anger during the conflict discussion at T4. Conflict reactions were not predicted by the slope. In regard to sex differences, the constrained multiple group model fit the data well. Although the χ^2 difference test of sex differences was not significant, $\Delta\chi^2(16) = 10.88$, *ns*, all significant paths to T4 outcomes were for girls and not boys.

For teachers' reports of children's negative emotionality, the model predicting T4 conflict reactions fit the data well. Higher levels of teacher-reported negative emotionality at T2 (the intercept) predicted more maternal anger and disharmonious reactions during the conflict discussion at T4 and, near significantly, less positive maternal reactions and higher levels of youths' anger. The unconstrained multigroup model testing for sex differences fit the data best. However, an error message accompanied the constrained model, indicating that it was inappropriate to compare the constrained with the unconstrained model. Thus, we could not test for sex differences in prediction of the conflict reactions.

In summary, although the intercept (T2) values of children's negative emotionality tended to predict a variety of mothers' and adolescents' conflict reactions in a manner consistent with predictions, conflict reactions were not predicted by the slope—that is, the rate of change in children's negative emotion.

Resiliency—For mothers' reports of children's resiliency, the model fit the data well. Children's resiliency at T2 (the intercept) predicted higher levels of positive affective reactions by mothers, higher positive affect and humor as displayed by youths, and lower anger as displayed by mothers (and, near significantly, by youths) during the conflict discussion. In addition, the constrained multiple group model testing for sex differences fit the data well. The χ^2 difference test did not indicate a significant improvement in the fit of the model when freeing the path coefficients, $\Delta\chi^2(16) = 11.68$, *ns*. In summary, although the initial level of children's parent-rated resiliency predicted a number of conflict reactions in the predicted direction, the slope did not.

Control/Regulation—The model predicting conflict reactions from mother-reported control fit the data adequately. Variability in both the intercept and the slope significantly predicted conflict outcomes. Higher levels of children's control at T2 (i.e., the intercept) predicted higher levels of mothers' positive reactions, youths' display of positive affect, and, marginally, youths' humorous reactions at T4. Higher T2 control also predicted lower levels of youths' and mothers' display of anger (and, marginally, mothers' disharmonious reactions). In addition, variability in the developmental trajectory of children's control was significantly negatively

related to youths' negative verbal reactions at T4. Children whose control increased more rapidly over time were less likely to emit negative verbalizations during the conflict discussion. The fit of the constrained multigroup model testing for sex differences was marginally acceptable (and varied across indices) and the unconstrained model did not significantly improve the fit of the model, $\Delta\chi^2(16) = 14.62$, *ns*. It should be noted that although the χ^2 difference test was not significant, the relations between control/regulation and conflict outcomes in this model were mainly for girls.

Externalizing Problems—For mothers' reports of children's externalizing problems, the model predicting conflict reactions fit the data well. Variability in the intercept significantly or near significantly predicted all eight conflict outcomes (the *p* value was marginal for youths' humorous statements) such that children higher on externalizing at T2 (the intercept) displayed more anger and other negative reactions and less positive affect, as well as somewhat fewer humorous statements, and their mothers displayed fewer positive reactions and more anger, hostile, and disharmonious verbal reactions. Furthermore, variability in developmental trajectories was significantly related to conflict reactions. A less steep decline in externalizing was associated with higher maternal anger, and marginally, with high levels of youths' anger and other negative reactions. In addition, the fit of the constrained model that tested for sex differences was acceptable on most indices, and the fit did not improve significantly as a result of releasing the paths, $\Delta\chi^2(16) = 21.10$, *ns*. Nonetheless, although the sex differences were not significant, paths between the intercept or slope and conflict outcomes were significant primarily for girls.

The model for fathers' report of children's externalizing also fit the data well. Variability in the intercept (but not the slope) significantly predicted conflict reactions, such that higher levels of father-reported externalizing at T2 predicted higher levels of mothers' nonverbal anger, hostile reactions, and disharmonious reactions (and near significantly negatively related to positive reactions), as well as youths' display of anger and negative verbal reactions. The multigroup model ran with serious error messages, so we were not able to assess moderation by sex.

For teachers' reports of children externalizing, the fit of the model was acceptable. However, few relations between variability in the intercept and conflict reactions were found. Teacher-reported externalizing at T2 was only marginally and positively related to mothers' disharmonious reactions and to youths' anger. We were not able to assess moderation by sex because the models did not run without a serious error message.

In summary, the T2, initial levels of mother- and father-reported (but not teacher-reported) externalizing problems predicted high levels of negative conflict reactions by both mothers and their children at T4. In addition, mother-reported externalizing problems at T2 predicted low levels of positive affect for mothers and adolescents. Of even more interest, a less steep decline in (or maintenance of) mother-reported externalizing problems predicted three out of five indices of mothers' or youths' negative conflict reactions at near significance or significance.

Parenting

Positive Affect: When the conflict outcomes were added to the model for maternal positive affect, the model fit the data well. Per the advice of Muthén and Muthén (Mplus discussion board), the residual variance for positive affect at T4 was fixed at zero because it was slightly (although not significantly) negative ($t = -0.61$). The higher mothers' positive affect at T2 (the intercept), the greater mothers' positive reactions, the less mothers' and their children's anger, and the less mothers' hostile verbal reactions during the conflict discussion. Furthermore, for the range of our data, mothers with a smaller (or no) decline in positive affect across time were

more likely to display positive reactions and less likely to display nonverbal anger during the conflict discussion at T4, and their children were more likely to use humor. Moreover, the fit of the constrained multiple group model testing for sex differences was acceptable and did not improve significantly as a function of freeing the paths coefficient, $\Delta\chi^2(16) = 10.25$, *ns*.

Warmth: The fit of the model predicting conflict reactions from maternal warmth was acceptable. Higher initial maternal warmth was associated with high maternal positive reactions and more humorous statements by youths during the conflict discussion at T4. In addition, the higher maternal warmth was at T2, the less mothers displayed nonverbal anger and verbal hostile and disharmonious reactions. Finally, the variability in the developmental trajectory of maternal warmth (the slope) significantly predicted conflict reactions. For the range of our data, the larger the increase in maternal warmth over time (especially from T3 to T4), the more mothers exhibited positive reactions and the less (marginally) youths displayed nonverbal anger during the conflict discussion at T4.

The fit of the multiple group constrained model for warmth was good, and freeing the paths did not significantly improve the model, indicating that there were no significant sex differences in the prediction of the conflict outcomes, $\Delta\chi^2(16) = 12.28$, *ns*. Indeed, when comparing findings for boys and girls, no clear pattern of sex differences emerged.

In summary, the initial levels of maternal warmth and positive affect tended to predict the quality of mothers' and youths' conflict reactions, especially the former. In addition, a smaller decline in positive affect and a greater increase in warmth over time predicted mothers' positive conflict reactions and, for the former, children's humor during the conflict interaction. In addition, the slope for one or the other parenting measure was related to lower levels of anger conflict reactions, significantly for mothers and near significantly for adolescents.

MEDIATIONAL ANALYSES

In a last set of analyses, mediated relations between measures of children's temperament/personality (i.e., negative emotionality, control, resiliency) and measures of observed quality of parenting (positive affect and warmth) when predicting T4 conflict reactions were examined using the traditional structural equation modeling (SEM) approach.⁹ These analyses allowed us to explore the bidirectionality of the relations between children's temperament/personality and parenting over time, as well as to test whether dispositional characteristics mediated the relations of parenting to conflict reactions or vice versa. In addition, in these models, we could assess the unique effects of parenting and child dispositions on conflict reactions (i.e., prediction for parenting controlling for child temperament/personality and vice versa) and if there was additive unique prediction from parenting and children's temperament or resiliency. In this set of models, we focused on children's temperamentally based differences and personality resiliency (rather than externalizing problems) assuming that they were somewhat (albeit not entirely) more independent of parenting at young ages than were levels of children's externalizing problems.

As was true for the growth curve models predicting conflict reactions, findings were highly similar if we did separate models for mothers' reactions and adolescents' reactions or included

⁹We also estimated parallel growth curves models predicting conflict outcomes at T4. For example, both the growth curve model for children's control and parents' warmth were used to predict conflict reactions, allowing the intercept and slope of one growth curve model to predict the intercept and slope of the other, thus enabling testing of the mediated relation between one growth model and conflict reactions through the other growth model. Four of these models were run using children's control or negative emotionality as the growth model for children's temperament and parental positive affect or warmth as the growth model for parenting. Results showed significant mediation of the relation between the intercept of one growth model and conflict reactions through the intercept of the other growth model, but no significant mediation was found involving the slopes. Because the intercept only represents T2 data, we do not present the results of these analyses.

them in the same model; thus, we present the findings with both sets of reactions. We tested only relations in which parenting or child dispositions predicted one another over time and then predicted one or more conflict relations at T4. We did not test for mediation if both parenting and temperament/personality were not involved in the pathway (e.g., mediation only from T3 parenting to T4 parenting to T4 conflict reactions was not tested). Furthermore, when a four-variable mediated path was found (e.g., T2 parenting → T3 child disposition → T4 child disposition → conflict reactions), we do not report three-variable mediated paths if they represented part of the four-variable mediated pathway (e.g., T3 child disposition – T4 child disposition – conflict reactions). We only present three-variable mediated sequences that add to the pattern of findings above and beyond any four-variable paths. Furthermore, we report mediation only when all paths involved were significant (sometimes mediation came out with a marginal path). For measures of temperament, to reduce the number of models, we included both mothers' and teachers' reports in the same model but for measures of resiliency, we computed separate models for mothers' and teachers' reports because they did not load together (confirmatory factor analyses [CFAs] are presented below). Finally, in each model, parenting and child temperament variables (or their error terms for endogenous variables) were allowed to correlate within time.

Mplus 4.2 (Muthén & Muthén, 2006) was used to estimate the models. Mplus 4 allows for the estimation of confidence intervals (CIs) for the parameter estimates (including the indirect effects) using bootstrap procedures. In the models presented below, we obtained 95% and 99% CIs using the bias-corrected bootstrap method as recommended by MacKinnon, Lockwood, and Williams (2004). Using bootstrapping methods to test mediation is highly encouraged in the field for samples smaller than 400 (McCartney, Burchinal, & Bub, 2006). We directed Mplus to draw 1,000 samples to estimate the bias-corrected bootstrap standard errors. The bias-corrected bootstrap method takes into account the non-normality of the parameter estimate distribution, which results in CIs that are not necessarily symmetrical (Muthén & Muthén, 2006). If the CI includes the value 0, the null hypothesis that there is not mediation cannot be rejected. Figures 14-21 depict the results from the mediational analyses; fit values for the models are in Table 18. Strongly bolded lines in the Figures indicate paths that were significantly mediated according to the Mplus statistics. Table 21 includes information on significant (or near significant) paths from parenting or child characteristics to conflict reactions and Table 22 provides a summary of all the cross-paths and mediated relations.

CFAs for SEMs—We ran a total of 18 CFAs to ensure unidimensionality of the latent variables in the model, separating constructs from each time points, and putting together factors from each of the models performed to test for mediation. At T2, we computed a CFA with (1) maternal positive affect and the four indicators of children's control, (2) maternal positive affect and the four indicators of children's negative emotionality, (3) maternal positive affect and the two indicators of children's resiliency, and (4), (5), and (6) involving maternal warmth (instead of maternal positive emotion) and children's control, negative emotionality, and resiliency, respectively. At T3 and T4, we ran the same six CFAs as described above for T2.

In general, all CFAs including children's control (two at each of three assessments) and for children's negative emotionality fit the data well and the loadings of the indicators usually were significant. In the few cases in which a loading on a construct was not significant in the negative emotionality CFAs, the same loading was significant in the full model testing mediation. Thus, we kept the four indicators of teacher- and mother-reported children's dispositions on the same latent construct in the models for both control/regulation and for negative emotionality.

Of the six CFAs including children's resiliency with an index of parenting, one did not converge. The other five models indicated that mothers' and teachers' reports of resiliency did

not load on the same factor in most models (one exception was at T4 when warmth was also in the model). Therefore, mediational models were computed separately for mothers' and teachers' reports of resiliency.

Maternal Positive Affect and Children's Negative Emotionality—The fit of the model including maternal positive affect and children's negative emotion was acceptable on most indices (see Table 18). A χ^2 difference test indicated that all indicators for children's negative emotionality could be constrained to be equal across time, $\Delta\chi^2(6) = 1.25, ns$. All indicators for children's negative emotionality loaded significantly on the latent constructs. Both children's negative emotionality and maternal positive affect were stable across assessments (i.e., the autoregressive paths were significant; see Figure 14). Furthermore, children's negative emotionality at T2 near significantly predicted lower maternal positive affect during the slides at T3, and children's negative emotionality at T3 marginally predicted lower maternal positive affect during the origami task at T4. In regard to predicting T4 conflict reactions, higher maternal positive affect at T4 uniquely predicted relatively high maternal positive reactions and low maternal anger during the conflict discussion. In addition, relatively high child negative emotionality at T4 was uniquely related to greater adolescent anger and fewer maternal positive reactions during the conflict discussion at T4. Generally, parenting and child negative emotionality did not provide unique additive prediction of conflict reactions (i.e., conflict reactions were usually uniquely predicted by one or the other). However, mothers' positive conflict reactions were uniquely predicted by both positive parenting and a low level of children's negative emotionality.

Although the two marginally significant cross-paths provided some support for longitudinal relations between children's characteristics and parenting, there were no significant cross-paths between children's temperament and parenting variables. Therefore, we did not test for mediation.

Maternal Positive Affect and Children's Resiliency—For mothers' reports of children's resiliency, the mediational model fit the fairly data well. Maternal positive affect and children's resiliency were relatively stable over time (i.e., the autoregressive paths were significant; see Figure 15). Furthermore, resiliency at T3 significantly predicted maternal positive affect at T4. The path from maternal positive affect at T4 was positive for maternal positive reactions, negative for maternal anger, and nearly significant and negative for maternal hostile verbal reactions. Resiliency at T4 was related to higher levels of maternal positive reactions and youth positive affect, lower levels of lower maternal anger, and to some extent (near significantly) lower youth anger and greater use of humorous reactions during the conflict discussion.

Two significant four-variable mediated relations were found using the bias-corrected bootstrap method (see Figure 15). Children's resiliency at T2 predicted their resiliency at T3, which predicted maternal positive affect at T4, which in turn predicted maternal positive conflict reactions and fewer maternal displays of anger, CIs (99%) = (0.001, 0.077) and (−0.050, −0.003), respectively.

For teachers' reports of children's resiliency, the fit of the model was acceptable. The autoregressive paths for both teachers' report of children's resiliency and parental positive affect indicated that they were stable over time (see Figure 16). Maternal positive affect at T4 predicted more maternal positive reactions, less maternal anger, and, to some extent (i.e., marginally) fewer maternal disharmonious reactions during the conflict discussion. The paths from T4 resiliency to both children's positive reactions and low levels of mothers' disharmonious reactions were only near significant. There were no significant cross-paths between children's resiliency and parenting; therefore, no mediated paths were tested.

Maternal Positive Affect and Children's Control—The fit of the model was acceptable. Only the mother-reported indicators could be constrained to be equal across time. Mothers' reports of effortful control were set at 1 and when we released the constraint for mothers' reports of ego control, the model did not fit significantly better, $\Delta\chi^2(2) = 0.601$, *ns*, whereas it fit significantly worse when we tested equivalence across time for teachers' reports of effortful control and ego control, $\Delta\chi^2(2) = 11.12$ and 8.43 , $ps < .01$ and $.05$, respectively. All indicators for children's control/regulation loaded significantly on the latent constructs. Furthermore, both children's control and parenting were stable across time (see Figure 17). Children's control at T2 marginally predicted T3 maternal positive affect. In addition, higher maternal positive affect at T4 uniquely predicted higher levels of maternal positive reactions and lower maternal anger during the conflict discussion. Children higher on adult-reported control at T4 displayed less anger and negative verbal reactions and had mothers who displayed less anger and made fewer disharmonious verbal statements during the conflict discussion at T4. Generally additive unique prediction was not found, although mothers' anger reactions were predicted by both low child control and low maternal positive affect at T4.

Although there was a marginally significant cross-path between children's control/regulation at T2 and maternal positive affect at T3, there were no significant cross-paths between children's temperament and parenting variables. Therefore, no mediated relations were tested.

Maternal Warmth and Children's Negative Emotionality—The fit of the model was acceptable. All indicators for children's negative emotionality loaded significantly on the latent constructs and, as in the prior analysis, were constrained across time points. In addition, consistent with previous models, both children's negative emotionality and maternal warmth were stable over time (see Figure 18). Furthermore, children who were reported as higher on negative emotionality at T2 had mothers who displayed less warmth at T3. In terms of unique prediction by parenting versus child characteristics, youths higher on negative emotionality at T4 displayed more anger and had mothers who displayed fewer positive reactions and marginally more anger during the conflict discussion. Warmer mothers at T4 exhibited more positive reactions, less anger, and, to some extent (i.e., only marginally), fewer disharmonious reactions during the conflict (and youths used marginally more humor). Based on the modification indices, we also added a path from T3 parental warmth to mothers' hostile reactions at T4: Warmer mothers at T3 exhibited fewer hostile reactions during the conflict discussion. Unique additive prediction by parenting and negative emotionality was evident for mothers' positive conflict reactions.

Two four-variable (or factor) and one three-variable mediated sequences were found (see Figure 18). First, children rated lower on negative emotionality at T2 had warmer parents at T3, which in turn predicted higher maternal warmth at T4, which predicted more positive maternal reactions and less maternal anger during the conflict discussion at T4, although mediation for anger was only marginally significant (i.e., one of the limits of the 95% CI was exactly 0.000—Mplus only gives three decimals), CIs (95%) = $(-0.035, -0.002)$ and $(0.000, 0.021)$, respectively. Furthermore, warmth at T3 significantly mediated the relation between children's negative emotionality at T2 and maternal hostile reactions at T4, such that children lower on negative emotionality at T2 had warmer mothers at T3, which in turn predicted low levels of mothers' hostile reactions at T4, CI (99%) = $(0.006, 0.191)$.

Maternal Warmth and Children's Resiliency—For mothers' reports of children's resiliency, the fit of the data was acceptable once, following modification indices, a path was added between maternal warmth at T3 and maternal hostile reactions during the conflict discussion at T4. Resiliency and maternal warmth displayed longitudinal stability (see Figure 19). Furthermore, children's resiliency at T3 significantly predicted maternal warmth at T4; children's resiliency at T2 marginally predicted maternal warmth at T3; and maternal warmth

at T2 marginally predicted children's resiliency at T3. Children's resiliency significantly predicted lower maternal anger and higher adolescent positive affect, and, marginally, more maternal positive reactions during the conflict discussion. Maternal warmth at T3 significantly predicted fewer maternal hostile reactions during the conflict discussion, whereas maternal warmth at T4 predicted significantly more positive maternal reactions, marginally less maternal anger, and marginally fewer disharmonious reactions during the conflict discussion. A significant mediated relation was found: Children's resiliency at T2 predicted their resiliency at T3, which predicted parental warmth at T4, which in turn predicted maternal positive reactions during the conflict discussion, $CI (99\%) = (0.005, 0.078)$.

For teachers' reports of children's resiliency, the fit of the model was acceptable. The autoregressive paths for both teachers' reports of children's resiliency and maternal warmth supported the longitudinal stability of these constructs (see Figure 20). Furthermore, maternal warmth at T2 significantly predicted teachers' report of children's resiliency at T3. Teachers' reports of children's resiliency predicted only marginally fewer maternal disharmonious reactions and marginally higher youth positive affect during the conflict discussion. Maternal warmth significantly predicted fewer maternal disharmonious reactions, less maternal anger, and more positive maternal reactions, and near significantly predicted lower levels of youths' anger and more humor. Furthermore, based on the modification indices, in the final model a negative path was added between maternal warmth at T3 and mothers' hostile reactions during the conflict discussion. No mediated paths were found.

Maternal Warmth and Children's Control—The fit of the model including maternal warmth and children's control was acceptable. All indicators for children's control/regulation loaded significantly on the latent constructs. Maternal warmth and children's control were stable over time (see Figure 21). Higher control at T4 uniquely predicted lower levels of maternal anger and disharmonious verbalizations (and marginally predicted fewer hostile verbalizations), as well as low levels of youths' anger and negative verbal reactions during the conflict discussion. Furthermore, maternal warmth at T4 uniquely and significantly predicted less maternal anger, more positive maternal reactions, and marginally fewer maternal disharmonious reactions, and near significantly predicted more humorous reactions by youths during the conflict discussion. Additive unique prediction by both parenting and children's control was evident for maternal anger. Mediated relations between children's control/regulation, maternal warmth, and conflict discussion outcomes were not supported by the model.

Summary—In the SEMs, observed parenting (warmth and positive affect) and children's dispositional characteristics were stable over time. Generally either parenting or children's dispositional characteristics were uniquely related to conflict reactions in the predicted manner, although occasionally there was evidence of unique additive prediction of mothers' reactions. Children's dispositional characteristics frequently uniquely predicted adolescents' conflict reactions and/or parents' conflict reactions. Parenting tended to uniquely predict parents' conflict reactions but did not uniquely predict children's conflict reactions when variance due to children's temperament/personality was accounted for in the models. Furthermore, in a number of models, there was evidence that children's dispositions predicted subsequent parenting (2 years later) and that parenting sometimes mediated the relations of children's dispositional characteristics to conflict reactions. There were only one significant across-time path from parenting to child characteristics and one near significant path, both of which involved the prediction of T3 resiliency from T2 parenting. There was not significant evidence of children's characteristics mediating the relation of parenting to conflict reactions.

V. SUMMARY AND DISCUSSION

The primary goal of this study was to examine concurrent and longitudinal correlates and predictors of individual differences in the affective quality of adolescents' and their mothers' interactions when discussing potentially conflictual issues. To assess the affective quality of the mother-adolescent interaction, mothers' and adolescents' nonverbal anger and positive emotion, as well as their positive (e.g., humor), hostile, and controlling/disharmonious verbalizations, were coded when the dyad discussed issues of recent conflict between the two of them. Two major classes of predictors—parenting behaviors and youths' dispositional characteristics (i.e., control/regulation, emotionality, and resiliency)—were examined as concurrent or longitudinal predictors of the quality of the participants' conflict reactions; another contemporaneous predictor was reports by mothers and youths of the degree of recent conflict between them. In addition, relations of conflict reactions with concurrent and prior externalizing problem behaviors were examined, as were relations with participants' evaluations of the conflict discussion. Moreover, we examined if the pattern of relations found for observed conflict reactions was also obtained when we correlated parenting, children's dispositional characteristics, and children's externalizing problems with mothers' and adolescents' reports of the intensity of recent conflict.

Based on a social relationships perspective (Collins & Laursen, 2004; Grotevant, 1998) that assumes continuity in the quality of the parent-child relationship, we expected positive parenting behaviors such as warmth, the expression of positive emotion in the home and with the child, and parental discussion/teaching about emotion to predict higher levels of positive conflict reactions by both youths and their mothers, and lower levels of negative reactions. Conversely, reports of the expression of assertive and often hostile negative emotion by parents in the home were expected to predict anger and negative verbalizations in the conflict discussion. In addition, based on the relative stability of dispositional characteristics (due to both constitutional factors and to relative continuity in the rearing environment) and the accentuation hypothesis (Block, 1982), we expected relations between youths' dispositional characteristics and their affective reactions and verbalizations in the conflict interaction. Moreover, because youths' characteristics often evoke responses from adults (e.g., Cook et al., 1991; Burt et al., 2005) and evocative child characteristics appear to partly account for the genetic contribution to the stability of parent-adolescent conflict (McGue et al., 2005), children's dispositional characteristics also were expected to predict mothers' reactions during the mother-adolescent conflict discussion. For example, unregulated youths prone to negative emotion, as well as those prone to externalizing problems, were expected to be high in verbal verbalizations and nonverbal anger, and perhaps low in positive reactions, and their mothers were also expected to react to them in negative ways. Youths who were resilient and low in negative emotionality were expected to exhibit relatively high levels of positive affect, verbally and nonverbally, during the conflict interaction, as were their mothers. Both concurrent relations and across-time relations (albeit somewhat weaker) of the aforementioned nature were expected. Moreover, we expected some unique contribution of both youth dispositional and parenting variables to the prediction of mothers' and youths' conflict reactions.

In this section, we summarize and discuss several factors that were examined as predictors of mothers' and children's conflict reactions, including children's dispositional characteristics and externalizing problems, parenting variables, and the intensity of recent conflict. We attempt to integrate the various findings obtained from the correlations, growth curve analyses, and SEMs. The unique effects of parenting and child dispositional variables, and mediated relations involving both parenting and child dispositional characteristics when predicting conflict reactions, are also discussed.

Although there were relatively few *significant* sex differences in the associations we examined, the pattern of relations sometimes varied considerably with the sex of the adolescent child. Owing to the moderate sample size, correlations for sons and daughters had to differ by approximately 0.35 to constitute a significant difference between the sexes. Often what was found was a pattern of significance for one sex but not the other (or a much weaker pattern). Differences in patterns of findings for sons and daughters are sometimes noted, even if sex differences were not significant.

PREDICTION OF CONFLICT REACTIONS AND REPORTED INTENSITY OF CONFLICT

A variety of factors related to both mothers' and children's conflict reactions. These included the adolescents' dispositional characteristics (including externalizing problems), the quality of parenting, the quality of mother-adolescent interactions just before the conflict interaction, and the intensity of recent conflict between mother and adolescent. Thus, conflict reactions were related to both current and antecedent variables of several sorts.

Relations of Conflict Reactions With Children's Dispositional Characteristics and Behavior

With several sets of analyses, we examined our first major question: What is the relation of the quality of mothers' and youths' conflict reactions to children's concurrent and previously assessed dispositional characteristics and can the quality of conflict reactions be predicted from the initial levels 4 years earlier and patterns of change in children's dispositional characteristics? We found that both mothers' and children's conflict reactions often were related to children's concurrent and antecedent dispositional characteristics—in this case, their negative emotionality, control/regulation, and resiliency, as well as their externalizing problem behavior. This pattern of relations was especially true for daughters for negative emotionality, control/regulation, and mother- or teacher-reported externalizing problems. First we review the overall pattern of findings for each child characteristic; then we integrate and interpret the findings as a group.

Negative emotionality: In regard to children's negative emotionality, in correlational analyses mothers tended to be more negative and less positive during the conflict interaction when their children were high in dispositional negative emotionality. However, this pattern really held only for daughters (and some of the sex differences in the correlations were significant). Similarly, adolescents tended to express more anger when they were viewed by adults, especially mothers, as high in negative emotionality and exhibited negative emotion when alone shortly before the conflict interaction, and these findings—although not significantly different for sons and daughters—tended to be significant only for daughters. Consistent with these findings, there was some correspondence between the degree to which adolescents expressed negative emotion during the origami task shortly before the conflict interaction and the negativity and/or positivity of their own and their mothers' conflict reactions.

In addition, in the growth curve model predicting conflict reactions, mothers were higher in negative reactions, and lower in positive affect/verbalizations, during the conflict interaction if their child was relatively high in parent-reported and/or teacher-reported negative emotionality at the initial assessment 4 years earlier (T2, the intercept). Similarly, children who were relatively high in parent-reported negative emotionality initially were relatively likely to express anger during the conflict interaction. In multigroup growth curve model for parent-reported negative emotionality, the pattern of findings was not significantly different for sons and daughters; however, all the significant relations were for daughters.

Although there was a decline with age in the mean level of mothers' (but not teachers') reports of children's negative emotionality, conflict outcomes were not predicted by individual differences in trajectories of either parent- or teacher-reported negative emotionality. Rather,

as already noted, conflict outcomes were predicted by levels of negative emotionality 4 years earlier. This pattern of findings suggests that individual differences in negative emotionality in childhood serve as one of the factors that set up a relatively stable pattern of parent–child interaction. The association between daughters’ negative emotionality and the quality of mother–daughter interactions probably was already evident years before the conflict interaction. However, we cannot determine if our index of children’s negative emotion at T2 (in childhood) had already been affected by the ongoing quality of mother–child interactions or if a third variable affected both children’s dispositions and the quality of parent–child interactions.

Control/regulation: Findings for dispositional differences in children’s control/regulation were somewhat similar to those for dispositional negative emotionality (albeit the pattern of association was reversed). In correlational analyses, mothers tended to be relatively low in negative verbalizations and anger and high in positive affect during the conflict interaction when they or their children’s teachers (especially at younger ages for teachers) reported that their daughters were controlled and/or regulated. The sex differences in the pattern of findings often were significant or near significant. In addition, adolescents tended to express anger (both sons and daughters) and negative verbalizations (primarily daughters) during the conflict interaction if they were low in parent- or teacher-reported control/regulation. Observed regulation (persistence) was not related to conflict reactions, perhaps due to the limited variability in adolescents’ persistence.

Moreover, in the growth curve analyses, relatively low levels of children’s control at T2 predicted less positive and more anger reactions by both adolescents and mothers during the conflict interaction. In addition, although the mean levels of children’s mother-reported control/regulation did not change over the 4 years, there was variability in its slope, and children who increased more in control with age were less likely to emit negative verbalizations during the conflict interaction. Although there were not significant sex differences in the growth curve model in which control/regulation predicted conflict reactions, in the unconstrained model, most of the findings were significant only for daughters and their mothers.

Thus, overall, there appeared to be an association between children’s—especially daughters’—dispositional control/regulation 4 years earlier and the quality of mothers’ and daughters’ conflict reactions, and this association generally held over time. The only evidence of change over time in the relation of child control/regulation with conflict reactions was the relatively low level of negative verbal reactions for youths who became more regulated over time. Therefore, the findings for control/regulation suggest that the relation between children’s control/quality and mothers’ and daughters’ conflict reactions had a developmental basis in childhood.

Resiliency: Individual differences in youths’ resiliency also were related to conflict reactions. In correlational analyses, when youths were perceived as relatively resilient by their mothers, mothers and adolescents were relatively positive during the conflict interaction and low in anger. In the growth curve model predicting conflict reactions from parent-reported resiliency, resiliency at T2 (the intercept) predicted mothers’ and adolescents’ positive verbal and nonverbal conflict reactions and low levels of mothers’ anger. Resiliency did not change in mean level with age and individual differences in trajectories did not predict conflict reactions. Thus, the findings for resiliency, like negative emotionality and control/regulation, suggest that children’s dispositional characteristics in childhood may affect, and predict, the quality of mothers’ and adolescents’ affect in conflict reactions years later and that there was likely stability in this association.

Unlike parents' reports of resiliency, teachers' reports of children's resiliency did not predict conflict reactions. Teachers may have been less perceptive reporters of children's resiliency or, perhaps, children's resiliency differed at home and at school. In addition, mothers' perceptions of their children's resiliency may be more important than their children's actual resiliency in affecting mothers' own conflict reactions.

Externalizing problems: Children's externalizing problems are not usually considered a dispositional characteristic, although it is generally assumed that both temperament (and its hereditary bases) and parenting contribute to their development and occurrence (e.g., Dodge et al., 2006). Externalizing problems were relatively consistently related to mothers' and youths' conflict reactions. In correlations, mothers tended to display more negative conflict reactions, particularly anger, when their children, especially their daughters, were rated high in externalizing problems by mothers, teachers, and/or fathers, concurrently or years earlier. Mothers' conflict reactions were also relatively positive if they (or teachers at T2) viewed their daughters as low in externalizing problems. The difference in the correlations for sons and daughters was often marked, with findings in the expected directions for daughters and near zero correlations or nonsignificant correlations in the opposite direction for sons. In all cases, girls rated by adults, especially teachers, as high in externalizing appeared to "elicit" more negative and less positive affect and verbalizations from their mothers. Although we cannot determine causality, it seems possible that mothers were more offended by their daughters' than sons' externalizing behavior, perhaps due to the greater discrepancy of externalizing behavior with the feminine gender role. Or mothers may have been especially offended by daughters' externalizing behaviors because they constituted a greater violation of mothers' expectations regarding the nature of the daughter-mother relationship. Perhaps one reason that mothers did not react particularly negatively when their sons were high in externalizing problems was that they were intimidated by their acting-out adolescent sons.

Fathers', but not mothers' or teachers', ratings of their sons' concurrent externalizing problems were positively related to negative maternal conflict reactions. Perhaps fathers were more aware than mothers of their sons' problematic externalizing behavior.

Youths displayed more nonverbal anger and negative verbalizations during the conflict interaction if they were rated high in externalizing problems by mothers, fathers, and teachers, either concurrent or years earlier. It is not surprising that youths with a history of externalizing problems were angry and negative during the conflict interaction; this negativity was likely evident for years.

In fact, in the growth curves, mothers' reports of children's externalizing problems at the intercept (as estimated at the initial assessment) consistently predicted maternal and adolescent conflict reactions that were relatively negative and low in positive affect. Similarly, fathers' reports of youths' externalizing problems at T2 predicted more negative verbalizations and angry affect from both mother and adolescent during the T4 conflict interaction. No significant relations were found for teachers' reports of externalizing problems in the growth curve analyses. Thus, early externalizing problems, especially in the home, fairly consistently predicted more negative conflict reactions by both mothers and adolescents 4 years later.

There generally was a decline with age in mother-reported and teacher-reported externalizing problems. This decline across childhood into adolescence would be expected for most children (Dodge et al., 2006); Loeber, Farrington, Stouthamer-Loeber, and van Kammen (1998) concluded that most longitudinal studies show a decrement in aggression as youths enter adolescence, although serious acts of aggression may increase. Moreover, a lesser degree of decline was associated with higher levels of mothers' anger and near significantly higher levels of youths' anger and negative verbalizations during the conflict discussion. The degree that

mothers perceived a reduction in their children's externalizing problems over time was, therefore, associated with less negative interactions during the mother–adolescent conflict discussion. Thus, in total, the pattern of findings for externalizing problems suggested that both early levels of such problems, and change over time in them, predicted the quality of the mother–adolescent conflict interaction.

Unique prediction of conflict reactions by dispositional characteristics in the SEMs: In the SEMs, we examined the unique prediction of conflict reactions by dispositional parenting and temperament/personality—that is, prediction of conflict reactions by temperament/personality when controlling of the variance accounting for by parenting, as well as vice versa. Of particular importance is the finding that children's dispositional characteristics frequently uniquely predicted youths' conflict reactions, with control/regulation and negative emotionality predicting negative reactions and resiliency predicting youths' positive affect. In addition, youths' characteristics tended to uniquely predict mothers' nonverbal reactions (positive and negative), and, to a lesser degree, mothers' disharmonious verbal reactions. Of importance, children's dispositional characteristics did not uniquely predict mothers' hostile verbalizations once the effects of parenting were taken into account, perhaps because such verbalizations, in comparison with negative nonverbal affect, are more voluntarily controlled than nonverbal affect and more closely linked to mothers' ideas about parenting. Overall, the aforementioned pattern of relations suggests that children's dispositional characteristics had a relation to conflict reactions above and beyond that of parental warmth or positive affectivity.

Integration and interpretation of the findings on children's dispositional characteristics: Based on the correlations, growth curve, and SEM findings, it is clear that the adolescents' temperamentally based control/regulation and negative emotionality, as well as personality resiliency and externalizing problems, were associated (albeit not always uniquely) with the quality of both mothers' and adolescents' conflict reactions, often across time. This pattern of findings suggests that the valence of interactions observed during the conflict interaction was not novel, and that children's dispositional characteristics likely contributed to the quality of the interaction.

The findings also suggest differential continuity from childhood to adolescence. Children's dispositions were modestly to moderately related across time. The overall pattern of findings therefore tends to support the accentuation principle (Elder & Caspi, 1990)—the view that there is an increase in emphasis or salience of already prominent characteristics during social transitions in the life course. Such a process would foster differential continuity rather than discontinuity. One might also speculate that characteristics such as dispositional anger are especially heightened in conflictual and stressful contexts, which could partly account for the abundance of relations between children's dispositions and their anger.

There was only modest evidence that *change* in mean levels of child characteristics (i.e., control/regulation or externalizing problems) predicted quality of mother–adolescent conflict. It is entirely unclear why change in children's characteristics (as assessed in the growth curve analyses) was not a more powerful predictor of conflict reactions. One likely reason is the relatively high level of differential stability found for the various child dispositional variables (e.g., in the SEMs),¹⁰ especially as reported by parents. Owing to this stability, there may have been relatively little variability in the trajectories of adolescents' characteristics, which made it difficult for trajectories of dispositional variables to predict conflict reactions. In fact, there

¹⁰All correlations for parent-reported dispositions across time were 0.62 or higher even when correlations were computed separately for sons and for daughters. Because teachers differed at each assessment, correlations among assessments for the same construct were not as substantial. Moreover, correlations across time within each given construct for teacher-reported negative emotionality, resiliency, control/regulation, and externalizing problems were 0.33, 0.21, 0.46, and 0.49 or higher, respectively, for the total sample.

was significant across-individual variability in slopes only for parent-reported control/regulation and for mother-reported externalizing problems, and these were the only two child dispositional variables for which the slope of the trajectory predicted one or more conflict reactions.

We can only speculate regarding why the relations of control/regulation, negative emotionality, and mother- or teacher-reported externalizing problems when predicting conflict reactions were more plentiful and consistent for daughters than for sons. Sons did not differ from daughters, nor did mothers of sons and daughters differ, in the mean levels of their conflict reactions. Girls and their mothers were somewhat more variable than boys in most negative conflict reactions; however, this difference was significant only for daughters' negative verbalizations, which only could partially explain the general pattern of prediction for girls' negative conflict reactions.

It was also possible that mothers perceived greater discontinuity in their sons' than their daughters' personalities. However, supplemental analyses indicated that there was similar substantial consistency across time (from T2 or T3 to T4) in perceptions of sons' and their daughters' temperaments. Alternatively, it is possible that mothers of daughters are more concerned than mothers of sons that their children be well-regulated and nonnegative in their affect (but are equally focused on their resiliency), with the consequence that mothers' perceptions of their children's personalities have sex-related differential effects on how they react to them. Consistent with gender roles (and with the mean gender differences in this study), females likely are expected to be more positive and less negative in their social interactions—for example, to smile more than males (see LaFrance, Hecht, & Paluck, 2003)—and more controlled (which they are in childhood; Else-Quest, Hyde, Goldsmith, & Van Hulle, 2006). Thus, mothers may expect their daughters to show greater self-regulation, lower negative emotionality, and fewer externalizing problems and may respond more contingently to daughters' than sons' deviations in this regard.

A contributing factor to the pattern of findings may have been that the parents in the conflict interactions were mothers. Parents were warmer in the slide interaction, expressed more positive emotion, and discussed emotion more with daughters at T2, whereas such sex differences in parenting were not found at older ages in the social interactions. There were also significant sex differences in the trajectories of parenting warmth and positive affect for sons and daughters, and it appeared that mothers' positive affect decreased less for sons than for daughters, whereas their warmth increased more for sons. Thus, mothers' relationships with their sons, in comparison to daughters, appear to have improved over the 4 years before the conflict interactions, which might have caused considerable discontinuity in how mothers and sons responded to one another as they moved from childhood through adolescence. Moreover, due to the closeness of the mother–daughter relation in childhood and the greater increase in negative interactions between parents and daughters in early adolescence (McGue et al., 2005), mothers may react more strongly to their daughters' than to their sons' negative characteristics and behaviors in adolescence. Similarly, because conflict between mothers and daughters generally is more intense than for mothers and sons (Laursen & Collins, 1994; Steinberg & Silk, 2002), mothers of girls may be more likely than mothers of boys to attribute the conflict to negative characteristics of their child and, hence, to react to their daughters' undesirable characteristics. It is important to replicate the pattern of findings because often the differences between findings for sons and daughters were not significantly different. Moreover, it would be informative to determine if the same pattern of relations, or lack of relations, that was found for mothers and their children is evident for father–adolescent conflict reactions.

The notion that there was more coherence and consistency in the mother–daughter than mother–son relationship is indirectly supported by the finding that there was greater internal

consistency in mothers' or youths' negative conflict behaviors when daughters were involved. Specifically, positive correlations between negative verbalizations and nonverbal anger were significantly stronger for daughters than sons; similarly, the correlation between mothers' disharmonious negative verbalizations and nonverbal anger was near significantly stronger for mothers of daughters than for mothers of sons (albeit significant for both sexes). Although we can only speculate, perhaps the greater coherence in emotional experience and/or responding for daughters and their mothers than for sons and their mothers was because mothers' conflict reactions were reactions to their daughters' rather than to their sons' personality/behavior as exhibited over years. The gender-related difference may also have been partly due to the aforementioned greater variability in daughters' hostile reactions (which increases the likelihood of finding a correlation) and a history of more openly expressed conflict emotion with daughters (resulting in consistency between verbal and nonverbal indicators of emotion). A task for the future is to replicate this finding and identify the source of the greater coherence in mothers' and daughters' negative conflict reactions.

Overall, the relations of children's dispositional characteristics and externalizing problems to the quality of adolescents' and mothers' conflict reactions are consistent with the other research in which children's characteristics have been associated with the quality of parent-child interactions and relationships (e.g., Eisenberg et al., 2005; Stoneman et al., 1989; see Rothbart & Bates, 1998, 2006). In addition, the findings bear on the less frequently examined association between children's dispositional characteristics and parent-adolescent conflict, a specific aspect of parent-child interaction. In the sparse relevant research, relations of children's temperament to reported parent-child conflict have been relatively inconsistent and complex (e.g., Galambos & Turner, 1999; Kawaguchi et al., 1998), with the exception of the Rubenstein and Feldman's (1993) finding of a relation between adolescents' self-reported temperament and their conflict-related reactions. In contrast, our findings provide rather compelling evidence for an association within and across time between children's dispositional characteristics and parents' and adolescents' (especially daughters') conflict reactions. The pattern of findings in this study also is consistent with other work in which children's dispositional emotional intensity and regulation were associated with less constructive coping in emotional and potentially conflictual situations with peers (e.g., Eisenberg et al., 1994). Observational measures of conflict reactions may tap relatively genuine conflict-related behavior that, especially for nonverbal affective reactions, is difficult to totally inhibit or fake. In contrast, self-reported conflict reactions may be somewhat more vulnerable to self-presentational biases.

Relations of Conflict Reactions With Parenting Variables—In thinking about relations of parenting to conflict reactions, it is important to note that autoregressive paths in the SEM models indicated that there was differential continuity (i.e., rank-order stability) in observed parenting across time. Thus, children who received relatively warm parenting and were exposed to positive parental affect in childhood were relatively likely to be exposed to such supportive, positive parenting in adolescence.

Mothers' observed conflict reactions were sometimes related to concurrent and prior parenting behavior, as well as to characteristics of the child. For example, mothers' observed warmth and/or positive emotion in interactions with their child at T2 and T3 (in childhood) generally predicted the positivity versus negativity of their nonverbal and verbal conflict reactions (albeit not disharmonious verbal reactions) at T4 (in adolescence). These findings were in addition to the pattern of consistency between mothers' conflict reactions and their warmth and positive affect observed during the joint origami task at T4 shortly before the conflict interaction.

Observed parenting 2 and 4 years before the conflict interaction also was associated with adolescents' negative conflict reactions, although primarily for T2 observed parenting and for youths' nonverbal anger during the conflict interaction. T2 maternal positive affect was

negatively related to youths' nonverbal anger, whereas T2 parental warmth was negatively related to boys' anger. T2 observed maternal positive affect was also negatively related to daughters' negative verbalizations during the conflict interaction, and there were some negative relations between discussion of emotion at T2 or T3 and youths' negative conflict reactions. In addition, mothers' negative emotion during the origami task, which was shortly before the conflict interaction, predicted daughters' anger and negative verbalizations.

Associations also were found between parent-reported negative emotionality expressed in the home and adolescents' conflict reactions. When parents reported relatively high expression of negative emotion in the family 2 and 4 years earlier, mothers were relatively likely to express nonverbal anger and to use negative verbalizations at T4 during the conflict interaction, as were daughters. Conversely, mothers' reports of positive expressivity in the family tended to be only weakly associated with mothers' or youths' positive reactions in the conflict interaction.

Consistent with the pattern of correlations, in the growth curve analyses, both T2 warmth and T2 positive emotion (the intercepts) predicted relatively high maternal positive affect, low maternal anger, and few maternal negative verbalizations during the conflict interaction. In addition, T2 positive affect (the intercept) predicted low levels of adolescents' anger during the conflict interaction, whereas T2 warmth predicted high levels of adolescents' verbal humor. Of particular interest, a relative increase (vs. decline) in the slope for warmth over time and/or less of a decline in positive affectivity predicted mothers' positive affect during the conflict and lower maternal anger. Moreover, less of a decline in the slope of parental positive affect also predicted adolescents' humor during the conflict whereas a relative increase in warmth near significantly predicted lower levels of adolescents' anger. Although we do not have great confidence in the growth curves testing for the precise pattern of mean level changes over time in parental warmth and positive affect (due to the change in tasks at T4), individual differences in the general pattern of change (e.g., an increase or decrease in parental warmth or positive affect relative to other mothers) would still seem to provide useful information when predicting conflict reactions.

Thus, both the quality of parental interactions with their children 4 years earlier and change in the quality of their parenting relative to other families were related to conflict reactions in predictable ways. Warm supportive parents in childhood tended to remain relatively warm and supportive parents, even when discussing conflictual issues in adolescence. However, when growth curves were used to predict conflict reactions, mean-level change in parenting was related to the quality of adolescents' and especially mothers' conflict reactions. This pattern of findings supports the conclusion that there is considerable consistency as well as some change from childhood into adolescence in the relation of parenting behaviors to parents' and adolescents' conflict reactions.

Overall, the findings in regard to the relation of observed parenting variables to conflict reactions seemed not to differ markedly across sons and daughters. However, in correlations, sons' and their mothers' conflict reactions were related to warmth but not parental positive affect. Moreover, relations between mothers' reports of positive and negative affect in the home were related to daughters' but not sons' conflict reactions. In prior work on empathy-related responding, Eisenberg and colleagues (1991, 1992) found more consistent relations between mothers' expressivity in the family and daughters', in comparison to sons', empathy/sympathy. Daughters may be more reactive to mothers' expressivity in the home, due to differential modeling of same-sex parents. Alternatively, daughters may be the target of mothers' emotional displays more often than are sons, as is the case for mothers' discussion of most emotions (Dunn, Bretherton, & Munn, 1987; Fivush, 1989, 1991; Kuebli, Butler, & Fivush, 1995; also see Kuebli & Fivush, 1992). Although we did not find a sex difference in mothers' reports of positive expressivity in the home, in observations mothers expressed more positive

emotion with their daughters at T2. Moreover, if parents believe that the appropriate expression of emotion is more critical for daughters' than sons' development, parental expression of emotion in the home may be a more reliable component of quality parenting for daughters and more stably linked to adolescents' socioemotional outcomes and the quality of the mother–adolescent relation for daughters than sons.

Unique prediction of conflict reactions by parenting in the SEMs: In the SEMs including both a dimension of parenting and a child characteristic as predictors of conflict reactions, parental warmth and positive affect were stable over time and often uniquely predicted mothers' nonverbal displays of positive affect and anger and, less reliably, low levels of mothers' disharmonious verbalizations. In some models, parenting and child dispositions provided unique additive prediction of mothers' conflict reactions. Only warmth at T3 (and not child characteristics or maternal positive affect) uniquely predicted mothers' hostile verbalizations. Warmth directed at a child may tap into parenting style and beliefs more directly than do parental displays of positive affect, which could explain why maternal warmth but not maternal positive affectivity, was uniquely related to mothers' hostile verbalizations directed at their children. The fact that warmth at T3 rather than T4 was a unique predictor of mothers' hostile verbalizations suggests that mothers' warmth with younger children, when relations with children are less likely to be conflictual, may be a stronger predictor of their hostile reactions to their adolescent children than their warmth at an older age when conflict is perhaps more normative.

The findings in the SEM analyses for parents' conflict reactions support the view that concurrent and prior parenting are related to the quality of parents' conflict reactions even when accounting for at least some important characteristics of youths. How much of this relation is due to genetic factors (see McGue et al., 2005) and how much is due to consistency in parenting beliefs, environmental factors affecting parenting (e.g., stress), or other environmental factors (e.g., fathers' beliefs and behavior) is not known.

Of interest, maternal warmth and positive affect did not significantly predict adolescents' conflict reactions once the variance accounted for by children's temperament/personality was taken into account. The fact that adolescents' reactions often were correlated with parenting and their own dispositional characteristics but not uniquely predicted by parenting in the SEMs suggests that affective features of parenting and child dispositional characteristics often are overlapping in the variance they account for in youths' conflict reactions. Parenting and youths' dispositions may affect one another (e.g., Belsky et al., 1991; Eisenberg et al., 1999), which makes it likely that they are not unique predictors. Of course, hereditary factors may account for some of the overlapping prediction in the two types of variables (Burt et al., 2005), although environmental factors also likely play a role in parent–child conflict (see McGue et al., 2005).

Mediated Relations Between Positive Parenting and Children's Dispositional Characteristics When Predicting Conflict Reactions—In the SEM analyses, we were able to examine if the relations of parenting variables to conflict reactions were likely to be mediated by children's dispositions or vice versa. In these analyses, we used both those parenting variables (warmth or positive affect) and dispositional variables that were assessed at three occasions. In regard to the later, we choose negative emotionality, resiliency, and control/regulation—variables with temperamental/personality bases—because they were likely “purer” measures of child characteristics than were externalizing problems.

In the mediational analyses, parenting mediated the relations of children's negative emotionality or resiliency to conflict reactions rather than vice versa. Specifically, T2 mother-reported resiliency predicted T3 resiliency, which predicted T4 maternal positive affect, which

in turn predicted high levels of maternal positive affect and low levels of maternal anger during the conflict discussion. An analogous mediated path was found for mother-rated resiliency, maternal warmth, and mothers' positive conflict reactions. In addition, children's negative emotionality at T2 predicted maternal warmth at T3, which predicted low levels of mothers' hostile verbalizations and, through T4 warmth, high levels of mothers' positive reactions. Thus, the findings suggest that in late childhood/early adolescence, children's temperamental dispositions had more of an effect on parenting behaviors than vice versa, although the models cannot prove causality. Because the children were, on average, 9 years of age at the first assessment, it is quite possible that parenting had effects on children's dispositions at younger ages. Nonetheless, it is very interesting that the relations of children's dispositions to parenting were stronger than the reverse relations as children moved into adolescence and that mediated relations were found only for mothers' conflict reactions.

Although all the mediated paths went from children's characteristics to parenting, it should be noted that there was some evidence in the SEMs that parenting also predicted subsequent child characteristics. Specifically, maternal warmth at T2 predicted T3 teacher-reported resiliency and near significantly predicted T3 mother-reported resiliency. Given the reputed role of warm parenting in children's adjustment (e.g., Parke & Buriel, 2006; Thompson, 2006), this relation is not surprising. Resiliency probably is less biologically based than are temperamentally based negative emotionality and control/regulation, which may result in resiliency being more malleable than negative emotionality or control/regulation. This argument is supported by the findings that positive emotionality is less hereditary than is negative emotionality (Goldsmith et al., 1997; Volbrecht, Lemery-Chalfant, Aksan, Zahn-Waxler, & Goldsmith, 2007), and resiliency often seems to involve positive emotionality (Fredrickson, Mancuso, Branigan, & Tugade, 2000; Tugade & Fredrickson, 2004; Tugade, Fredrickson, & Barrett, 2004).

In this study, there were no significant mediated relations involving child control/regulation when predicting conflict reactions. In contrast, in a study of externalizing problems with the youths in this sample, effortful control (i.e., regulation) mediated the relation of warm, positive parenting to externalizing problem behaviors across time but not vice versa (Eisenberg et al., 2005; also see Valiente et al., 2006, for similar findings with another sample). It is possible that parenting is a more potent predictor of children's externalizing problems than conflict reactions and that parenting affects effortful control more than the combination of effortful control and reactive control (i.e., ego control) used in the analyses in this study. Indeed, if reactive over- and undercontrol—impulsivity and overly inhibited behavior—are linked to subcortical structures whereas effortful control is situated primarily in cortical structures (e.g., Pickering & Gray, 1999; Rothbart & Bates, 2006; see Eisenberg, Hofer, & Vaughan, 2007), one might expect less effect of parenting on reactive control. In another study of the prediction of externalizing problems from emotion-related parenting and effortful control, parenting and youths' control/regulation affected one another over time (Eisenberg et al., 1999), suggesting bi-directional relations.

It should be kept in mind that it is very difficult to obtain cross-lagged paths in both directions (e.g., from parenting to child characteristics and vice versa) in panel SEM models, especially with a relatively small sample. Thus, it is quite possible that parenting had relations with or effects on children's dispositions over time, but that these effects were relatively weak, and certainly weaker than relations in the reverse direction. In addition, as already mentioned, it is quite possible that parenting has stronger effects on children's characteristic responding at some ages than others—for example, at younger rather than older ages—and that children's characteristics become stronger predictors of parenting with age as parents can less easily control and direct their children's behaviors. In future work, it would be useful to examine changes with age in the degree to which child characteristics versus parenting predict one another and the quality of youths' and parents' behavior when interacting with each other.

Relations of Reported Intensity of Recent Conflict to Observed Conflict—Because we obtained reports of intensity of mother–adolescent conflict in the prior month, we could examine two issues: (a) if observed conflict reactions were related to reports of recent intensity of conflict and (b) if the pattern of relations with parenting and child characteristics obtained for reported intensity of conflict reactions was similar to the pattern found for observed conflict reactions. In regard to the first issue, there was considerable correspondence in the findings for the two types of conflict measures. Specifically, mothers were relatively likely to interact in negative rather than positive ways with their children during the conflict discussion when they themselves or their daughters reported a high degree of upset about mother–adolescent conflict in the past month. Adolescents were also relatively negative during the conflict interaction if their mother reported that recent conflict was relatively severe or, for daughters, if they themselves perceived high levels of recent conflict intensity. This correspondence between reported intensity of conflict and observed conflict reactions supports the validity of both constructs. It is also likely that recent conflict at home affected the quality of conflict reactions.

In regard to the second issue, mothers' reports of the intensity of recent conflict were fairly consistently related to their reports of adolescents' concurrent and prior characteristics, as well as to observed parenting years earlier, and this pattern was similar for sons and daughters. In addition, mothers' reports of high intensity of recent conflict were significantly correlated with teachers' reports of children of children being negative, unregulated, and low in resiliency 4 years earlier, and with teachers' and fathers' reports of externalizing problems at nearly all assessments. The fact that mothers' reports of intensity of recent conflict were related to teachers' reports of children's dispositions at T2 more than at older ages may reflect teachers knowing their students better in elementary school than at older ages. Thus, the findings for mothers' reports of recent conflict were similar to those for observed conflict reactions, albeit somewhat more consistent in pattern for the former than for the latter in regard to parenting measures and especially for correlations involving sons. Of course, common method variance could partly account for the relations between parents' reports of the intensity of recent conflict and their reports of youths' dispositional characteristics and behavior at T2, T3, or T4, although this explanation cannot explain relations of mothers' reported intensity of conflict with observed parenting and teacher- or father-reported child characteristics/behavior. It is also possible that the observed reactions in the laboratory context did not assess mother–son conflict as well as mothers' reports of intensity of conflict; sons' behavior may have been more affected by the context than was that of daughters.

Youths' reports of the intensity of recent conflict, in comparison to mothers' reports, were much less frequently correlated with mothers' and teachers' reports of their dispositions. Relations of youth-reported intensity of recent conflict with adolescents' characteristics were found primarily for daughters and for parent-reported control/regulation or externalizing problems. Relations of adolescent-reported intensity of recent conflict with parenting measures were relatively few. Perhaps children's reports of perceived intensity of conflict were not as tied to reality as were mothers' reports. Or perhaps adolescents' perceptions of the degree to which recent conflicts were upsetting were tied to immediate contextual factors more than was true for mothers. Regardless, the findings for reported intensity of conflict, especially as reported by mothers, generally support the associations found between observed conflict reactions and both parenting behavior and youths' dispositional characteristics.

Additional Discussion of Relations of Dispositional Characteristics and Parenting to Conflict Reactions and Intensity

—In summary, we found that adolescents' conflict reactions were *uniquely* related to child dispositional measures but not parenting, and child dispositions did not mediate relations between parenting and children's conflict reactions. These findings suggest that by adolescence, youths' conflict reactions are

especially linked to stable patterns of temperamentally based, personality characteristics. This does not indicate that parenting plays no role in conflict reactions; consistent with a substantial body of literature linking positive, warm parenting with better socioemotional outcomes in adolescence (e.g., Barber, Stolz, & Olsen, 2005; see Collins & Steinberg, 2006), parenting sometimes was correlated with children's conflict reactions within and across time. However, by adolescence, it appears that any effects of parenting on conflict reactions overlapped with the effects of child characteristics. Although other investigators often have found evidence of relations of parenting with adolescents' behavior and conflict reactions (see Collins & Steinberg, 2006), few have examined conflict reactions or have controlled for individual difference in children's dispositions when doing so.

In contrast to children's conflict reactions, mothers' conflict reactions were uniquely predicted by both their own positive parenting and children's dispositional characteristics (and some relations of the latter were mediated by the former)—a pattern that suggests both stability in mothers' parenting behaviors with their children and some maternal reactivity to children's characteristics. In late childhood and early to mid-adolescence, mothers' affective parenting style, as well as their reactions in specific interactions (i.e., the conflict reactions), may be influenced by children's characteristic responding. Recall that there were fewer significant correlations between mothers' affective behavior during the joint origami task shortly before the conflict discussion and adolescents' conflict reactions than between adolescents' affective displays during the origami task and mothers' conflict reactions. This pattern of findings is consistent with the notion that mothers' conflict reactions were more a response to their adolescent's affect/behavior than vice versa, and is consistent with some other research highlighting the importance of adolescents' characteristics in evoking parental reactions (e.g., Barber et al., 2005; Cook et al., 1991; Stice & Barrera, 1995). As children age and become more autonomous and capable of controlling social interactions, they and their parents may increasingly view adolescents as legitimate decision makers (Smetana, Campione-Barr, et al., 2004), and, consequently, youths may be better able and more motivated to alter the course of parent-adolescent interactions in ways consistent with their personalities.

Overall, the findings suggested considerable short-term and longer-term differential continuity in parenting and children's characteristics, and how they both related to the quality of conflict reactions in adolescence. Thus, the data provide some support for conceptual approaches emphasizing differential continuity of child characteristics and the quality of ongoing mother-child relationships. Moreover, there was some evidence in the growth curve analyses that changes in childhood/early adolescence, especially in parenting, were related to the quality of conflict interactions. However, this finding also supported differential continuity in that individual differences in the patterning of change (e.g., in maternal warmth, maternal positive affect, or children's control/regulation) predicted individual differences in the quality of conflict interactions. We obtained little evidence of an abrupt disconnect between functioning of the child or in the quality of the mother-child relationship from childhood and adolescence. If change were abrupt, we would not expect prediction of mother-adolescent conflict reactions from measures in childhood. Rather, we might expect the quality of conflict reactions to relate solely to concurrent measures of child dispositions, parenting, and/or intensity of conflict in the home.

Although the quality of parenting in childhood predicted the quality of mother-adolescent interactions in the conflict discussion context—a finding consistent with social relationships models of consistency—it appears that a social relationships perspective must be tempered by consideration of the role that children's evocative characteristics may play in relationship continuity. By adolescence, the quality of children's conflict reactions was uniquely predicted only by child dispositional factors, and there was evidence that the relation between these two variables was mediated by parenting. Nonetheless, mothers' conflict reactions were predicted

by prior parenting as well as children's dispositional characteristics, providing considerable support for the argument that there is stability in relationship variables across time. However, it is also quite possible that some of the stability in parenting variables is due to genetic factors and the hereditary nature of emotionality and personality more generally (e.g., Deater-Deckard & Petrill, 2004; De Fruyt et al., 2006; see Caspi & Shiner, 2006).

Given the apparent continuity in both parenting and children's dispositions, as well as their association with T4 conflict reactions, it is likely that the observed conflict reactions predict adolescents' concurrent and future socioemotional functioning. In this study, the quality of conflict reactions was related to adolescents' concurrent externalizing problem behaviors. In other work, the quality of parent-adolescent interaction when problem solving or discussing conflictual issues has been linked to adolescent competencies, including self-esteem and adjustment (Allen et al., 1994; Rueter & Conger, 1998; Soenens et al., 2006). Moreover, adolescents' reported conflict strategies have been related to their proneness to distress and appropriately restrained behavior (Rubenstein & Feldman, 1993). Thus, observed indices of conflict reactions may be useful for predicting adolescents' future competence, perhaps especially in interpersonal domain.

Part of any association between quality of conflict reactions and adolescents' socioemotional functioning may be because conflict reactions provide a barometer, albeit imperfect, of the quality of the parent-adolescent relationship. Smetana, Campione-Barr, et al. (2004) found that adolescents who experienced increasing autonomy from parents across adolescence in those areas of decision making they felt that should control had better self-worth and less depression. These adolescents likely had parents who provided age-appropriate support for their autonomy. Parental supportive encouragement of adolescents' autonomy when resolving dilemmas or disagreements also predicts resiliency in early adulthood (Best et al., 1997). It is likely that parents who are supportive when dealing with conflicts generally provide high-quality (e.g., authoritative) parenting, which contributes to youths' positive development (see Collins & Steinberg, 2006).

In addition, how parents and their adolescents deal with conflicts probably contributes to the quality of their relationship, including their satisfaction with their interactions. After all, reactions during conflicts are probably relatively salient aspects of parent-child interactions. In the present study, when parents and/or adolescents expressed anger and used negative verbalizations, they were less able to achieve a positive outcome to the discussion. These findings are consistent with prior research indicating that negativity when discussing conflicts can undermine problem solving by the dyad (Rueter & Conger, 1995b; Vuchinich et al., 1996). A history of dealing with intense conflict may undermine adolescents' perceptions of how well they and their parents deal with one another and their motivation to relate in a constructive manner. Indeed, negative rather than positive affect during conflict discussions probably feeds into a nonconstructive cycle of conflict-related interactions and may help foster stability in regard to the quality of the mother-child relationship.

Our findings also provide some insight into the question of whether parent-adolescent conflict is positive or negative for children. Although we cannot address the issue of frequency of conflict, our findings are consistent with the view that *quality* of parent-adolescent conflict is important. It relates to children's negative emotionality, regulation, resiliency, and externalizing problems, as well as with prior and concurrent parenting. Although we cannot determine if quality of parent-child conflict in early childhood contributed to less optimal child characteristics or parenting, it is clear that parent-child conflict that was imbued with negativity was part of a larger pattern of suboptimal child functioning and mother-child interactions. Thus, an emphasis on the positive and negative intensity of conflict interactions is clearly important to retain and highlight in work on parent-child conflict.

FUTURE DIRECTIONS

Our findings suggest that the quality of parent–adolescent conflict is related to prior and/or contemporaneous dispositional characteristics of youths, as well as the quality of mothers' behavior and affect. Although sex differences often were not significant, the differences in the patterns of findings for sons and daughters support some prior work in indicating that it is important to consider the sex of the adolescent in research on this topic. Especially for daughters, there was evidence of their dispositional characteristics years before predicting their own and their mothers' conflict reactions.

In future work, it would be useful to examine the relations of fathers' conflict reactions with sons' and daughters' dispositional characteristics and the quality of fathers' prior and contemporaneous parenting behaviors. It is quite possible that the pattern of findings obtained in such research would differ considerably from the findings in this study, especially if most of the fathers in the study were not the primary care-giving parent. For example, fathers may react more to their sons' than daughters' difficult dispositional traits and behaviors or perhaps react more with sons than do mothers.

Relatively little is known about conflict with siblings (Collins & Steinberg, 2006) or how parents and adolescents deal with conflicts involving other members of the family. Smetana (1995) reported that many moral conflicts that adolescents and their parents discuss originate in youths' relationships with siblings or friends and that parents are drawn in as third parties. Smetana found that adolescents often felt that parental interventions in interpreting these conflicts were unfair or that parents were not impartial. Thus, studies of how parents and adolescents deal with conflicts involving siblings and the implications for the larger family dynamics would provide insight into conflict at the familial level. In addition, conflicts with siblings often involve issues of harm or fairness, so they provide a good context for examining parent–adolescent reactions when dealing with moral issues, which tend to be relatively infrequent occurrences (Smetana, 1995).

It also would be very interesting to examine at the more micro level how parents' and adolescents' behaviors sequentially affect one another during the discussion of conflict (a task we hope to complete in the future). In addition, another important issue to explore in future work is changes in the quality of parents' and adolescents' conflict reactions over time and predictors of patterns of change in hostile and positive conflict reactions. For such a study, one would need at least two parent–adolescent conflict interactions in adolescence, and the results of such a study might vary depending on the timing of the assessments (due to changes in the quality of parent–adolescent relationships at different times in adolescence). It would also be useful to map both differential and mean-level stability in the quality of conflict reactions across adolescence. Furthermore, because parenting and child dispositional factors years earlier predicted the quality of mothers' and adolescents' conflict reactions, an important direction would be to examine these relations across childhood. It is likely that families differ in their trajectories not only in regard to the quality of parent–child conflict interactions but also in regard to factors that predict different trajectories. Moreover, to more directly test social relationships models of continuity, it would be desirable to assess not just parenting in childhood but also the quality of parent–child conflict in childhood and how these variables jointly predict the quality of parent–child interactions, the intensity of conflict interactions, and developmental outcomes.

Parent–child conflict in adolescence probably has implications for social competence, maladjustment, and quality of relationships in adulthood as well as in adolescence. In a recent study, Overbeek et al. (2007) found that adolescents' reports of relatively intense parent–child conflict at ages 15–17 (assessed four times), which were themselves predicted by the quality of the parent–child relationship in childhood, in turn predicted lower quality of relationships

with partners and more maladjustment at age 25, which then predicted low quality of relationships and/or life dissatisfaction at age 37. Moreover, Allen et al. (2002) found relations between parental undermining of autonomy during parent–child interactions and youths' hostility toward peers a decade later (in adulthood). Thus, an important question is the degree to which parent–adolescent conflict is a mediator of the relationship between poor quality parenting in childhood and social and psychological problems in adulthood, is a causal factor unique from the quality of the earlier parent–child relationship, or is simply a correlate of maladjustment and relationship problems in adulthood due to the quality of parenting or child characteristics affecting both conflict and later problems. To examine this issue, research is needed that assesses all these variables multiple times across development. In addition, prevention/intervention studies targeted at improving parent–adolescent conflict resolution with longitudinal follow-ups would provide valuable information regarding causal pathways.

The consistent relations between children's, especially girls', externalizing problems and the quality of mothers' and adolescents' conflict reactions (often years later) suggest that children's maladjustment plays a major role in the quality of parent–adolescent conflict. This is consistent with some literature on aggression (see Dodge et al., 2006). What was encouraging, however, was that change in externalizing problems was also associated over time with the quality of adolescent–parent conflict behavior. Thus, interventions or preventive measures that affect children's aggression may also affect the quality of parent–adolescent conflict years later. One could learn much about the nature of the relation between children's maladjustment and parent–child conflict by examining the effects of interventions for children's externalizing problems (or for parenting) on both subsequent parenting and parent–child conflict, as well as on externalizing problems. It would also be worthwhile to examine the relation between adolescents' internalizing symptoms and the quality of parent–adolescent conflict behavior.

Another important direction would be to examine the relations of child dispositional variables and parenting in childhood to adolescent–parent conflict in a genetically informed design. In such a study, one could better assess the role of heredity in both the continuity of parenting and/or childhood dispositions and their relations to quality of parent–child conflict. Genetics partly account for the relation of a difficult temperament with externalizing and internalizing problems (Lemery-Chalfant, Doelger, & Goldsmith, in press), and Burt et al. (2005) found that reported parent–child conflict predicted youths' externalizing problems through genetic, common environmental, and unique environmental factors. Moreover, heredity has been related in twin studies to aspects of parental warmth, punitiveness, and control (Deater-Deckard, Fulker, & Plomin, 1999; Deater-Deckard, Ivy, & Petrill, 2006; Deater-Deckard & Petrill, 2004; Pike, Manke, Reiss, & Plomin, 2000). Thus, it would not be surprising if genetic factors also partly explain the relations among parenting, children's dispositions, and parents' and youths' conflict reactions.

In addition to twin or adoption studies in the behavioral genetics tradition, one could examine specific candidate genes that might be expected to predict the quality of parent–child conflict. Given the growing body of work relating specific alleles to children's and adults' effortful control (e.g., Fan, McCandliss, Sommer, Raz, & Posner, 2002; Fossella, Posner, Fan, Swanson, & Pfaff, 2002; Rueda, Rothbart, McCandliss, Saccomanno, & Posner, 2005; Sheese, Voelker, Rothbart, & Posner, 2007), one could, for example, examine the degree to which such genes predict adolescents' effortful control and their emotional conflict reactions, account for variance in the relation between quality of adolescents' conflict behavior and their regulation, or predict aspects of parenting that in turn predict parents' and adolescents' conflict reactions. Executive functioning (which is involved in effortful control) may play an important role in the management of emotion and behavior in adolescence. Researchers have found changes in multiple areas of the prefrontal cortex throughout adolescence, which may contribute to improvements in executive functioning (long-term planning, self-evaluation, self-regulation,

and the coordination of affect and cognition; e.g., Sowell, Trauner, Gamst, Jernigan, 2002; see Keating, 2004). In addition, substantial changes appear to occur in neurological systems that regulate how individuals process and respond to social stimuli, including facial displays of affective states (Nelson, Leibenluft, McClure, & Pine, 2005). Thus, genes related to executive attention (and perhaps negative emotionality) might be appropriate candidate genes to examine in relation to conflict reactions.

Another important next step is to examine affectively charged conflict reactions when dealing with different kinds of conflicts. Conflicts can be about moral issues (involving others' rights and welfare), social conventional issues (issues pertaining to conventions in social systems and expectations in a given context regarding appropriate behavior), prudential issues (issues that have potential negative consequences for the adolescent's health or safety), or personal issues (issues that pertain only to the actor and therefore are considered to be outside the realm of conventional or moral regulation, e.g., issues of personal discretion or choice pertaining to friends or activities, the state of one's body, and privacy; Nucci, 2001; see Turiel, 2006). Although adolescents generally feel that parents have a duty to regulate moral conduct and also endorse parents' authority to regulate social conventions in the family, many adolescents feel that they should have some input on social conventional issues more generally (Smetana & Asquith, 1994; see Smetana, 1995) and that decisions about prudential and social conventional issues should be made jointly (Smetana, Campione-Barr et al., 2004). In addition, they reject parents' (or teachers') authority to dictate decisions in the personal domain (Smetana & Asquith, 1994; Smetana, Campione-Barr, et al., 2004; see Smetana, 1995). In contrast, mothers tend to view prudential and conventional issues as parental decisions, and view personal issues as joint decisions (Smetana, Campione-Barr, et al., 2004). Thus, adolescents' and parents' perceptions of the type of the conflictual issue (e.g., if getting a tattoo is a personal, social conventional, or prudential issue) and who has authority in regard to the given issue would be expected to affect or moderate the quality of parents' and adolescents' affect and verbalizations (e.g., how controlling they are) when discussing conflictual issues. It is also likely that adolescents' views about these issues are related to their dispositional characteristics and behavior; for example, those who are high in externalizing problems and prone to anger might be especially likely to assert autonomy in regard to social conventional, prudential, and personal issues. Moreover, parents who are low in supportive, positive parenting might be expected to be more controlling in regard to many kinds of issues than are more supportive parents, especially those who scaffold their adolescent's emerging autonomy. Thus, how parents and adolescents assign authority for making decisions about various types of issues might be intricately related to other aspects of their functioning.

Finally, because conflict in the family undoubtedly is affected by cultural values and norms, work on adolescent-parent conflict reactions in various subcultures and societies outside of North America is needed. Although Overbeek et al. (2007), using a Swedish sample, found a pattern of relations between the quality of parent-child relationships in childhood and reported conflict in adolescence similar to that obtained in the United States, findings in other cultures might be quite different. For example, the relations of parental expression of positive emotion in the family to children's socioemotional competence and dispositional characteristics appears to be different in Indonesia than the relations found in the United States, perhaps due to a cultural emphasis on not expressing intense emotions, even positive ones (Eisenberg, Liew, & Pidada, 2001). Moreover, the expression and discussion of negative emotion seems to be discouraged in some cultures (Lillard, 1998; Mesquita & Frijda, 1992). Thus, it is likely that conflict is expressed less and/or differently in many cultures than in North America and Western Europe, and that the relations of parents' emotion-related parenting to quality of conflict interactions differ somewhat across cultures. In addition, researchers have found that the degree and nature of parent-adolescent conflict (including topics of conflict) differ somewhat across groups (e.g., Yau & Smetana, 2003), which likely both reflects and affects

attitudes about conflict. Conceptions of what is appropriate parenting and the correlates of punitive or directive parenting also differ across cultures (e.g. Lansford et al., 2005; see Bugental & Grusec, 2006), and these differences would be expected to affect normative parental reactions when discussing conflicts and how children react to their parents' controlling or punitive behaviors. Thus, more work is needed to identify both differences in the nature of parent–adolescent conflict in diverse cultures and the factors that predict the frequency and quality of conflict interactions in diverse contexts.

STRENGTHS AND LIMITATIONS OF THE STUDY

This study has both strengths and limitations. Among the strengths is that the data were drawn from three longitudinal assessments spanning childhood into adolescence. There are few studies in which the quality of observed affect and verbalizations in parent–adolescent conflict discussions has been coded and predicted longitudinally, and our sample was relatively large for studies of this sort. In addition, by coding both the verbal content of statements and nonverbal affect, and both positive and negative emotion, it was possible to obtain a rich and varied assessment of parent–adolescent conflict. In addition, unlike in most existing research, conflict interactions were examined in relation both to parenting and to characteristics of the adolescent, as well as to other variables such as age. Moreover, parenting behavior was both reported and observed, conflict was observed and reported, and there were some observed measures (at T4) of adolescents' control and emotion, as well as reports from multiple respondents. Thus, the data set allowed for examination of both concurrent and across-time relations of measures of parent–adolescent conflict with diverse indices of most constructs with a reasonably large sample of families.

Limitations of the study include the fact that there was moderate attrition of study participants over time, with minority families (especially African American families) being especially likely to drop out of the study. Our findings therefore may not generalize to racial or ethnic minority families. Although there was some economic diversity in the sample, very low-income families were not well represented and thus our findings may not generalize to such families. In addition, we computed a relatively large number of analyses because we wanted to preserve some of the distinctions in the conflict reactions (e.g., verbal vs. nonverbal reactions and positive vs. negative reactions). To deal with this problem, we focused primarily on patterns of findings and not on isolated findings.

Another limitation is that we assessed conflict reactions only once and they were the outcome variables. Thus, conclusions regarding causality are limited not only by the correlational nature of the data, but also the fact that we could not control for quality of conflict reactions at the first assessment.

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Figure 1.
Conceptual model.

Figure 2.

Latent growth curve for children's negative emotionality as reported by mothers.

Note. Unstandardized estimates reported with the standard error in parentheses. Neg. Emo. = negative emotion; Q-sort = negative emotionality subscale from Block and Block's Questionnaire. $^+p < .10$. $^*p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Figure 3.

Linear developmental trajectory of children's negative emotionality as reported by mothers.

Note. Items on the emotional intensity subscale were rated from 1 to 7. Items on the Q-sort subscale were rated from 1 to 9. The observed trajectory represents the actual sample values. The predicted trajectory represents the model-estimated values.

Figure 4.

Developmental trajectories of negative emotionality (teacher report) by gender.

Note. Items on the emotional intensity subscale were rated from 1 to 7. Items on the Q-sort subscale were rated from 1 to 9.

Figure 5.

Latent growth curve for children's externalizing as reported by mothers, fathers, and teachers. *Note.* M = mothers; F = fathers; T = teachers. R^2 presented for all three models. For the correlation between the slope and intercept, the unstandardized estimate is reported with the standard error in parentheses. The correlation between the intercept and slope was not significant in all three models and is therefore only presented here, as an example, for mothers' report of children's externalizing. $^+p < .10$. $^*p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Figure 6.

Linear developmental trajectories of children's externalizing as reported by mothers, teachers, and fathers.

Note. Each item on the externalizing scale was rated from 1 to 4. The observed trajectory represents the actual sample values. The predicted trajectory represents the model-estimated values.

Figure 7.

Developmental trajectories of externalizing (mother report) by gender.

Note. Each item on the externalizing scale was rated from 1 to 4. The observed trajectory represents the actual sample values. The predicted trajectory represents the model-estimated values. Owing to the poor fit of the model on some indices, these findings may not be reliable.

Figure 8.

Latent growth curve for maternal positive affect and warmth (two separate models were estimated).

Note. Pos, positive affect; W, warmth. For the paths and the correlation between the intercept and the slope, unstandardized estimates are reported with the standard errors in parentheses. $^+p < .10$. $^*p < .05$. $^{**}p < .01$. $^{***}p < .001$. a Nonlinear trajectories were estimated for both mother's positive affect and warmth. In order to test a nonlinear trajectory, one the loadings for the slope was released (here, the loadings at T3 were released). The model-estimated loadings are displayed on the Figure. A negative estimate (as is the case for warmth) indicates that the trend over time takes a turn downward from T2 to T3 and then a large turn back up from T3 to T4.

Figure 9.

Nonlinear developmental trajectory of maternal display of positive affect.

Note. Positive affect was coded from 1 to 9 and averaged across the segment (or slides, depending on the time point). The observed trajectory represents the actual sample values. The predicted trajectory represents the model-estimated values. See text for discussion of fit of the model.

Figure 10.

Developmental trajectories of mothers' positive affect by gender.

Note. Positive affect was coded from 1 to 9 and averaged across the segment (or slides, depending on the time point). The observed trajectory represents the actual sample values. The predicted trajectory represents the model-estimated values.

Figure 11.

Nonlinear developmental trajectory of maternal display of warmth.

Note. Warmth was a global code rated on a scale ranging from 1 to 7. The observed trajectory represents the actual sample values. The predicted trajectory represents the model-estimated values. See text for discussion of the model's fit.

Figure 12.

Nonlinear developmental trajectories of maternal display of warmth by gender.

Note. Warmth was a global code rated on a scale ranging from 1 to 7. The observed trajectory represents the actual sample values. The predicted trajectory represents the model-estimated values.

Figure 13.

Example of tested latent growth curve predicting outcomes at Time 4.

Note. Time 4 conflict discussion outcomes were allowed to correlate with each other.

Unstandardized estimates for loadings and the correlation between the intercept and slope are reported with the standard error in parentheses. ⁺ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 14.

Mediation model of children's negative emotionality, maternal positive affect, and conflict reactions. $+p < .10$, $*p < .05$, $**p < .01$, $***p < .001$.

Note. The estimates given in the Figure are nonbootstrap estimates. All significant estimates in the above model were also significant using the bootstrap method. All outcomes were allowed to correlate and some of the within-reporter error variances were allowed to correlate, following suggestions from the modification indices. Q = negative emotionality from Block and Block's Questionnaire. EI = emotional intensity. M before these abbreviations = mother-reported; T = teacher-reported.

Figure 15.

Mediation model of mothers' reports of children's resiliency, maternal positive affect, and conflict reactions. $^{+}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Note. The estimates given in the Figure are nonbootstrap estimates. All significant estimates in the above model were also significant using the bootstrap method. All outcomes were allowed to correlate.

Figure 16.

Mediation model of teachers' reports of children's resiliency, maternal positive affect, and conflict reactions. $^+p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Note. The estimates given in the Figure are nonbootstrap estimates. All significant estimates in the above model were also significant using the bootstrap method. All outcomes were allowed to correlate.

Figure 17.

Mediation model of children's control/regulation, maternal positive affect, and conflict reactions. $+p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Note. The estimates given in the Figure are nonbootstrap estimates. All significant estimates in the above model were also significant using the bootstrap method. All outcomes were allowed to correlate and some of the within-reporter error variances were allowed to correlate, following suggestions from the modification indices. EC = effortful control; Ego = ego control.

Figure 18.

Mediation model of children's negative emotionality, warmth, and conflict reactions. $^+p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Note. The estimates given in the Figure are nonbootstrap estimates. All significant estimates in the above model were also significant using the bootstrap method. All outcomes were allowed to correlate and some of the within-reporter error variances were allowed to correlate, following suggestions from the modification indices. Q = negative emotionality from Block and Block's Questionnaire; EI = emotionality intensity.

Figure 19.

Mediation model of mothers' reports of children's resiliency, warmth, and conflict reactions. $+p < .10$, $*p < .05$, $**p < .01$, $***p < .001$.

Note. The estimates given in the Figure are nonbootstrap estimates. All significant estimates in the above model were also significant using the bootstrap method. All outcomes were allowed to correlate.

Figure 21.

Mediation model of children's control/regulation, maternal warmth, and conflict reactions. + $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Note. The estimates given in the Figure are nonbootstrap estimates. All significant estimates in the above model were also significant using the bootstrap method. All outcomes were allowed to correlate and some of the within-reporter error variances were allowed to correlate, following suggestions from the modification indices. EC = effortful control; Ego = ego control.

Table 1

Mean Ratings of Intensity of Various Conflict Issues and Proportion of Parents and Youths Indicating That an Issue was Conflictual (at Any Level)

Issue	Mother Ratings		Youth Ratings		Selected Topic	
	Mean ^a	Proportion Selecting as an Issue	Mean ^a	Proportion Selecting as an Issue	Proportion of Dyads: 1st Topic	Proportion of Dyads: 2nd Topic ^b
Cleaning/chores	2.94	0.93	2.26	0.83	0.35	0.18
How family is getting along	2.31	0.72	2.32	0.76	0.20	0.17
Respect/manners	2.13	0.68	1.51	0.60	0.10	0.14
School issues	1.71	0.54	1.71	0.70	0.13	0.13
Use of free time	1.43	0.52	1.33	0.53	0.06	0.09
Appearance/health	1.47	0.56	1.09	0.49	0.04	0.09
Family rules	1.31	0.48	1.37	0.56	0.06	0.06
Supervision of youths	1.01	0.40	1.39	0.50	0.02	0.05
Money	0.87	0.38	1.48	0.64	0.03	0.02
Making noise	0.70	0.32	1.10	0.46	0.01	0.04
Friends and dating	0.42	0.26	0.82	0.40	0.00	0.02
Smoking or alcohol	0.16	0.29	0.44	0.24	0.00	0.02
Mean for all issues	1.32	—	1.40	—	—	—

^a Scale ranged from 1 = *not at all upset* to 5 = *very upset* (if a category was not selected, it received a score of 0).

^b Proportions do not add to 1.00 due to rounding error.

Table 2

Means and Standard Deviations for the Major Constructs

Variable	Full Sample		Girls Only		Boys Only	
	Mean	SD	Mean	SD	Mean	SD
Conflict T4 reactions						
Youths' conflict reactions						
Negative verbal	2.96	2.37	3.11	2.70	2.80	1.99
Anger affect	1.69	0.56	1.70	0.61	1.67	0.50
Humor verbal ^a	0.18	0.31	0.19	0.32	0.16	0.31
Positive affect	(0.19)	(0.27)	(0.20)	(0.27)	(0.18)	(0.27)
Mothers' conflict reactions	2.15	0.71	2.25	0.74	2.05	0.67
Hostile verbal	1.12	1.01	1.11	1.18	1.13	0.80
Disharmony verbal	1.05	0.86	1.04	0.89	1.06	0.83
Anger affect	2.01	0.56	1.91	0.56	2.11	0.55
Positive verbal/affect	2.18	0.79	2.25	0.83	2.10	0.74
Intensity of recent conflict						
Mother report	1.36	0.70	1.25	0.75	1.48	0.64
Youth report	1.40	0.67	1.36	0.73	1.44	0.60
Post-conflict evaluation of satisfaction						
Mother report	2.65	1.01	2.67	1.02	2.62	1.00
Youth report	2.31	0.89	2.24	0.88	2.38	0.90
Negative emotionality						
T2 mother-report negative EI	4.22	1.12	4.28	1.17	4.15	1.07
T2 mother-report negative emo.	4.12	1.31	4.18	1.30	4.05	1.33
T2 teacher-report negative EI	3.62	1.28	3.31	1.22	3.91	1.28
T2 teacher-report negative emo.	3.49	1.30	3.16	1.32	3.82	1.21
T3 mother-report negative EI	4.12	1.23	4.19	1.24	4.05	1.21
T3 mother-report negative emo.	4.04	1.34	4.07	1.26	4.00	1.44
T3 teacher-report negative EI	3.12	1.27	2.88	1.16	3.38	1.33
T3 teacher-report negative emo.	3.12	1.44	2.88	1.33	3.39	1.50
T4 mother-report negative EI	3.94	1.09	3.87	1.13	4.02	1.06
T4 mother-report negative emo.	3.87	1.42	3.88	1.42	3.86	1.44
T4 teacher-report negative EI	3.08	1.22	2.89	1.11	3.28	1.31
T4 teacher-report negative emo.	3.87	1.42	3.88	1.42	3.86	1.44
T4 observed	1.04	0.06	1.04	0.05	1.04	0.06
Resiliency						
T2 mother-report	6.61	1.09	6.61	1.08	6.61	1.12
T2 teacher-report	6.48	1.15	6.56	1.19	6.40	1.12
T3 mother-report	6.63	1.06	6.65	1.05	6.62	1.07
T3 teacher-report	6.61	1.28	6.90	1.18	6.31	1.32
T4 mother-report	6.57	1.10	6.67	1.11	6.46	1.08
T4 teacher-report	6.45	1.13	6.54	1.05	6.36	1.21
Control/regulation						
T2 mother-report EC	4.74	0.73	4.91	0.71	4.56	0.72
T2 mother-report ego control	4.37	1.04	4.36	1.14	4.39	0.94
T2 teacher-report EC	4.87	1.01	5.22	0.88	4.54	1.01
T2 teacher-report ego control	5.07	1.25	5.34	1.06	4.80	1.36
T3 mother-report EC	4.77	0.80	4.96	0.76	4.57	0.79
T3 mother-report ego control	4.52	1.18	4.72	1.13	4.30	1.21
T3 teacher-report EC	5.18	1.08	5.65	0.78	4.68	1.13
T3 teacher-report ego control	5.35	1.26	5.47	1.16	5.23	1.37
T4 mother-report EC	4.80	0.76	4.99	0.79	4.60	0.68
T4 mother-report ego control	5.13	1.13	5.27	1.17	4.99	1.08
T4 teacher-report EC	5.13	0.95	5.39	0.73	4.84	1.09

Variable	Full Sample		Girls Only		Boys Only	
	Mean	SD	Mean	SD	Mean	SD
T4 teacher-report ego control	5.69	1.22	6.18	1.13	5.18	1.11
T4 observed	348.13	104.32	355.27	99.30	340.77	109.59
Observed parenting during slides						
T2 warmth	4.17	1.52	4.61	1.66	3.72	1.24
T2 positive affect	5.74	0.78	5.96	0.81	5.53	0.69
T2 discussion of emotion	17.24	8.25	19.53	8.50	15.07	7.44
T3 warmth	3.75	1.51	3.90	1.62	3.60	1.40
T3 positive affect	5.60	0.57	5.64	0.58	5.56	0.57
T3 discussion of emotion	20.68	8.61	20.17	7.83	21.21	9.40
Family Expressiveness (FE)						
T2 positive FE	7.35	0.92	7.41	0.86	7.29	0.99
T2 negative dominant FE	4.03	1.15	3.99	1.14	4.07	1.17
T3 positive FE	7.37	1.01	7.46	0.88	7.28	1.13
T3 negative dominant FE	4.02	1.24	3.86	1.28	4.20	1.17
Externalizing						
T2 mother-report	2.10	0.45	2.05	0.43	2.15	0.47
T2 father-report	2.04	0.51	1.98	0.48	2.10	0.54
T2 teacher-report	1.70	0.64	1.45	0.51	1.94	0.67
T3 mother-report	2.09	0.46	1.99	0.43	2.18	0.49
T3 father-report	2.03	0.47	1.99	0.47	2.07	0.48
T3 teacher-report	1.52	0.55	1.33	0.42	1.72	0.60
T4 mother-report	2.02	0.48	1.90	0.43	2.13	0.50
T4 father-report	1.97	0.48	1.91	0.48	2.03	0.47
T4 teacher-report	1.48	0.58	1.28	0.44	1.70	0.63
Affect during the origami task						
T4 mothers' warmth	5.46	0.95	5.48	1.04	5.44	0.87
T4 mothers' positive emotion	2.44	0.46	2.46	0.50	2.41	0.41
T4 mothers' negative affect ^a	-0.01	0.86	0.03	1.01	-0.06	0.68
	(-0.19)	(0.02)	(-0.19)	(0.03)	(-0.19)	(0.02)
T4 youths' positive emotion	2.24	0.60	2.35	0.57	2.12	0.61
T4 youths' negative affect ^a	1.15	0.26	1.19	0.31	1.10	0.17
	(0.05)	(0.08)	(0.06)	(0.09)	(0.04)	(0.06)

Note. FEI = emotional intensity. EC = effortful control. FE = family expressivity. Emo. = emotionality.

^a Descriptives for the untransformed variables are presented first; descriptives for transformed variables (due to skew) are in parentheses. In a few cases, "mother-report" T2 or T3 variables were provided by fathers.

Table 3
Summary of the Verbal Conflict Discussion Categories

Positive Verbalizations;

- **Validation/Praise/Endearment** ($M_{\text{parent}} = .34$; $M_{\text{adolescent}} = .02$)
Verbal expressions of support, empathy, approval of a person's behavior, appearance, or state, apologies, personalized praises and compliments, and physical affection that place value on the other person (e.g., "I think that you did a fantastic job" or "I'm sorry I hurt your feelings").
- **Agree** ($M_{\text{parent}} = .64$; $M_{\text{adolescent}} = .45$)
Verbal expressions explicitly agreeing with the other's interpretation, ideas, opinion, or perspective (e.g., "You always do that" or "I agree with you.").
- **Humor/Tease** ($M_{\text{parent}} = .13$; $M_{\text{adolescent}} = .18$)
Verbal expressions of joking, gentle wit, absurd or exaggerated statements, questions, or suggestions, mimics. These verbal expressions are made in lighthearted fashion without intent to offend (e.g., "If you can't talk on the phone less, we'll just have to get a pigeon for you to send messages back and forth").
- **Elicit Opinion of Other** ($M_{\text{parent}} = 1.25$; $M_{\text{adolescent}} = .09$)
Verbal expressions explicitly or implicitly asking, "What do you think?" These verbal expressions can ask about the value of a behavior or others' preferences but do not request information that would be only factual (e.g., "Is that a good idea?" or "Do you want to...?").
- **Discuss Own Feelings** ($M_{\text{parent}} = .19$; $M_{\text{adolescent}} = .09$)
Verbal expressions self-disclosing on emotional states or on susceptibility to emotional response (e.g., "It really bums me out because she always ignores me" or "Do you feel that we're being insensitive to you?").
- **Discuss Other's Feelings** ($M_{\text{parent}} = .20$; $M_{\text{adolescent}} = .03$)
Verbal expressions eliciting discussion of other's feelings by asking questions about other's feelings, reacting to other's feelings with distress, punitive reaction, encouragement, or minimization (e.g., "How did you feel when I reacted that way?" or "There was no reason for you to be so angry.").
- **Discuss Emotions in General** (emotion education; only coded for parents) ($M_{\text{parent}} = .01$; $M_{\text{adolescent}} = .01$)
Verbal expressions teaching or educating the child on the appropriate expression of emotion, the nature of the emotion, and on strategies to soothe the child's own emotion (e.g., "Were you sad because...").

Negative Verbalizations

- **Disagree/Dispute/Challenge** ($M_{\text{parent}} = .91$; $M_{\text{adolescent}} = .99$)
Verbal expressions disagreeing with or challenging the other's judgment (e.g., "That's not true" or "Did I say that?").
 - **Verbal Put Down/Derogation** ($M_{\text{parent}} = .47$; $M_{\text{adolescent}} = .23$)
Verbal expressions of personalized or unqualified disapproval of a person's statements or unqualified negative emotion toward the person such as name calling, humiliation, threats, criticism, or blaming (e.g., "You always do it wrong" or "Get off my back").
 - **Derisive Humor/Sarcasm** ($M_{\text{parent}} = .16$; $M_{\text{adolescent}} = .23$)
Verbal expressions of mean-spirited humor at the other's expense, intended to hurt the other's feelings such as making fun of a person, exaggerating, or mimicking others with intent to humiliate (e.g., "You can't even do this").
 - **Coerce/Assert Dominance** ($M_{\text{parent}} = .63$; $M_{\text{adolescent}} = .18$)
Verbal expressions demanding behavior change, or asserting force, authority, or power (e.g., "Talk back to me again and you'll get your face slapped" or "You better stop hitting your sister").
 - **Interrupts Other** ($M_{\text{parent}} = .48$; $M_{\text{adolescent}} = .82$)
Verbal expressions explicitly attempting to cut off the other person in order to override what they were saying and to take over the conversation.
 - **Attempts to Change Subject or End/Stonewall Discussion** ($M_{\text{parent}} = .04$; $M_{\text{adolescent}} = .29$)
Verbalizations attempting to change topic or end a topic (e.g., "I don't want to talk about it" or "I'm done talking about that").
-

Table 4

Intercorrelations Among the Parenting Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
Observed parenting during slides													
1. T2 warmth	—												
2. T2 positive affect	0.39***	—											
3. T2 disc. of emo.	0.16 ⁺	0.12	—										
4. T3 warmth	0.56***	0.38***	0.04	—									
5. T3 positive affect	0.39***	0.46***	0.09	0.48***	—								
6. T3 disc. of emo.	0.09	-0.06	0.34***	0.01	0.06	—							
Reported family expressiveness (FE)													
7. T2 positive FE	0.05	-0.01	0.03	-0.13	-0.05	0.06	—						
8. T2 neg. dom. FE	-0.19*	-0.25**	-0.14	-0.19*	-0.20*	-0.08	0.05	—					
9. T3 positive FE	0.17 ⁺	0.15	0.04	0.12	0.18*	0.14	0.53*** ^c	-0.25**	—				
10. T3 neg. dom. FE	-0.14	-0.36***	-0.23**	-0.15	-0.24**	-0.10	-0.04	0.77***	-0.17 ⁺	—			
Mothers' observed T4 origami affect													
11. Warmth	0.09	0.05	0.13	0.24**	0.11	0.20*	-0.03 ^d	-0.16 ⁺	0.13	-0.07	—		
12. Positive emotion	0.20*	0.12	0.13	0.29***	0.28***	0.15 ⁺	0.02	-0.12	0.09	-0.10	0.73***	—	
13. Negative affect	-0.06 ^a	0.12	-0.07	-0.12	-0.09	-0.20*	0.05	0.08	-0.07	0.06	-0.31***	-0.23**	—

 $p < .001$.**
 $p < .01$.*
 $p < .05$.+
 $p < .10$.

Neg. = negative; emo. = emotion; disc. = discussion; dom. = dominant.

^a $z = 2.48$, $p < .05$, for the sex difference in correlations (.08 for girls and -.38** for boys).

Table 5
Intercorrelations among child characteristics variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
Negative emotionality													
1. T2 mothers	—												
2. T2 teachers	0.15	—											
3. T3 mothers	0.77***	0.24**	—										
4. T3 teachers	0.18 ⁺	0.36***	0.15	—									
5. T4 mothers	0.70***	0.24**	0.74***	0.14	—								
6. T4 teachers	0.23**	0.33***	0.23**	0.39***	0.30***	—							
7. T4 observed	0.12	0.05	0.02	0.09	0.09	0.09	—						
Resiliency													
8. T2 mothers	-0.63***	-0.05	-0.47***	-0.14	-0.49***	-0.25*** ^f	-0.11	—					
9. T2 teachers	-0.16 ⁺	-0.47*** ⁱ	-0.12	-0.27**	-0.22*	-0.26**	-0.15 ⁺	0.23**	—				
10. T3 mothers	-0.52***	-0.22*	-0.62***	-0.13	-0.54***	-0.32***	-0.07	0.72***	0.33***	—			
11. T3 teachers	-0.03	-0.24*	-0.05	-0.69***	-0.07	-0.43***	0.07	0.04	0.28**	0.08	—		
12. T4 mothers	-0.49***	-0.19*	-0.49***	-0.02	-0.67***	-0.27***	-0.10	0.65***	0.30***	0.67***	0.02	—	
13. T4 teachers	-0.24**	-0.04	-0.21*	-0.13	-0.22*	-0.50***	0.06	0.24**	0.45***	0.27***	0.21*	0.28***	—
Control/regulation													
14. T2 mothers	-0.46***	-0.33***	-0.44***	-0.33***	-0.44*** ^j	-0.33***	-0.02	0.33***	0.23**	0.38***	0.25**	0.27***	0.22*
15. T2 teachers	-0.16 ⁺	-0.50***	-0.23*	-0.44***	-0.25**	-0.37***	-0.04	0.06	0.24**	0.16 ⁺	0.39***	0.13	0.15
16. T3 mothers	-0.35***	-0.42***	-0.47***	-0.39***	-0.40***	-0.30***	-0.07	0.25**	0.23*	0.37***	0.30***	0.24**	0.13
17. T3 teachers	-0.06	-0.40***	-0.13	-0.60***	-0.17 ⁺	-0.32***	-0.06	0.14	0.18 ⁺	0.14	0.43***	0.10	0.05
18. T4 mothers	-0.38***	-0.41***	-0.41***	-0.31***	-0.52***	-0.35***	-0.04	0.27***	0.24**	0.34***	0.24*	0.42***	0.21*
19. T4 teachers	-0.09	-0.36***	-0.10	-0.40***	-0.24**	-0.61***	-0.09	0.09	0.26**	0.20*	0.46***	0.17 ⁺	0.34***
20. T4 observed	-0.14	-0.02	-0.08	0.07	-0.16 ⁺	0.08	-0.04	0.23*	0.10	0.10	-0.08	0.22*	-0.03
Externalizing													
21. T2 mothers	0.65***	0.28***	0.56***	0.32***	0.55*** ^c	0.30***	0.13	-0.44***	-0.17 ⁺	-0.43***	-0.22*	-0.31***	-0.25**
22. T2 fathers	0.38***	0.13	0.34***	0.43***	0.23*	0.30**	0.22*	-0.23*	-0.09 ^g	-0.22*	-0.26 ^{ai}	-0.13	-0.06
23. T2 teachers	0.17 ⁺	0.73***	0.31***	0.31***	0.26**	0.40***	0.08	-0.02	-0.45***	-0.21*	-0.28**	-0.13	-0.26**
24. T3 mothers	0.56***	0.29***	0.67***	0.32***	0.54*** ^d	0.30***	0.14	-0.40***	-0.14	-0.49***	-0.17 ⁺	-0.30***	-0.11
25. T3 fathers	0.38***	0.22*	0.46***	0.36***	0.42***	0.30***	0.13	-0.20 ⁺	-0.05 ^h	-0.26*	-0.23*	-0.27**	-0.14
26. T3 teachers	0.11	0.36***	0.19*	0.72***	0.23*	0.44***	0.06	-0.12	-0.23*	-0.16 ⁺	-0.56*** ^{aj}	-0.17 ⁺	-0.26**
27. T4 mothers	0.53***	0.33***	0.55***	0.24**	0.70***	0.29**	0.14	-0.32***	-0.21*	-0.41***	-0.14	-0.44***	-0.15 ⁺
28. T4 fathers	0.36***	0.19 ⁺	0.32***	0.29**	0.32***	0.33***	0.14	-0.24**	-0.15	-0.23*	-0.30***	-0.32***	-0.26**
29. T4 teachers	0.12	0.31***	0.15 ⁺	0.34***	0.25*** ^c	0.68***	0.11	-0.09	-0.20*	-0.15	-0.44***	-0.14	-0.27*** ^k
	14	15	16	17	18	19	20						
Control/regulation													
14. T2 mothers	—												
15. T2 teachers	0.67***	—											
16. T3 mothers	0.84***	0.69***	—										
17. T3 teachers	0.51***	0.60***	0.60***	—									
18. T4 mothers	0.80***	0.67***	0.85***	0.58***	—								
19. T4 teachers	0.50***	0.67***	0.53***	0.46***	0.53***	—							
20. T4 observed	-0.07	-0.07	-0.17 ⁺	-0.14	-0.10 ^l	-0.15	—						
Externalizing													
21. T2 mothers	-0.64***	-0.43***	-0.52***	-0.34***	-0.49***	-0.28***	-0.06						
22. T2 fathers	-0.39***	-0.36***	-0.43***	-0.37***	-0.34***	-0.26*	0.07						
23. T2 teachers	-0.48***	-0.71***	-0.55***	-0.53***	-0.53***	-0.52***	0.16 ⁺						
24. T3 mothers	-0.62***	-0.45***	-0.66***	-0.32***	-0.52***	-0.33***	0.05						
25. T3 fathers	-0.52***	-0.32***	-0.42***	-0.46***	-0.39***	-0.23*	-0.04						
26. T3 teachers	-0.46***	-0.60***	-0.56***	-0.79***	-0.55***	-0.49***	0.18 ⁺						
27. T4 mothers	-0.59***	-0.48***	-0.61***	-0.36***	-0.71***	-0.38***	-0.02						

	14	15	16	17	18	19	20		
28. T4 fathers	− 0.51***	− 0.36***	− 0.45***	− 0.35***	− 0.47***	− 0.33***	0.01		
29. T4 teachers	− 0.42***	− 0.54***	− 0.45***	− 0.40***	− 0.45***	− 0.75***	0.16 ⁺		
	21	22	23	24	25	26	27	28	29
Externalizing									
21. T2 mothers	—								
22. T2 fathers	0.61***	—							
23. T2 teachers	0.41***	0.36***	—						
24. T3 mothers	0.76***	0.63***	0.46***	—					
25. T3 fathers	0.64***	0.77***	0.38***	0.68***	—				
26. T3 teachers	0.43***	0.45***	0.53***	0.38***	0.54***	—			
27. T4 mothers	0.71***	0.54***	0.48***	0.77*** ^m	0.60***	0.41***	—		
28. T4 fathers	0.55***	0.69***	0.32***	0.49***	0.80***	0.48***	0.46***	—	
29. T4 teachers	0.36***	0.39***	0.49***	0.43***	0.39***	0.51***	0.48***	0.37***	—

 $p < .001$.

**
 $p < .01$.

*
 $p < .05$.

⁺
 $p < .10$.

^a
 $z = -2.26, p < .05$, for the sex difference in correlations (−.63*** for girls and −.30 for boys).

^b
 $z = 3.02, p < .01$, for the sex difference in correlations (−.24⁺ for girls and −.67*** for boys).

^c
 $z = -2.53, p < .05$, for the sex difference in correlations (−.39** for girls and .71*** for boys).

^d
 $z = -2.36, p < .05$, for the sex difference in correlations (.39** for girls and .69*** for boys).

^e
 $z = -2.19, p < .05$, for the sex difference in correlations (.03 for girls and .41*** for boys).

^f
 $z = -2.47, p < .05$, for the sex difference in correlations (−.49*** for girls and −.05 for boys).

^g
 $z = 2.36, p < .05$, for the sex difference in correlations (.20 for girls and −.33 for boys).

^h
 $z = 2.12, p < .05$, for the sex difference in correlations (.22 for girls and −.25⁺ for boys).

ⁱ
 $z = -1.98, p < .05$, for the sex difference in correlations (−.48** for girls and −.03 for boys).

^j
 $z = -2.47, p < .05$, for the sex difference in correlations (−.73*** for girls and −.40** for boys).

^k
 $z = 2.59, p < .01$, for the sex difference in correlations (.02 for girls and −.44*** for boys).

^l
 $z = 1.87, p < .10$, for the sex difference in correlations (.06 for girls and −.28 for boys).

^m
 $z = -3.44, p < .001$, for the sex difference in correlations (.62*** for girls and .88*** for boys).

Intercorrelations Among the T4 Conflict Reactions

Table 6

Conflict reactions	Youths' T4 Conflict Reactions				Mothers' T4 Conflict Reactions			
	Negative Verbal	Anger Affect	Humor Verbal	Positive Affect	Hostile Verbal	Disharmonious Verbalizations	Anger Affect	Positive Affect/Verbal
Youth								
Negative verbal								
Anger affect	0.63*** ^a							
Humor verbal	−0.03	−0.06						
Positive affect	0.10	−0.06	0.40***					
Mother								
Hostile verbal	0.49***	0.33***	−0.07	0.12				
Disharmonious verbalizations	0.71***	0.43*** ^b	−0.05	−0.06	0.42***			
Anger affect	0.39	0.47***	−0.24***	−0.24**	0.44***	0.47***		
Positive affect/verbal	−0.13	−0.19*	0.40***	0.57***	−0.08	−0.18*	−0.49***	

 $p < .001$.

**
 $p < .01$.

*
 $p < .05$.

+
 $p < .10$.

^a
 $z = 2.31, p < .05$, for the sex difference in correlations (.73** for girls and .46** for boys).

^b
 $z = 2.32, p < .05$, for the sex difference in correlations (.58** for girls and .23+ for boys).

Relations of Intensity of Conflict Upset Reported in the Last Month to Observed Conflict Reactions

Table 7

T4 Conflict Reactions	Recent Conflict Intensity					
	Mother Report			Youth Report		
	Total	Girls	Boys	Total	Girls	Boys
Mother						
Hostile verbal	0.13	0.10	0.18	0.06	0.17	-0.16
Disharmonious Verbalizations	0.19*	0.19	0.18	0.10	0.23 ⁺	-0.06
Anger affect	0.32***	0.39**	0.19	0.21*	0.40***	-0.03
Positive verbal/affect	-0.26**	-0.28*	-0.22 ⁺	-0.24**	-0.29*	-0.16
Youth						
Negative verbal	0.19*	0.14	0.29*	0.13	0.19	0.02
Anger affect	0.21*	0.21 ⁺	0.22 ⁺	0.24**	0.30*	0.14
Humor verbal	-0.08	-0.07	-0.08	0.03	-0.01	0.08
Positive affect	-0.12	-0.19	0.02	-0.16 ⁺	-0.22 ⁺	-0.06

*** $p < .001$.
** $p < .01$.
* $p < .05$.
+ $p < .10$.

Significant sex differences are in bold and italics. Marginal sex differences are in bold.

Table 8
Relations of Youth and Mother Affectivity in the T4 Origami Task To T4 Adolescent and Maternal Conflict Reactions

T4 Conflict Reactions	Mother Affect During T4 Origami						Youth Affect During T4 Origami					
	Warmth			Positive Affect			Negative Affect			Positive Affect		
	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys
Mother												
Hostile verbal	−0.08	−0.13	0.01	−0.18 [*]	−0.20	−0.16	0.24 ^{**}	0.25 [*]	0.22 ⁺	−0.06	−0.07	−0.06
Disharmonious Verbalizations	−0.18 [*]	−0.21 ⁺	−0.15	−0.15	−0.20	−0.07	0.10	0.25 [*]	−0.10	−0.11	−0.16	−0.07
Anger affect	−0.21 [*]	−0.21 ⁺	−0.21	−0.26 ^{**}	−0.30 [*]	−0.21	0.07	0.08	0.07	−0.29 ^{***}	−0.34 ^{**}	−0.19
Positive verbal/affect	0.30 ^{***}	0.28 [*]	0.33 ^{**}	0.24 ^{**}	0.21	0.27 [*]	−0.10	−0.02	−0.22 ⁺	0.26 ^{**}	0.29 [*]	0.19
Youth												
Negative verbal	−0.12	−0.15	−0.09	−0.08	−0.14	0.00	0.19 [*]	0.33 ^{**}	−0.05	−0.07	−0.08	−0.08
Anger affect	−0.17 ⁺	−0.23 ⁺	−0.07	−0.12	−0.15	−0.09	0.21 [*]	0.23 ⁺	0.18	−0.19 [*]	−0.14	−0.26 [*]
Humor verbal	0.19 [*]	0.14	0.25 ⁺	0.16 ⁺	0.12	0.21	−0.05	−0.01	−0.11	0.20 [*]	0.23 ⁺	0.16
Positive affect	0.13	0.10	0.18	0.08	0.14	−0.02	0.04	0.09	−0.03	0.36 ^{***}	0.33 ^{**}	0.36 ^{**}

p<.001.

**
p<.01.

*
p<.05.

+
p<.10.

Significant sex differences are in bold and italics. Marginal sex differences are in bold.

Table 9
Relations of Mothers' Conflict Reactions to Youths' Dispositional Characteristics

Mothers' T4 Conflict Reactions												
Dispositional Variable	Hostile Verbal			Disharmonious Verbalizations			Anger Affect			Positive Affect/Verbal		
	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys
Negative emotionality												
T2 mothers	0.21 [*]	0.27 [*]	0.12	0.19 [*]	0.29 [*]	0.07	0.22 [*]	0.42 ^{***}	0.04	-0.29 ^{***}	-0.45 ^{***}	-0.12
T2 teachers	0.07	0.09	0.04	0.24 ^{**}	0.41 ^{**}	0.07	0.27 ^{**}	0.41 ^{**}	0.05	-0.15	-0.27 [*]	0.01
T3 mothers	0.16 ⁺	0.23 ⁺	0.07	0.11	0.24 ⁺	-0.03	0.11	0.28 [*]	-0.04	-0.11	-0.20	-0.02
T3 teachers	0.20 [*]	0.22	0.18	0.18 ⁺	0.36 ^{**}	0.01	0.19 ⁺	0.13	0.16	0.03	0.06	0.05
T4 mothers	0.13	0.11	0.16	0.08	0.07	0.09	0.22 [*]	0.34 ^{**}	0.08	-0.23 ^{**}	-0.30 [*]	-0.15
T4 teachers	0.09	0.06	0.15	0.12	0.19	0.05	0.22 [*]	0.24 ⁺	0.16	-0.16 ⁺	-0.16	-0.13
T4 observed	0.24 ^{**}	0.27	0.20	0.07	0.05	0.09	0.22 [*]	0.27 [*]	0.16	-0.11	-0.13	-0.09
Resiliency												
T2 mothers	-0.02	-0.07	0.04	-0.09	-0.04	-0.15	-0.19 [*]	-0.23 ⁺	-0.15	0.24 ^{**}	0.38 ^{**}	0.09
T2 teachers	-0.04	0.01	-0.13	-0.14	-0.21	-0.06	-0.17 ⁺	-0.25 ⁺	-0.07	0.10	0.08	0.12
T3 mothers	-0.08	-0.08	-0.07	-0.17 ⁺	-0.12	-0.23 ⁺	-0.21 [*]	-0.25 [*]	-0.17	0.21 [*]	0.23 ⁺	0.20
T3 teachers	-0.12	-0.18	-0.04	-0.02	-0.20	0.15	-0.01	0.05	0.05	0.09	-0.11	0.25 ⁺
T4 mothers	-0.02	0.04	-0.12	-0.11	-0.04	-0.20	-0.31 ^{***}	-0.28 [*]	-0.33 ^{**}	0.25 ^{**}	0.24 ⁺	0.24 ⁺
T4 teachers	0.00	0.04	-0.06	-0.16 ⁺	-0.24 ⁺	-0.09	-0.13	-0.10	-0.13	0.07	-0.03	0.15
Control/regulation												
T2 mothers	-0.13	-0.19	-0.04	-0.19 [*]	-0.40 ^{**}	0.02	-0.37 ^{***}	-0.56 ^{***}	-0.14	0.25 ^{**}	0.34 ^{**}	0.11
T2 teachers	-0.14	-0.29 [*]	0.02	-0.24 [*]	-0.64 ^{***}	0.10	-0.40 ^{***}	-0.54 ^{***}	-0.21	0.15	0.22	0.06
T3 mothers	-0.19 [*]	-0.27 [*]	-0.08	-0.21 [*]	-0.50 ^{***}	0.12	-0.33 ^{***}	-0.53 ^{***}	-0.03	0.14	0.23 ⁺	-0.01
T3 teachers	-0.16 ⁺	-0.26 ⁺	-0.04	-0.09	-0.30 [*]	0.10	-0.19 [*]	-0.10	-0.13	-0.09	-0.07	-0.19
T4 mothers	-0.11	-0.12	-0.11	-0.23 [*]	-0.38 ^{**}	-0.05	-0.40 ^{***}	-0.56 ^{***}	-0.16	0.19 [*]	0.24 ⁺	0.10
T4 teachers	-0.14	-0.19	-0.10	-0.19 [*]	-0.41 ^{***}	-0.04	-0.25 ^{**}	-0.24 ⁺	-0.13	0.12	0.00	0.14
T4 observed	-0.05	-0.01	-0.12	0.10	0.11	-0.10	-0.10	0.03	-0.20	-0.07	-0.11	-0.04

 $p < .001$.

**
 $p < .01$.

*
 $p < .05$.

+
 $p < .10$.

Significant sex differences are in bold and italics. Marginal sex differences are in bold.

Table 10
Relations of Youths' Conflict Reactions to Youths' Dispositional Characteristics

Youths' T4 Conflict Reactions												
Dispositional Variables	Negative Verbal			Anger Affect			Humor Verbal			Positive Affect		
	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys
Negative emotionality												
T2 mothers	0.07	0.13	-0.03	0.21 [*]	0.27 [*]	0.13	-0.14	-0.24 ⁺	-0.04	-0.18 ⁺	-0.30 [*]	-0.05
T2 teachers	0.19 [*]	0.17	0.25 ⁺	0.20 [*]	0.22	0.23	0.10	0.11	0.11	-0.06	-0.01	-0.05
T3 mothers	0.12	0.20	0.00	0.31 ^{***}	0.38 ^{**}	0.24 ⁺	-0.04	-0.08	0.01	0.02	-0.01	0.03
T3 teachers	0.07	0.09	0.08	0.04	0.05	0.03	0.05	0.14	-0.01	0.08	0.12	0.10
T4 mothers	0.09	0.10	0.09	0.26 ^{**}	0.31	0.21	-0.18 [*]	-0.24 ⁺	-0.11	-0.15 ⁺	-0.20	-0.08
T4 teachers	-0.01	0.01	0.00	0.10	0.13	0.09	-0.06	-0.17	0.06	-0.18 ⁺	-0.18	-0.13
T4 observed	0.09	0.13	0.04	0.25 ^{**}	0.31 [*]	0.19	-0.15	-0.32 [*]	0.02	-0.04	-0.13	0.06
Resiliency												
T2 mothers	0.05	0.03	0.07	-0.07	-0.10	-0.03	0.20 [*]	0.32 [*]	0.10	0.33 ^{***}	0.43 ^{***}	0.23 ⁺
T2 teachers	-0.11	-0.18	-0.04	-0.12	-0.10	-0.16	0.06	0.05	0.06	0.12	0.03	0.22
T3 mothers	-0.07	-0.01	-0.16	-0.19 [*]	-0.13	-0.27 [*]	0.12	0.14	0.11	0.23 [*]	0.25 ⁺	0.22
T3 teachers	0.06	-0.02	0.12	0.10	0.03	0.17	0.03	-0.31 [*]	0.31 [*]	0.12	-0.05	0.25 ⁺
T4 mothers	-0.07	0.02	-0.22 ⁺	-0.18 [*]	-0.14	-0.24 ⁺	0.18 [*]	0.29 [*]	0.06	0.32 ^{***}	0.36 ^{**}	0.25 [*]
T4 teachers	0.06	0.03	0.08	-0.05	0.00	-0.11	0.14	0.23 ⁺	0.05	0.16 ⁺	0.12	0.19
Control/regulation												
T2 mothers	-0.16 ⁺	-0.24 ⁺	-0.08	-0.33 ^{***}	-0.30 [*]	-0.39 ^{**}	0.12	0.17	0.08	0.16 ⁺	0.26 [*]	-0.01
T2 teachers	-0.22 [*]	-0.43 ^{***}	-0.06	-0.33 ^{***}	-0.43 ^{***}	-0.31 [*]	0.04	0.05	0.03	0.14	0.13	0.06
T3 mothers	-0.21 [*]	-0.37 ^{***}	-0.04	-0.35 ^{***}	-0.43 ^{***}	-0.27 [*]	0.03	0.07	-0.04	0.02	0.09	-0.15
T3 teachers	-0.17 ⁺	-0.33 [*]	-0.08	-0.23 [*]	-0.21	-0.28 [*]	-0.12	-0.18	-0.12	-0.09	-0.06	-0.23
T4 mothers	-0.21 [*]	-0.24 ⁺	-0.22 ⁺	-0.32 ^{***}	-0.32 ^{***}	-0.34 ^{***}	0.11	0.15	0.06	0.10	0.17	-0.06
T4 teachers	-0.10	-0.27 [*]	-0.01	-0.14	-0.26 [*]	-0.08	0.05	-0.01	0.06	0.12	-0.07	0.18
T4 observed	0.02	-0.04	0.09	0.00	-0.02	0.03	0.05	0.07	0.03	0.02	0.07	-0.04

*** $p < .001$.

** $p < .01$.

* $p < .05$.

+ $p < .10$.

Significant sex differences are in bold and italics. Marginal sex differences are in bold.

Table 11
Relations of Youths' Externalizing to Youths' and Mothers' Conflict Reactions at T4

Externalizing	Mothers' T4 Conflict Reactions				Youths' T4 Conflict Reactions			
	Hostile Verbal	Disharmonious Verbalizations	Anger Affect	Positive Aff/Verbal	Negative Verbal	Anger Affect	Humor Verbal	Positive Affect
T2 mothers								
Total	0.18 [*]	0.31 ^{***}	0.31 ^{***}	-0.31 ^{***}	0.20 [*]	0.37 ^{***}	-0.15	-0.28 ^{**}
Girls	0.32 [*]	0.44 ^{***}	0.55 ^{***}	-0.41 ^{***}	0.25 ⁺	0.33 [*]	-0.20	-0.38 ^{**}
Boys	0.00	0.19	0.04	-0.19	0.16	0.44 ^{***}	-0.11	-0.13
T2 fathers								
Total	0.30 ^{**}	0.20 ⁺	0.25 [*]	-0.17	0.09	0.18	-0.01	-0.04
Girls	0.37 [*]	0.20	0.27 ⁺	-0.29 ⁺	0.05	0.09	-0.07	-0.20
Boys	0.21	0.18	0.19	-0.05	0.12	0.28 ⁺	0.04	0.16
T2 teachers								
Total	0.04	0.20 [*]	0.17 ⁺	-0.05	0.17 ⁺	0.23 [*]	0.04	-0.04
Girls	0.22	0.54 ^{***}	0.46 ^{***}	-0.26 [*]	0.35 ^{**}	0.33 [*]	-0.05	-0.08
Boys	-0.16	-0.03	-0.15	0.17	0.06	0.22	0.12	0.10
T3 mothers								
Total	0.22 [*]	0.20 [*]	0.24 ^{**}	-0.22 [*]	0.17 ⁺	0.34 ^{***}	-0.07	-0.10
Girls	0.35 ^{**}	0.32 [*]	0.39 ^{**}	-0.39 ^{**}	0.23 ⁺	0.31 [*]	-0.17	-0.19
Boys	0.07	0.09	0.04	-0.02	0.16	0.41 ^{***}	0.03	0.05
T3 fathers								
Total	0.28 ^{**}	0.26 [*]	0.24 [*]	-0.05	0.27 [*]	0.44 ^{***}	0.04	0.03
Girls	0.44 ^{**}	0.31 [*]	0.25	-0.23	0.33 [*]	0.41 ^{***}	0.00	-0.03
Boys	0.09	0.22	0.21	0.12	0.22	0.49 ^{***}	0.07	0.09
T3 teachers								
Total	0.10	0.16	0.23 [*]	0.03	0.13	0.25 ^{**}	0.10	0.02
Girls	0.17	0.46 ^{***}	0.16	-0.01	0.25 ⁺	0.23 ⁺	0.14	-0.03
Boys	0.02	-0.08	0.15	0.14	0.10	0.30	0.11	0.17
T4 mothers								
Total	0.22 [*]	0.24 ^{**}	0.37 ^{***}	-0.31 ^{***}	0.25 ^{**}	0.37 ^{***}	-0.17 ⁺	-0.15 ⁺
Girls	0.32 ^{**}	0.32 [*]	0.60 ^{***}	-0.44 ^{***}	0.34 ^{**}	0.42 ^{***}	-0.29 [*]	-0.24 ⁺
Boys	0.11	0.17	0.11	-0.15	0.21 ⁺	0.37 [*]	-0.06	0.01
T4 fathers								
Total	0.20 [*]	0.33 ^{***}	0.33 ^{***}	-0.20 [*]	0.20 [*]	0.36 ^{***}	-0.10	-0.13
Girls	0.23	0.36 ^{**}	0.26 ⁺	-0.15	0.21	0.26 [*]	-0.03	-0.09
Boys	0.15	0.28 [*]	0.37 [*]	-0.21	0.22	0.47 ^{***}	-0.15	-0.11
T4 teachers								
Total	0.21 [*]	0.10	0.19 [*]	-0.16 ⁺	0.09	0.18 [*]	0.02	-0.12
Girls	0.36 ^{**}	0.32 [*]	0.21 ⁺	-0.08	0.26 [*]	0.24 ⁺	0.10	0.01
Boys	0.11	-0.05	0.05	-0.14	0.01	0.19	0.01	-0.12

 $p < .001$.

**
 $p < .01$.

*
 $p < .05$.

+
 $p < .10$.

Significant sex differences are in bold and italics. Marginal sex differences are in bold. Aff = affect.

Table 12
Relations of Observed T2/T3 Parenting Behavior With Mothers' Conflict Reactions

	Mothers' T4 Conflict Reactions								
	Hostile Verbal			Disharmonious Verbalizations			Anger Affect		
	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys
Parenting									
T2 warmth	-0.23 [*]	-0.27 [*]	-0.21	-0.07	-0.11	-0.02	-0.23 [*]	-0.11	-0.28 [*]
T2 positive affect	-0.27 ^{**}	-0.34 ^{**}	-0.18	-0.14	-0.21	-0.07	-0.30 ^{***}	-0.27 [*]	-0.25 ⁺
T3 warmth	-0.33 ^{***}	-0.39 ^{**}	-0.23 ⁺	-0.09	-0.17	0.00	-0.21 [*]	-0.17	-0.23 ⁺
T3 positive affect	-0.21 [*]	-0.29 [*]	-0.09	-0.07	-0.15	0.03	-0.13	-0.08	-0.17
Discussion of emotion									
T2 mothers	-0.01	-0.02	-0.02	-0.24 ^{**}	-0.25 ⁺	-0.25 ⁺	-0.24 [*]	-0.32 [*]	-0.07
T3 mothers	-0.11	-0.15	-0.06	-0.10	-0.16	-0.04	-0.11	-0.28[*]	0.03
								0.19 [*]	0.03
								0.15	0.08
								0.23 ⁺	0.23 ⁺

 $p < .001$.

**
 $p < .01$.

*
 $p < .05$.

+
 $p < .10$.

Marginal sex differences are in bold.

Table 13

Relations of Reported T2/T3 Maternal Expressivity in the Family With Mothers' and Adolescents' Conflict Reactions

T4 Conflict Reactions	T2 Positive			T2 Negative Dominant			T3 Positive			T3 Negative Dominant		
	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys
Mother												
Hostile verbal	0.14	0.16	0.14	0.24 ^{**}	0.32 [*]	0.14	0.02	-0.02	0.07	0.20 [*]	0.23 ⁺	0.14
Disharmonious verbalizations	-0.15	-0.08	-0.21	0.17 ⁺	0.21	0.12	-0.09	-0.14	-0.06	0.17 ⁺	0.13	0.21
Anger affect	-0.05	0.00	-0.08	0.21 [*]	0.06	0.35^{**}	-0.03	0.02	-0.04	0.22 [*]	0.07^{**}	0.37^{**}
Positive verbal/affect	0.09	0.05	0.12	-0.17 ⁺	-0.14	-0.20	0.18 ⁺	0.05	0.29 [*]	-0.15 ⁺	-0.22 ⁺	-0.04
Youth												
Negative verbal	-0.08	-0.01	-0.17	0.24 ^{**}	0.37 ^{**}	0.08	-0.06	-0.13	0.00	0.28 ^{**}	0.35 ^{**}	0.20
Anger affect	-0.01	0.02	-0.05	0.22 [*]	0.32 [*]	0.12	-0.04	-0.09	0.01	0.22 [*]	0.25 [*]	0.19
Humor verbal	0.05	0.24⁺	-0.11	-0.04	0.09	-0.17	0.05	0.13	-0.01	0.14	0.20	0.10
Positive affect	0.17 ⁺	0.30 [*]	0.03	0.03	0.16	-0.11	0.18 ⁺	0.20	0.14	0.12	0.17	0.11

^{**} $p < .01$.

^{*} $p < .05$.

⁺ $p < .10$.

Marginal sex differences are in bold.

Table 14
Relations of Observed T2/T3 Parenting Behavior With Youths' Conflict Reactions

	Youths' T4 Conflict Reactions											
	Negative Verbal			Anger Affect			Humor Verbal			Positive Affect		
	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys	Total	Girls	Boys
Parenting												
T2 warmth	0.02	0.06	-0.10	-0.03	0.08	-0.26 *	0.07	0.07	0.06	0.14	0.07	0.14
T2 positive affect	-0.13	-0.29 *	0.05	-0.22*	-0.27*	-0.19	-0.06	0.01	-0.19	0.05	0.02	-0.04
T3 warmth	-0.07	-0.09	-0.05	-0.04	-0.02	-0.07	0.11	-0.03	0.26*	-0.01	-0.09	0.07
T3 warmth	-0.10	-0.12	-0.09	-0.12	-0.05	-0.21	-0.10	-0.12	-0.09	0.03	0.02	0.01
Discussion of emotion												
T2 mothers	-0.10	-0.14	-0.12	-0.26**	-0.33*	-0.21	-0.03	0.01	-0.12	0.12	0.04	0.12
T3 mothers	-0.15	-0.05	-0.26*	-0.09	-0.12	-0.06	0.07	0.22 ⁺	-0.06	0.10	0.16	0.06

 $p < .01$.

*
 $p < .05$.

+
 $p < .10$.

Marginal sex differences are in bold.

Table 15
Relations of Reports of Intensity of Recent Conflict Intensity With Youths' Characteristics

Dispositional Variables	Recent Conflict Intensity					
	Mother Report			Youth Report		
	Total	Girls	Boys	Total	Girls	Boys
Negative emotionality						
T2 mothers	0.36***	0.41***	0.32*	0.21*	0.42***	-0.05
T2 teachers	0.28**	0.27*	0.25+	0.08	0.18	-0.09
T3 mothers	0.32***	0.30*	0.38**	0.09	0.20	-0.04
T3 teachers	0.07	0.06	-0.03	0.07	0.18	-0.08
T4 mothers	0.39***	0.41***	0.37***	0.04	0.13	-0.07
T4 teachers	0.17+	0.24+	0.04	0.09	0.20	-0.05
T4 observed	0.12	0.12	0.10	0.16+	0.13	0.20
Resiliency						
T2 mothers	-0.22*	-0.29*	-0.16	-0.10	-0.20	0.01
T2 teachers	-0.24**	-0.40**	-0.04	-0.27**	-0.21	-0.34**
T3 mothers	-0.28**	-0.31*	-0.24+	-0.04	-0.05	-0.02
T3 teachers	0.01	-0.04	0.23	-0.15	-0.13	-0.17
T4 mothers	-0.31***	-0.36**	-0.23+	-0.08	-0.14	0.01
T4 teachers	-0.14	-0.21	-0.04	-0.09	-0.21+	0.06
Control/regulation						
T2 mothers	-0.36***	-0.34**	-0.34**	-0.18*	-0.36**	0.06
T2 teachers	-0.22*	-0.24+	-0.15	-0.15	-0.25+	0.01
T3 mothers	-0.40***	-0.35**	-0.41***	-0.12	-0.28*	0.11
T3 teachers	-0.17+	-0.13	-0.06	0.00	-0.16	0.19
T4 mothers	-0.52***	-0.51***	-0.49***	-0.13	-0.32*	0.14
T4 teachers	-0.17+	-0.17	-0.02	0.00	-0.10	0.16
T4 observed	-0.13	-0.14	-0.10	-0.05	-0.10	0.02
Externalizing						
T2 mothers	0.42***	0.36**	0.47***	0.27**	0.32*	0.19
T2 fathers	0.39***	0.31*	0.44**	0.27*	0.24	0.31*
T2 teachers	0.30***	0.37**	0.21	0.16+	0.21	0.06
T3 mothers	0.45***	0.30*	0.59***	0.15+	0.18	0.11
T3 fathers	0.35***	0.21	0.46***	0.26*	0.39**	0.13
T3 teachers	0.17+	0.15	0.02	0.06	0.20	-0.10
T4 mothers	0.66***	0.63***	0.67***	0.20*	0.27*	0.11
T4 fathers	0.31***	0.28*	0.29*	0.31***	0.44***	0.16
T4 teachers	0.31***	0.24+	0.27*	0.07	0.14	-0.04

*** $p < .001$.

** $p < .01$.

* $p < .05$.

⁺ $p < .10$.

Significant sex differences are in bold and italics. Marginal sex differences are in bold.

Table 16
Relations of Mothers' and Adolescents' Reports of Intensity of Recent Conflict Intensity With Parenting Variables

Parenting Variables	Recent Conflict Intensity					
	Mother Report			Youth Report		
	Total	Girls	Boys	Total	Girls	Boys
Observed parenting during slides						
T2 warmth	-0.28**	-0.20	-0.34**	0.10	0.11	0.20
T2 positive affect	-0.18 ⁺	-0.17	-0.11	-0.15	-0.17	0.05
T2 discussion of emotion	-0.11	-0.09	-0.05	-0.17 ⁺	-0.12	-0.18
T3 warmth	-0.36***	-0.35**	-0.35**	0.05	0.06	0.04
T3 positive affect	-0.33***	-0.32*	-0.32*	-0.13	-0.18	0.07
T3 discussion of emotion	-0.06	-0.02	-0.13	-0.14	-0.14	-0.16
Reported family expressiveness (FE)						
T2 positive FE	-0.10	-0.07	-0.11	-0.28**	-0.05	-0.52***
T2 negative dominant FE	0.29***	0.21	0.38**	0.07	0.17	-0.05
T3 positive FE	-0.16 ⁺	-0.19	-0.11	-0.16 ⁺	-0.13	-0.18
T3 negative dominant FE	0.29	0.21 ⁺	0.37**	0.13	0.12	0.13
Mothers' observed T4 origami affect						
Warmth	-0.22*	-0.28*	-0.14	-0.10	0.04	0.32*
Positive emotion	-0.22*	-0.33**	-0.04	-0.20*	-0.20	-0.21
Negative affect	0.10	0.03	0.23 ⁺	0.02	-0.05	0.12

p<.001.

**
p<.01.

*
p<.05.

+
p<.10.

Significant sex differences are in bold and italics. Marginal sex differences are in bold. FE = family expressivity.

Table 17
Relations of Conflict Reactions to Reported Lack of Consensus/Resolution in the Conflict Discussion

T4 Conflict Reactions	Postconflict Evaluation of Satisfaction					
	Mother Report			Youth Report		
	Total	Girls	Boys	Total	Girls	Boys
Mother						
Hostile verbal	0.10	0.13	0.05	0.10	0.04	0.17
Disharmonious verbalizations	0.23*	0.27*	0.17	0.08	0.07	0.09
Anger affect	0.28**	0.42***	0.14	0.24**	0.29*	0.17
Positive verbal/affect	-0.07	-0.21 ⁺	0.09	-0.19*	-0.25*	-0.10
Youth						
Negative verbal	0.31***	0.36**	0.24 ⁺	0.22*	0.13	0.36**
Anger affect	0.46***	0.56***	0.33**	0.36***	0.38**	0.35**
Humor verbal	-0.07	-0.23 ⁺	0.08	-0.00	-0.19	0.17
Positive affect	-0.06	-0.14	0.04	-0.06	-0.21	0.12

**
*
+
 $p < .001$.
 $p < .01$.
 $p < .05$.
 $p < .10$.

Significant sex differences are in bold and italics. Marginal sex differences are in bold.

Table 18
Summary of the Fit of the Latent Growth Curve Models and Meditational Models

Variable in Analysis	χ^2	CFI	RMSEA	CI RMSEA	SRMR	Constraints
Latent Growth Curve Models						
Mother negative emotionality						
Ind. LGM	$\chi^2(6, N = 171) = 4.42, p = .62$	1.00	0.00	0.00–0.08	0.017	IT
Moderation 1	$\chi^2(17, N = 170) = 13.19, ns$	1.00	0.00	0.00–0.07	0.073	IT & IS
With outcomes	$\chi^2(38, N = 171) = 57.41, p = .02$	0.980	0.055	0.02–0.08	0.048	IT
Mod. with outcomes	$\chi^2(105, N = 170) = 126.16, p = .08$	0.978	0.049	0.00–0.08	0.087	IT IS MIS OS
Teacher negative emotionality						
Ind. LGM	$\chi^2(10, N = 171) = 15.65, p = .11$	0.985	0.057	0.00–0.11	0.055	None
Moderation 1	$\chi^2(19, N = 169) = 13.99, ns$	1.00	0.00	0.00–0.07	0.034	IS
Moderation 2	$\chi^2(23, N = 169) = 23.95, ns$	0.997	0.022	0.00–0.09	0.061	IS
With outcomes	$\chi^2(42, N = 171) = 53.25, ns$	0.985	0.040	0.00–0.07	0.043	
Mod. with outcomes	NA (error)					
Mother resiliency						
Ind. LGM	$\chi^2(1, N = 171) = 0.14, ns$	1.00	0.00	0.00–0.15	0.006	NA
Moderation 1	$\chi^2(3, N = 170) = 3.79, ns$	0.996	0.056	0.00–0.20	0.119	NA
With outcomes	$\chi^2(9, N = 171) = 10.58, ns$	0.997	0.032	0.00–0.10	0.026	
Mod. with outcomes	$\chi^2(38, N = 170) = 34.49, ns$	1.00	0.00	0.00–0.07	0.071	MIS & OS
Mother control/regulation						
Ind. LGM	$\chi^2(7, N = 171) = 2.76, ns$	1.00	0.00	0.00–0.04	0.059	None
Moderation 1	$\chi^2(11, N = 170) = 16.39, ns$	0.993	0.076	0.00–0.15	0.061	IS
Moderation 2	$\chi^2(17, N = 170) = 24.36, ns$	0.990	0.071	0.00–0.13	0.091	IS
With outcomes	$\chi^2(39, N = 171) = 67.15, p = .003$	0.975	0.065	0.04–0.09	0.067	
Mod. with outcomes	$\chi^2(98, N = 170) = 147.86, p = .001$	0.956	0.077	0.05–0.10	0.102	IS MS OS
Mother externalizing						
Ind. LGM	$\chi^2(1, N = 171) = 0.85, ns$	1.00	0.00	0.00–0.20	0.015	NA
Moderation 1	$\chi^2(5, N = 170) = 14.98, p = .01$	0.963	0.153	0.07–0.25	0.109	NA
Moderation 2	$\chi^2(6, N = 170) = 15.59, p = .02$	0.965	0.137	0.06–0.22	0.117	NA
With outcomes	$\chi^2(9, N = 171) = 11.05, ns$	0.997	0.037	0.00–0.10	0.022	
Mod. with outcomes	$\chi^2(39, N = 170) = 53.90, p = .06$	0.977	0.067	0.00–0.11	0.121	MI & OS
Father externalizing						
Ind. LGM	$\chi^2(1, N = 150) = 0.12, ns$	1.00	0.00	0.00–0.15	0.005	NA
Moderation 1	$\chi^2(3, N = 148) = 1.85, ns$	1.00	0.00	0.00–0.16	0.048	NA
Moderation 2	$\chi^2(3, N = 148) = 0.64, ns$	1.00	0.00	0.00–0.09	0.009	NA
With outcomes	$\chi^2(9, N = 163) = 8.21, ns$	1.00	0.00	0.00–0.08	0.026	
Mod. with outcomes	NA (error)					
Teacher externalizing						
Ind. LGM	$\chi^2(1, N = 171) = 1.88, ns$	0.991	0.072	0.00–0.23	0.024	NA
Moderation 1	$\chi^2(1, N = 169) = 2.30, ns$	0.983	0.124	0.00–0.34	0.030	NA
Moderation 2	$\chi^2(2, N = 169) = 2.97, ns$	0.987	0.076	0.00–0.24	0.036	NA
With outcomes	$\chi^2(22, N = 171) = 39.33, p = .01$	0.962	0.068	0.03–0.10	0.056	
Mod. with outcomes	NA (error)					
Mother positive affect						
Ind. LGM	NA (perfect fit)					NA
Moderation 1	$\chi^2(2, N = 158) = .319, ns$	1.00	0.00	0.00–0.12	0.028	NA
Moderation 2	$\chi^2(2, N = 158) = 2.20, ns$	0.995	0.036	0.00–0.23	0.043	NA
With outcomes	$\chi^2(9, N = 158) = 8.82, ns$	1.00	0.00	0.00–0.09	0.041	
Mod. with outcomes	$\chi^2(66, N = 158) = 82.40, p = .08$	0.958	0.056	0.00–0.09	0.092	OS
Mother warmth						
Ind. LGM	$\chi^2(1, N = 158) = 9.05, p < .05$	0.848	0.226	0.11–0.37	0.08	NA
Moderation 1	$\chi^2(2, N = 158) = .671, ns$	1.00	0.00	0.00–0.16	0.030	NA
Moderation 2	$\chi^2(2, N = 158) = 9.34, p = .01$	0.850	0.216	0.09–0.36	0.102	NA
With outcomes	$\chi^2(9, N = 158) = 17.45, p = .04$	0.980	0.077	0.01–0.13	0.035	
Mod. with outcomes	$\chi^2(34, N = 158) = 36.69, ns$	0.994	0.032	0.00–0.09	0.072	OS

Variable in Analysis	χ^2	CFI	RMSEA	CI RMSEA	SRMR	Constraints
Latent Growth Curve Models						
Mediational Models						
Negative emo. & positive affect	$\chi^2(184, N = 173) = 274.36, p < .001$	0.940	0.053	0.04–0.07	0.096	IT
Resiliency (M) & positive affect	$\chi^2(36, N = 171) = 52.89, p = .03$	0.973	0.052	0.02–0.08	0.056	NA
Resiliency (T) & positive affect	$\chi^2(36, N = 171) = 57.83, p = .01$	0.952	0.060	0.03–0.09	0.070	NA
Control/regulation & positive affect	$\chi^2(172, N = 173) = 278.48, p < .001$	0.943	0.060	0.05–0.07	0.068	M cont. IT
Negative emo. & warmth	$\chi^2(183, N = 173) = 289.36, p < .001$	0.933	0.058	0.05–0.07	0.094	IT
Resiliency (M) & warmth	$\chi^2(35, N = 171) = 52.24, p = .03$	0.974	0.054	0.02–0.08	0.047	NA
Resiliency (T) & warmth	$\chi^2(35, N = 171) = 66.41, p = .001$	0.939	0.072	0.05–0.10	0.066	NA
Control/regulation & warmth	$\chi^2(175, N = 173) = 351.06, p < .001$	0.908	0.076	0.07–0.09	0.071	M cont. IT

M = parent (usually mother) report; T = teacher report; CI = confidence intervals; emo. = emotionality; Ind. = Individual variable model testing the trajectory; Moderation1 = model testing moderation by sex testing for sex differences on the intercept and slope; Moderation2 = moderation by sex estimating the values of the intercept and slopes for boys and girls; Mod. = moderation; NA = not applicable; IT = indicators over time; IS = indicators for boys and girls (by sex); MIS = mean intercept and slope across sexes; MI = mean intercept across sexes; MS = mean slope across sexes; OS = paths to the outcomes across sexes; M cont. IT = indicator for mothers' reports of ego control constrained over time.

Table 19

Summary of the Individual Latent Growth Curve Models

Variable in Analysis	Slope Tested	Mean Intercept	Intercept Variance	Mean Slope	Slope Variance	Sex Difference: Intercept	Sex Difference: Slope
Negative emotionality (mother report)	Linear	4.13 ***	0.77 ***	-0.15 ***	0.06	<i>ns</i>	<i>ns</i>
Negative emotionality (teacher report)	Linear	3.44 ***	0.83 **	-0.09	0.14	$\sigma^2 3.75$ *** $\sigma^2 3.12$ ***	$\sigma^2 -0.16^+$ $\sigma^2 -0.02$
Resiliency (mother report)	Linear	6.65 ***	0.87 ***	-0.02	0.05	<i>ns</i>	<i>ns</i>
Control/regulation (mother report)	Linear	4.74 ***	0.44	0.04	0.04	$\sigma^2 4.58$ *** $\sigma^2 4.90$ ***	<i>ns</i>
Externalizing (mother report)	Linear	2.11 ***	0.17 ***	-0.05 ***	0.02 *	<i>ns</i>	$\sigma^2 -0.02$ $\sigma^2 -0.08$ ***
Externalizing (father report)	Linear	2.08 ***	0.21	-0.02	0.02	$\sigma^2 2.15$ *** $\sigma^2 2.00$ ***	<i>ns</i>
Externalizing (teacher report)	Linear	1.73 ***	0.31	-0.14 ***	0.01	$\sigma^2 1.98$ *** $\sigma^2 1.47$ ***	<i>ns</i>
Positive affect (mother)	Nonlinear	5.72 ***	0.22	-0.93 ***	0.20	$\sigma^2 5.55$ *** $\sigma^2 5.87$ ***	$\sigma^2 -0.86$ *** $\sigma^2 -0.98$ ***
Warmth (mother)	Nonlinear	4.04 ***	1.11 ***	0.71 ***	0.33 ***	$\sigma^2 3.76$ *** $\sigma^2 4.35$ ***	$\sigma^2 0.84$ *** $\sigma^2 0.55$ ***

+ $p < .10$.* $p < .05$.** $p < .01$.*** $p < .001$.

Unstandardized estimates are reported.

NA = not applicable (model did not run properly). Bold text = significant sex difference. Italicized text = near significant sex difference.

See text and Table 18 for information about the fit of the models.

Summary of the Latent Growth Curve Models Predicting Outcomes

Table 20

Latent Growth Curve	Time 4 Conflict Outcomes							
	Mother Conflict Reactions				Youth Conflict Reactions			
	Anger Affect	Hostile Verbal	Disharmonious Verbalizations	Positive Affect/Verbal	Negative Verbal	Anger Affect	Humor Verbal	Positive Affect
Neg. emotionality (M)	Int 0.13 [*]	Int 0.23 [*]		Int -0.22 [*]		Int 0.17 ^{**}		
Neg. emotionality (T)	Int 0.25 ^{**}		Int 0.32 [*]	Int -0.18 ⁺		Int 0.14 ⁺		
Resiliency (M)	Int	-0.20 ^{**}			Int 0.23 ^{**}		Int -0.12 ⁺	Int 0.06 [*]
Control (M)	Int	-0.33 ^{***}		Int -0.20 ⁺	Int 0.31 ^{**}	Slope 32.95 [*]	Int -0.21 ^{**}	Int 0.07 ⁺
Externalizing (M)	Int 0.47 ^{***}	Int 0.57 ^{**}	Int 0.61 ^{***}	Int -0.60 ^{***}	Int 1.28 [*]	Int 0.53 ^{***}	Int -0.11 ⁺	Int -0.38 [*]
Externalizing (D)	Slope 0.90 [*]				Slope 3.29 ⁺	Slope 0.67 ⁺		
Externalizing (T)	Int 0.51 ^{**}	Int 0.79 ^{**}	Int 0.79 ^{**}	Int -0.36 ⁺	Int 1.47 [*]	Int 0.58 ^{***}		
Positive affect	Int -0.38 ^{**}	Int -0.75 ^{**}		Int 2.20 ⁺		Int -0.28 [*]	Int 1.57 ⁺	
Warmth	Slope -0.27 [*]			Int 0.44 [*]			Slope 0.11 [*]	
	Int -0.21 ^{**}	Int -0.31 ^{**}	Int -0.21 [*]	Slope 0.35 [*]		Slope -0.19 ⁺		
				Int 0.38 ^{***}				
				Slope 0.31 [*]				

Note

+ $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

M = others, D = fathers, T = teachers. *Int* refers to the intercept of the latent growth curve. *Slope* refers to the slope of the latent growth curve. Unstandardized estimates are reported.

Table 21
Summary of The Meditational Models Part 1: Prediction of Conflict Outcomes and Betas

	Mother Conflict Reactions T4			Youth Conflict Reactions T4				
	Anger Affect	Hostile Verbal	Disharmonious Verbalizations	Positive Affect/Verbal	Negative Verbal	Anger Affect	Humor Verbal	Positive Affect
Negative emo. & positive affect	PA -0.14 [*]			PA 0.17 [*] NE -0.13 [*]		NE 0.14 ^{**}		
Resiliency (M) & positive affect	PA -0.13 ^{**} R -0.14 ^{**}	PA -0.20 ⁺		PA 0.17 [*] R 0.16 [*]		R -0.08 ⁺	R 0.04 ⁺	R 0.20 ^{***}
Resiliency (T) & positive affect	PA -0.16 ^{**}		PA -0.13 ⁺ R -0.13 ⁺	PA 0.20 [*]				R 0.10 ⁺
Control/regulation & positive affect	PA -0.12 [*] CR -0.38 ^{***}		CR -0.34 [*]	PA 0.18 [*]	CR -0.95 [*]	CR -0.31 ^{**}		
Negative emo. & warmth	W -0.11 [*] NE 0.09 ⁺	W3 -0.18 ^{**}	W -0.15 ⁺	W 0.22 ^{**} NE -0.13 [*]		NE 0.14 ^{**}	W 0.05 ⁺	
Resiliency (M) & warmth	W -0.08 ⁺ R -0.14 ^{**}	W3 -0.19 ^{***}	W 0.15 ⁺	W 0.20 ^{**} R 0.13 ⁺				R 0.19 ^{***}
Resiliency (T) & warmth	W -0.12 [*]	W3 -0.19 ^{***}	W -0.16 [*] R -0.13 ⁺	W 0.24 ^{***}		W -0.10 ⁺	W 0.05 ⁺	R 0.10 ⁺
Control/regulation & warmth	W -0.10 [*] CR -0.40 ^{***}	CR -0.33 ⁺	W -0.15 ⁺ CR -0.34 [*]	W 0.23 ^{**}	CR -0.85 [*]	CR -0.31 ^{**}	W 0.05 ⁺	

p<.001.
**
p<.01.
*
p<.05.
+
p<.10.

PA = parental positive affect; NE 5children's negative emotionality; R = resiliency; CR = control/regulation; W = mothers, T = teachers. Unless otherwise noted (e.g., W3), all predictions are T4 predictions. Unstandardized estimates are reported.

Summary of The Mediation Models Part 2: Cross-Paths And Mediation

Table 22

Model	Cross-Paths	Value	Mediation	
				Conflict Outcome
Negative emotionality & positive affect	NE2 → PA3 NE3 → PA4 R3 → PA4	-0.10 ⁺ -0.15 ⁺ 0.24 ^{***}	None R2 → R3 → PA4 →	M positive & anger ^{**}
Resiliency (M) & positive affect	None	0.18 ⁺	None	
Resiliency (T) & positive affect	CR2 → PA3	-0.33 [*]	NE2 → W3 → W4 →	M positive [*]
Control/regulation & positive affect	NE2 → W3		NE2 → W3 → W4 →	M anger ⁺
Negative emotionality & warmth			NE2 → W3 →	M hostile ^{**}
			R2 → R3 → W4 →	M positive ^{**}
Resiliency (M) & warmth	R2 → W3 R3 → W4 W2 → R3	0.18 ⁺ 0.21 ^{***} 0.07 ⁺		
Resiliency (T) & warmth	W2 - R3	0.17 [*]	None	
Control/regulation & warmth	None		None	

**
*
+
 $p < .001$.
 $p < .01$.
 $p < .05$.
 $p < .10$.

PA = parental positive affect; NE = children's negative emotionality; R = resiliency; CR = control/regulation; W = parental warmth; M = mothers; T = teachers; Y = youth. The number refers to the time point (2 = T2, 3 = T3, 4 = T4). Unstandardized estimates are reported.