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Delineating the Sequelae of Destructive and Constructive Interparental Conflict for Children Within an Evolutionary Framework

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Abstract

We examined the joint role of constructive and destructive interparental conflict in predicting children's emotional insecurity and psychological problems. In Study 1, 250 early adolescents ($M = 12.6$ years) and their primary caregivers completed assessments of family and child functioning. In Study 2, 201 mothers and their two-year old children participated in a multi-method, longitudinal design with three annual measurement occasions. Findings from structural equation modeling in both studies revealed that children's emotional insecurity in the interparental relationship mediated associations between destructive interparental conflict and children's psychological problems even after including constructive conflict and family and child covariates as predictors. Conversely, emotional insecurity was not a mediator of associations between constructive interparental conflict and children's psychological problems when destructive interparental conflict was specified as a risk factor in the analyses. The results are consistent with the evolutionary reformulation of emotional security theory and the resulting primacy ascribed to destructive interparental conflict in accounting for individual differences in children's emotional insecurity and its pathogenic implications (Davies & Sturge-Apple, 2007).

Children exposed to high levels of conflict between parents are more likely to exhibit emotional distress in response to interparental conflict and broader patterns of psychological difficulties (e.g., internalizing and externalizing symptoms) than are children from harmonious homes (Cummings & Davies, 2010). In attempting to understand the unfolding developmental pathways underlying children's vulnerability, several theories have proposed that children's distress in response to interparental conflict is a key mechanism mediating interparental conflict and later problems (e.g., Davies & Cummings, 1994; Grych & Fincham, 1990). In support of this assumption, studies have consistently identified children's distress responses to interparental conflict as significant mediating factors underlying their heightened vulnerability to psychological difficulties when exposed to heightened conflict between parents (Buehler, Lange, & Franck, 2007; Cummings, Schermerhorn, Davies, Goeke-Morey, & Cummings, 2006; Davies, Harold, Goeke-Morey, & Cummings, 2002; Fosco & Grych, 2008).

However, the treatment of interparental conflict as a homogeneous construct in these studies has not afforded an analysis of whether different forms of conflict have unique implications for children's reactivity and their adjustment. Couples vary widely in how they approach and manage conflicts, with some resorting to aggression, disengagement, and escalation of distress and others making efforts to work in a collaborative way toward compromise and

resolution. Thus, advancing a process-oriented approach to understanding individual variation in the links among interparental discord, children's distress reactivity to conflict, and their adjustment requires an understanding of the specific stimulus characteristics of interparental conflict that may have implications for individual differences in child reactivity and adjustment (Cummings & Davies, 2010). As a first step in addressing this gap, the objective of this study was to explore the relative roles of constructive and destructive conflict between parents in informing pathways between interparental discord, children's distress, and their psychological difficulties. Because empirical distinctions between conflict tactics in models of child development have largely been guided by emotional security theory (EST; Cummings & Davies, 2010), our aim is to specifically discriminate between these two forms of conflict in advancing an understanding of children's emotional security. According to EST (Davies & Cummings, 1994), repeated exposure to destructive interparental conflict characterized by elevated hostility and conflict escalation undermine children's goal of preserving their security and are manifested overtly in their heightened distress, negative appraisals, and elevated involvement in response to interparental conflict. Elevated concerns about security, in turn, are proposed to increase children's risk for a wide array of psychological problems.

Building on the empirical delineation of differential associations between forms of interpartner conflict and adults' relationship quality and well-being (e.g., Gottman, 1994; Notarius & Markman, 1993), Cummings and colleagues proposed that distinguishing between destructive and constructive interparental interactions from the child's perspective may help to inform an understanding of children's adjustment over time (Cummings & Cummings, 1988; Goeke-Morey, Cummings, Harold, & Shelton, 2003). Utilizing both experimental simulations of interadult conflict and parental diary procedures, studies support the classification of parent aggression and hostility as destructive conflict properties evoking negative emotions and behaviors in children (e.g., Goeke-Morey et al., 2003; Goeke-Morey, Cummings, & Papp, 2007). Other research further supports these "destructive" forms of interparental conflict in increasing children's vulnerability for mental health problems through its association with children's emotional insecurity in the interparental relationship (Davies, Harold et al., 2002; El-Sheikh, Cummings, Kouros, Elmore-Staton, & Buckhalt, 2008; McCoy, Cummings, & Davies, 2009). Conversely, parental support, cooperation, and problem-solving have been designated as "constructive" from the child's perspective based on their associations with diminished negative emotions (Cummings & Wilson, 1999; Cummings, Goeke-Morey, Papp, & Dukewich, 2002; Cummings, Goeke-Morey, & Papp, 2004; Goeke-Morey et al., 2003; 2007). It is further hypothesized that these constructive tactics have salubrious implications for children's mental health by reducing children's concerns about security in the interparental relationship (Cummings, Goeke-Morey, & Papp, 2003; Easterbrooks, Cummings, & Emde, 1994). Although there is less evidence in support of the child sequelae associated with exposure to constructive conflicts, a recent study found that the association between constructive interparental conflict tactics and children's prosocial behavior were mediated by signs of diminished child insecurity in the interparental relationship (McCoy, Cummings, & Davies, 2009).

Analysis of the nature and frequency of conflict behaviors in the home indicates that the vast majority of couples use both constructive and destructive tactics during conflicts (Cummings et al., 2004). Yet, no studies, to our knowledge, have delineated how these two primary classes of conflict tactics operate jointly in understanding how children cope with and adapt to interparental conflict. In rare cases in which the two types of conflict are distinguished from one another, the predominant approach is to isolate constructive and destructive sets of conflict tactics as predictors of child adjustment in separate analytic models (e.g., McCoy et al., 2009; Cummings et al., 2002; 2004; Goeke-Morey et al., 2003; 2007). As a result, little is known about the interplay between exposure to destructive and constructive forms of

conflict in advancing an understanding of children's coping and adjustment to interparental conflict. Accordingly, this study is designed to break new ground by examining the additive and interactive roles of these two classes of interparental conflict tactics in predicting signs of children's emotional insecurity in the interparental relationship and, in turn, their psychological difficulties.

Hypotheses regarding the interplay between constructive and destructive conflict vary across two conceptual versions of EST. According to the original version of EST, both conflict types (i.e., destructive, constructive) are assigned relatively equal empirical weight as independent contributors to child reactivity in the face of interparental conflict (Cummings & Davies, 1996; Davies & Cummings, 1994). A primary proposal is that parental conflict tactics can be distinguished in terms of their constructive and destructive properties based on the degree to which they increase or reduce insecurity (Goeke-Morey et al., 2003). Therefore, interparental conflict characterized by aggression, withdrawal, and detachment is defined as destructive because it is posited to increase signs of insecurity. In contrast, parental displays of cooperation, collaboration, and resolution during conflicts are postulated to enhance children's security, in part, by reducing their signs of distress (McCoy et al., 2009). Taken together, the underlying assumption of the original formulation of EST is that indicators of children's emotional insecurity are products of their exposure to both constructive and destructive properties of interparental conflict.

The evolutionary reformulation of emotional security theory offers an alternative hypothesis (EST-R; Davies & Sturge-Apple, 2007; Davies & Woitach, 2008). Although EST-R shares with the original theory the assumption that security is a primary goal for children, it differs in proposing that this goal is largely organized around the operation of the social defense system, a behavioral system that evolved through our ancestral history to defuse and avoid threat from other members of the social group (Gilbert, 1993; Davies & Sturge-Apple, 2007; Ohman & Mineka, 2001). Operating from the assumption that the emotional security system is specifically designed to contend with conspecific danger, interpersonal threat cues (e.g., angry expressions, dominant posturing, loud voices) are theorized to assume greater primacy in organizing children's distress responses in social contexts compared to expressions of interpersonal cooperation or support. Thus, although EST-R acknowledges that constructive interparental interactions are likely to have important implications for children's psychological adjustment, insecurity in the interparental relationship is not proposed to be a primary mediator in these pathways. As a derivative hypothesis, antagonism between parents is expected to be more salient than constructive interparental conflict as a predictor of children's insecurity in the interparental relationship.

A primary objective of this paper is to test the relative viability of the original and reformulated accounts of emotional security theory in explicating the role of emotional security as a mediator in pathways between constructive and destructive interparental conflict and children's psychological adjustment. Whereas EST proposes that constructive and destructive conflict may uniquely increase children's vulnerability to psychological problems by undermining their security in the interparental relationship, the more selective hypothesis of EST-R is that emotional insecurity will only serve as an explanatory mechanism in associations between destructive interparental conflict and children's psychological symptoms. To test these alternative hypotheses, the present paper capitalizes on data drawn from two large studies ($n > 200$) of children and their families.

Examination of the joint role of constructive and destructive interparental conflict raises two additional questions about the operation of pathways within a multivariate context. First, pathways between one form (i.e., destructive, constructive) of interparental conflict and children's functioning may vary as a function of the other form of conflict. For example, in

the original EST, destructive bouts of interparental conflict are proposed to assume a more benign meaning for children if they are balanced by expressions of harmony, warmth, and cooperation between parents (Cummings & Davies, 2010; Davies, Harold et al., 2002). Thus, it is possible that witnessing constructive forms of interparental conflict serves as a protective factor in the risk posed by destructive conflict for children's insecurity and psychological adjustment. As a way to examine this possibility, we explored whether the interaction between constructive and destructive interparental conflict uniquely predicts children's security and psychological adjustment above and beyond the additive effects of each form.

Second, although both versions of EST propose that the hypothesized interrelationships among interparental conflict and child functioning will continue to be robust in the context of other family factors, a plausible alternative hypothesis is that the associations are simply artifacts of the influence of co-occurring child, parenting, family-level, or sociodemographic characteristics. Therefore, to increase the rigor of our analyses for each study, we specify factors within each of these four classes of constructs as covariates in the primary analyses. Selection of these factors was based on a careful consideration of research and theory on the potential impact of specific dimensions of child, parent-child, family, and sociodemographic characteristics. First, at the level of child attributes, children's general tendencies to experience heightened, prolonged distress is consistently identified as a factor that may artificially inflate mediational paths among interparental conflict, child insecurity, and child adjustment (e.g., Davies, Harold et al., 2002; Harold & Conger, 1997). Second, in the parent-child dyad, the quality of the emotional relationship between parents and children has been regarded as a pivotal factor that may explain or supersede associations between interparental conflict and children's adjustment (Buehler, Benson, & Gerard, 2006; Levendosky, Leahy, Bogat, Davidson, & von Eye, 2006). Third, at the level of the family unit, prior research has underscored the possibility that difficulties maintaining cohesive, close-knit relationships and experiences with instability and disruptive events (e.g., changes in caregiver intimate relationships) may co-occur with interparental problems and, in turn, threaten children's security (e.g., Ackerman, Kogos, Youngstrom, Schoff, & Izard, 1999; Winter, Davies, & Cummings, 2010). Finally, we also included indices of socioeconomic status (e.g., parent education, income) as covariates based on their implications for family and child functioning (Conger, Conger, & Martin, 2010).

Study 1

As the first foray into addressing the primary aims of the paper, data for Study 1 were drawn from a cross-sectional, multi-informant project of young adolescents and their families. Although research has yet to definitely identify sensitive developmental periods for exposure to interparental conflict, there are strong bases for expecting that witnessing interparental conflict assumes particular significance in the lives of young adolescents. A recent study specifically documented that the association between interparental conflict and children's concerns about insecurity was significantly stronger for adolescents than preadolescent children (Cummings et al., 2006). Children's dispositions to mediate conflicts also increase sharply during preadolescence and peak sometime during early adolescence (Cummings, Ballard, El-Sheikh, & Lake, 1991). Young adolescents have also been shown to exhibit greater acuity than younger children in discriminating between interparental conflict tactics and drawing causal connections between social events and their impact on future interpersonal relations (Cummings & Davies, 2010; Davies, Myers, Cummings, & Heindel, 1999). Accordingly, documentation of the high sensitivity of adolescents to the parameters and implications of constructive and destructive forms of conflict maximized our power to test the alternative predictions derived from EST.

Methods

Participants—Participants included 250 early adolescent children and their primary caregivers recruited from a public middle school in a working- and middle-class suburb directly bordering a moderately-sized city in the Northeast. Primary caregivers and children must have each completed at least some of the assessments in the measurement battery to be included as participants in this paper. Participating children were, on average, 12.6 years old ($SD = 0.95$) and were relatively evenly distributed across the three middle school grades (34% sixth grade; 33% seventh grade; 33% eighth grade) and sex (129 girls, 121 boys). The majority of the children were White (92%), followed by smaller percentages of African American (4%), Native American (3%), and Latino (1%) children. Primary caregivers were predominantly female (88%) and married or living with a partner (84%). The remainder of the caregivers were divorced or separated from the other parent. Median family income for the sample exceeded \$40,000 and the average number of years of completed education was 14.0 years for the primary caregivers ($SD = 2.33$) and their partners ($SD = 2.52$).

Procedure—Mailing lists with the addresses of students were provided to the principal investigators following approval of the study by school administrators and the Institutional Review Board. Primary caregivers, who indicated an interest in participating in the study via phone or mail correspondence, completed survey forms on family and child functioning and returned them in a postage-free envelope. Child participants completed their surveys on family and child functioning in their classrooms under the guidance of a trained experimenter.

Measures—The measurement battery was designed to assess multiple manifest indicators of each of the key constructs in the model (i.e., constructive and destructive conflict, child emotional security, child psychological difficulties) as a more rigorous approach to creating latent variables.

Destructive interparental conflict: To assess destructive forms of interparental conflict, primary caregivers completed the Verbal Aggression, Child Involvement, and Frequency scales of the Conflict and Problem-Solving Scales (CPS; Kerig, 1996). Frequency assesses the number of times the primary caregiver reports engaging in minor (e.g., “spats”) and major (e.g., “big fights”) conflicts over the past year, with response alternatives ranging from 1 (once a year or less) to 6 (just about every day). Items on the remaining scales are rated along 4-point scales (0 = never, 3 = often), reflecting the frequency with which parents and their partners engage in: (a) verbally aggressive conflict tactics such as yelling, accusing, and insulting (Verbal Aggression; 16 items; “Raise voice, yell, shout”) and (b) child-related disagreements (Child Involvement; 10 items; “Involve the child in our argument”). Internal consistency, test-retest reliability and various forms of validity for the CPS subscales are well-established (Kerig, 1996). In the present sample, the three CPS scales yielded satisfactory internal consistency (α s from .78 – .89).

Constructive interparental conflict: Primary caregivers completed two scales to assess constructive interparental conflict. First, caregivers completed the CPS *Resolution* scale to assess how successful the couple is in making progress toward resolution during conflicts. Although the original scale contains thirteen items, the majority of the statements (i.e., 8 or 9) actually reflect unsuccessful or destructive ways of ending conflict that are reverse scored (e.g., “We feel worse about one another than before the fight,” “We stay mad at one another for a while”). To determine whether the thirteen items yield a single factor, all the items were subjected to a principal components analysis with varimax rotation. The results supported a two-factor solution that discriminated between the four constructive items (e.g., “We feel that we’ve resolved it, or come to an understanding”) and nine destructive items

reflecting gridlock and escalation of conflict. Therefore, to obtain an uncontaminated assessment, the four items were summed together to form a constructive conflict resolution scale ($\alpha = .82$). Second, the *Leveling* subscale from the Managing Affect and Differences Scale (MADS; Arellano & Markman, 1995) is designed to assess the clarity and constructiveness of communications between partners regarding their negative feelings and relationship challenges. The eleven items (e.g., “I offer constructive alternatives for his/her bothersome behavior”) are rated along a five-point scale ranging from *strongly disagree* (1) to *strongly agree* (5). The internal consistency for the scale was satisfactory ($\alpha = .89$) and prior studies support its convergent and predictive validity (Arellano & Markman, 1995).

Children’s emotional insecurity: To assess children’s emotional insecurity in the interparental relationship, children completed three subscales from the Security in the Interparental Subsystem (SIS; Davies, Forman, Rasi, & Stevens, 2002) Scale: (a) *Emotional Reactivity*, defined as multiple, prolonged, and dysregulated expressions of emotional distress (9 items; “When my parents argue, I feel scared”); (b) *Involvement*, characterized by emotional and behavioral involvement in interparental conflicts (6 items; “When my parents have an argument, I try to comfort one or both of them”), and (c) *Destructive Family Representations*, which assess appraisals of the deleterious consequences of interparental conflict for the welfare of the family (4 items; “When my parents have an argument, I wonder if they will divorce or separate”). Alpha coefficients ranged from .70 – .89 across the subscales and the validity of the instrument is supported by its correspondence with multi-informant reports of interparental conflict, family discord, and child psychological problems (e.g., Buehler et al., 2007; Davies, Forman et al., 2002).

Child symptomatology: To obtain a multi-informant construct, children and parents reported on internalizing and externalizing problems using corresponding forms of the Youth Self-Report (YSR) and Child Behavior Checklist (CBCL) (Achenbach, 1991). Raw scores of children’s internalizing and externalizing symptoms for the YSR and CBCL were aggregated in order to create a parental and a child report measure of children’s total psychological problems. Alpha coefficients were .92 for the child YSR and .93 for parent CBCL.

Covariates: Children’s negative affectivity: Children’s general tendencies to experience distress were assessed through child reports on two scales. The Negative World View Scale from the Personality Assessment Questionnaire (PAQ, Rohner, 1990) consists of six items assessing adolescent dispositions to interpret the world as a threatening place (e.g., “I see life as full of dangers.”), whereas the six items on the Negative Self-Esteem Scale from the PAQ were designed to capture children’s negative affective appraisals of themselves (e.g., “I feel that I am no good and I never will be any good.”). Intraclass correlation coefficients were .84 and .77 for the Negative World View and Negative Self-Esteem Scales, respectively. Support for the validity of each scale is evidenced by its theoretically meaningful patterns of associations with family processes and child maladjustment (Khaleque & Rohner, 2002; Rohner, 2004).

Covariates: Parent-child relationship quality: Three indicators were used to assess the affective quality of parent-child relationships. As the first assessment, children also completed the abbreviated, 10-item version of the Parental Acceptance and Rejection Questionnaire (PARQ; Rohner, 1990; 2004) separately for mothers and fathers. The PARQ is designed to assess child appraisals of parental emotional availability and support (e.g., “My mother [father] tries to help me when I am scared or upset”). Given the high correlation between child appraisals of maternal and paternal emotional availability ($r = .65$), the

measures were aggregated into a single composite with good internal consistency at the item level ($\alpha = .95$).

For the second indicator, the child version of Parental Attachment Security Scale (C-PASS; Davies et al., 2002) was used to assess children's use of their parents as sources of protection and support (e.g., "When I'm upset, I go to this person for comfort"). Children completed the 15 item scale separately for mothers and fathers using a 4-point Likert-type response scale ranging from 1 (*not at all true of me*) to 4 (*very true of me*). In light of the considerable overlap between reports of maternal and paternal attachment ($r = .56$), the scales were aggregated to form a single, internally consistent ($\alpha = .95$) composite of parent-child relationship quality.

As the third assessment, primary caregivers completed the parent version of the PASS (P-PASS; Davies, Forman et al., 2002). Primary caregivers completed the 9-item scale twice, rating how well each statement described their child's relationships with themselves and their partners on a 5-point scale (e.g., "When my child is upset, he or she goes to me," "My child appears comfortable sharing thoughts and feelings with my partner") with response alternatives from 1 = *not at all like my child* to 5 = *a whole lot like my child*. Primary caregivers reports of children's affective quality in the mother-child and father-child relationships were aggregated into a more parsimonious measure in light of their moderate to strong correspondence ($r = .54$). The resulting composite evidenced high internal consistency ($\alpha = .89$). Evidence of the validity of all three measures is derived from their associations with multi-informant reports of parent-child relationship quality, family relationship quality, and child functioning (Davies, Forman et al., 2002; Cummings et al., 2010).

Covariates: Family-level process: To provide a balanced assessment of adversity and harmony in the family unit as a whole, primary caregivers completed two complementary measures. First, family cohesion was assessed through the Family Cohesion Scale of the Family Adaptability and Cohesion Evaluation Scales-III. The FACES-III Family Cohesion scale contains 10 items designed to assess family bonding and support (e.g., "Family members feel very close to each other"), with response alternatives ranging from 1 = *almost never* to 5 = *almost always*. The psychometric properties of the measure are well-established (Olson, Portner, & Lavee, 1985). Cronbach's alpha for the present sample was .86. Second, family instability, which is defined as the degree to which families fail to provide stability and continuity, was measured using the revised version of the Family Instability Index (Ackerman et al., 1999; Forman & Davies, 2003). The revised FII consists of nine items tapping the frequency of experiencing disruptive life events over the past five years in five family domains: (a) changes in residence, (b) changes in the primary and/or secondary caregivers, (c) transitions in romantic relationships of the primary caregiver (e.g., dissolution, new romantic relationships), (d) job and income loss, and (e) death or serious illness of a close family member ($M = 3.20$, $SD = 2.87$). Support for its validity is reflected in empirical links between the revised FII and other family characteristics and children's coping and adjustment (e.g., Forman & Davies, 2003).

Covariates: Socioeconomic status: To obtain a multi-indicator composite of socioeconomic status to be used as a covariate in the analyses, primary caregivers reported on: (a) their level of education in years, (b) their partner's level of education in years, and (c) total family income divided into nine categories reflecting increments from the lowest (i.e., less than \$6,000) to highest (i.e., \$75,000 or more) income categories.

Results and Discussion

Table 1 provides the raw means and the intercorrelations of the indicators of the main constructs for the primary analyses. Because the CPS Physical Aggression scale was highly skewed, a logarithmic transformation was conducted to normalize its distribution prior to calculating the correlations and the primary analyses. In support of the measurement model, intercorrelations between the indicators of the four main variables (i.e., constructive and destructive interparental conflict, child insecurity, child psychological problems) tended to be moderate in magnitude (*Mean* $r = .42$). To more specifically determine the viability of distinguishing between constructive and destructive dimensions of interparental conflict, we submitted the five interparental measures in Table 1 to a principal components analysis with varimax rotation. Inspection of the eigenvalues (i.e., > 1.0) and the scree plot supported a two-factor solution that accounted for 69.6% of the variance. Lending further support for the measurement model, each of the indicators loaded onto the hypothesized constructive or destructive interparental construct, with loadings ranging from .74 to .86.

Some children and primary caregivers exercised their participant rights of declining to complete some of the measures. Thus, some data were missing for the analyses, with a range of 0% to 14.8% across variables (mean = 6.7%). As a test of whether data were missing completely at random (MCAR), we examined the patterns of missing data using Little's MCAR test (Little, 1988; Schlomer, Bauman, & Card, 2010). Because the findings of this test indicated that the data were MCAR, $\chi^2 = 655.78$, $df = 606$, $p = .08$, missing data were estimated using full-information maximum likelihood (FIML) in Amos 18.0 to retain the full sample for primary analyses (Enders, 2001).

Primary Analysis: Process Model of Forms of Interparental Conflict—Our

primary aim was to explore the simultaneous and relative roles of constructive and destructive conflict as predictors in mediational pathways involving child security and total problems. Therefore, as shown in Figure 1, structural paths were estimated between: (a) the two types of conflict and children's emotional insecurity and psychological problems and (b) children's insecurity and their total problems. The model provided a good representation of the data, $\chi^2 (29, N = 250) = 46.25$, $p = .02$, $RMSEA = .049$, $CFI = .97$, $TLI = .93$, and χ^2/df ratio = 1.60. As shown in Figure 1, the results indicated that constructive interparental conflict did not significantly predict either children's emotional insecurity or their psychological problems with the inclusion of all the paths in the model. In contrast, destructive interparental conflict was significantly related to children's emotional insecurity, $\beta = .32$, $p < .01$ even after including constructive conflict as a predictor. Supporting the hypothesized role of insecurity as a mediator of destructive interparental conflict, the estimated path between insecurity and children's psychological problems was significant in the full model, $\beta = .61$, $p < .01$. Moreover, the significant path between destructive interparental conflict and children's psychological difficulties when constraining the path between insecurity and total problems to 0 ($\beta = .63$, $p < .01$) dropped substantially to a negligible magnitude after specifying the mediational path involving insecurity, $\beta = .16$, *ns*. To more authoritatively examine children's insecurity as a mediator of associations between destructive interparental conflict and children's total problems, we conducted bootstrapping tests with the PRODCLIN software program (MacKinnon, Fritz, Williams, & Lockwood, 2007; Preacher & Hayes, 2008). Lending support to children's insecurity as a mediator of destructive interparental conflict, the results indicated that the indirect path was significantly different from zero, 95% CI = .07 to .48.

The analyses in Figure 1, however, do not address the possibility that the negligible role of constructive interparental conflict as a predictor may be attributable to differences in assessment batteries between our study and prior research rather than the greater salience of

destructive conflict for children. To provide a basis for comparing the validity of our measurement of constructive conflict with prior studies that have examined the predictive role of constructive conflict in isolation from destructive conflict, we estimated the predictive paths running from constructive conflict to children's security and total problems while constraining all other predictive paths denoted in Figure 1 to 0. The results indicated that constructive interparental conflict was significantly related to lower levels of insecurity, $\beta = -.47, p < .01$, and total psychological problems, $\beta = -.73, p < .01$. Thus, the comparability of these findings with previous research provides support for the validity of the constructive conflict measurement.

Stability and Generalizability of the Process Model—Two additional sets of analyses were conducted to examine whether the results of the primary model depicted in Figure 1 were robust in the context of family processes. In the first set of analyses, the child, parent-child, family, and socioecodemographic characteristics were successively entered as covariates in the mediational model depicted in Figure 1. For each of the four models conducted, predictive paths were specified running from the covariates to children's emotional security and child adjustment. Correlations among the covariate and each form of interparental conflict were also estimated. To increase comparability among the measurement of covariates and the main constructs in the model, we developed latent constructs of the covariates when interrelationships among indicators of the constructs were sufficiently strong in magnitude. Variables within three of the four classes of constructs met the conditions, resulting in the formation of the following latent constructs: (a) *child negative affectivity* consisting of the PAQ Negative World View and Negative Self-Esteem scales as manifest indicators, (b) *parent-child relationship quality* comprised of the PARQ, C-PASS, and P-PASS as manifest indicators, and (c) *socioeconomic status* as reflected in manifest indicators of primary caregiver education, partner education, and family income. Supporting this approach, the loadings of the manifest indicators onto their latent constructs were all significant ($p < .005$) and, on average, moderate to strong in magnitude ($M = .68$, $range = .30$ to $.92$). Due to the negligible correlation between family instability and cohesion ($r = -.06$), *family instability* and *cohesion* variables were retained as separate manifest predictors of children's emotional security and child adjustment in the analysis of family-level processes as covariates.

Results across all four models replicated the pattern of significant relationships reported in the primary analyses: (a) destructive conflict continued to be associated with children's emotional insecurity (β ranged from $.24$ to $.31$, all $ps < .05$), and (b) children's emotional insecurity was related to their psychological problems (β ranged from $.33$ to $.59$, all $ps < .01$). Furthermore, bootstrapping tests of the indirect effect using the PRODCLIN program indicated that children's emotional insecurity was a significant mediator in all four covariate tests. Across the models, estimates of the lower and upper bounds within the 95% confidence interval averaged $.04$ ($range = .01$ to $.06$) and $.36$ ($range = .26$ to $.45$), respectively.

The second analytic step in examining the generality and specificity of the findings consisted of testing constructive interparental conflict as a moderator of the association between destructive interparental conflict and children's insecurity. To conduct the analyses in SEM, it was necessary to standardize and aggregate the indicators of each form of conflict in order to create manifest composites of destructive interparental conflict, constructive interparental conflict, and their multiplicative product. However, without appropriate statistical correction, the significant association between the first-order predictors of constructive and destructive conflict ($r = .31, p < .01$) may bias path estimates of the product term (Aiken & West, 1991). Therefore, to obtain an accurate estimate of the moderating effect, we utilized a residual-centering, or orthogonalizing, approach to creating a product

term that is uncorrelated with each of the first-order predictors (Lance, 1988; Little, Bovaird, & Widaman, 2006). After specifying the main effects of the manifest composites of destructive and constructive interparental conflict in the model, the findings indicated that the interaction term failed to predict the latent construct of insecurity, $\beta = -.14$, *ns*. Thus, constructive conflict did not serve as a significant moderator of destructive conflict.

Study 2

Although the findings from Study 1 support the primacy of destructive conflict in accounting for the mediational role of children's emotional insecurity, authoritative tests of the generalizability of the results hinge on replication in a study that differs in sample characteristics, measurement approach, and design. Therefore, Study 2 was designed to complement Study 1 in several ways. At one level, questions remain as to whether destructive interparental conflict operates in a comparable way across different developmental periods. Accordingly, we elected to examine the multivariate interplay between constructive and destructive conflict in a sample of preschool children based on several developmental considerations.

The wide temporal span between early adolescence in Study 1 and the preschool period in Study 2 offers a rigorous test of the generalizability of our findings. Furthermore, although little is known about preschool children's adaptation to interparental conflict, there are compelling developmental bases for expecting that preschooler functioning may vary depending on the form of interparental conflict. Due to their greater immersion in the family unit, preschool children may experience pronounced sensitivity from heightened opportunities for exposure to both constructive and destructive forms of interparental conflict (Mahoney, Jouriles, & Scavone, 1997). Likewise, the incipient regulatory mechanisms underlying young children's security in the marital relationship may engender reactivity to both angry, aggressive bouts and cooperative, resolved displays of conflict between parents. For example, relative to older children, preschool children are predisposed to experience greater distress and more limited abilities to enlist coping strategies in the face of interparental anger and aggression (e.g., Cummings, Vogel, Cummings, & El-Sheikh, 1989; El-Sheikh & Cummings, 1995; Kitzmann, Gaylord, Holt, & Kenny, 2003). Reflecting young children's potential sensitivity to constructive conflict, findings from experimental simulations of interadult emotional exchanges have indicated that toddler and preschool children's distress reactions to anger between adults subside to baseline levels following adult displays of cooperation and resolution (Cummings, Iannotti, & Zahn-Waxler, 1985; Cummings, Pellegrini, Notarius, & Cummings, 1989). In further underscoring the broad developmental relevance of interparental conflict for children across developmental periods, Cummings and Davies (2010) concluded that: "it is difficult to decipher whether children in any specific age group or developmental period are, in any broad sense, more vulnerable to interparental conflict or insecurity than other age groups (p. 158)." Thus, although little is known about the relative roles of constructive and destructive conflict as predictors of child functioning, there are compelling reasons to expect that preschoolers are sensitive to characteristics of interparental conflict.

Confidence in the findings from Study 1 would also be bolstered by greater rigor in the measurement of constructive interparental conflict. Because the assessment of constructive conflict consisted of a narrow (i.e., 2) set of indicators that were more limited in scope, it is possible that the negligible role of constructive conflict in Study 1 was a product of stronger psychometric properties of the three relatively large indicators of destructive conflict. Therefore, in Study 2, we implemented a measurement battery that specifically targeted three strategies for resolving conflicts and challenges in the interparental relationship that were comparable in size and scope to the destructive conflict measurement battery.

In addition, although Study 1 utilized a multi-informant design, reliance on a single method within a cross-sectional design does not eliminate common method bias from the structural paths. Toward addressing this limitation, we utilized a multi-method, prospective design that followed a large sample of young children and mothers over three annual measurement occasions. Finally, in Study 1, participating families were predominantly White, middle class, and relatively advantaged in terms of experiencing high stability in interparental relationships and relatively low levels of environmental adversity. As a relatively stringent test of the generalizability of findings in Study 1, we recruited mother-child dyads who evidenced greater diversity in their racial characteristics (i.e., substantially higher proportion of African American participants), considerable socioeconomic adversity (e.g., 95% experiencing poverty), and elevated levels of interparental violence.

Methods

Participants—Participants included 201 two-year-old children and their mothers in a moderately-sized metropolitan area in the Northeast. A two-step recruitment process was implemented to insure the enrollment of a high-risk sample who exhibited elevated levels of interparental violence. In the first step, we recruited participants through agencies serving disadvantaged children and families, including Women, Infants, and Children and Temporary Assistance to Needy Families rosters from the Department of Human and Health Services, and the county family court system. In the second step, we administered the abbreviated version of the Physical Assault Scale of the Conflict Tactics Scale 2 (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) to insure that roughly equal proportions of participating mothers experienced (a) no violence (i.e., 40%), (b) mild/moderate physical violence (i.e., 24%), and (c) severe physical violence (i.e., 36%) in the interpartner relationship. Additional inclusionary criteria consisted of: (a) the female caregiver is the biological mother; (b) the child participant is 27 months old (± 5 months) and has no serious developmental disabilities, and (c) the male partner had maintained regular contact with the mother and toddler over the past year.

Median annual income for the family household was \$18,300 (US) per year and a substantial minority of mothers (30%) and their partners (24%) did not complete high school. Most families received public assistance (95%) and were impoverished according to the US Federal Poverty Guidelines (99.5%). Based on the Hollingshead Four Factor Index, the majority of families (77%) fell within the lower two social strata (i.e., unskilled or semi-skilled workers). The mean age of the children was 26 months ($SD = 1.69$), with 44% of the sample consisting of girls ($n = 92$). The majority of mothers and children were Black (56%), followed by smaller proportions of family members who identified as White (23%), Latino (11%), Multi-Racial (7%), and “Other” (3%).

The cumulative retention rate across the three annual measurement occasions was 87%. To test for selective attrition, we conducted statistical comparisons between the mother-child dyads who participated through the third measurement occasion and dyads who dropped out during the longitudinal component of the study along the nine primary family and child functioning variables, the ten covariates, and nine additional demographic characteristics (e.g., sex of child, race and age of mothers and children). No significant differences were identified in the twenty-eight statistical comparisons.

Procedures and Measures—Mothers and children visited the laboratory at a research center for multiple visits at each of three annual measurement occasions beginning when children were two years old. Of relevance to this paper, mothers completed a series of questionnaires and a semi-structured interview to obtain assessments of interparental and child functioning at each measurement wave. At the first wave, family, parent-child, and

child functioning covariates were assessed via maternal questionnaires. As a key covariate, mother-child relationship quality was further assessed through observational ratings of mother-child interactions in the first wave. During a seven minute free-play period, mothers were instructed to play as they normally would at home with their children in a room full of toys. Immediately following the free play, a six-minute clean up episode involved the mothers instructing their child to clean up the toys. Videotaped records of the interactions were subsequently coded for parenting behavior in each of the tasks. All research procedures were approved by the Institutional Review Board at the research site prior to conducting the study. For their participation in the study, mother received: (a) \$25 per visit for three visits at Wave 1, (b) \$35 per visit for three visits at Wave 2, and (c) \$75 per visit for two visits at Wave 3. Children received a small toy valued at approximately \$5 for each visit during the three measurement occasions.

Destructive interparental conflict: Three measures collected at Time 1 were used as indicators of destructive interparental conflict. The first two indices of aggression were derived from maternal reports on the Frequency and Physical Aggression Subscales of the Conflict and Problem-Solving Scales. Whereas the Physical Aggression Subscale contains sixteen items indexing the frequency with which mothers and their partners engage in physically aggressive conflict tactics in their relationship (e.g., “beat up,” “slap”), the Frequency Subscale contains two items designed to assess the incidence of minor and major conflicts (see Study 1, for additional details). For the Physical Aggression subscale, mothers reported on the frequency with which each of the items in the subscale occurred over the past year using a Likert scale of response alternative ranging from “Never” (0) to “Often” (3). In contrast to Study 1 in which parents reported on the overall incidence of conflict, mothers specifically reported on the frequency with which each of the CPS subscale items occurred in the presence of their children. The third indicator consisted of the Psychological Aggression Subscale of the Revised Conflict Tactics Scale (CTS2; Straus et al., 1996). The Psychological Aggression Subscale is comprised of 14 items that assess maternal and partner verbal and psychological forms of hostility directed toward one another (e.g., “insulted or swore at my partner,” “I shouted or yelled at my partner”). Following scoring guidelines, prevalence scores were calculated for each of the two scales based on the sum of the occurrences of specific aggressive acts (1 = act occurred one or more times; 0 = specific act did not occur) over the past year. Reliability was satisfactory for both the CTS2 and CPS scales in this sample (α s ranged from .78 – .92 for each subscale) and prior research supports the validity of the measures (El-Sheikh et al., 2008; Kerig, 1996).

Constructive Interparental Conflict: Mothers also completed three scales at Time 1 to assess constructive interparental conflict. First, the Editing subscale from the Managing Affect and Differences Scale (MADS; Arellano & Markman, 1995) consists of fourteen items designed to assess the degree to which the respondent and partner are able to respond positively to each other even during challenging or stressful times through listening skills and framing communications in a constructive way (e.g., “I express appreciation for my partner’s help despite his unsuccess”). Response alternatives range from “Strongly disagree” (1) to “Strongly agree” (5). Second, mothers completed the CPS Cooperation subscale in order to capture the frequency with which the respondent and partner work collaboratively toward solving conflicts in a mutually respectful way. The sixteen items (e.g., “try to find a solution that meets both needs equally,” “listen to partner’s point of view”) are each rated along a four-point scale ranging from “Never” (0) to “Often” (3). Finally, mothers completed the CPS Resolution scale to assess the couple’s success in making progress towards resolution during the conflicts. Following comparable procedures in Study 1, the thirteen items were subjected to a principal components analysis with a varimax rotation. Consistent with Study 1, the eigenvalues and scree plot supported a two-factor solution that

distinguished between constructive forms of resolution and destructive conflict endings. Moreover, the same four items selected for the constructive scale in Study 1 loaded onto the constructive resolution factor in Study 2. Therefore, the four items were aggregated to form a more precise Resolution scale. Alpha coefficients, indexing reliability for the MADS and CPS scales, ranged from .83 to .93.

Children's emotional insecurity: At Time 1 and 2, mothers completed the Interparental Disagreement Interview (IDI) to assess children's signs of insecurity in the context of interparental conflicts. The IDI is a semi-structured, narrative interview with the mother that is designed to generate rich descriptions of children's behavioral signs of reactivity following common, intense conflicts between the parents. For example, maternal responses to one of the questions, "During these disagreements that [child] sees or hears, how does s/he respond?" is followed up with a further probe inquiry "What does [child] do or say during these disagreements?" If the mother indicates that the child does nothing, additional probes (e.g., "When you say that [child] does nothing, what do you mean specifically?") are also utilized to further capture the child's response. Audiovisual records of the mothers' descriptions of their children's behavioral reactions to interparental conflict in the IDI were subsequently coded independently by a pair of judges to assess children's emotional insecurity in the interparental relationship. Because mothers frequently displayed gestures and faces to supplement their narrative descriptions of their children's reactions, the video records of the interview provided valuable complementary information to the audio track in coding of children's responses.

Judges specifically coded two indicators of children's emotional insecurity in the interparental relationship. First, judges coded for the presence (1) and absence (0) of behavioral dimensions reflecting high levels of emotional reactivity to conflict and regulation of exposure to conflict. Specific dimensions included: (a) fearful distress, defined as descriptions of facial expressions, behaviors (e.g., freezing), and verbalizations (e.g., telling mom s/he is scared) marked by mobilizing forms fear, tension, or distress; (b) verbal concern, as evidenced by child verbal expressions of concern about the welfare of the family (e.g., "Mom, are you alright?"); (c) crying, as reflected in visible tears or sobbing; (d) active flight, characterized by actively shutting out or avoiding the disagreement in an arousing way (e.g., running away, plugging ears); (e) comfort-seeking, reflected in bids for contact or support (e.g., hugging) in an apparent attempt to seek comfort from another individual; and (f) triangulation, consisting of taking sides with one parent against the other. The six codes were subsequently summed into a continuous, *behaviorally* of distress. Second, coders provided a *molar rating* of children's fearful distress along a seven-point scale based on the multiplicity, intensity, quality, and organization of the children's fearful distress (i.e., behavioral signs of fear or tension) during the interparental disagreements. Narratives containing no indications of fearful distress were coded as "0", whereas "6" on the molar scale reflected that children expressed dysregulated and disturbing patterns of distress. The intraclass correlation coefficients, reflecting agreement between two independent raters on 25% of the interviews at each wave of measurement in this study, varied from .88 to .99 for the two insecurity indicators. Support for the validity of the IDI codes is reflected in its associations with established measures of interparental discord and child psychological functioning with preschool children (Davies, Cicchetti, & Martin, in press; Davies, Sturge-Apple, Cicchetti, Manning, & Zale, 2009; Davies, Sturge-Apple, Cicchetti, Manning, & Vonhold, in press).

Child Disruptive Behavior Problems: At each of the three measurement waves, mothers completed the 99 items from the Child Behavior Checklist to obtain assessments of children's total behavior problems. The CBCL is designed to assess a wide range of internalizing (e.g., anxiety, depression), externalizing (e.g., aggressive behavior, attention

problems), and social problems over a two month reporting window (Ages 1½–5; Achenbach, Dumenci, & Rescorla, 2003). Response alternatives range from “Not True” (0) to “Very or Often True” (2). Internal consistency estimates of the Total Problems scale ranged from .94 to .95 across the three measurement occasions.

Covariates: Children’s negative affectivity: At Time 1, mothers completed the Soothability/Falling Reactivity and Discomfort scales from the Child Behavior Questionnaire. (CBQ, Rothbart, Ahadi, Hershey, & Fisher, 2001). The Soothability scale consists of thirteen items that index children’s regulation of distress and arousal (e.g., “Changes from being upset to feeling much better within a few minutes”), whereas the Discomfort scale contains twelve items that assess children’s tendencies to experience distress in a wide array of different stimuli (e.g., “Is likely to cry when even a little bit hurt”). Alpha coefficients were .73 and .61 for the Soothability and Discomfort scales, respectively. Previous research supports the convergent and discriminant validity of the CBQ scales (Putnam & Rothbart, 2006; Rothbart et al., 2001).

Covariates: Mother-child relationship quality: Mother-child relationship quality was assessed through maternal questionnaire and observation of mother-child interactions at Time 1. For the first two assessments, mothers completed the Role Reversal and Lack of Empathy Toward Children’s Needs scales from the Adult-Adolescent Parenting Inventory (AAPI; Bavolek, 1984). The Role Reversal scale is designed to assess the degree to which parents expect that children should support, comfort, and promote parental well-being in times of distress and challenge (8 items; e.g., “Young children should be expected to comfort their mother when she is feeling blue”). The Lack of Empathy scale indexes parental insensitivity to the developmental needs of young children (e.g., 8 items; “Young children who feel secure often grow up expecting too much.”). The AAPI has good internal reliability in our sample, with α s of .82 and .89 for Lack of Empathy and Role Reversal subscales in our sample. The validity of the AAPI scale is supported by its ability to differentiate between abusive and non-abusive parents and predict future the prospective mental health of children (e.g., Cicchetti, Rogosch, & Toth, 2006; Wyman et al., 1999).

Assessment of the final indicator consisted of coder ratings of mother-child interactions in the free-play and clean-up tasks using the Relationship Quality scales from the Iowa Family Interaction Rating Scales (IFIRS; Melby & Conger, 2001). The IFIRS Relationship Quality scale is a global, macro-level rating scale that assesses the frequency, intensity, and quality of maternal and child affective behaviors on a nine-point scale. Low scores (e.g., 1 = Negative) reflect asynchrony, distress, and disengagement in the dyad, while high scores (e.g., 9 = Positive) are defined by warmth, openness, and synchrony. Three coders, who were trained to reliability, were randomly assigned to code subsamples of the parent-child interactions. To evaluate interrater reliabilities, the coders were responsible for rating the same subsample (21%) of tapes. Intraclass correlation coefficients, which examined interrater reliabilities of the team of judges, were .89 and .93 for the play and clean up episodes, respectively. Due to the high correlation between the play and clean up ratings ($r = .70$), the two codes were aggregated to form a single index of relationship quality.

Covariates: Family-level process: Consistent with the instruments used in Study 1, mothers completed the FACES-III Family Cohesion scale (Olson, Portner, & Lavee, 1985) and the Family Instability Index at Wave 1 (FII; Forman & Davies, 2003). In completing the FII, mothers reported on instability over the past year.

Socioeconomic Status: Mothers completed a demographic interview at Time 1 to obtain three measures of socioeconomic status (SES). First, mothers reported on their educational level along a nine-point scale that ranged from 1 (“completed elementary and junior high

school”) to 9 (“earned doctorate”). Second, maternal responses to questions about their occupation were used to derive the occupational strata score on the Hollinghead Four Factor Index of Social Status (Hollingshead, 1975). Third, mothers reported on the earned annual income of the family unit without consideration of public assistance supplements.

Results

Table 2 provides the raw means and standard deviations of the primary variables in the study. Because the CPS Physical Aggression Scale evidenced skewness, log transformations were calculated to normalize its distribution prior to the calculation of correlations in Table 1. Indicators of the proposed, higher-order constructs of destructive and constructive interparental conflict and Time 1 and Time 2 child emotional insecurity evidenced moderate to high intercorrelations (*mean* $r = .52$, *range* .40 – .68). Furthermore, inspection of the correlations indicates that indices of both constructive and destructive conflict are associated with signs of children’s insecurity and their total behavior problems. Consistent with Study 1 procedures, the six interparental conflict measures in Table 2 were submitted to a principal components analysis to further determine whether the hypothesized indicators of constructive and destructive conflict were sufficiently differentiated to form distinct latent constructs for the primary analyses. Inspection of the eigenvalues (i.e., > 1.0) and the scree plot supported a two-factor solution that accounted for 65.6% of the variance. Lending further support for the measurement model, each of the indicators loaded onto the hypothesized constructive or destructive interparental construct, with loadings ranging from .74 to .88.

Analysis of the missing data in the study ($M = 7.5\%$, *range* = 0 to 22%) indicated that data were missing completely at random, Little’s MCAR test, $\chi^2 = 435.26$, $df = 424$, $p = .34$. Therefore, consistent with Study 1, we utilized full-information maximum likelihood (FIML) in Amos 18.0 to estimate missing data and retain the full sample for the primary analyses.

Growth Analyses of Children’s Insecurity and Psychological Problems—Prior to delineating multivariate associations among children’s exposure to forms of interparental conflict, emotional insecurity, and their psychological problems, we conducted unconditional growth analyses of child emotional insecurity and total psychological problems using AMOS 18.0 software. To descriptively index change, an unconditional, second-order latent difference score (LDS) model was specified for the child security measures across the two time assessments (Ferrer, Balluerka, & Widaman, 2008; McArdle, 2009). Through the synthesis of latent growth curve and cross-lagged panel applications, the LDS model is able to test for the existence and significance of changes in emotional insecurity in the sample of children as well as individual differences in the intercept and change parameters of insecurity (King, King, McArdle, Shalev, & Doron-LaMarca, 2009; McArdle, 2009; Sbarra & Allen, 2009). Figure 2 depicts the results of the unconditional LDS analyses. The model fit the data well, $\chi^2(1, N = 201) = 0.01$, $p = .93$, $RMSEA = .00$, $CFI = 1.00$, and χ^2/df ratio = 0.00. For the first-order component of the model, the manifest indicators loaded significantly onto the latent constructs of child emotional insecurity at Times 1 and 2 (all $ps < .001$). In accord with prior research on associations between initial levels and change in psychological distress (e.g., King et al., 2009), the Time 1 level of child insecurity was negatively correlated with change in insecurity over time, $r = -.57$, $p < .01$. The mean level of initial status of children’s insecurity was significantly different from 0 (1.84, $z = 13.45$), and levels of insecurity increased significantly over time (0.34, $z = 2.31$) to a level of 2.18 at Time 2. Tests of the variances of the latent intercept and mean difference factors indicated that there were statistically significant individual differences in

children's initial levels of insecurity ($\sigma^2 = 1.89$, $z = 7.02$) and changes in insecurity ($\sigma^2 = 2.43$, $z = 6.54$).

The unconditional growth curve model for mother reports of children's total psychological problems also yielded a good representation of the data, $\chi^2(3, N = 201) = 5.01$, $p = .17$, $RMSEA = .06$, $CFI = .99$, $TLI = .98$ and χ^2/df ratio = 1.67. The average initial mean level of children's total behavior problems (intercept = 39.78) was significantly different from 0, $z = 27.01$. Likewise, the mean of the slope factor was -2.74 , $z = 3.69$, indicating that levels of child psychological problems decreased over time for the sample as a whole. Individual differences in the initial level and rate of change in total psychological problems were also statistically significant as evidenced by significant variances for the intercept ($\sigma^2 = 310.62$, $z = 6.91$) and slope ($\sigma^2 = 29.08$, $z = 2.25$).

Primary Analysis: Process Model of Forms of Interparental Conflict—The unconditional growth models indicating significant variability between children in their levels and rates of change in insecurity and psychological problems supported our ultimate goal of understanding how individual differences in children's insecurity may elucidate associations between forms of interparental conflict and child psychological problems. Following the organization of Study 1, we examined whether constructive and destructive conflict were uniquely associated with children's insecurity and psychological problems by simultaneously examining the predictive roles of each form of conflict. To examine the role of children's insecurity as a putative explanatory mechanism in the full model, we also freely estimated the paths between children's insecurity and their psychological problems. The model, which is depicted in Figure 3, fit the data well, $\chi^2(52, N = 201) = 73.19$, $p = .03$, $RMSEA = .045$, $CFI = .97$, and χ^2/df ratio = 1.41. In support of the first link in the proposed mediational chain, destructive conflict remained a significant predictor of children's insecurity at Time 1, $\beta = .44$, $p < .01$, and greater increases in their insecurity from Time 1 to Time 2, $\beta = .37$, $p < .01$, even after estimating the predictive role of constructive conflict. In support of the second component of the hypothesized mediational path, greater increases in child insecurity from Time 1 to 2 were associated with less steep declines in children's psychological problems across the three measurement occasions, $\beta = .37$, $p < .05$.

In contrast to links between destructive interparental conflict and children's insecurity, the full model in Figure 3 shows that constructive conflict failed to predict initial levels of and changes in children's insecurity (β s = .01 and .12, *ns*, respectively) when paths involving destructive conflict were included. Therefore, the findings do not support the role of children's insecurity as an intervening process in associations between constructive interparental conflict and children's psychological difficulties. Nevertheless, constructive conflict between parents was significantly associated with more marked decreases in children's psychological problems over the three measurement occasions, $\beta = -.38$, $p < .05$.

As a further test of the role of change in children's insecurity from Time 1 to Time 2 as an explanatory mechanism linking destructive interparental conflict and changes in their total problems over the three measurement occasions, we utilized the PRODCLIN software program to test the significance of the indirect pathway. Lending support to children's emotional insecurity as a mediator of destructive interparental conflict, the results indicated that the indirect path was significantly different from zero, 95% CI = .13 to 3.52 (MacKinnon et al., 2007; Preacher & Hayes, 2008).

However, the primary analyses do not address whether the negligible role of constructive interparental conflict as a predictor of children's insecurity is primarily the result of differences in measurement approaches between our study and prior research or, as we

hypothesized, the greater salience of destructive conflict for children. To provide a basis for comparing the validity of our measurement of constructive conflict with prior studies that have examined the predictive role of constructive conflict in isolation from destructive conflict, we estimated the predictive paths running from constructive conflict to children's security while constraining all other predictive paths denoted in Figure 3 to 0. Although the results indicated that constructive conflict did not predict changes in insecurity from Time 1 to Time 2, $\beta = -.07$, *ns*, it was significantly associated with lower levels of levels of insecurity at Time 1, $\beta = -.26$, $p < .01$. Thus, in support of our measurement battery, these results corresponded with findings in Study 1 and previous cross-sectional studies on associations between constructive conflict and children's security.

Stability and Generalizability of the Process Model—In accord with the analytic steps in Study 1, we conducted two additional sets of analyses. First, child, parent-child, family, and sociodemographic characteristics were successively entered as covariates in the mediational model depicted in Figure 1. For each of the four models conducted, the focal covariate was estimated as a predictor of children's emotional security and child adjustment. Correlations among the covariate and the forms of interparental conflict were also specified. As with Study 1, variables within three of the four classes of constructs evidenced sufficient interrelationships to form latent constructs. The latent constructs and their specific indicators were as follows: (a) *child negative affectivity* comprised of maternal reports on the CBQ Soothability and Discomfort Scales; (b) *parent-child relationship quality* reflected in the observational IFIRS rating of Relationship Quality from the maternal-child interactions and maternal on the AAPI Role Reversal and Lack of Empathy Toward Children's Needs scales, and (c) *socioeconomic status* consisting of manifest indicators of maternal education level, maternal occupational prestige, and earned income in family unit. Loadings of the manifest indicators were all significant ($p < .005$) and moderate to strong in magnitude ($M = .64$, *range* = .42 to .86). For the final analysis involving family-level processes, *family instability* and *cohesion* were specified as separate predictors of child emotional insecurity and adjustment in light of evidence for their distinctiveness ($r = .08$).

The findings replicated the pattern of significant relationships for the mediational pathways identified in the primary analyses. Across all four models, destructive interparental conflict remained a significant predictor of greater insecurity over the subsequent year, β s from .33 to .38, $ps < .01$. In turn, children's increases in insecurity were associated with lower declines psychological problems across the three measurement occasions, with β s ranging from .34 to .35, $ps < .05$. Bootstrapping tests of the indirect effect using the PRODCLIN program further indicated that children's emotional insecurity was a significant mediator in all four covariate tests. Across the models, lower and upper bound estimates of the 95% confidence interval averaged .106 (*range* .09 – .14) and 3.343 (*range* 3.15 – 3.51), respectively. In addition, constructive interparental conflict continued to be associated with steeper declines in the slope of children's psychological problems in all four models, with β s ranging from $-.35$ to $-.41$, $ps < .05$.

Second, it is also possible that the magnitude of the paths between destructive interparental conflict and child insecurity may vary at different levels of children's exposure to constructive conflict. Therefore, in our final SEM analyses we examined whether the interaction between destructive and constructive conflict significantly predicted the child functioning variables in Figure 2 after estimating the main effects of the two forms of conflict as predictors. Consistent with Study 1, we standardized and aggregated the indicators of each form of conflict in order to create manifest composites of destructive interparental conflict, constructive interparental conflict, and their multiplicative product. To correct for potential biases in the estimate of the moderating effect that may result from collinearity between the first-order predictors of constructive and destructive conflict ($r = -.23$, $p < .01$),

the orthogonalizing approach in Study 1 was used to create the product term. The findings indicated that the interaction term did not predict the initial level of or change in emotional insecurity after taking into account the first-order predictors (β s = $-.11$ and $-.07$, respectively). Thus, constructive conflict did not moderate destructive conflict. In conclusion, the findings from the primary analyses remained stable across different classes of covariates and levels of constructive conflict in moderator analyses.

General Discussion

Little is known about how constructive and destructive forms of interparental conflict operate jointly in understanding children's coping and adjustment. To address this gap, the two studies in this paper were designed to delineate the relative roles of constructive and destructive conflict as predictors of children's reactivity to conflict and their psychological maladjustment. The results across the two studies were consistent in identifying children's emotional insecurity in the interparental relationship as a mediator in the association between destructive interparental conflict and children's psychological maladjustment even after adjusting for levels of constructive interparental conflict. In contrast, mediational pathways involving constructive interparental conflict, children's insecurity, and their adjustment were negligible in both studies with the inclusion of destructive interparental conflict as a predictor. Replication of emotional security as a unique explanatory process underlying exposure to destructive conflict was especially striking in light of the variation in measures, methodological designs, and the risk and SES characteristics of the samples across studies.

Underscoring the conceptual significance of the findings, the two formulations of emotional security theory (EST) differ substantially in their hypotheses about the impact of destructive and constructive conflict on children's security and, ultimately, their adjustment. Whereas the original EST proposed that children's insecurity hinges on their experiences with both constructive and destructive conflict, the evolutionary reformulation of the theory (EST-R) posits that children's heightened exposure to hostile, destructive expressions of interparental conflict assumes primacy in predicting children's insecurity. Consistent with prior research (McCoy et al., 2009; Goeke-Morey et al., 2003; 2007), the findings in both studies indicated that children's experiences with constructive interparental conflict marked by high levels of cooperation, support, and resolution were associated with lower levels of children's insecurity in interparental conflicts without consideration of destructive conflict as a complementary predictor. Fewer difficulties preserving security, in turn, were associated with diminished risk for children's psychological problems across the studies. Reflecting a comparable pathway, the correlational analyses in the studies identified associations between destructive interparental conflict, emotional insecurity, and child psychological problems without the inclusion of constructive conflict as a predictor. Although these findings, at quick glance, appear to support the original EST, the conventional practice of isolating each form of conflict as predictors in separate analytic models does not provide an authoritative test of the two alternative predictions in EST. Because constructive and destructive patterns of interparental conflict covary substantially, it is unclear whether both forms of conflict are pivotal in the mediational pathways of insecurity or whether one form of conflict may simply be spuriously related through its association with the other.

As a first step toward addressing this gap, the primary analyses in both studies were designed to break new ground by simultaneously testing constructive and destructive interparental conflict as predictors in models of child security and adjustment. The results of these more stringent analyses provided compelling support for the predictions derived from EST-R over the hypotheses generated by EST. In both studies, children's emotional insecurity was a significant explanatory mechanism in associations between destructive

interparental conflict and children's psychological symptomatology when both forms of conflict were included as predictors. In contrast, constructive conflict failed to predict children's emotional security after specifying the effects of destructive conflict. Thus, emotional security was not a central explanatory mechanism for understanding why constructive conflict may be associated with children's functioning. Not only was this pattern of findings evident in the cross-sectional design in Study 1, but it was also replicated through the dynamic change analyses employed in the longitudinal design of Study 2. Destructive interparental conflict rather than constructive conflict was a significant predictor of preschool children's subsequent increases in signs of insecurity to parental conflicts over a one year period. Increases in children's signs of insecurity were, in turn, associated with latent growth curve estimates of greater psychological symptoms over a two year period. Further buttressing our confidence in the findings, consideration of child, parent-child, family-level, and socioeconomic factors as plausible third variables did not significantly alter the nature or strength of the mediational pathways among destructive interparental conflict, children's emotional insecurity, and their psychological problems in either study.

In delving deeper into interpreting the findings, a main assumption of EST-R is that children's strategies for preserving emotional security in interparental contexts are largely organized by the social defense system and its function of defending against social threat, particularly threat posed by dominants in the social group. As a defining property of an evolved behavioral system within evolutionary models, the social defense system is conceptualized as an encapsulated module that responds selectively to a delimited set of contextual stimuli comparable in form to recurring stimuli that presaged significant threats to survival throughout human evolution (Davies & Sturge-Apple, 2007; Ohman & Mineka, 2001). As the function of the social defense system is to defuse conspecific threat, indicators of children's efforts to defend themselves against the threat of interparental conflict should selectively reflect their sensitivity to histories of interpersonal threat cues (e.g., angry expressions, loud noises, aggression, dominant posturing) displayed by parents in their disagreements (Davies & Sturge-Apple, 2007; Hofmann, Moscovitch, & Heinrichs, 2004). In contrast, diminished displays of mutual happiness, support, and cohesiveness are far less reliable as signals of danger if they are not accompanied by hostile threat cues. Thus, these parameters of constructive conflict are hypothesized to carry minimal weight in signifying threat and organizing children's social defense strategies (Ohman & Mineka, 2001). Within the framework of EST-R, the more telling prognosticator of diminished levels of child insecurity is not the presence of positive affect and support, but the relative absence of hostility, aggression, and dominant posturing by parents. Although this is the first paper to systematically test this proposition, earlier research lends some additional, albeit indirect, support for this interpretation. Fosco and Grych (2007) specifically reported that children's exposure to destructive interparental conflict was the only significant predictor of their appraisals of threat in the face of parental conflict within a multivariate model that also examined parental positive emotional expressiveness in the family as a predictor.

Because it is still possible that constructive interparental conflict may buffer children from experiencing high levels of insecurity following destructive histories of conflict, we also examined the multiplicative interplay between the two forms of conflict in predicting child insecurity. However, constructive conflict did not moderate pathways between destructive interparental conflict and children's security in either study. As a first foray into addressing this issue, authoritative conclusions about the multiplicative interplay between destructive and constructive conflict will require additional research. Nevertheless, our null results are consistent with the same prior empirical findings indicating that parental positive emotionality failed to moderate pathways between children's exposure to destructive interparental conflict and their appraisals of threat in response to conflict (Fosco & Grych, 2007). Moreover, although it is important to note that we did not offer any a priori

hypotheses about moderator models within the EST-R framework, the negligible role of constructive conflict as a buffer can be cautiously interpreted as reflecting the selective and encapsulated nature of the social defense system. That is, if the social defense system prioritizes the processing of threatening and destructive forms of interparental conflict in a way that is relatively impervious to the influence of other environmental cues (Johnston, Roseby, & Kuehnle, 2009; LaFreniere, 2005), inherently positive expressions between parents in other contexts may do little to alter the threatening stimulus value of their angry and hostile behaviors.

Although the results of our paper do not support the role of constructive conflict in altering children's security in the interparental relationship as a predictor or moderator, they should not be interpreted as disconfirming the significance of constructive parental conflict in the lives of children. First, in spite of proposing that destructive conflict cumulatively supersedes the impact of constructive conflict on children's security processes, EST-R postulates that there are some specific conditions under which constructive conflict may help to allay their security concerns. In comparison to calm, dispassionate endings to interparental antagonism, displays of parental affection and cooperation following hostile disagreements may more prominently signify to children that the threat has subsided and any negative consequences are minimal or easily avoided (Nesse, 2005). Under these circumstances, the ability of parents to constructively and quickly repair initial angry displays during conflicts should hold greater significance in accounting for individual differences in children's security than the sheer frequency of constructive conflicts (Davies & Sturge-Apple, 2007). Thus, understanding how children's insecurity may vary as a function of the timing of constructive conflict is an important direction for future research.

Second, the longitudinal findings in Study 2 indicated that children's exposure to constructive interparental conflict uniquely predicted declines in children's psychological problems over a two year period even after estimating children's insecurity and exposure to destructive interparental conflict as predictors. Within an EST-R framework, the power of constructive conflict to predict diminished risk for psychopathology may be interpreted as support for the impact of parental expressions of warmth and cooperation on children's mental health through the operation of other behavioral systems outside of the security goals organized by the social defense system. In support of this broad thesis, findings derived from the use of parent diary and analogue presentations of adult interactions have indicated that constructive forms of conflict marked by warmth, cooperation, and compromise evoke, in the immediate term, greater positive emotionality than hostile, unresolved conflicts (Goeke-Morey et al., 2003; 2007). In integrating the current findings with this prior work, it is possible that constructive conflict may signify increased accessibility to interpersonal resources that are manifested in the experience of positive emotionality and, at a broader level, greater salience of affiliative and exploratory goals. As an outgrowth of this premise, children witnessing higher levels of cooperation, warmth, and resolution may better positioned to internalize interpersonal values and rules, acquire interpersonal skills and standing, and exhibit greater mastery of physical and social environments. Thus, tracing the implications of constructive conflict for children's ability to pursue other goals beyond security and social defense is a key step for future research.

Given the early stage of this research, interpretations of the findings need to be qualified by consideration of the study limitations. First, it is important to note that each study, in isolation, does not eliminate the potential influence of shared method and informant variance in the findings. For example, it is important to note that the predominant reliance on maternal reports may have inflated relationships between interparental and child functioning. Thus, replicating our findings with a broader set of informants (e.g., partner reports) or methods (e.g., observations of interparental interactions) is an important next step

for future research. By the same token, the latent change analyses within a multi-method, prospective design in Study 2 was employed to reduce the operation of methodological bias by controlling for shared informant variance within measurement occasions. Furthermore, the identification of a comparable pattern of findings in the multi-informant design utilized in Study 1 offers further support for the validity of the findings. Second, although our mediational findings remained stable after the inclusion of four theoretically plausible classes of covariates in the analyses, all potential covariates and moderators were not exhaustively examined. Thus, expanding the scope of inquiry to include other parent-child relationship processes and other dimensions of children's reactivity to conflict (e.g., self-blame, empathetic responding) as mediators will likely reveal new pathways of children's development in contexts of destructive and constructive interparental conflict. Finally, because our mediator and moderator analyses were designed to address a targeted set of theoretically guided questions, we did not exhaustively examine all potential multivariate relationships among the constructs. For example, in highlighting other potential ways in which constructive conflict may impact children, it is possible that children's experiences with constructive conflict may serve as a protective factor in associations between children's insecurity and their psychological symptoms.

In spite of the limitations, this paper is the first empirical effort to address the unique developmental sequelae of children's exposure to constructive and destructive forms of interparental conflict. Emotional security emerged as a key explanatory mechanism in pathways between destructive interparental conflict and children's psychological difficulties even after adjusting for levels of constructive conflict. In contrast, children's experiences with constructive conflict failed to account for any additional variation in their emotional security as either a predictor or moderator after consideration of destructive interparental conflict as a predictor. These results lay the groundwork for the utility of EST-R as a heuristic for increasing precision in understanding the family precursors and correlates of children's adaptation to interparental conflict. From a clinical standpoint, the findings further highlight the potential value of prioritizing the reduction of destructive interparental conflict as a primary benchmark in allaying children's concerns about insecurity and its pathogenic repercussions for their mental health.

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References

- Achenbach, TM. Integrative guide for the 1991 CBCL / 4–18, YSR, and TRF profiles. Burlington, VT: University of Vermont, Department of Psychiatry; 1991.
- Achenbach TM, Dumenci L, Rescorla LA. DSM-oriented and empirically based approaches to constructive scales from the same item pools. *Journal of Clinical Child and Adolescent Psychology*. 2003; 32:328–340. [PubMed: 12881022]
- Ackerman BP, Kogos J, Youngstrom E, Schoff K, Izard C. Family instability and the problem behaviors of children from economically disadvantaged families. *Developmental Psychology*. 1999; 35:258–268. [PubMed: 9923480]
- Aiken, LS.; West, SG. Multiple regression: testing and interpreting interactions. London: Sage; 1991.
- Arellano CM, Markman HJ. The Managing Affect and Differences Scale (MADS): A self-report measure assessing conflict management in couples. *Journal of Family Psychology*. 1995; 9:319–334.

- Bavolek, SJ. The Adult-Adolescent Parenting Inventory. Schaumburg, IL: Family Development Resources, Inc.; 1984.
- Buehler C, Benson MJ, Gerard JM. Interparental hostility and early adolescent problem behavior: The mediating role of specific aspects of parenting. *Journal of Research on Adolescence*. 2006; 16:265–292.
- Buehler C, Lange G, Franck KL. Adolescents' cognitive and emotional responses to marital hostility. *Child Development*. 2007; 78:775–789. [PubMed: 17517004]
- Cicchetti D, Rogosch FA, Toth SL. Fostering secure attachments in infants in maltreating families through preventative interventions. *Development and Psychopathology*. 2006; 18:623–649. [PubMed: 17152394]
- Conger RD, Conger KJ, Martin MJ. Socioeconomic status, family processes, and individual development. *Journal of Marriage and Family*. 2010; 72:685–704. [PubMed: 20676350]
- Cummings EM, Ballard M, El-Sheikh M, Lake M. Resolution and children's responses to interadult anger. *Developmental Psychology*. 1991; 27:462–470.
- Cummings EM, Cummings JS. A process-oriented approach to children's coping with adults' angry behavior. *Developmental Review*. 1988; 3:296–321.
- Cummings EM, Davies P. Emotional security as a regulatory process in normal development and the development of psychopathology. *Development and Psychopathology*. 1996; 8:123–139.
- Cummings, EM.; Davies, PT. *Marital conflict and children: An emotional security perspective*. New York: Guilford; 2010.
- Cummings EM, Goeke-Morey MC, Papp LM. Children's responses to everyday marital conflict tactics in the home. *Child Development*. 2003; 74:1918–1929. [PubMed: 14669904]
- Cummings EM, Goeke-Morey MC, Papp LM. Everyday marital conflict and child aggression. *Journal of Abnormal Child Psychology*. 2004; 32:191–202. [PubMed: 15164860]
- Cummings EM, Goeke-Morey MC, Papp LM, Dukewich TL. Children's responses to mothers' and fathers' emotionality and conflict tactics during marital conflict in the home. *Journal of Family Psychology*. 2002; 16:478–492. [PubMed: 12561293]
- Cummings EM, Iannotti RJ, Zahn-Waxler C. Influence of conflict between adults on the emotions and aggression of young children. *Developmental Psychology*. 1985; 21:495–507.
- Cummings EM, Schermerhorn AC, Davies PT, Goeke-Morey MC, Cummings JS. Interparental discord and child adjustment: Prospective investigations of emotional security as an explanatory mechanism. *Child Development*. 2006; 77:132–152. [PubMed: 16460530]
- Cummings EM, Schermerhorn AC, Merrilees CE, Goeke-Morey MC, Shirlow P, Cairns E. Political violence and child adjustment in Northern Ireland: Testing pathways in a socioecological model including single- and two-parent families. *Developmental Psychology*. 2010; 46:827–841. [PubMed: 20604605]
- Cummings, EM.; Wilson, AG. Contexts of marital conflict and children's emotional security: Exploring the distinction between constructive and destructive conflict from the children's perspective. In: Cox, M.; Brooks-Gunn, J., editors. *Formation, functioning, and stability of families*. Mahwah, NJ: Erlbaum; 1999. p. 105–129.
- Cummings EM, Vogel D, Cummings JS, El-Sheik M. Children's responses to different forms of expression of anger between adults. *Child Development*. 1989; 60:1392–1404. [PubMed: 2612248]
- Cummings JS, Pellegrini DS, Notarius CI, Cummings EM. Children's responses to angry adult behavior as a function of marital distress and history of interparent hostility. *Child Development*. 1989; 60:1035–1043. [PubMed: 2805881]
- Davies PT, Cicchetti D, Martin MJ. Towards greater specificity identifying associations among interparental aggression, child emotional reactivity to conflict, and child problems. *Child Development*. in press.
- Davies PT, Cummings EM. Marital conflict and child adjustment: An emotional security hypothesis. *Psychological Bulletin*. 1994; 116:387–411. [PubMed: 7809306]
- Davies PT, Forman EM, Rasi JA, Stevens KI. Assessing children's emotional security in the interparental subsystem: The Security in the Interparental Subsystem (SIS) Scales. *Child Development*. 2002; 73:544–562. [PubMed: 11949908]

- Davies PT, Harold GT, Goeke-Morey M, Cummings EM. Children's emotional security and interparental conflict. *Monographs of the Society for Research in Child Development*. 2002; 67:1–129.
- Davies PT, Myers RL, Cummings EM, Heindel S. Adult conflict history and children's subsequent responses to conflict: An experimental test. *Journal of Family Psychology*. 1999; 13:610–628.
- Davies PT, Sturge-Apple ML. Advances in the formulation of emotional security theory: An ethologically-based perspective. *Advances in Child Behavior and Development*. 2007; 35:87–137.
- Davies PT, Sturge-Apple ML, Cicchetti D, Manning LG, Zale E. Children's patterns of emotional reactivity to conflict as explanatory mechanisms in links between interpartner aggression and child physiological functioning. *Journal of Child Psychology and Psychiatry*. 2009; 50:1384–1391. [PubMed: 19744183]
- Davies PT, Sturge-Apple ML, Cicchetti D, Manning L, Vonhold SE. Pathways and processes of risk in associations among maternal antisocial personality symptoms, interparental aggression, and preschoolers' psychopathology. *Development and Psychopathology*. in press.
- Davies PT, Woitach MJ. Children's emotional security in the interparental relationship. *Current Directions in Psychological Science*. 2008; 17:269–274.
- Easterbrooks MA, Cummings EM, Emde RN. Young children's responses to constructive marital disputes. *Journal of Family Psychology*. 1994; 8:160–169.
- El-Sheikh M, Cummings EM. Children's responses to angry adult behavior as a function of experimentally manipulated exposure to resolved and unresolved conflict. *Social Development*. 1995; 4:75–91.
- El-Sheikh M, Cummings EM, Kouros CD, Elmore-Staton L, Buckhalt J. Marital psychological and physical aggression and children's mental and physical health: Direct, mediated, and moderated effects. *Journal of Consulting and Clinical Psychology*. 2008; 76:138–148. [PubMed: 18229991]
- Enders CK. A primer on maximum likelihood algorithms for use with missing data. *Structural Equation Modeling*. 2001; 8:128–141.
- Ferrer E, Balluerka N, Widaman KF. Factorial invariance and the specification of second-order latent growth models. *Methodology*. 2008; 4:22–36. [PubMed: 20046801]
- Forman EM, Davies PT. Family instability and young adolescent maladjustment: The mediating effects of parenting quality and adolescent appraisals of family security. *Journal of Clinical Child and Adolescent Psychology*. 2003; 32:94–105. [PubMed: 12573935]
- Fosco GM, Grych JH. Emotional expression in the family as a context for children's appraisals of interparental conflict. *Journal of Family Psychology*. 2007; 21:248–258. [PubMed: 17605547]
- Fosco GM, Grych JH. Emotional, cognitive, and family systems mediators of children's adjustment to interparental conflict. *Journal of Family Psychology*. 2008; 22:843–854. [PubMed: 19102605]
- Gilbert P. Defence and safety: Their function in social behaviour and psychopathology. *British Journal of Clinical Psychology*. 1993; 32:131–153. [PubMed: 8318932]
- Goeke-Morey MC, Cummings EM, Harold GT, Shelton KH. Categories and continua of destructive and constructive marital conflict tactics from the perspective of U.S. and Welsh children. *Journal of Family Psychology*. 2003; 17:327–338. [PubMed: 14562457]
- Goeke-Morey MC, Cummings EM, Papp LM. Children and marital conflict resolution: Implications for emotional security and adjustment. *Journal of Family Psychology*. 2007; 21:744–753. [PubMed: 18179346]
- Gottman, JM. Why marriages succeed and fail. New York: Simon & Schuster; 1994.
- Grych JH, Fincham FD. Marital conflict and children's adjustment: A cognitive-contextual framework. *Psychological Bulletin*. 1990; 108:267–290. [PubMed: 2236384]
- Harold GT, Conger RD. Marital conflict and adolescent distress: The role of adolescent awareness. *Child Development*. 1997; 68:333–350. [PubMed: 9180005]
- Hofmann, SG.; Moscovitch, DA.; Heinrichs, N. Evolutionary mechanisms of fear and anxiety. In: Gilbert, P., editor. *Evolutionary theory and cognitive therapy*. New York, NY: Springer; 2004. p. 119–136.
- Hollingshead, AA. Four-factor index of social status. New Haven, CT: Yale University; 1975. Unpublished manuscript

- Johnston, JR.; Roseby, V.; Kuehnle, K. In the name of the child: A developmental approach to understanding and helping children of conflicted and violent divorce. New York: Springer; 2009.
- Kerig P. Assessing the links between interparental conflict and child adjustment: The Conflict and Problem-Solving Scales. *Journal of Family Psychology*. 1996; 10:454–473.
- Khaleque A, Rohner RP. Perceived parental acceptance-rejection and psychological adjustment: A meta-analysis of cross-cultural and intracultural studies. *Journal of Marriage and Family*. 2002; 64:54–64.
- King DW, King LA, McArdle JJ, Shalev AY, Doron-LaMarca S. Sequential temporal dependencies in associations between symptoms of depression and posttraumatic stress disorder: An application of bivariate latent difference score structural equation modeling. *Multivariate Behavioral Research*. 2009; 44:437–464.
- Kitzmann KM, Gaylord NK, Holt AR, Kenny ED. Child witness to domestic violence: A meta-analytic review. *Journal of Consulting and Clinical Psychology*. 2003; 71:339–352. [PubMed: 12699028]
- LaFreniere, P. Human emotions as multipurpose adaptations: An evolutionary perspective on the development of fear. In: Burgess, RL.; MacDonald, K., editors. *Evolutionary perspectives on human development*. Thousand Oaks, CA: Sage; 2005. p. 189-205.
- Lance CE. Residual centering, exploratory and confirmatory moderator analysis, and decomposition of effects in path models containing interactions. *Applied Psychological Measurement*. 1988; 12:163–175.
- Levendosky AA, Leahy KL, Bogat GA, Davidson WS, Von Eye A. Domestic violence, maternal parenting, maternal mental health, and infant externalizing behavior. *Journal of Family Psychology*. 2006; 20:544–552. [PubMed: 17176188]
- Little RJA. A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*. 1988; 83:1198–1202.
- Little TD, Boivard JA, Widaman KF. On the merits of orthogonalizing powered and product terms: Implications for modeling interactions among latent variables. *Structural Equation Modeling*. 2006; 13:497–519.
- McArdle JJ. Latent variable modeling of differences and changes with longitudinal data. *Annual Review of Psychology*. 2009; 60:577–605.
- McCoy K, Cummings EM, Davies PT. Constructive and destructive marital conflict, emotional security, and children's prosocial behavior. *Journal of Child Psychology and Psychiatry*. 2009; 50:270–279. [PubMed: 18673403]
- MacKinnon DP, Fritz MS, Williams J, Lockwood CM. Distribution of the product confidence limits for the indirect effect: Program PRODCLIN. *Behavior Research Methods*. 2007; 39:384–389. [PubMed: 17958149]
- Mahoney A, Jouriles EN, Scavone J. Marital adjustment, marital discord over childrearing and child behavior problems: Moderating effects of child age. *Journal of Clinical Child Psychology*. 1997; 26:415–423. [PubMed: 9418180]
- Melby, JN.; Conger, RD. The Iowa Family Interaction Rating Scales: Instrument summary. In: Kerig, PK.; Lindahl, KM., editors. *Family observational coding systems: Resources for systemic research*. Mahwah, NJ: Lawrence Erlbaum Associates; 2001. p. 33-58.
- Nesse RM. Natural selection and the regulation of defensive responses: A single detection analysis of the smoke detector principle. *Evolution and Human Behavior*. 2005; 26:88–105.
- Notarius, C.; Markman, HJ. *We can work it out: Making sense of marital conflict*. New York: Putnam; 1993.
- Ohman A, Mineka S. Fears, phobias, and preparedness: Toward an evolved module of fear and fear learning. *Psychological Review*. 2001; 108:483–522. [PubMed: 11488376]
- Olson, DH.; Portner, J.; Lavee, Y. *FACES-III: Family Adaptability and Cohesion Evaluation Scales*. St. Paul, MN: Family Social Science, University of Minnesota; 1985.
- Preacher KJ, Hayes AF. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*. 2008; 40:879–891. [PubMed: 18697684]

- Putnam SP, Rothbart MK. Development of short and very short forms of the Children's Behavior Questionnaire. *Journal of Personality Assessment*. 2006; 87:102–112. [PubMed: 16856791]
- Rohner, RP. Handbook for the study of parental acceptance and rejection. Storrs, CT: Rohner Research; 1990.
- Rohner RP. The parental “acceptance-rejection syndrome”: Universal correlates of perceived rejection. *American Psychologist*. 2004; 59:830–840. [PubMed: 15554863]
- Rothbart MK, Ahadi SA, Hershey KL, Fisher P. Investigations of temperament at three to seven years: The Children's Behavior Questionnaire. *Child Development*. 2001; 72:1394–1408. [PubMed: 11699677]
- Sbarra DA, Allen JJB. Decomposing depression: On the prospective and reciprocal dynamics of mood and sleep disturbances. *Journal of Abnormal Psychology*. 2009; 118:171–182. [PubMed: 19222323]
- Schlomer GL, Bauman S, Card NA. Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology*. 2010; 57:1–10. [PubMed: 21133556]
- Straus MA, Hamby SL, Boney-McCoy S, Sugarman DS. The revised conflict tactics scales (CTS2). *Journal of Family Issues*. 1996; 17:283–316.
- Winter MA, Davies PT, Cummings EM. Children's security in the context of family instability and maternal communications. *Merrill-Palmer Quarterly*. 2010; 56:131–142. [PubMed: 20689722]
- Wyman PA, Cowen EL, Work WC, Hoyt-Meyers L, Magnus KB, Fagen DB. Caregiving and developmental factors differentiating at-risk urban children showing resilient versus stress-affected outcomes: A replication and extension. *Child Development*. 1999; 70:645–659. [PubMed: 10368913]

Figure 1.

Study 1: A structural equation model examining constructive and destructive forms of interparental conflict as unique predictors of children's emotional insecurity and their psychological problems. Parameter estimates for the structural paths are standardized path coefficients. ** $p < .01$. CPS=Conflict and Problem-Solving Scales; MADS = Managing Affect and Differences Scale; SIS = Security in the Interparental Subsystem Scale; CBCL = Child Behavior Checklist; YSR = Youth Self Report.

Figure 2.

Study 2: An unconditional second-order latent difference score analysis of the intercept and mean difference of preschooler emotional insecurity at Time 1 and 2 prior to the inclusion of the predictors and outcomes. $^* p < .05$.

Figure 3.

Study 2: A structural equation model examining constructive and destructive forms of interparental conflict as unique predictors of preschool children's emotional insecurity and their psychological problems over time. Parameter estimates for the structural paths are standardized path coefficients. * $p < .05$; ** $p < .01$. CPS=Conflict and Problem-Solving Scales; CTS-2 = Conflict Tactics Scale –Revised; MADS = Managing Affect and Differences Scale; CBCL = Child Behaviour Checklist.

Table 1

Means, standard deviations, and intercorrelations of the main variables in Study 1.

	M	SD	1	2	3	4	5	6	7	8	9
Constructive Interparental Conflict											
1. CPS Conflict Resolution	8.79	2.67	--								
2. MADS Leveling	39.26	7.38	.34*	--							
Destructive Interparental Conflict											
3. CPS Verbal Aggression	23.55	8.32	-.30*	-.26*	--						
4. CPS Conflict Frequency	7.43	3.19	-.29*	-.18*	-.58*	--					
5. CPS Child-Related Conflict	9.22	5.73	-.22*	-.11	-.62*	.51*	--				
Children's Emotional Insecurity											
6. SIS Emotion Reactivity	15.80	6.09	-.01	-.01	.10	.13	.12	--			
7. SIS Involvement	12.95	3.21	.11	.04	.09	.09	.16*	.42*	--		
8. SIS Destructive Family Representations	6.46	3.15	-.11	-.12	.22*	.20*	.21*	.63*	.30*	--	
Children's Total Psychological Problems											
9. Child Behavior Checklist	15.70	11.95	-.01	-.12	.21*	.16*	.19*	.08	.07	.23*	--
10. Youth Self Report	21.18	13.03	-.07	-.13	.21*	.20*	.10	.40*	.14*	.42*	.26*

Note.

*
p .05.

CPS=Conflict and Problem-Solving Scales; MADS = Managing Affect and Differences Scale; SIS = Security in the Interparental Subsystem Scale.

Table 2

Means, standard deviations, and intercorrelations of the main variables in Study 2.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
Constructive Interparental Relations (Time 1)														
1. MADS Editing	53.84	3.65	--											
2. CPS Cooperation	17.32	4.36	.53*	--										
3. CPS Conflict Resolution	8.03	4.09	.42*	.64*	--									
Destructive Interparental Conflict (Time 1)														
4. CPS Physical Aggression	4.89	7.29	-.39*	-.24*	-.28*	--								
5. CPS Conflict Frequency	7.24	3.85	-.22*	-.22*	-.29*	.40*	--							
6. CTS2 Psychological Aggression	6.18	4.15	-.19*	-.24*	-.20*	.42*	.40*	--						
Child Emotional Insecurity in the Interparental Relationship (Time 1)														
7. Molar Distress Rating	1.85	1.87	-.15*	-.13	-.20*	.31*	.33*	.24*	--					
8. Distress Behavior Tally	1.60	1.30	-.14	-.08	-.24*	.21*	.24*	.18*	.68*	--				
Child Emotional Insecurity in the Interparental Relationship (Time 2)														
9. Molar Distress Rating	2.21	1.52	-.13	-.06	-.14	.29*	.25*	.29*	.37*	.30*	--			
10. Distress Behavior Tally	1.47	1.25	-.03	.01	-.11	.21*	.14	.21*	.19*	.23*	.65*	--		
Child Total Psychological Problems														
11. Time 1 Child Behavior Checklist	39.91	21.33	-.17*	-.02	.04	.20*	-.03	.00	.00	-.05	-.02	.12	--	
12. Time 2 Child Behavior Checklist	37.24	23.20	-.17*	-.13	-.01	.19*	.01	.08	-.03	.01	.06	.16*	.66*	--
13. Time 3 Child Behavior Checklist	35.07	24.89	-.25*	-.21*	-.07	.22*	.05	.10	-.07	-.06	.12	.22*	.65*	.79*

*Note.** $p < .05$.

CPS=Conflict and Problem-Solving Scales; MADS = Managing Affect and Differences Scale; CTS2 = Conflict Tactics Scale-Revised.