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# A Longitudinal Examination of the Associations between Fathers' and Children's Attributions and Negative Interactions

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## Abstract

*The present investigation examined the concurrent and longitudinal relations between attributions and negative behavioral interactions in the context of the father-child dyad. Participants were 177 fathers and their young adolescents recruited from non-metropolitan counties in the southeast. Results indicated that for children, attributions about their father play a significant role in their negative behavioral interactions with their father both within and across time. Interestingly, father's earlier negative behavioral interactions with their children predicted children's subsequent attributions about their father in the longitudinal analyses. In addition, both attributions and behavioral interactions were highly stable across time for both fathers and children.*

*Keywords:* Attributions; fathers; aggression

An extensive literature is emerging that suggests that social cognitions play a key role in affecting parenting practices and children's aggressive behavior. Unlike earlier work that examined global attitudes about child rearing, more recently a focus has been on the study of parental attributions about specific children. Parental negative attributions have been linked to dysfunctional parenting behavior (Bugental, Blue, & Lewis, 1990) and poor child adjustment (Dix, 1991). In addition, attention has been paid to the role that children's negative attributions may play in the interactions they have with their parents, although that work has focused on interactions with mothers (MacKinnon-Lewis, Lamb, Arbuckle, Baradaran, & Volling, 1992). This research has not clearly identified why some parents and children make negative attributions about one another. It may be that parents' and children's negative attributions arise out of response to the negative interactions they have experienced with one another earlier, but because of a lack of longitudinal research, it is unclear whether negative attributions about one another predict, or are predicted by, parents' and children's behavior with one another.

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In the current investigation, we addressed this question, but with fathers and their children, a sample traditionally under-represented in social science research.

A number of researchers have highlighted the significance of affective cognitions in predicting parenting behavior. Mothers' hostile attribution tendencies were found to predict children's subsequent behavior problems at school, with a significant proportion of the relation mediated by mothers' harsh disciplinary practices (Nix et al., 1999). Bugental and her colleagues (Bugental, Blue, & Lewis, 1990; Bugental & Goodnow, 1998; Bugental & Shennum, 1984) found that parents are particularly reactive to difficult child behavior if they perceive themselves as having low control relative to the child. These powerless parents engage in a verbally competitive style when interacting with their children (Bugental & Happaney, in press), and their children exhibit a more competitive style in their interactions with their peers (Bugental & Martorell, 1999). Moreover, these parents are not only more likely to respond to ambiguous behavior as if it were negative, but they are also more likely to attend to behavior that is consistent with their beliefs, and respond more negatively. In so doing, they exacerbate their children's uncontrollability by responding in a highly reactive and ineffectual manner. Consistent with that notion, Dix (e.g., Dix & Grusec, 1985; Dix, Ruble, & Zambarano, 1989) proposed and tested a model in which mothers' attributions were found to mediate the association between child behavior and the parent's response, such that attributions of intentionality and responsibility predicted stronger responses to misbehavior.

The role that *both* parental and child cognitions may play in affecting parents' and children's behavior was articulated by MacKinnon, Lamb, Belsky, and Baum (1990). They proposed a multipathway process model in which the 'affective cognitions' (i.e., emotionally laden thoughts) of both mothers and children helped explain the aggressiveness of mother-child interactions. It was proposed that when mothers or children erroneously attribute negative intent to one another, their interactions should be more aversive than when they accurately interpreted one another's intentions. They found, both cross-sectionally and longitudinally, that boys who held negative attributions about their mothers were more likely to be aggressive with their mothers (MacKinnon-Lewis et al., 1992; MacKinnon-Lewis, Lamb, Hattie, & Baradaran, 1998), as well as with their peers (MacKinnon-Lewis et al., 1994). Fincham, Beach, Arias, and Brody (1998) also found that children's conflict-promoting attributions about their parent's behavior were related to their reports of conflict behavior with their parents. Dodge and his colleagues (Dodge, 1986; Dodge, Pettit, Bates, & Valente, 1995) reported that social cognitive variables contributed significantly to predicting the subsequent aggressive behavior of children, but with their peers. Thus, it appears that negative attributional tendencies, in both children and mothers, may contribute to the aggressiveness of their interactions.

Not only may 'attributions potentiate coerciveness, but negative attributions may be generated by coercion' (MacKinnon et al., 1990, p. 6). Several studies have examined how child behaviors may serve as predictors of mothers' attributions in samples of mothers of exceptional children (Himmelstein, Graham, & Weiner, 1991) and aggressive children (Dix & Lochman, 1990; Pettit, Dodge, & Brown, 1988). Dix and Lochman (1990) found that mothers of aggressive boys were more likely to attribute negative intentionality to unknown children who exhibited undesirable behavior than were mothers of nonaggressive boys. Abusive parents have been found to perceive their children as more deviant than parents of other at-risk children, even though their children's behavior was not significantly different (Reid, Patterson, & Loeber, 1982).

Similarly, Strassberg (1995) found that mothers of behavior-problem boys were more likely to make negative attributions in response to children's ambiguous behaviors and were more negative in their disciplinary practices than mothers of average boys. Patterson (1997) reported that parents of problem children tended to be 'overly inclusive' in classifying as deviant behavior what other parents perceived as neutral or positive, and that the cognitive variable 'overly inclusive' was significantly associated with mothers' aversive behavior in the home. Thus, some mothers may have an inclination to attribute negative intent when such intent does not exist (i.e., attributional biases) and the proclivity to focus upon negative behavior when it does not occur.

Taken together, these studies suggest that some mothers' attributions about their children's behavior become increasingly more inclusive in what they characterize as negative. Also, mothers of behavior problem children are more likely to see child behaviors as intentional, attributions that are associated with negative parenting behaviors (Bugental & Shennum, 1984; Dix & Grusec, 1985; MacKinnon-Lewis et al., 1992). If parents attribute negative intent to their children's ambiguous behavior and respond more negatively, it is reasonable to expect that children may, in turn, make negative attributions when their parents, or others, respond negatively without sufficient provocation. Indeed, MacKinnon-Lewis and her colleagues (MacKinnon-Lewis et al., 1992; 1998) found that boys were more likely to attribute hostile intent to their mothers in ambiguous situations if their mothers were more aggressive in their behavior six to nine months earlier than were boys of mothers who had been less aggressive earlier. Thus, it may be that inferences about hostile intent in the mother-son relationship may stem from having repeated encounters that were hostile and aggressive with one another previously that lead to the formation of 'cognitive schemas.' Dodge and Crick (1990) suggest that individuals may rely on these 'cognitive schemas,' which reflect their past experiences rather than information presented concurrently, and that these schemas mediate the emotional reaction to a situation and the behavioral response that follows.

The preponderant majority of research pertaining to parents' and children's attributions and interactions has focused on mothers and children. One notable exception is a study by Burks and Parke (1996) in which fathers', mothers', and children's attributions were examined in which they found that the attributions of parents and their children were linked, and their attributions not only influenced their mutual relationship, but possibly the child's relationships with peers. However, efforts to examine linkages between attributions and behavior within the family were hampered by a lack of behavioral assessments (Burks & Parke, 1996). Thus, we know little about whether fathers' and children's negative attributions about one another predict, or are predicted by, their behavior with one another. Although associations have been found between fathers' coercive parenting and children's coercive behavior (Patterson, 1990), and fathers' parenting behavior and child adjustment (Hosley & Montemayor, 1997; Hwang & Lamb, 1997; Lamb, 1981; 1997), fathers have been underrepresented in research in general, and virtually absent in social cognitive research.

In response to that need, this study addressed two primary questions. First, are there associations between negative attributions and negative interactions in the father-child relationship, and if so, do fathers' and children's attributions contribute uniquely to their subsequent negative behavior, after accounting for earlier levels of negativity? We expected that fathers' and children's attributions would uniquely predict their

subsequent negative behavior with one another, a prediction consistent with a social cognitive perspective.

Second, do fathers' and children's earlier interactions with one another contribute to their subsequent attributions about one another? Given that mothers (Strassberg, 1995) and sons (MacKinnon-Lewis et al., 1992, 1998) have been shown to make more negative attributions in ambiguous situations if there have been experiences of earlier aggression, we expected that both fathers' and their children's negative attributions would be influenced by the other's aggressive behavior, a prediction that is consistent with a social learning perspective.

## **Method**

### *Participants*

Participants in the present study were young adolescents and their families recruited from 12 non-metropolitan counties in the southeast United States. The populations of these counties ranged from several hundred up to 15,000. A telephone directory-based random sampling procedure was followed in order to identify families that had at least one child between the ages of 10 to 15 years. Letters describing the study were sent to these families that also alerted them that a staff member would be contacting them to determine their willingness to participate, and, to assess whether or not they met eligibility criteria. These criteria included having an 11- or 12-year-old child present in the home and having the biological parents of the target child married and residing in the home.

Of the eligible families, 71 percent agreed to take part in the study. The initial wave of data collection was followed by a second wave of data collected approximately one year later. All participants responded to the same measures at wave one and wave two. The mean yearly family income for the sample was \$51,126.70 ( $SD = \$26,982.23$ ). Parents were paid \$50 for their participation and the adolescents were given \$10 to participate at wave one. At wave two, parents received \$60 to participate and adolescents received \$20 for their participation. For the present investigation, only data from adolescents and their fathers (mean age = 41.7 years,  $SD = 5.6$ ) are examined. Data from one hundred and seventy-seven Caucasian fathers and their children (50% male, 50% female) with a mean age of 12.02 years ( $SD = .64$ ) were analyzed for the current investigation. At wave two, due to attrition, data on one hundred and thirty-seven father-child pairs were analyzed.

### *Procedures*

Two researchers with at least 12–20 hours of training visited the families on two occasions for data collection. Each visit lasted approximately three hours and visits were made as close to one week apart as the families' schedules allowed. Self-report data were collected using laptop computers. Questionnaires were programmed into the laptops using the software program Ci3 (Sawtooth Software). Each participant was given their own computer and questionnaires were administered to the children and fathers separately. A trained researcher worked with the adolescent, reading each question and having the child respond using a numbered keypad. A partition placed between the respondent and the research assistant prevented the researcher from seeing the participant's answer selections.

In addition to the self-report measures, a fifteen-minute videotaped interaction of the father-child dyad was conducted using a structured discussion format. The procedures were explained to the dyad by trained researchers, and a practice session was completed. The researcher then moved to a part of the house where he/she was unable to hear the father-child interactions and the videotaped session began. More detailed information on the behavioral observations is presented in the measures section.

*Measures*

*Fathers' Attributions.* Fathers' attributions about their adolescents' behavior were assessed using the Relationship Attribution Measure (RAM; Fincham & Bradbury, 1992). Two negative behavioral scenarios were presented with six questions pertaining to each scenario, resulting in twelve total questions for the measure. The negative parent-adolescent behavioral scenarios used in the present study were: 'Your son/daughter tells you a lie' and 'Your son/daughter yells at you'. For each of the six questions pertaining to each incident, the fathers were asked to rate on a 6-point scale ranging from 1 (disagree strongly) to 6 (agree strongly) their agreement with statements related to why the incident may have occurred. Higher scores indicate more negative attributions.

Three attribution dimensions: blame, causal, and responsibility were assessed. Two questions assessed blame (e.g., 'He/she (target child) deserves to be blamed for lying to you. '), four questions assessed responsibility (e.g., 'He/she (target child) lied to you on purpose. '), and six questions pertained to causality (e.g., 'Your son/daughter (target child's) behavior was due to something about him or her (e.g., the type of person he/she is, the mood he/she was in). Items were summed within the dimensions to form the blame, causal, and responsibility subscales. The reliability coefficients were  $\alpha = .71, .74,$  and  $.63$  for the blame, responsibility and causality subscales, respectively.

Although theoretical distinctions have been drawn among the blame, causal, and responsibility dimensions, they do in fact share a considerable amount of variation (cf. Karney, Bradbury, Fincham, & Sullivan, 1994). For fathers' attributions about their children, the range of correlations among the attribution subscales was .27 to .44 at time one, and .37 to .56 at time two. Therefore, these attributions were combined in the present study to form a single indicator of negative attributions to be used in the subsequent analyses. The reliability coefficient for the composite measure was  $\alpha = .78$  and  $.84$  at times one and two, respectively. Means, standard deviations, and ranges for all variables are presented in Table 1.

*Adolescents' Attributions.* Adolescents' attributions about their father's behavior were assessed using the Children's Relationship Attribution Measure (CRAM). The CRAM was based on and derived from the previously described Relationship Attribution Measure (RAM; Fincham & Bradbury, 1992). Two hypothetical negative parental behaviors: 'Imagine your dad yelled at you' and 'Imagine your dad criticized you', were presented. These behaviors were selected because they were believed to be common enough to allow virtually all adolescents to imagine their parents engaging in them. For each negative behavior, questions were asked about why the behavior may have occurred. Children responded on a 5-point Likert scale that ranged from 1 (definitely not) to 5 (definitely yes). Higher scores corresponded to more negative attributions.

Parallel to the RAM, the children rated their agreement with statements on three attribution dimensions: blame, causality, and responsibility. Two statements were used

**Table 1. Means, Standard Deviations and Ranges for All Variables**

	Time 1			Time 2		
	M	SD	Range	M	SD	Range
Children's Attributions						
Blame	4.4	2.2	2-10	4.6	2.3	2-10
Causal	15.1	4.9	6-30	15.1	4.9	6-30
Responsibility	11.0	4.5	6-30	11.8	5.4	6-30
Fathers' Attributions						
Blame	7.4	2.3	2-12	7.9	2.3	2-12
Causal	17.6	4.5	6-36	19.1	5.1	6-36
Responsibility	12.6	4.0	4-24	14.1	4.4	4-24
Behavioral Observations						
Father Negativity	1.3	.28	1-5	1.9	.47	1-5
Child Negativity	1.4	.40	1-5	1.5	.45	1-5

to assess blame and asked directly about the degree to which the parent was at fault (e.g., 'Do you think that your dad should be blamed for criticizing you?'). Six questions pertained to the causal dimension (e.g., 'Do you think that your dad will criticize you for the same reason the next time he criticizes you?', and 'Do you think that your dad criticized you because of something about him (for example: because he was tired, or because he was in a bad mood, or because that's the way he is?'). Six statements pertained to the responsibility attribution dimension (e.g., 'Do you think your dad criticized you on purpose to hurt your feelings?' and 'Do you think that your dad was thinking only about himself when he criticized you?').

As with the fathers' attributions, items for the children's attributions were summed to create the three attribution subscales. Reliabilities for the blame ( $\alpha = .89$ ), causal ( $\alpha = .75$ ), and responsibility ( $\alpha = .83$ ) scales were quite high. However, the subscales for children's negative attributions about their fathers were significantly and positively correlated (range = .44 to .67 at time one, and .49 to .82 at time two). Thus, the attribution subscales were composited to form one single construct of negative attributions for use in the analyses. The reliability coefficient for this composite measure was  $\alpha = .80$  and .92 for times one and two, respectively.

*Behavioral Observations.* Father-child negativity was assessed using behavioral observations of dyadic interactions in a structured task situation developed by Conger and associates (cf. Conger, R. D., Conger, K. J., Elder, Lorenz, Simons, & Whitbeck, 1992). Each father-child dyad was presented with a set of cards containing questions to discuss regarding parenting practices, household chores, schoolwork, and other family events. The questions used in the discussion were developed to assess parent-child relationship quality and were designed to elicit information about positive and negative affect and positive and negative parenting practices. Sample questions included; 'What do I think has been my child's biggest accomplishment during the past year?' and 'What are some of the rules or things that my dad expects me to do or not to do?'

**Table 2. Operational Definitions of Negative Behaviors**

Behavior	Definition
Expression of dissatisfaction	Subject makes a specific statement of anger, displeasure, distress or other negativity about a person's actions
Criticism	Subject attacks the other's personality or character, usually with blame
Defensiveness	Subject avoids acknowledging, or outright denies, his or her responsibility for issues about which the other expresses negativity
Contempt	Subject enacts one or more of the following behaviors that are generally considered to be insulting or psychologically abusive: insults, name calling, hostile sarcasm, hostile humor, mockery, denying other's needs, body language such as rolling eyes, pursing lips
Stonewalling	Subject provides no feedback about the subject that the other is discussing, neither verbally nor through gestures
Negative Affect	Subject enacts one or more of the negative behaviors listed, toward or in the presence of the other: frowning, scowling, irritable or curt tone of voice, crying, negative touching
Dominance	Subject dominates, influences, or controls the discussion and/or the other interactor; controls conversation by monopolizing it and refusing to allow others to speak

Global observational codes (see Conger et al., 1992) were subsequently derived from the fifteen-minute videotaped interactions. Research assistants received 30 hours of training in observational coding before viewing the videotapes and rating the participants' behavior. Coders who worked as home visitors did not rate or view the tapes of any families whose homes they had visited.

Separate behavioral ratings of fathers' negativity toward their child, and the children's negativity directed toward their father were assessed. Specifically, fathers' and children's behaviors were coded on a 5-point scale from 1, indicating that the behavior 'never occurred' to 5, indicating that the behavior was 'mainly characteristic' of the interaction. For the present investigation, observed behaviors such as criticism, negative affect, contempt and dominance were averaged to get an overall score of behavioral negativity. Operational definitions of all the observed behaviors which constituted the negativity dimension are presented in Table 2. Reliability coefficients for the father's negativity scale were  $\alpha = .70$  and  $.60$  for times one and two, respectively. For adolescent's negativity toward their father, alpha coefficients were equal to  $.82$  at both time one and at time two. Inter-rater reliability for the behavioral observation data was established using Spearman-Brown coefficients. These correlations were calculated on two pairs of observers, and a mean was taken across the two sets of observers to get a reliability estimate. The inter-rater reliability estimates for

fathers' negativity on all dimensions ranged from .66 to 1.0 at time one and from .71 to .84 at time two. Reliability estimates for the children's negativity dimensions ranged from .62 to .97 at time one and from .49 to .96 at time two.

## Results

Preliminary analyses were conducted between the higher SES and lower SES groups (using a mean split to determine groups) to examine differences in the primary variables of interest. No significant differences on any of the variables emerged. Therefore, additional analyses according to SES group were not thought to be warranted. Further analyses of the data by gender revealed that overall, no consistent patterns of gender differences emerged among the variables. Slight mean differences on children's attributions about their father at time two, but not time one emerged (i.e., mean difference = .38). Boys had a slightly higher mean score on their negative attributions about their fathers than did girls. Girls showed slightly higher mean scores than boys on father's interactions with them at time one and on adolescent's interactions with their father at time two. Since only a very small difference existed on only a few variables and, there seemed to be no apparent pattern of consistent gender differences either across variables or across time points, additional analyses were not tested according to gender.

Pearson product moment correlation coefficients were calculated to test whether or not there was an association between fathers' and children's negative attributions about one another and their negative behavior with each other. Both within and across time, children's attributions were significantly associated with their negative behavior toward their fathers (range of  $r = .14$  to  $.26$ ). However, fathers' attributions about their children were not associated with their negative behavior toward their children. Further, it appeared that attributions and negative behavior were highly stable across time for both fathers and children (See Table 3).

Regression analysis was used to address the primary questions of interest in the present investigation. To examine our first question of whether fathers' and children's attributions contributed to their subsequent negative interactions with one another, above and beyond the contribution of their earlier negative behavior, path models were run separately for both fathers and children. Contrary to our hypotheses, the path from fathers' attributions at time 1 to their negative behavior with their child at time 2, was not significant after accounting for their negative behavior at time 1. The same was true for the parallel path model for children's attributions and negative behavior toward their father. Children's attributions at time 1 did not predict their negative interactions with their father at time 2, after accounting for their negative interactions at time 1. It is important to note here, however, the significant stability coefficients for both fathers and children accounted for a moderate portion of the variance in these models. Specifically, the standardized beta coefficient for fathers' negative behavior at time 1 and fathers' negative behavior at time 2 was  $.34$ , significant at the  $.001$  level. Similarly, the corresponding path coefficient for children's negative behavior with their fathers at time 1 and time 2 was  $.47$ , significant at the  $.001$  level.

Additional models were tested to examine if fathers' and children's earlier negative behavior with each other predicted the others' subsequent negative attributions, question two of the current investigation. As depicted in Figure 1, fathers' negative interactions with their children at time 1 predicted children's attributions about their fathers at time 2, after accounting for children's attributions at time 1. The same was not true

**Table 3. Correlations among Father and Child Attribution and Negative Interaction Variables at Time 1 and Time 2**

	Child's Attributions about Dad 1	Child's Attributions about Dad 2	Dad's Attributions about Child 1	Dad's Attributions about Child 2	Dad's Interactions with Child 1	Dad's Interactions with Child 2	Child's Interactions with Dad 1	Child's Interactions with Dad 2
Child's Attributions About Dad 1	1.00							
Child's Attributions About Dad 2	.51**	1.00						
Dad's Attributions About Child 1	.02	.14	1.00					
Dad's Attributions About Child 2	.12	.19*	.47**	1.00				
Dad's Interactions with Child 1	.21**	.25**	.03	.05	1.00			
Dad's Interactions with Child 2	.06	.08	-.04	.04	.34**	1.00		
Child's Interactions with Dad 1	.14 <sup>a</sup>	.08	.02	.04	.50**	.26**	1.00	
Child's Interactions with Dad 2	.17*	.26**	.11	.08	.31**	.45**	.48**	1.00

\*p &lt; .05; \*\*p &lt; .01.

<sup>a</sup>= approaching significance.

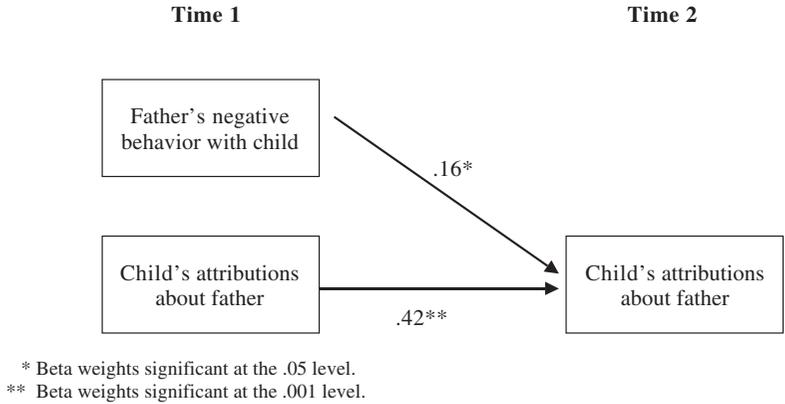


Figure 1. Model of significant relationship between fathers' negativity and subsequent child attributions.

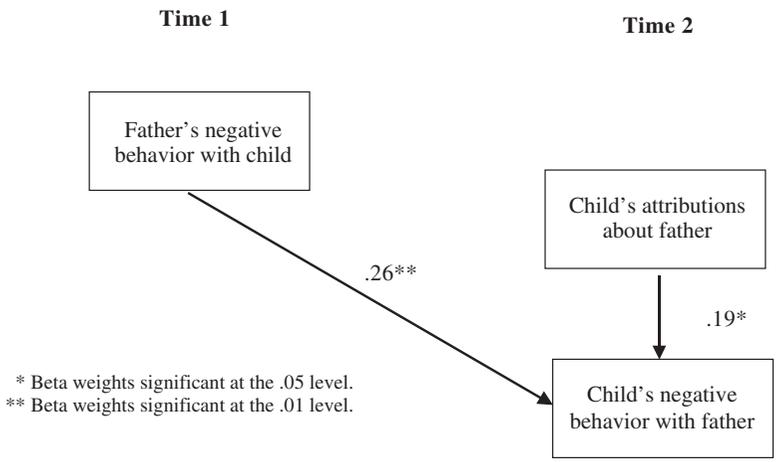


Figure 2. Model of significant relationship between fathers' negativity and children's subsequent attributions and negativity.

for children's earlier negative interactions contributing to fathers' subsequent negative attributions about their children. Moreover, fathers' negativity with their children at time 1 also predicted children's negativity at time 2, in addition to the contribution of children's attributions about their father at time 2 (See Figure 2).

### Discussion

The results of this study provide some support for the hypothesis that negative attributions are associated with negative interactions within the father-child dyad. At both assessments, each separated by one year, fathers' and children's negative attributions about one another's intent were associated with the negativity that each of them directed toward the other. These findings suggest that, in part, social cognitions may play a role in the quality of the relationship that fathers have with their sons and daughters. However, because directions of influence could not be determined from the cross-

sectional data, longitudinal data were used to examine the contribution of fathers' and children's negative attributions and negative behavior to their subsequent attributions and behavior.

For fathers and children, earlier negative attributions did not predict their subsequent negative behavior directly, after earlier negative behavior was taken into account. Interestingly, however, fathers' earlier negative behavior predicted subsequent negative attributions in their children, even after earlier negative attributions were taken into account. Those attributions were associated with negative child behavior. We did not find that children's earlier negative behavior predicted more negative attributions in fathers later. These findings are consistent with those of MacKinnon-Lewis et al. (1998) in which mothers' negative behavior predicted subsequent negative attributions on the part of their sons, but boys' earlier aggressive behavior did not predict more negative subsequent attributions in mothers. These findings suggest that children's negative attributions about both their mothers and fathers may represent reasonable inferences from the history of their interactions with them (MacKinnon et al., 1990).

The asymmetry between the influence of fathers' behavior on children's attributions and the influence of child's behavior on fathers' attributions is interesting. Grusec has paid particular attention to the origins of parenting cognitions. She and her colleagues (Grusec, Hastings, & Mammon, 1994) have argued for the centrality of parents' distal experience, those with their own caretakers, rather than their proximal experience as parents, on their cognitions about parenting, and on their parenting behavior.

Not only are these findings consistent with hypotheses offered by MacKinnon et al. (1990) that were later confirmed with mothers and sons (MacKinnon-Lewis et al., 1998), but they raise interesting questions with regard to the construct 'attributional bias.' It may be argued that 'biases' are reflections of an individual's earlier interactions and social experience and thus accurate in terms of their origins, but inaccurate as they are applied to new situations. If children bring to new situations an inclination to attribute negative intent to another individual and respond negatively when such intent does not exist (i.e., attributional biases), even though the origin of their attributions may have been based on earlier experience, in the current situation, a bias has contributed to negative behavior. Moreover, given the stability of negative behavior exhibited by both the fathers and children across time in this study, it is reasonable to expect that, at least for children, negative attributions may be a likely outcome of those interactions. Indeed, not only were there high correlations between fathers' and children's behavior within time, but for both fathers and children, their behavior at time 1 was highly associated with the other's behavior at time 2. Not only are interactions likely to become increasingly more negative over time (Patterson, 1982, 1997), but that experience is at risk of influencing children's subsequent attributions about their fathers, and possibly others.

The 'biased' tendencies on the part of the children in this study to attribute negative intent to their fathers, though based on previous experiences with their fathers, may place children at particular risk for negative interactions with others. Attachment theorists would argue that earlier experiences not only predispose individuals to pay attention to experiences that are affectively similar to past experiences, but also lead them to recode inconsistent events so as to make them consistent. The fact that the children's earlier experience with their fathers contributed to their subsequent negative attributions, which in turn potentiated aggressive behavior concurrently, has implications beyond the father-child dyad. For example, the tendency of aggressive children to harbor negative attributional biases which foster aggressiveness with peers (Dodge,

1986) may have its origin in experiences within the family, particularly as boys exposed to more coercive family experiences are more likely to be aggressive and rejected by peers (MacKinnon-Lewis et al., 1994). Aggressive children have been shown to be four to five times more likely than normal children to be attacked without provocation in the family (Patterson, 1982) and school (Shinn et al., 1987), which may lead to more negative attributions about others. Even peers report that in ambiguous situations, teachers and peers are likely to target aggressive children (Trachtenberg & Viken, 1994). These children may be particularly prone to attribute negative intent to others, and respond aggressively.

These results add to our growing knowledge about the associations between affective-cognitive and interactional processes. Strengths of the study lie in the inclusion of fathers and both boys and girls in examining the associations between attributions and behavior. The findings add to our expanding knowledge base about the processes associated with the establishment and maintenance of interactions as they contribute to relationship trajectories. There would be merit in future studies in extending this work to examine how children's representations of their family relationships influence their representations of their relationships with their peers, as well as their interactions with their peers. Although there is some support for the role of social cognitive processes in the influence of parent-child interaction patterns on children's social relationships (Parke & O'Neill, 1997), efforts to examine linkages between attributions and behavior across the family and peer contexts have been hampered either by a lack of comparability in the assessment of attributions (MacKinnon-Lewis et al., 1994), or a lack of behavioral assessments (Burks & Parke, 1996). Still, interest in the cross-generational transmission of 'working models' of relationships and associated interactional patterns has not been dampened (e.g., van IJzendoorn, 1995), with promising findings emerging recently. Nix and her colleagues (1999) demonstrated that mothers' hostile attribution tendencies predicted children's future externalizing behavior problems at school, a relation that was largely mediated by mothers' harsh disciplinary practices. Work by Bugental and Martorell (1999) suggests that the 'inter-generational transmission of power-oriented interactions may be partially mediated by the transmission of cognitive biases;' that is, the effects of mothers' perceived powerlessness on their sons' verbally competitive interactive style with their peers appears to be mediated by sons' own perceptions of powerlessness.

It may be that although children come to different contexts (peer) having had prior experiences with their parents and with a 'working model' of relationships, they may also have the capacity to behave independently of that working model, in ways that are more contingently tied to the context. Interestingly, MacKinnon-Lewis, Rabiner, and Starners (1999) found that boys' beliefs about familiar peers were unrelated to their aggression with peers in general. On the other hand, there were significant associations between boys' beliefs about unfamiliar peers and their aggression with peers. The link between unfamiliar peer beliefs and aggression is consistent with Dodge's (1986) work demonstrating associations between hostile attributional biases in ambiguous situations and aggression in children. However, the absence of any predictive relations between boys' beliefs about familiar peers and their aggression with their peers may suggest that although children may enter new peer situations predisposed to regard peers in particular ways as a function of their prior experience, these beliefs may be altered in response to the experience that children actually have in the current context. Whether children exercise a similar capacity to differentiate between their family experience and perceptions of that experience when interacting in other

contexts is a question that should be pursued in future work. It may be that children are capable of using different rules to manage distinctive problems associated with various domains of their social lives (Bugental, 2000). Bugental suggests that domains of social life are organized in ways that allow some range of flexible implementation, and that such flexibility occurs at different levels. At a biological level, humans are capable of responding differently within different ecologies. At the next level, knowledge based on an individual's history facilitates adaptive responses to life experiences. Finally, at the highest level of flexibility, individuals are capable of collaboratively managing their resources and their environments to fit their current needs (Bugental, 2000). Clearly, this is an area that merits further study given the implications for children's socialization.

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