

# Children's Representations of Multiple Family Relationships: Organizational Structure and Development in Early Childhood

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The authors examine mutual family influence processes at the level of children's representations of multiple family relationships, as well as the structure of those representations. From a community sample with 3 waves, each spaced 1 year apart, kindergarten-age children (105 boys and 127 girls) completed a story-stem completion task, tapping representations of multiple family relationships. Structural equation modeling with autoregressive controls indicated that representational processes involving different family relationships were inter-related over time, including links between children's representations of marital conflict and reactions to conflict, between representations of security about marital conflict and parent-child relationships, and between representations of security in father-child and mother-child relationships. Mixed support was found for notions of increasing stability in representations during this developmental period. Results are discussed in terms of notions of transactional family dynamics, including family-wide perspectives on mutual influence processes attributable to multiple family relationships.

*Keywords:* representations, family, mutual influence

A commonly held assumption for many years in psychology was that child development was entirely a function of parenting; that is, parent-child relations were considered to be unidirectional. However, several decades ago, Bell (1968) began writing about the reverse direction of effects, namely those of children on parents. Recently, theorists have increasingly recognized the transactional nature of family relationships, in principle. However, relatively little empirical investigation has been conducted, especially the study of transactional processes among multiple family relationships. We examined associations between several family relationships and processes, viewed through the lens of children's internal representations.

An initial step in advancing the study of transactional processes between family members has been demonstrating that children are active participants in parent-child relationships (P. M. Cole, 2003). Recent work also has suggested transactional links between child responding and interparental conflict. For example, Schermerhorn and colleagues demonstrated longitudinally that marital conflict influences

children's responding, which predicts changes in marital conflict (Schermerhorn, Cummings, & Davies, 2005; Schermerhorn, Cummings, DeCarlo, & Davies, 2007).

In the present article we extend this line of inquiry by expanding the model for examining bidirectionality in families to include multiple dimensions of family relationships (mother- and father-child relationships, marital conflict, child behavior), examined through the lens of children's internal representations of events, or internal working models, (Bretherton, 1985), rather than through the interactional qualities of dyads. Representations reflect children's beliefs about the likely behavior of others (Cassidy, Kirsh, Scolton, & Parke, 1996), based on prior experience with others (Bretherton, 2005). As cognitive processes within the child, representations are more proximal to the child's psychological development than external events, providing a window into processes underlying continuity in development (Cummings, Davies, & Campbell, 2000).

Theory and research have supported conceptions of children's representations of family relationships as reflections of the quality of those relationships (Bowlby, 1973; Davies & Cummings, 1994; Grych & Cardoza-Fernandes, 2001; Marvin & Stewart, 1990). Beginning with pioneering work on representations (Bretherton, Ridgeway, & Cassidy, 1990; Buchsbaum & Emde, 1990), representations have been linked with children's experiences of parenting (Laible, Carlo, Torquati, & Ontai, 2004; Shamir, Du Rocher Schudlich, & Cummings, 2001) and with marital conflict (Grych, Wachsmuth-Schlaefel, & Klockow, 2002; Shamir et al., 2001). Winter, Davies, Hightower, and Meyer (2006) found that children's representations of family relationships were the most secure in families with high-quality commu-

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nication and low levels of discord, suggesting links between multiple family relationships and children's representations.

Despite these contributions, many gaps remain in understanding the structure and development of representations, including processes of mutual influence among these representations. For example, many years ago Bretherton (1985) wondered how children's representations of mother-child and father-child attachments were interrelated, but little progress has been made in addressing this question. More generally, mutual influence among children's representations of family relationships reflects an important class of developmental processes about which little is known. Moreover, although many advances have been made in the study of children's emotional and behavioral responses to marital conflict (e.g., Davies, Harold, Goeke-Morey, & Cummings, 2002), children's representations of marital functioning have been largely neglected. Addressing a methodological as well as a substantive gap, the current article draws on coded observations of children's responses to a narrative story-stem completion task to investigate links among children's representations of multiple family relationship processes.

Providing a further conceptual foundation, Sroufe, Cicchetti, and colleagues, in independent research programs, have led the way in articulating how child development is a product, in part, of the mutual, transactional interplay among different developmental subsystems over time. An organizational perspective on development (Carlson, Sroufe, & Egeland, 2004) suggests that elements within systems are organized hierarchically, with mutual influence among these elements (Cicchetti, Toth, & Bush, 1988). By extension, and relevant to the goals of this study, the mutual influence of children's representations of multiple family relationships may be characterized similarly. An organizational perspective on development posits increasingly stable patterns of thought and behavior with development. Little is known about the stability and interrelationships among dimensions of family relationships over time. Thus, we also examined these issues, viewed through the lens of the child's internal representations.

### The Current Study

Building on these conceptual foundations, we examined processes of influence between representations of different family relationships, as well as the organization (i.e., stability) of these representations. We examined links between (a) representations of marital conflict and of children's reactivity to conflict, (b) representations of security about parent-child and marital relations, (c) representations of security about mother-child and father-child relations, and (d) stability of these representations over time. We addressed these directions, assessing children's representations through observationally based records from a narrative story-stem task.

Our first hypothesis involves links between children's representations of marital conflict and their reactivity to marital conflict. The sensitization hypothesis predicts that destructive marital conflict relates to greater reactivity to marital conflict over time (Davies, Sturge-Apple, Winter, Cummings, & Far-

rell, 2006). Related to this, multiple theories share an assumption that children's appraisals of destructive interparental conflict drive their affective-cognitive responses to interparental conflict (Crockenberg & Langrock, 2001; Davies & Cummings, 1994; Grych & Fincham, 1990). How children's representations of marital conflict are linked with children's representations of responding to marital conflict may be especially informative about the impact of marital conflict on children's functioning at a process level of analysis, but very little is known about these relations at this level of analysis, using longitudinal data. One question for which longitudinal study is particularly important is whether children's representations of marital conflict predict later reactivity to conflict or whether reactivity to conflict predicts later representations. Representations of marital conflict are expected to predict representations of greater child reactivity, as a function of mechanisms such as emotional insecurity and appraisals of threat or self-blame (Davies et al., 2002; Grych & Fincham, 1990).

Second, longitudinal relations between representations of children's security in the parent-child and marital relationships were explored. Marital conflict has long been linked to parenting (Davies & Cummings, 2006). At a behavioral level, the spillover hypothesis suggests relations between marital conflict and the quality of parent-child relationships (Cox, Paley, & Harter, 2001), including relations between children's security about parent-child relations and marital relations (Owen & Cox, 1997). Emotional security theory also supports a family-wide model of emotional security, with mixed evidence regarding interrelations between security in parent-child and marital systems (Davies et al., 2002). However, an important gap is the study of whether these relations pertain at the level of representational processes, advancing understanding of family-wide notions of internal working models (Bretherton, 1985).

Extending these notions to the study of specific parent-child relationships, according to the fathering vulnerability hypothesis, we expect marital conflict to disrupt father-child relations more than mother-child relations (Cummings, Goeke-Morey, & Raymond, 2004). However, there is scant information about these relations at a representational level, which may be especially relevant to the development of emotional security, and even less is known about the organizational structure of representations over time. Based on the fathering vulnerability hypothesis and on pertinent attachment research, we tentatively hypothesize that marital conflict is more closely linked with representations of father-child, rather than mother-child, relations.

Third, we expect to find reciprocal pathways of influence between representations of mother-child and father-child relationships. This question has long intrigued researchers interested in fathers, but it remains a gap in process-oriented understanding of family functioning. Mother-child and father-child attachments have often been reported to be unrelated concurrently (Cassidy & Shaver, 1999), but there has been little study of longitudinal links. As was the case at the time of Bretherton's (1985) classic article, it remains unknown whether children construct entirely separate models for each relationship or how these models become integrated if they are mutually influential. However, if attach-

ments are entirely based on individual relationship histories (Sroufe, Fox, & Pancake, 1983), then perhaps these relationships do not influence each other. Thus, there is little basis for directional predictions (e.g., that mother-child relations are more likely to influence father-child relations than the other way around). Finally, on the basis of inconsistent findings in the literature (Davies & Lindsay, 2001), although we do not predict specific child gender differences, we conducted tests of gender as a moderator.

Fourth, we examined the stability of children's representations of family relationships, attempting to identify the structure of representations of interparental and parent-child relationships over time. Sroufe and colleagues (Carlson et al., 2004) have discussed the nature, magnitude, and processes underlying continuity in children's representations over time, and an organizational perspective on development proposes the emergence of stable patterns of thought and behavior as a function of development. At the same time, Davies et al. (2006) have outlined how changes in developmental processes may give rise to significant reorganization in how children represent family relationships. Given the paucity of research addressing this question and theoretical counterarguments to the prediction of stability, we propose to test for stability without predicting increasing (or decreasing) stability.

## Method

### Participants

We recruited a community sample consisting of the kindergarten-age children of 232 couples from the midwest and northeast areas of the United States. Children (105 boys, 127 girls) had an average age of 5.99 years at Time 1 ( $SD = 0.45$ , range = 4.99–7.11). Couples had to have cohabited for at least 3 years to be eligible to participate. Parents reported cohabiting an average of 11.1 years ( $SD = 4.84$ ), and 209 of the couples (90.1%) were married. Step-families made up 6% of the families in our sample (0.4% of mothers, 5.6% of fathers). The mean age was 35 years for mothers ( $SD = 5.57$ ) and 37 years for fathers ( $SD = 6.09$ ). Approximately 98% of mothers had completed at least a high school education, and 39% had completed college or beyond; 93% of fathers had completed at least a high school education, and 43% had completed college or beyond.

Families were recruited via postcard mailings, sign-ups at community events, letters sent through local schools, and referrals from participating families. To obtain a sociodemographically diverse sample representative of the geographic areas, we made targeted efforts to recruit participants through school districts, community agencies, and events tailored to families of low socioeconomic status and of racial and ethnic diversity. The sample demonstrates diversity on a number of important characteristics: 71% of children were European American, 14% were African American, 13% were biracial, and 2% were Hispanic, and the median income fell between \$40,000 and \$54,999. U.S. Census Bureau data (2000) indicated that the two counties were made up of 82% European American, 13% African

American, and 5% Hispanic children; median household incomes were \$49,653 and \$55,900, respectively.

The sample size decreased slightly over time due to attrition, with 222 families retained at Time 2 and 212 families retained at Time 3. We found three differences as a function of attrition for the central variables and two differences for the demographic variables. Compared to families who did not participate in all three waves, for families participating in all three waves, children's representations of their mediation in marital conflict at Time 2 were higher ( $M = 3.01$ ,  $SD = 2.20$  vs.  $M = 1.67$ ,  $SD = 1.80$ ),  $t(219) = 2.31$ ,  $p < .05$ ; children's representations of paternal conflict resolution at Time 1 were higher ( $M = 5.09$ ,  $SD = 1.75$  vs.  $M = 4.08$ ,  $SD = 1.72$ ),  $t(226) = 2.68$ ,  $p < .01$ ; children's representations of mother-child attachment security at Time 2 were higher ( $M = 0.59$ ,  $SD = 0.49$  vs.  $M = 0.27$ ,  $SD = 0.46$ ),  $t(17) = 2.61$ ,  $p < .05$ ; income was higher (\$40,000–\$54,999 vs. \$29,000–\$39,999),  $t(223) = 3.46$ ,  $p < .001$ ; and parents were more educated ( $M = 14.67$ ,  $SD = 2.23$  vs.  $M = 12.83$ ,  $SD = 2.60$ ),  $t(228) = 3.77$ ,  $p < .001$ .

### Procedure and Measures

This research was approved by the institutional review boards at both sites prior to the beginning of the study. Procedures, risks, and benefits of participation were explained to parents and children at the beginning of each visit; following that, parental consent and child assent to participate were obtained. As part of a larger longitudinal project, families participated in laboratory sessions (approximately 3 hr) every year for 3 years. Children completed a story-stem completion task with the assistance of a research assistant in a separate room from their parents.

*Representations of marital conflict, reactivity to marital conflict, and emotional security about marital conflict.* The MacArthur Story Stem Battery (MSSB; Bretherton, Oppenheim, Buchsbaum, Emde, & The MacArthur Narrative Group, 1990) is a narrative story-stem completion task in which an experimenter tells the beginning of a story and the child tells the rest of the story. To facilitate story-telling, the experimenter introduced stories using family action-figure dolls: a mother, father, and child figure matching the child's gender and ethnicity. The figures were positioned to depict the story being told, and the examiner used animated voices to involve the child in the telling of the stories. The MSSB was substantially revised to include stories about marital conflict and parenting. Verbal prompts such as "What's going to happen about your mom and dad's argument?" and "Who cleaned up the dishes?" were used to encourage the child to elaborate on and clarify their stories as needed. The experimenter encouraged the child's story telling to continue until the main issue in the story stem was addressed. With permission from parents and children, the narratives were videotaped for later coding. Finally, innovative and theoretically driven codes were introduced to systematically code children's responses. A labor-intensive procedure was used to code observations of children's responses during this laboratory-based task (average duration of 30 min, range from 15 min to 120 min) involving

Table 1  
*Descriptive Statistics and Intercorrelations for Representations of Reactivity and Representations of Marital Conflict*

	1	2	3	4	5	6	7	8
Time 1: Child reactivity to marital conflict								
1. Mediation	—							
2. Dysregulation	.51***	—						
3. Negative emotional reactivity	.46***	.57***	—					
Time 2: Child reactivity to marital conflict								
4. Mediation	.21**	.21**	.17*	—				
5. Dysregulation	.31***	.32***	.24***	.36***	—			
6. Negative emotional reactivity	.16*	.14*	.16*	.42***	.49***	—		
Time 3: Child reactivity to marital conflict								
7. Mediation	.22**	.15*	.11	.25***	.15*	.05	—	
8. Dysregulation	.26***	.31***	.26***	.19*	.24***	.10	.44***	—
9. Negative emotional reactivity	.13	.20**	.32***	.10	.22**	.15*	.37***	.54***
Time 1: Child representations of marital conflict								
10. Father destructive	.35***	.48***	.43***	.22**	.32***	.22**	.12	.37***
11. Mother destructive	.32***	.44***	.38***	.22**	.30***	.22**	.12	.37***
12. Father resolved	-.25**	-.31***	-.18*	-.07	-.23***	-.14*	-.13	-.19**
13. Mother resolved	-.21**	-.34***	-.17*	-.11	-.23***	-.16*	-.09	-.20**
Time 2: Child representations of marital conflict								
14. Father destructive	.22***	.38***	.30***	.23***	.26***	.36***	.09	.25***
15. Mother destructive	.19**	.34***	.27***	.30***	.28***	.39***	.12	.25***
16. Father resolved	.01	-.16*	-.08	-.08	-.17*	-.19*	-.20**	-.20**
17. Mother resolved	.03	-.18**	-.09	-.14*	-.26***	-.20**	-.14*	-.22**
Time 3: Child representations of marital conflict								
18. Father destructive	.19**	.33***	.32***	.24***	.27***	.24***	.28***	.45***
19. Mother destructive	.17*	.30***	.31***	.20**	.25***	.24***	.23***	.43***
20. Father resolved	-.08	-.14*	-.08	-.07	-.16*	-.09	-.28***	-.37***
21. Mother resolved	-.09	-.12	-.08	-.07	-.20**	-.09	-.21**	-.34***
<i>M</i>	2.52	0.72	0.74	2.92	0.58	0.60	3.36	0.58
<i>SD</i>	1.97	1.29	1.28	2.20	1.00	1.17	2.35	1.15

Note. *N*s range from 205–229 due to missing data.  
 \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

more than 200 children at each of three time points to investigate relations over time.

Responses were coded by advanced research assistants ( $n = 4$ ) using a manualized coding system (available from Alice C. Schermerhorn). All coders followed the same coding procedure, beginning by watching a story once and assigning initial codes to the story. Coders then watched the same story a second time to ensure the accuracy of the initial codes. If coders were not completely comfortable with the codes after completing those two steps, they watched a third time before moving on the next story. Anything judged to be particularly difficult to code was discussed with the rest of the coders during a weekly coding meeting. To check reliability, all coders coded 20% of the videos throughout the coding process. Weekly coding meetings addressed reliability issues. Each coder coded tapes individually for the purpose of calculating reliability. Following that, discrepancies were discussed until consensus was reached for every code. Thus, the actual reliability is at least as high as, if not higher than, that indicated by the reliability coefficients (see below).

The marital conflict stories include a mild conflict regarding a lost set of keys (Story 1), an intense conflict regarding a messy kitchen (Story 2), and a productive marital conflict regarding one parent returning home late (Story 3; see Schermerhorn et al., 2005, for story stems). Children's

responses to these stories were coded for representations of maternal and paternal *destructive* and *resolved* interparental conflict, child reactivity to interparental conflict (*mediation*, *dysregulation*, and *negative emotional reactivity*), and child *emotional security* about interparental conflict. The codes for the marital conflict stories were scored on a 4-point scale, with 0 representing *none* and 3 representing *a lot* of the indicated construct. Responses that depicted a parent handling the conflict in an angry, hostile, self-serving, or withdrawn manner received high scores on the destructive scale; responses that depicted working toward a solution or compromise received high scores on the resolution scale. Responses that depicted the child telling the parents what to do about the conflict received high scores for mediation, responses that depicted the child engaging in physically or verbally aggressive behavior or misbehaving received high scores for dysregulation, and responses that depicted the child exhibiting sadness, fear, or anger received high scores for negative emotional reactivity. In addition, *constructive conflict* (handling conflict in an emotionally controlled, positive manner), *avoidance* (depicting the child as leaving the area, hiding), and *parentification* (depicting the child doing something typically done by a parent) were coded. For each story, the child's combination of scores on the destructive, resolved, reactive, constructive, avoidant, and parentified scales was used as the basis for coding each child's emo-

9	10	11	12	13	14	15	16	17	18	19	20	21
—												
.26***	—											
.23***	.81***											
-.18*	-.40***	-.45***										
-.14*	-.38***	-.48***	.82***									
.29***	.37***	.44***	-.23***	-.25***								
.30***	.36***	.41***	-.24***	-.26***	.90***							
-.27***	-.22***	-.27***	.33***	.28***	-.43***	-.45***						
-.30***	-.20***	-.21***	.29***	.32***	-.40***	-.43***	.85***					
.45***	.41***	.37***	-.31***	-.29***	.46***	.44***	-.29***	-.31***				
.45***	.40***	.36***	-.29***	-.25***	.43***	.43***	-.25***	-.27***	.91***			
-.19**	-.17*	-.14*	.18*	.17*	-.24***	-.19**	.28***	.29***	-.42***	-.37***		
-.13	-.17*	-.14	.22**	.21**	-.19*	-.15*	.26***	.31***	-.36***	-.35***	.83***	
0.52	2.52	2.36	4.99	4.83	2.26	2.08	5.50	5.43	2.56	2.38	5.86	5.71
1.17	2.40	2.48	1.77	1.79	2.32	2.23	2.04	1.97	2.57	2.40	1.82	1.78

tional security. Codes were summed across the three stories to create a score for each variable for each child. Interrater reliabilities were computed on 20% of the videos. For 93% of the codes (28 codes), Cronbach’s alphas ranged from .73 (Time 2 negative emotional reactivity) to .99 (Time 3 father–child attachment). For the remaining two codes, Cronbach’s alphas were .68 and .48 (for negative emotional reactivity at Time 1 and Time 3, respectively). These variables were retained in the analyses because of their theoretical importance in creating latent constructs reflecting overall emotional security and reactivity.

For purposes of structural equation modeling (SEM), four MSSB codes, maternal and paternal destructive conflict and maternal and paternal resolved conflict, served as manifest indicators of a latent variable tapping children’s representations of marital conflict. Higher scores for destructive conflict representations reflect more negative marital functioning and therefore load positively on this latent variable, whereas higher scores for resolved representations reflect more positive marital functioning and thus load negatively. The MSSB codes of mediation, behavioral dysregulation, and negative emotional reactivity were used as indicators of a latent variable reflecting children’s representations of their own reactivity to marital conflict. These three codes load positively on the reactivity construct. In addition, the MSSB codes of emotional security about marital conflict for each

of the three marital conflict stories served as indicators of a latent variable representing emotional security about marital conflict. Emotional security codes from each story load positively on the latent emotional security construct.

*Representations of attachment.* Children’s responses to the MSSB attachment stories were coded for representations of mother–child and father–child attachment security. Attachment stories depicted separation from the parents followed by reunion with one of the parents (Story A; reunion with the mother in one story and with the father in the other story) and parental response following an injury to the child (Story B; i.e., warmth, care-taking of the child). Responses to Story A that depicted family figures showing warmth and attention toward one another (e.g., facing each other, hugging each other), engaging in conversations about their experiences while apart, and engaging in family activities together were coded as secure. Responses to Story B that depicted the parent attending to the child’s injury and showing warmth toward the child were coded as secure. Security was scored on a dichotomous scale, with 0 representing *insecure* attachment representations and 1 representing *secure* attachment representations. Story A was administered at all three time points, and Story B was administered at Times 1 and 3. Thus, for Times 1 and 3, attachment codes from Stories A and B were averaged to create a single mother–child score and a single father–child score at each time point. Interrater reliabilities computed on 20% of the

stories ranged from .85 for Time 2 mother–child security to .99 for Time 3 father–child security. For SEM, these averaged scores were used as manifest indicators of security about parent–child relations. With regard to the equivalency of Story A (Time 2) in relation to the average of Stories A and B (i.e., Times 1 and 3), three out of four correlations between A and B were significant (at Time 1,  $r_{\text{mother}} = .22, p < .001$ , and  $r_{\text{father}} = .17, p < .01$ ; at Time 3,  $r_{\text{mother}} = .14, p < .05$ , and  $r_{\text{father}} = .06, p > .05$ ).

## Results

Descriptive statistics and intercorrelations are presented in Table 1 and Table 2. Correlations supported the construction of the planned latent variables, and *t* tests indicated no significant gender differences. We conducted SEM using analysis of moment structures (Amos, Version 4.01; Arbuckle & Wothke, 1999) to examine links between family relationships. The measurement and statistical demands to advance the study of mutual influence processes within families are considerable. Analysis requires, at a minimum, simultaneous, longitudinal testing of both pathways, with statistical controls over prior levels of functioning (i.e., autoregressive controls) for the most cogent demonstration of these pathways. SEM allows the researcher to efficiently accommodate data from multiple sources, and Amos handles missing data using the full information maximum likelihood approach.

In our model testing, whenever the same construct was modeled at multiple time points, we allowed its indicators to be correlated over time. We report multiple fit indexes to facilitate evaluation of the degree to which our models fit the sample data. The traditional chi-square discrepancy test is presented, although it produces a poor fit with samples of even moderately large size (Bentler & Bonett, 1980). For adequate fit, values of the relative chi-square index ( $\chi^2/df$ ) should be below 3 (Arbuckle & Wothke, 1999), values of the root-mean-square error of approximation (RMSEA; Browne & Cudeck, 1993) should be less than or equal to .08, values of the comparative fit index (CFI; Bentler, 1990) should be at least .95, and values of the normed fit index (NFI; Bentler & Bonett, 1980) should be at least .90.

Addressing our first aim, we tested links between children's representations of destructive marital conflict (i.e., destructive, unresolved; see Figure 1) and their representations of reactivity to marital conflict (i.e., mediation, dysregulation, and negative emotional reactivity). We modeled these representations at all three time points, with each latent construct predicting both itself and the other latent construct at the next time point, an approach that is consistent with the stringent recommendations of D. A. Cole and Maxwell (2003).

With regard to our first hypothesis, as expected based on the sensitization hypothesis, children's representations of destructive marital conflict at Time 1 predicted increases in children's representations of reactivity to marital conflict (i.e., emotional insecurity) at Time 2 ( $\beta = .38, p < .05$ ). Moreover, children's representations of destructive marital conflict at Time 2 predicted increases in children's repre-

sentations of reactivity to marital conflict (i.e., emotional insecurity) at Time 3 ( $\beta = .58, p < .001$ ). At the same time, children's representations of reactivity to marital conflict did not predict change in representations of marital conflict in either comparison. Fit indexes reflected a good fit between the model and the sample data,  $\chi^2(158) = 227.26, p < .001, \chi^2/df = 1.44, NFI = .97, CFI = .99, RMSEA = .04$ . We followed this test with a test of gender differences using stacked models testing to compare the fit of this model with the fit of a model in which the paths were constrained to be equal for boys and girls. No significant gender differences were found ( $\chi^2_{\text{diff}} = 12.06, df_{\text{diff}} = 8, p > .05$ ). Representations of destructive conflict predicted increases in children's representations of reactivity over time, but the opposite direction of effects was not supported.

Addressing our second and third aims, we examined links between representations of security about the interparental and parent–child relationships. We tested a model with children's representations of emotional security about marital conflict and children's representations of secure mother–child and father–child attachment relationships at each time point, allowing each construct to predict itself and the other constructs at the next time point (see Figure 2). Secure representations of father–child relations at Time 1 predicted representations of greater emotional security about marital conflict at Time 2 ( $\beta = .18, p < .05$ ), and secure representations of emotional security about marital conflict at Time 2 predicted more secure representations of father–child ( $\beta = .28, p < .01$ ) attachment. At the same time, secure representations of marital conflict at Time 2 also predicted secure representations of mother–child ( $\beta = .18, p < .05$ ) attachment at Time 3. Limited evidence was found of pathways between representations of the security of mother– and father–child attachments. Representations of secure mother–child relations at Time 2 predicted more secure father–child relations at Time 3 ( $\beta = .28, p < .001$ ). Fit indexes reflected acceptable fit to the sample data,  $\chi^2(69) = 167.97, p < .001, \chi^2/df = 2.43, NFI = .97, CFI = .98, RMSEA = .079$ . With regard to the equivalency of Story A alone and the average of Stories A and B, we reran the model in Figure 2 using only Story A as the index of attachment. Consistent with the above results, representations of emotional security about marital conflict at Time 2 predicted more secure representations of father–child ( $\beta = .21, p < .05$ ) attachment at Time 3, and secure representations of mother–child relations at Time 2 predicted more secure representations of father–child relations at Time 3 ( $\beta = .34, p < .001$ ). However, the path from Time 1 representations of father–child security to Time 2 representations of emotional security was reduced to a trend ( $\beta = .18, p < .10$ ), and the path from Time 2 representations of emotional security to Time 3 representations of mother–child security was not significant ( $\beta = .13, p > .10$ ). The model demonstrated acceptable fit to the data,  $\chi^2(69) = 164.55, p < .001, \chi^2/df = 2.39, NFI = .97, CFI = .98, RMSEA = .077$ .

Stacked models testing indicated significant gender differences for the model in Figure 2 ( $\chi^2_{\text{diff}} = 29.47, df_{\text{diff}} = 18, p < .05$ ). Follow-up tests compared the fit of this model

Table 2  
Descriptive Statistics and Intercorrelations Among Emotional Security About Marital Conflict and Emotional Security About Parent-Child Relations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Time 1: Emotional security about marital conflict															
1. Story 1	—														
2. Story 2	.42 <sup>***</sup>	—													
3. Story 3	.24 <sup>***</sup>	.39 <sup>***</sup>	—												
Time 2: Emotional security about marital conflict															
4. Story 1	.29 <sup>***</sup>	.19 <sup>**</sup>	.10 <sup>*</sup>	—											
5. Story 2	.13 <sup>***</sup>	.30 <sup>***</sup>	.16 <sup>***</sup>	.44 <sup>***</sup>	—										
6. Story 3	.25 <sup>***</sup>	.08 <sup>*</sup>	.19 <sup>**</sup>	.31 <sup>***</sup>	.32 <sup>***</sup>	—									
Time 3: Emotional security about marital conflict															
7. Story 1	.15 <sup>**</sup>	.17 <sup>**</sup>	.23 <sup>**</sup>	.22 <sup>**</sup>	.25 <sup>***</sup>	.31 <sup>***</sup>	—								
8. Story 2	.21 <sup>***</sup>	.23 <sup>***</sup>	.27 <sup>***</sup>	.19 <sup>**</sup>	.26 <sup>***</sup>	.23 <sup>***</sup>	.45 <sup>***</sup>	—							
9. Story 3	.10 <sup>*</sup>	.17 <sup>**</sup>	.15 <sup>*</sup>	.12 <sup>*</sup>	.18 <sup>*</sup>	.24 <sup>***</sup>	.27 <sup>***</sup>	.33 <sup>***</sup>	—						
Time 1: Emotional security about parent-child relations															
10. Father-child	.15 <sup>**</sup>	.13 <sup>**</sup>	.09 <sup>*</sup>	.15 <sup>**</sup>	.18 <sup>**</sup>	.07 <sup>*</sup>	.07 <sup>*</sup>	.06 <sup>*</sup>	-.03 <sup>*</sup>	—					
11. Mother-child	-.04 <sup>*</sup>	.06 <sup>*</sup>	.01 <sup>*</sup>	-.04 <sup>*</sup>	.03 <sup>*</sup>	.03 <sup>*</sup>	.06 <sup>*</sup>	.11 <sup>**</sup>	.11 <sup>**</sup>	.34 <sup>***</sup>	—				
Time 2: Emotional security about parent-child relations															
12. Father-child	-.02 <sup>*</sup>	.10 <sup>*</sup>	.05 <sup>*</sup>	-.10 <sup>*</sup>	.13 <sup>**</sup>	.09 <sup>*</sup>	.05 <sup>*</sup>	.11 <sup>**</sup>	.00 <sup>*</sup>	.21 <sup>***</sup>	.12 <sup>**</sup>	—			
13. Mother-child	-.03 <sup>*</sup>	.09 <sup>*</sup>	.10 <sup>*</sup>	-.04 <sup>*</sup>	-.03 <sup>*</sup>	-.05 <sup>*</sup>	.02 <sup>*</sup>	-.01 <sup>*</sup>	-.10 <sup>*</sup>	.15 <sup>**</sup>	.05 <sup>*</sup>	.46 <sup>***</sup>	—		
Time 3: Emotional security about parent-child relations															
14. Father-child	.13 <sup>**</sup>	.10 <sup>*</sup>	.16 <sup>**</sup>	.15 <sup>**</sup>	.09 <sup>*</sup>	.16 <sup>**</sup>	.16 <sup>**</sup>	.10 <sup>*</sup>	-.01 <sup>*</sup>	.16 <sup>**</sup>	.05 <sup>*</sup>	.27 <sup>***</sup>	.27 <sup>***</sup>	—	
15. Mother-child	-.10 <sup>*</sup>	.07 <sup>*</sup>	.01 <sup>*</sup>	.11 <sup>**</sup>	.07 <sup>*</sup>	.04 <sup>*</sup>	.02 <sup>*</sup>	.04 <sup>*</sup>	-.04 <sup>*</sup>	.11 <sup>**</sup>	.03 <sup>*</sup>	.20 <sup>***</sup>	.41 <sup>***</sup>	.41 <sup>***</sup>	—
M	1.64	1.56	1.76	1.78	1.77	2.04	1.78	1.77	2.19	1.00	1.10	.52	0.57	1.27	1.36
SD	0.70	0.81	0.78	0.68	0.80	0.80	0.65	0.76	0.70	0.77	0.78	0.50	0.50	0.70	0.71

Note. Ns range from 200–229 due to missing data.  
\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

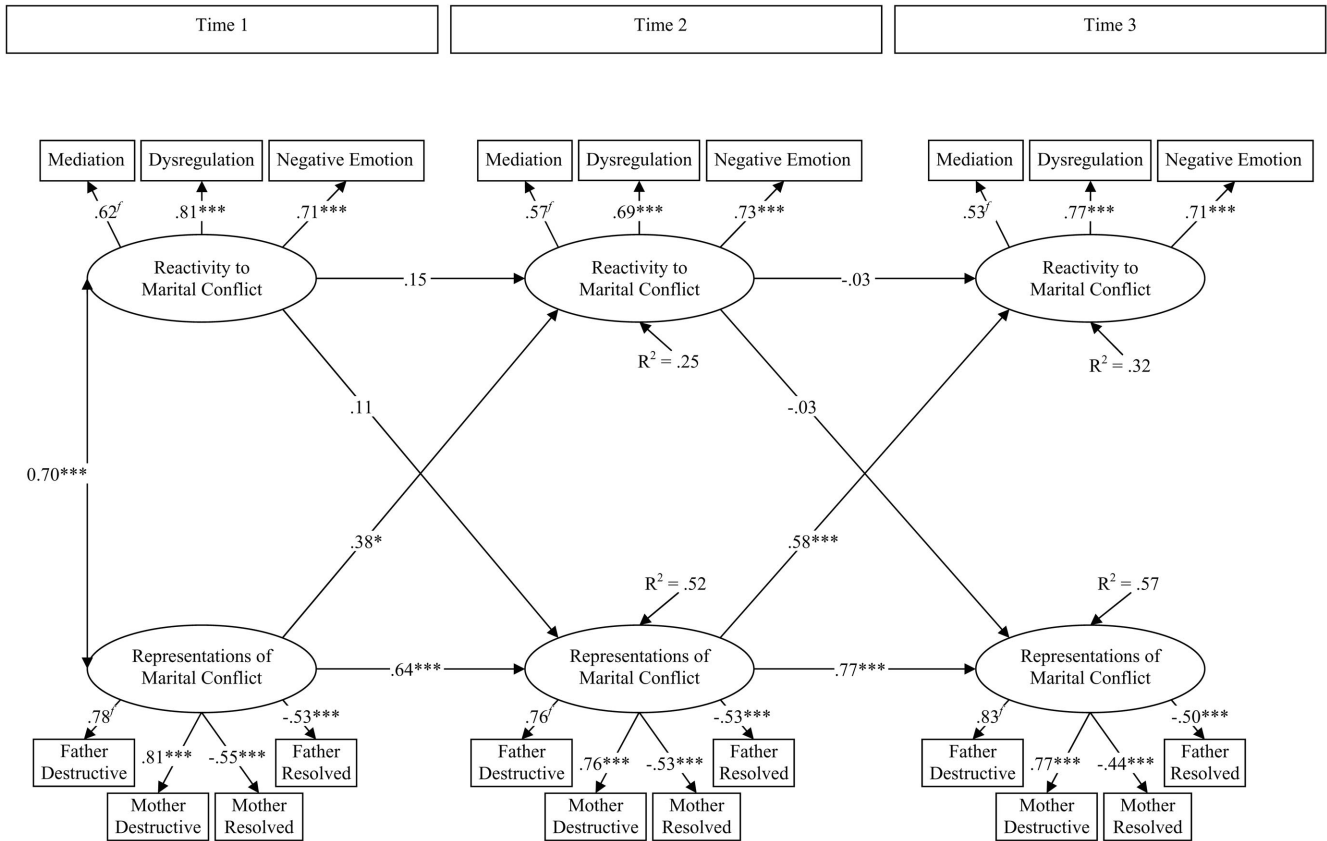


Figure 1. Links between children’s representations of marital conflict and reactivity to marital conflict. Standardized path coefficients are presented, and *f* superscripts indicate fixed loadings for model estimation purposes.  $\chi^2(158) = 227.26, p < .0001, \chi^2/df = 1.44$ , normed fit index = .97, comparative fit index = .99, root-mean-square error of approximation = .04. \*  $p < .05$ . \*\*\*  $p < .001$ .

with the fit of a series of models, each of which allowed one (unique) pathway to vary across genders. Results indicated gender differences for the path from Time 1 representations of father–child relations to Time 2 representations of emotional security about marital conflict, with a positive relationship found for girls ( $\beta = .38, p < .001$ ) and a nonsignificant relationship for boys ( $\beta = -.13, p > .05$ ). In addition, the path from Time 1 representations of mother–child relations to Time 2 representations of father–child relations also differed by child gender, with a positive relationship for boys ( $\beta = .21, p < .05$ ) and a nonsignificant relationship for girls ( $\beta = -.06, p > .05$ ). Results suggest closer links between representations of the father–child relationship and of emotional security about marital conflict for girls than for boys and between representations of the mother–child relationship and the father–child relationship for boys than for girls.

Addressing our fourth aim, we examined the stability of representations across time points. Stability would be indicated by large magnitudes of the autoregressive paths. On the basis of Figures 1 and 2, representations of reactivity to marital conflict and of mother–child and father–child relations showed little stability, whereas autoregressive paths

for representations of marital conflict and of emotional security about marital conflict suggested moderate stability.

Addressing questions regarding changes in stability, we constrained paths from Time 1 to Time 2 to be equal to paths from Time 2 to Time 3 for each type of representation separately and compared model fit for the constrained and unconstrained models. Results of this test indicated only one significant difference in model fit: For the model in Figure 2, constraining the path from Time 1 to Time 2 representations of security about the mother–child relationship to be equal to that from Time 2 to Time 3 fit significantly worse than its corresponding unconstrained model ( $\chi^2_{diff} = 6.04, df_{diff} = 1, p < .05$ ); results were essentially the same for the model using only Story A ( $\chi^2_{diff} = 4.08, df_{diff} = 1, p < .05$ ). The magnitude of the autoregressive path increased over time, suggesting (modest) increased stability.

### Discussion

The results of the current study advance understanding of the organizational structure and development of children’s representations of multiple family relationships in early



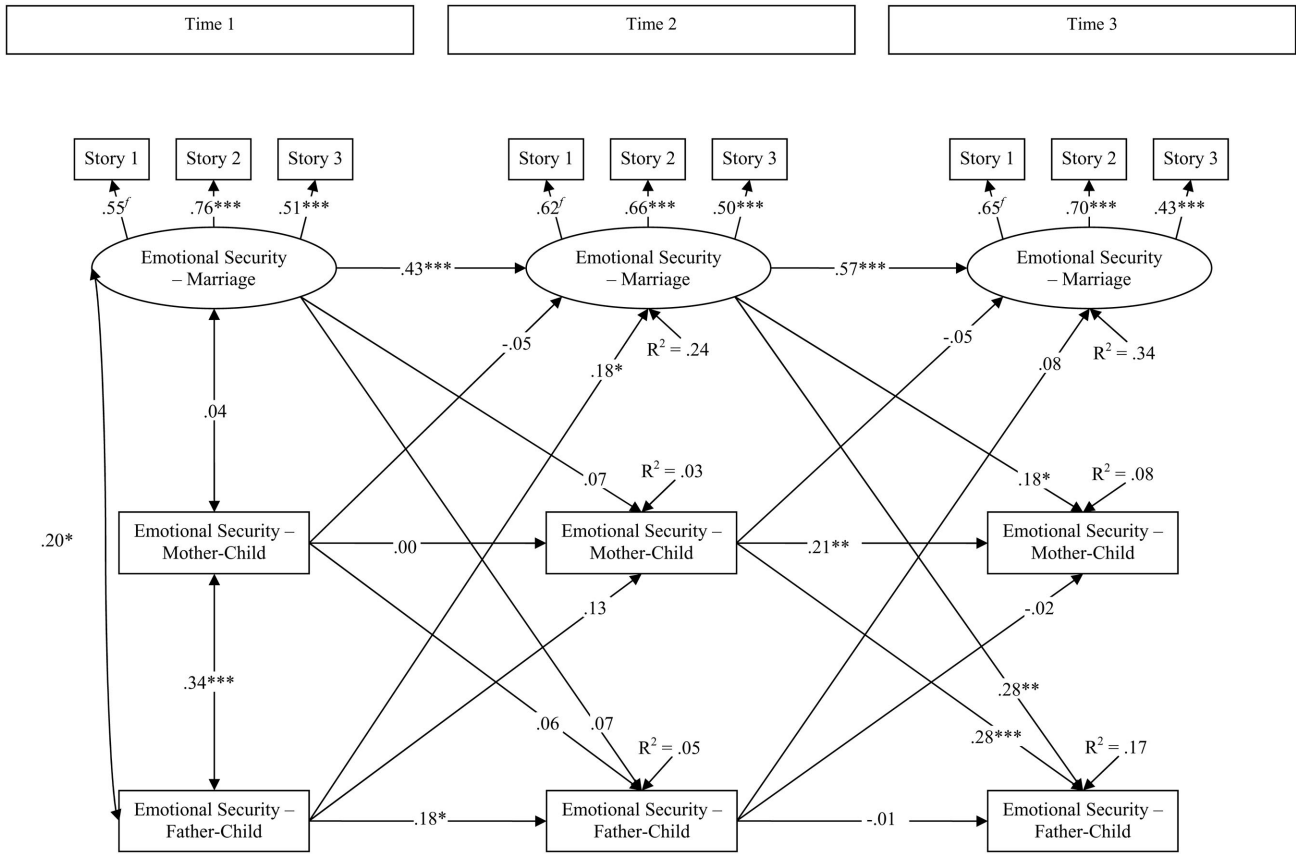


Figure 2. Links between children’s representations of emotional security about marital conflict and secure parent–child relations. Standardized path coefficients are presented, and *f* superscripts indicate fixed loadings for model estimation purposes.  $\chi^2(69) = 167.97, p < .001, \chi^2/df = 2.43$ , normed fit index = .97, comparative fit index = .98, root-mean-square error of approximation = .079. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

childhood. Based on analyses that included autoregressive paths and observationally based assessments of children’s reports of representations of multiple family relationships and family processes, the pattern of influence processes at the level of representations of family relationships was complex and showed partial support for our hypotheses.

Children’s representations of marital conflict predicted representations of reactivity to marital conflict over time, consistent with our first hypothesis. Both longitudinal tests were significant, providing support for sensitization of internal response systems (i.e., cognitions, representations) as a pathway related to developmental trajectories (Davies et al., 2006). These findings provide further support for a key tenet of current theories about marital conflict and children (e.g., Davies & Cummings, 1994) and may be particularly noteworthy for practitioners interested in developmental and adjustment problems because of insights provided about cognitive and appraisal processes affected by marital conflict. The reverse direction of effects did not hold; children’s representations of reactivity to conflict did not predict later representations of marital conflict. However, these tests may be inconclusive, because different forms of reactivity may

have different longitudinal relations with marital conflict; for example, Schermerhorn et al. (2007) found that children’s mediation in interparental conflict predicted decreases in interparental conflict, whereas children’s behavioral dysregulation in the context of interparental conflict predicted increases in interparental conflict.

Consistent with our second and third hypotheses, children’s representations of family relationships were interrelated to some extent. Several significant paths emerged between representations of emotional security about the marital relationship and representations of mother–child and father–child relationships. The fathering vulnerability hypothesis was not supported; that is, there was equal influence of representations of marital conflict on representations of father–child as on mother–child relationships. It is notable that parenting vulnerability is by far the most consistent finding in the literature (Cummings et al., 2004). That is, when differences are found, the evidence tends to favor the fathering vulnerability hypothesis, but similar effects of marital conflict on both parent–child relationships are commonly found. At the same time, a reverse pathway suggested contributions of only the father–child relation-

ship to the quality of the marital relationship. One interpretation is that fathers' family relationships are more closely interrelated than mothers' family relationships, so disruptions in any relationships involving fathers may be more likely to have implications for other relationships. However, given the interaction with gender, this effect appears stronger for girls than for boys.

Given the stringent nature of the test of links between representations of the mother-child and father-child relationships with autoregressive controls, it is notable that one finding suggested that the child's relationship with one parent may have implications for the relationship with the other parent (see Figure 2). This finding has relevance for practitioners, insofar as the evidence suggests that problems in one parent-child relationship may contribute to problems in the other parent-child relationship. However, links between mother-child and father-child relations were fairly limited. Nonetheless, the directionality from mother to father attachments suggests that attachments to fathers may be influenced by attachments to mothers, highlighting the potential sensitivity of father-child attachments to family context. Drawing on the model in Figure 2, a further possibility may be that difficulties originating in the father-child relationship generalize to influence the mother-child relationship through their influence on children's emotional security about marriage. At the same time, given the limited findings, one could argue from an attachment theory perspective that influence between internal working models of mother- and father-child attachments is limited (Cassidy & Shaver, 1999).

The findings regarding differences between the model using only Story A compared with the model using both Stories A and B were interesting, because the link between Time 2 representations of emotional security about marital conflict and Time 3 representations of parent-child security remained significant, despite the removal of Story B. It is interesting that the path linking representations of mother-child and father-child security also remained significant without Story B. It is notable that Story B assessed representations of parental caring and warmth in the context of a child misbehavior leading to injury, which may elicit different parental responses than a separation-reunion story (Story A). Thus, one question for future research is the comparability of parent-child attachment in the context of child misbehavior and injury compared with separation-reunion situations. Regardless, the two modeling approaches yielded fairly similar results, suggesting some tendency for the occurrence of transactional influence processes across domains of family relationships.

The findings regarding child gender differences are interesting with regard to parent-child cross-gender effects. This model (see Figure 2) suggests that secure mother-son relations may spill over to influence father-son relations. Moreover, representations of the father-child relationship appear to have implications for girls' representations of emotional security about marital conflict. One possibility is that girls derive a sense of security (or insecurity) from the father-daughter relationship that influences their perceptions of the

interparental relationship. However, given the limited prior research on children's representations of emotional security from a family-wide perspective, further research is needed to explore the intriguing possibilities.

Our test of the stability of representations about family lent mixed support for notions of increasing stability with development. Moderate to high levels of stability for representations of marital conflict and of emotional security about marital conflict were found. There was modest evidence for increasing stability in representations of security in mother-child relations. Less stability was found for representations of reactivity to marital conflict and of security in father-child relations (see Figure 2). Although an organizational perspective on development suggests increasing stability of systems over time, this theory also allows that developmental periods may involve significant reorganization for specific response domains. For example, developmental gains in social perspective-taking abilities during the early elementary school years may increase children's concerns about the safety and welfare of other family members, including the parents, thereby reducing stability of emotional security in this age period. That is, the early school age period may be a time of discontinuity in how children internalize their representations of themselves and broader family relationships. In any case, this study provides some initial evidence of changes in the stability of child representations during this developmental period.

The overall pattern of findings suggests that children's representations of marital conflict predict children's representations of their own reactivity to that conflict, in the context of relatively high stability in representations of conflict and low stability in representations of reactivity to conflict. The contributions of representations of conflict to representations of reactivity may be a factor in this low stability. Moreover, although links between representations of security about marital conflict and of security about parent-child relations were not widespread (three out of eight paths were significant), the pattern that emerged suggests reciprocal links between representations of father-child relations and of emotional security about marital conflict. Taken together, the link from Time 1 representations of security in father-child relations to Time 2 representations of emotional security about marital conflict and from Time 2 representations of emotional security about marital conflict to Time 3 representations of father-child relations suggests reciprocal effects. These findings also suggest that emotional security about marital conflict may serve as part of the process by which representations of father-child relations change and develop over time. This pathway may also contribute to the relative lack of stability in representations of father-child relations during this age period (see Figure 2). Regarding mutual influences between representations of mother-child and father-child relations, model testing revealed modest support (with one out of four cross-paths supporting this hypothesis). Results also suggested moderate to high levels of stability for representations of marital conflict and of emotional security about marital conflict and a significant increase in stability in representations of mother-child relations. By contrast, a relative lack

of stability was found for representations of reactivity and representations of security in father–child relations. One possibility may be that the tendency toward stability in representations of emotional security about marital conflict was stronger than influences from representations of mother–child and father–child relationships.

Based on this overall pattern of findings and on other emerging research on reciprocal influences in the family, we propose transactional family dynamics as a framework for conceptualizing family influence processes. We define transactional family dynamics as the collection of ways in which family members and family relationships influence one another, that is, mutual influence processes within families over time. Figure 3 depicts the proposed relations among the constructs of interest, reflecting the view that transactional family dynamics involve multiple processes, including representations, overt behaviors, and psychological functioning. At the same time, reflecting the focus of this

article, children’s representations of multiple family relationships appear in the center of the figure.

Moreover, moving beyond conceptualizing family members’ mutual influence as reflecting bidirectional effects, Granic (2000) and others have described these transactional processes as “circular;” that is, the distinct effects of each actor in a dyad cannot be disentangled, but instead, each actor continuously influences the other over time. Similarly, reflecting the process-oriented focus of this article, children’s representations of each family system may continuously influence one another over time. Thus, we use the word *dynamics* to convey processes of perpetual influence and change and depict transactional family dynamics as a circle, reflecting this conceptualization of family influence processes as circular, rather than bidirectional. These representational processes are depicted as being influenced by, and contributing to, each other as well as having implications for behavioral and other psychological processes as-

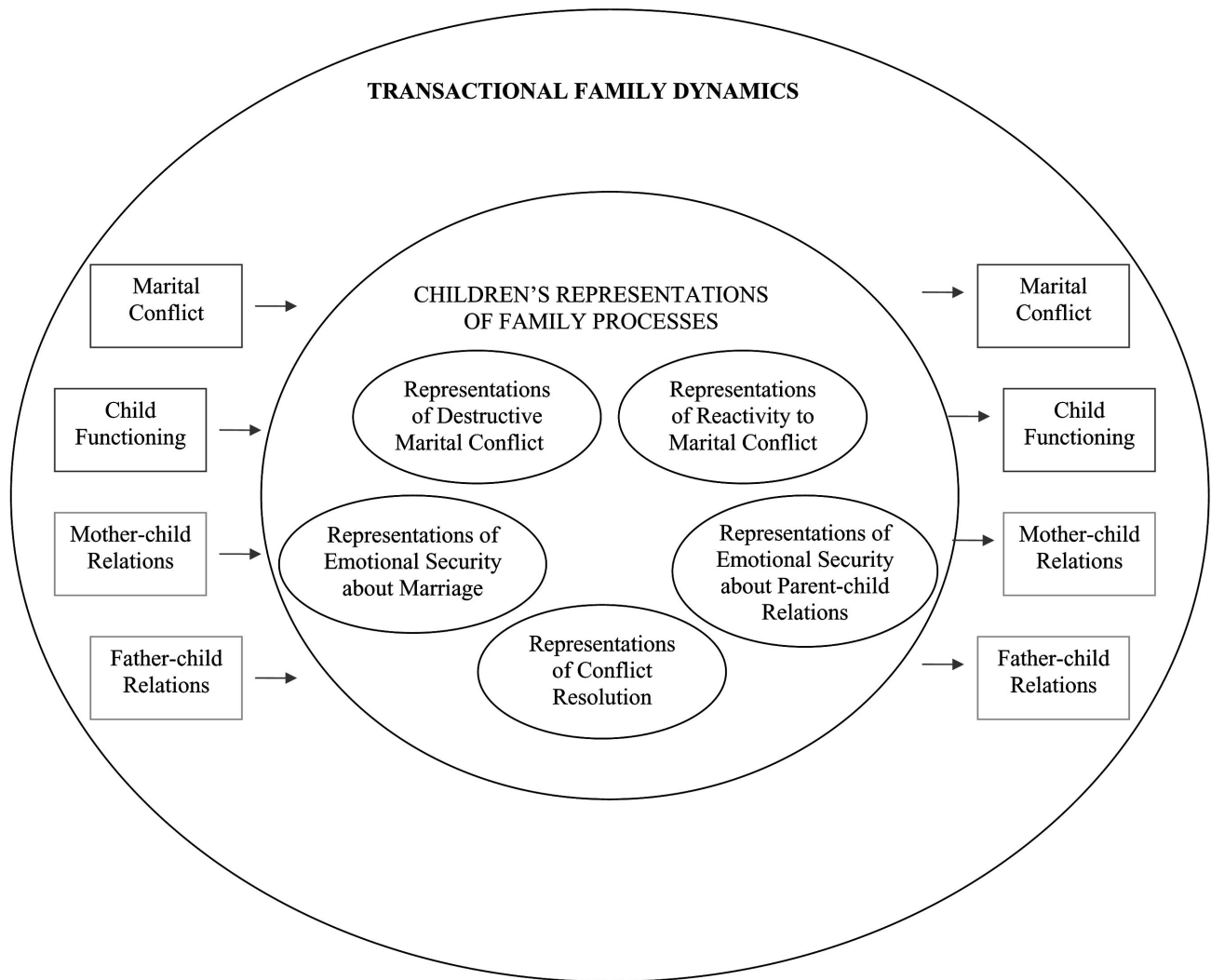


Figure 3. Theoretical model of transactional family dynamics.

sociated with marital conflict, children's functioning, and parent-child relations. Relatedly, representations in one family subsystem may affect representations of another family subsystem, regardless of the configuration of actual behavioral processes in the family. The current study provides some support, albeit modest, for the transactional family dynamics framework at the level of representational processes, both in terms of links between representations of different family relationships and in terms of the overall structure of representations of family.

This study and the transactional family dynamics framework have implications for clinical practice, as they support notions of mutual influence processes across multiple family relationships. Thus, what may have once been viewed as an isolated difficulty within a single family relationship is now recognizable in terms of its implications for the complex set of mutually influential family relationships. At the same time, family dynamics in a community sample might be quite different from the dynamics in a sample experiencing high levels of marital conflict or clinical levels of psychopathology. Thus, additional examination of transactional family dynamics in multiple family contexts, including clinical samples, is needed. The findings also suggest the possibility of increasingly stable representations of security in the mother-child relationship, pointing to the potential importance of addressing problems in this relationship at an earlier developmental point when possible, to prevent stabilization of negative representations.

Limitations of the current study merit consideration. Given the relatively conservative tests, with autoregressive controls and longitudinal model testing, the evidence for mutual influence is consistent with a transactional family dynamics framework. At the same time, a number of effects were primarily unidirectional, and some of the cross-component pathways that were predicted by our hypotheses did not differ significantly from zero. The focus on representational data is a strength, given the many gaps regarding understanding of these significant child processes, but also has limitations. Because of below-threshold interrater reliabilities for a small proportion of the coded data, the results need to be replicated. Moreover, the measures of representations were constructed for this project, and there is no prior evidence of their validity. In addition, some of the representations of security in the parent-child relationship had low levels of stability, despite findings of high stability in other studies (Carlson et al., 2004). However, it remains to be seen whether our findings reflect substantive change during this age period, as there has been very little work on representations of attachment and representations of family in 6- to 8-year-olds, despite progress with methods of assessing attachment at other ages. At the same time, differing assessments of representations of security in the parent-child relationships across time points may have contributed to the appearance of a lack of stability in our analyses. It is clear that additional research is needed to investigate the stability of representations about multiple family relationships during this age period. Moreover, although our study focused exclusively on the structure and development of children's representations of multiple family relationships, a

remaining challenge for future work is to address the interface between representations and behavior. Through the use of multiple methods and approaches, we can derive a fuller understanding of transactional family dynamics, including antecedents and consequents of representations.

By investigating mutual influence processes in children's representations of family relationships over time, we begin in the current study to address a gap in the examination of mutual family influence processes (or transactional family dynamics), especially for multiple family relationships and response processes. However, from the perspective of our goals for research on transactional family dynamics, many questions remain to be addressed. For example, in addition to testing the replicability of our findings, future directions could include the study of mutual influence processes involving siblings and of conditions contributing to the stabilization of patterns of thought regarding family relationships. Thus, this article addresses only a subset of the transactional family dynamics model depicted in Figure 3, and much work remains to be done in actualizing this level of analysis.

The findings of the current study are consistent with ideas first developed by Bretherton (1985) regarding the interconnected nature of representations of multiple family relationships. It is notable that representational data are unique in that participating children are free to demonstrate what they are inclined to do in these contexts, irrespective of practical constraints (e.g., opportunities to respond, ramifications of their actions) that limit what they ultimately choose to do in these contexts. This study represents the first longitudinal demonstration of links between the marital relationship, the parent-child attachment relationship, and child response processes using representational data, with findings evidencing some support for the notion of circular influence of family relationships on one another. These results suggest that what are sometimes viewed as highly distinct relationships in terms of children's representations may in fact be interdependent through the complex dynamics of their mutual influence.

## References

- Arbuckle, J. L., & Wothke, W. (1999). *Amos 4.0 user's guide*. Chicago: SmallWaters Corporation.
- Bell, R. Q. (1968). A reinterpretation of the direction of effects in studies of socialization. *Psychological Review*, *75*, 81-95.
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, *107*, 238-246.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, *88*, 588-606.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation*. New York: Basic Books.
- Bretherton, I. (1985). Attachment theory: Retrospect and prospect. In I. Bretherton & E. Waters (Eds.), *Growing points in attachment theory and research. Monographs of the Society for Research in Child Development*, *50* (1-2, Serial No. 209), 3-35.
- Bretherton, I. (2005). In pursuit of the internal working model construct and its relevance to attachment relationships. In K. E. Grossman, K. Grossmann, & E. Waters (Eds.), *Attachment from infancy to adulthood: The major longitudinal studies* (pp. 13-47). New York: Guilford Press.
- Bretherton, I., Oppenheim, D., Buchsbaum, H., Emde, R. N., &

- The MacArthur Narrative Group. (1990). MacArthur Story-Stem Battery. Unpublished manual.
- Bretherton, I., Ridgeway, D., & Cassidy, J. (1990). Assessing internal working models of the attachment relationship: An attachment story completion task for 3-year-olds. In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 273–308). Chicago: University of Chicago Press.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.
- Buchsbaum, H. K., & Emde, R. N. (1990). Play narratives in thirty-six-month-old children: Early moral development and family relationships. *The Psychoanalytic Study of the Child*, 40, 129–155.
- Carlson, E. A., Sroufe, L. A., & Egeland, B. (2004). The construction of experience: A longitudinal study of representation and behavior. *Child Development*, 75, 66–83.
- Cassidy, J., Kirsh, S. J., Scolton, K. L., & Parke, R. D. (1996). Attachment and representation of peer relationships. *Developmental Psychology*, 32(5), 892–904.
- Cassidy, J., & Shaver, P. R. (1999). *Handbook of attachment: Theory, research, and clinical applications*. New York: Guilford Press.
- Cicchetti, D., Toth, S., & Bush, M. (1988). Developmental psychopathology and incompetence in childhood: Suggestions for intervention. In B. Lahey & A. Kazdin (Eds.), *Advances in clinical child psychology* (pp. 1–71). New York: Plenum Press.
- Cole, D. A., & Maxwell, S. E. (2003). Testing mediational models with longitudinal data: Questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology*, 112, 558–577.
- Cole, P. M. (2003). The developmental course from child effects to child effectiveness. In A. C. Crouter & A. Booth (Eds.), *Children's influence on family dynamics: The neglected side of family relationships* (pp. 109–118). Mahwah, NJ: Erlbaum.
- Cox, M. J., Paley, B., & Harter, K. (2001). Interparental conflict and parent-child relationships. In J. H. Grych & F. D. Fincham (Eds.), *Interparental conflict and child development: Theory, research, and applications* (pp. 249–272). New York: Cambridge University Press.
- Crockenberg, S., & Langrock, A. (2001). The role of emotion and emotional regulation in children's responses to interparental conflict. In J. H. Grych & F. D. Fincham (Eds.), *Interparental conflict and child development: Theory, research, and applications* (pp. 129–156). New York: Cambridge University Press.
- Cummings, E. M., Davies, P. T., & Campbell, S. B. (2000). *Developmental psychopathology and family process: Theory, research, and clinical implications*. New York: Guilford Press.
- Cummings, E. M., Goeke-Morey, M. C., & Raymond, J. (2004). Fathers in family context: Effects of marital quality and marital conflict. In M. E. Lamb (Ed.), *The role of the father in child development* (4th ed., pp. 196–221). Hoboken, NJ: Wiley.
- Davies, P. T., & Cummings, E. M. (1994). Marital conflict and child adjustment: An emotional security hypothesis. *Psychological Bulletin*, 116, 387–411.
- Davies, P. T., & Cummings, E. M. (2006). Interparental discord, family process, and developmental psychopathology. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Vol. 3. Risk, disorder, and adaptation* (2nd ed., pp. 86–128). New York: Wiley.
- Davies, P. T., Harold, G. T., Goeke-Morey, M. C., & Cummings, E. M. (2002). Child emotional security and interparental conflict. *Monographs of the Society for Research in Child Development*, 67(3, Serial No. 270).
- Davies, P. T., & Lindsay, L. L. (2001). Does gender moderate the effects of marital conflict on children? In J. H. Grych & F. D. Fincham (Eds.), *Interparental conflict and child development: Theory, research, and applications* (pp. 64–97). New York: Cambridge University Press.
- Davies, P. T., Sturge-Apple, M. L., Winter, M. A., Cummings, E. M., & Farrell, D. (2006). Child adaptational development in contexts of interparental conflict over time. *Child Development*, 77, 218–233.
- Granic, I. (2000). The self-organization of parent-child relations: Beyond bidirectional models. In M. D. Lewis & I. Granic (Eds.), *Emotion, development, and self-organization: Dynamic systems approaches to emotional development* (pp. 267–297). New York: Cambridge University Press.
- Grych, J. H., & Cardoza-Fernandes, S. (2001). Understanding the impact of interparental conflict on children: The role of social cognitive processes. In J. H. Grych & F. D. Fincham (Eds.), *Interparental conflict and child development: Theory, research, and applications* (pp. 157–187). New York: Cambridge University Press.
- Grych, J. H., & Fincham, F. D. (1990). Marital conflict and children's adjustment: A cognitive-contextual framework. *Psychological Bulletin*, 108, 267–290.
- Grych, J. H., Wachsmuth-Schlaefler, T., & Klockow, L. L. (2002). Interparental aggression and young children's representations of family relationships. *Journal of Family Psychology*, 16, 259–272.
- Laible, D., Carlo, G., Torquati, J., & Ontai, L. (2004). Children's perceptions of family relationships as assessed in a doll story completion task: Links to parenting, social competence, and externalizing behavior. *Social Development*, 13, 551–569.
- Marvin, R. S., & Stewart, R. B. (1990). A family systems framework for the study of attachment. In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 51–86). Chicago: University of Chicago Press.
- Owen, M. T., & Cox, M. J. (1997). Marital conflict and the development of infant-parent attachment relationships. *Journal of Family Psychology*, 11, 152–164.
- Schermerhorn, A. C., Cummings, E. M., & Davies, P. T. (2005). Children's perceived agency in the context of marital conflict: Relations with marital conflict over time. *Merrill-Palmer Quarterly*, 51, 121–144.
- Schermerhorn, A. C., Cummings, E. M., DeCarlo, C. A., & Davies, P. T. (2007). Children's influence in the marital relationship. *Journal of Family Psychology*, 21, 259–269.
- Shamir, H., Du Rocher Schudlich, T., & Cummings, E. M. (2001). Marital conflict, parenting styles, and children's representations of family relationships. *Parenting: Science and Practice*, 1, 123–151.
- Sroufe, L. A., Fox, N. E., & Pancake, V. R. (1983). Attachment and dependency in developmental perspective. *Child Development*, 54, 1615–1627.
- U.S. Census Bureau. (2000). United States Census 2000 [Data file]. Available from U.S. Census Bureau Web site: <http://www.census.gov/>
- Winter, M. A., Davies, P. T., Hightower, A. D., & Meyer, S. C. (2006). Relations among family discord, caregiver communication, and children's family representations. *Journal of Family Psychology*, 20, 348–351.

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