Children's emotional reactivity to interadult nonverbal conflict expressions. (Statistical Data Included) 

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The authors investigated children's responses to nonverbal expressions of conflict. Reactions of 3 groups of children (ranging in age from 6 to 16 years) to multiple forms of nonverbal conflict behaviors expressed in videotaped simulations of interadult disputes were examined. Results indicated that children make few discriminations between different forms of nonverbal conflict behaviors and that their reactions to nonverbal conflict are similar to their reactions to verbal conflict. Adults' expressions of fear elicited the most negative emotional responses from children, suggesting that children react to the meaning of conflict expressions and that expressions of fear may represent the greatest emotional security risks to children. Implications of these results for a theoretical model of the effects of forms of marital conflict on children are discussed (P. T. Davies & E. M. Cummings, 1994).

Keywords: children, conflict, emotion, nonverbal

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MARITAL CONFLICT has been associated with children's maladjustment (Jouriles, Murphy, & O'Leary, 1989; Wolfe, Jaffe, Wilson, & Zak, 1985), including externalizing and internalizing disorders (Emery, 1982; Grych & Fincham, 1990; Jouriles et al.; Katz & Gottman, 1993; Wolfe et al.). Moreover, marital conflict, compared with other individual aspects of distressed marriages, is a stronger predictor of negative behavior problems in children (Emery, 1982; Emery & O'Leary, 1984; Johnson & O'Leary, 1987; Porter & O'Leary, 1980). Children exhibit distress in response to marital conflict through overt motor responses, somatic reactions, increases in anger or aggression, and involvement in parental disputes. Children's reactions to anger are significantly different from their reactions to baseline or control conditions, such as friendly or emotionally neutral interactions between adults (Cummings & Davies, 1994). Furthermore, emotions experienced by children are related to their reactions toward marital conflict. For example, Davies and Cummings (1995) found that children who had been previously induced to feel angry or sad reported lower perceptions of self-regulation and increased negative appraisals in reaction to interadult conflict. In contrast, children who had been induced to feel happy reported lower negative appraisals. These findings suggest that emotions felt by the child may be a causal factor in the child's reactions to interadult conflicts.

Although conflict can be distressing for children, it is an inevitable and unavoidable part of life that is occasionally experienced even by those living in harmonious families. Therefore, in addition to discovering situations in which conflict can be avoided,
researchers should focus on the heterogeneity of conflict and its expressions to more fully understand the impact of conflict on children. For example, investigators may attain a more comprehensive assessment of the effect of conflict by using the process-oriented approach proposed by Cummings and colleagues (Cummings & Cummings, 1988; Cummings, Davies, & Campbell, 2000), which evaluates how multiple dimensions and domains of marital conflict affect a child's sense of emotional security. This approach is intended to help researchers understand how and why particular psychological, physiological, and contextual factors organize and operate dynamically across the life span to affect overall functioning and development. Although research has indicated that marital conflict acts as a risk factor that can adversely affect children, some forms of marital conflict (e.g., constructive problem solving) may not affect children as negatively as other forms of conflict (e.g., domestic violence). In addition, other individual factors (e.g., age, gender roles) may further add to or protect against the negative impact of marital conflict on children. Because the relation between risk factors and the development of maladaptive responding is probabilistic, researchers should examine the specific stimulus characteristics of conflict and individual characteristics of children exposed to various forms of conflict when studying children's patterns of responding.

Researchers have demonstrated that marital conflict can be particularly damaging when it compromises a child's emotional security (Cummings & Davies, 1994). According to the emotional security hypothesis (Davies & Cummings, 1994), emotional security, as a regulatory system derived from family functioning, may affect children through their emotional regulation, regulation of marital relations, and internal representations of family relationships. The process-oriented approach accounts for individual differences and specific contexts and stimulus characteristics of conflict expressions and is, therefore, particularly useful in studying these variables as influences on children's emotional, behavioral, and cognitive response patterns.

Our purpose in this study was to apply this process-oriented framework to the investigation of children's reactions to nonverbal expressions of negative emotions (e.g., anger, fear, and sadness) displayed in interadult disputes, as a function of individual differences and the specific stimulus characteristics of nonverbal behavior. Although children's sensitivity to verbal and physically aggressive expressions of anger have been systematically investigated (Cummings & Davies, 1994), little is known regarding children's reactions to nonverbal conflict communications (i.e., facial expressions and body posturing). In particular, although researchers have examined the presence of nonverbal behavior within marital communication (Gottman, Notarius, Gonso, & Markman, 1976), as well as individuals' abilities to detect emotional states in persons displaying static nonverbal expressions (Ekman, 1978; Ekman, Friesen, & Ellsworth, 1982), there has been no systematic comparison of the effects of nonverbal communications expressed during marital conflict on children.

We made our assessments in this study in regard to children's reports of emotional reactivity, problem-solving strategies, personal intervention strategies, and confidence levels in response to 12 videotaped interactions that depicted different nonverbal communications, including multiple forms of nonverbal conflict expression. Such
systematic study of children's reactions to active nonverbal behavior (i.e., not static, as depicted in photographs, but expressed as a part of a marital interaction) presented us with significant methodological challenges. For example, it would have been difficult to manipulate the presentation of specific nonverbal behaviors within a live, actual marital interaction. Therefore, we chose the analogue methodology, which is particularly well suited for the examination of children's reactions to these relatively subtle, but commonplace, expressions (Cummings, 1995). We presented each nonverbal ending in the context of more general conflict situations, the rationale being that nonverbal conflict expressions typically do not occur in isolation, but are expressed in terms of broader conflict scenarios.

One of our primary interests in this study was the effect of nonverbal conflict on different age groups of children. Because younger children have been found to be less capable of regulating emotional arousal and distress than older children (Cummings & Davies, 1994), we expected younger children to react more negatively toward the nonverbal conflict expressions. Moreover, we expected older children to be more likely than younger children to report complex problem-solving strategies for the conflicting adults, because older children have more life experiences with conflict and higher developed reasoning abilities (Siegler, 1989).

We also conducted analyses on personal intervention strategies to determine if proposed mediation with one or both parents, active avoidance of parental conflict, or hostility toward the conflicting adults varied as a function of children's age. Although analyses of children's preferences for approaching one or both parents were exploratory, we expected that younger children, with their increased emotional dysregulation and limited notions of how to propose mediation (Shifflett-Simpson & Cummings, 1996), would react with greater avoidance and hostility than would older children.

Regarding confidence levels, younger children, compared with older children, were expected to report being more confident that they could resolve parental disputes, because younger children have less experience with the complexities of problem solving and conflict (Covell & Abramovitch, 1987, 1988). To summarize, we hypothesized that younger children, in contrast with older children, would report greater emotional negativity, less complex problem-solving strategies, more avoidance and hostility, and greater confidence in their ability to successfully resolve interparental disputes.

Because of the emphasis within the process-oriented approach on assessing possible relations between context and individual characteristics, we also included gender (in addition to age) as a factor in the analyses. However, the literature to date on gender differences regarding children's reactivity to conflict expressions is sparse. Therefore, an exploratory examination of possible child gender differences was undertaken.

One final note concerns the various forms of nonverbal expressions examined in this study. This was a preliminary and exploratory approach to study reactions toward certain expressions commonly found in interadult disputes; therefore, we did not investigate all possible forms of nonverbal communications exhibited during conflict. On the basis of
the notion that there is a universal uniformity in how people display emotions and how
they can detect emotional states by observing facial characteristics (Ekman & Friesen,
1975; Ekman & Oster, 1979), we expected that the children in this study would have the
capacity to accurately distinguish between the negative and nonnegative emotional states
of the conflicting couples for the basic emotions of anger, sadness, fear, and happiness.

The forms of negative conflict expressions selected for examination were those that could
be commonly observed during everyday conflicts. In this study, negative nonverbal
expressions included those of anger-avoidant body orientation, avoidance via an object
barrier, exasperation, intimidation, the "silent treatment"--and those of fear and sadness.
Nonverbal expressions of fear and sadness, though not anger expressions, frequently
accompany anger expressions and often occur during episodes of marital conflict. Thus,
the question of how children react to nonverbal expressions of fear and sadness is
pertinent to a more comprehensive understanding of the effects of negative nonverbal
marital communications on children. Although other nonverbal communications
undoubtedly occur during conflict, because they have not been systematically
investigated, we decided to focus on these relatively commonplace forms of expression.

We included the following conditions for comparison purposes and to present a variety of
nonnegative expressions, as well as to prevent possible expectancy biases or habituation
effects: an angry interaction with a verbal resolution, two nonverbal friendly interactions
(e.g., positive facial affect and physical affection), and one verbal friendly discussion.
Each nonverbal ending consisted of facial expressions and body posturing based on
Mehrabian's (1968) research on nonverbal communication. For example, each conflict
expression contained specific behaviors that have been coded in past research as
"negative" behaviors; the friendly expressions contained behaviors that have been coded
as being "positive" or nonnegative (Gottman et al., 1976; Mehrabian, 1972).

Method

Participants

Twenty-two children, aged 6 to 8 years (10 boys and 12 girls; mean age = 6.95 years, SD
= 1.05); 20 preadolescents, aged 10 to 12 years (10 boys and 10 girls; mean age = 11.0
years, SD = 1.12); and 20 adolescents, aged 14 to 16 years (10 boys and 10 girls; mean
age = 14.7 years, SD = 1.42), from a midsized city participated in the study. All
participants were recruited through paid newspaper advertisements and were
compensated $10 for their participation.

Mothers of the participants accompanied their children to the lab and completed the
measures on family background characteristics while their children participated in the
study. The educational background of the parents ranged from 11th grade through the
doctorate level (mean years of education = 13.8, SD = 2.8). Parental monthly income
ranged from $1,000 to $10,500 (mean monthly income = $3,850.81, SD = $1,888.22). In
regard to the ethnicity of the participants, 83.3% were Caucasian, 10.8% were African
American, 2.9% were Hispanic, 2.0% were Asian, and 1.0% were Native American.
Materials

After the children watched each segment of marital interactions, they were interviewed by a research assistant, who used a 12-item questionnaire that has been used in the research of Cummings and colleagues (e.g., Cummings, Ballard, & El-Sheikh, 1991; Cummings, Vogel, Cummings, & El-Sheikh, 1989; Shifflett-Simpson & Cummings, 1996). The questionnaire assessed the children's perceptions of the actors' emotions; children's perceptions of their own emotions, in response to the scenarios presented; and children's problem-solving strategies, personal interventions, and confidence levels with respect to the interventions.

Design and Procedure

Testing took place in the family studies center of a midsized, midwestern university. Twelve different 1-min videotaped segments of male and female adult interactions were presented to each child individually in the lab. These segments included 5 nonverbal expressions of anger (e.g., silent treatment, avoidant body orientation, avoidance via a barrier, exasperation, and intimidation), 1 nonverbal expression of sadness, 1 nonverbal expression of fear, 2 nonverbal friendly interactions (e.g., physical affection and positive facial affect), 1 verbal friendly interaction (e.g., positive discussion), 1 verbal expression of anger without a resolution (e.g., continued arguing), and 1 verbal expression of anger with a verbal resolution.

Three "angry" base, or preparatory, skits provided the themes for the nine types of negative emotional interactions (i.e., the seven interactions with expressions of nonverbal conflict and the two interactions with expressions of verbal anger). Of these nine interactions, three depicted an argument over the cost of the phone bill, three presented an argument over dinner, and three portrayed an argument over cleaning the house. The duration of each base skit was 45 s. Each base skit was followed by one of nine different 15-s endings, making the total duration of each interaction equal to 1 min. In addition, participants viewed three 1min friendly interactions, which depicted positive facial affect, physical affection, and a positive discussion. The specific facial characteristics and body posturing presented in the 12 conditions can be found in Table 1.

The conflicts portrayed in the angry base skits were intended to represent normal, everyday disputes. Thus, none of the disputes were expressed as intensely angry, and the themes of the arguments were about everyday issues. Two sets of actors (i.e., two different parent couples) performed the interactions. Scripts were written for the interactions so that the wording was the same for both sets of actors. To prevent unwanted behaviors from entering into different scenarios with different actors, we included specific directions in the scripts for the actors' expressions of facial affect and specific nonverbal behaviors. All actors, therefore, expressed the same behaviors, words, and intensity levels of each emotion in the base skits and in the positive interactions.

Furthermore, to prevent possible "parent gender" and "couple" effects (i.e., to ensure that children were not influenced by particular characteristics of the couple or an actor's
gender), we selected for the study portrayals in which the actors depicted the endings at similar intensity levels that were within a low to moderate range of anger, fear, or sadness. In past research, Cummings and colleagues (Cummings et al., 1989; Cummings et al., 1991; Shifflett-Simpson & Cummings, 1996) highlighted that it is unnecessary to depict conflict expressions at high intensity levels when investigating differences in children's responses to conflict. That is, expressions of conflict portrayed at moderate levels effectively show differences in reactions to marital conflict. Two raters (a graduate and an undergraduate student) viewed the taping of each expression and were in agreement that the portrayal and intensity of the expressions were similar across actors and scenarios.

<table>
<thead>
<tr>
<th>Ending or Behavior</th>
<th>Description</th>
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<tbody>
<tr>
<td>Avoidance via a barrier</td>
<td>Couples placed objects (e.g., books, newspapers) in front of their faces to avoid looking at their partners.</td>
</tr>
<tr>
<td>Avoidant body orientation</td>
<td>Couples turned their bodies away and averted their gaze away from their partners.</td>
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<tr>
<td>Exaggeration</td>
<td>Couples expressed heavy sighs, rolling of eyes, shaking heads in displeasure, and placed hands on hips (arms akimbo stance) while facing partners.</td>
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<tr>
<td>Intimidation</td>
<td>Couples pointed their index finger at their partners, lowered their eyebrows in a frown, and looked threateningly with an angry facial affect at their partners.</td>
</tr>
<tr>
<td>Silent treatment</td>
<td>Couples displayed long stares at their partners but did not lower their eyebrows into a frown and displayed a neutral facial affect.</td>
</tr>
<tr>
<td>Fear</td>
<td>Couples displayed frightened facial affect with widened eyes, mouth agape; and body shaking.</td>
</tr>
<tr>
<td>Sadness</td>
<td>Couples displayed crying; rubbing of eyes; lowered heads; and eyes and mouth in a downward position.</td>
</tr>
<tr>
<td>Physical affection</td>
<td>Couples displayed handholding; hugs; and backpatting while sitting next to their partners.</td>
</tr>
<tr>
<td>Positive facial affect</td>
<td>Couples smiled widely and winked at their partners.</td>
</tr>
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</table>

The presentation of endings were arranged in a randomly assigned order on a videotape. This order was counterbalanced by a second videotape. To control for order effects, we had half of each participant group view the interactions in the order shown in the first videotape and the other half view the interactions in the counterbalanced order shown in the second videotape. Concerns about order effects should also be assuaged by the fact that past researchers who have used this methodology have rarely found evidence for order effects (Cummings & Davies, 1994). To reduce the possibility that the children would leave the lab with concerns for the conflicting couple, a resolution was included at the end of each videotape in which both couples apologized for all of the negative behaviors they displayed during the previous interactions and stated that they were not angry with each other. The order of conditions shown on the first videotape can be found on Table 2.

A research assistant explained to each child individually that he or she would watch videotaped interactions between adult actors. Each child was asked to pretend that the actors were his or her parents and to imagine they were behaving in the ways presented in the videotape. Following each videotaped interaction, the videocassette recorder was paused, and each child was asked a series of questions about his or her feelings regarding the ending of each interaction. Specifically, each child was asked to point to an Ekman photograph (Ekman & Friesen, 1975) to show how he or she felt at the end of the interaction (e.g., "mad," "sad," "scared," "okay," or "happy"). The children were also asked to rate how much of the chosen emotion they felt using a 5-point Likert-type scale that ranged from very little to a whole lot.
To assess levels of complexity within problem-solving strategies, the research assistants asked the children to suggest what each parent could have done to feel better. The children were also asked what they would do if they saw their parents behave in the same way as did the parents on the videotape, to collect data for assessing personal intervention strategies. Finally, children were asked to rate on the 5-point Likert-type scale used previously how confident they were that their proposed interventions would successfully resolve a similar dispute between their parents.

Scoring

We assessed whether a child experienced a negative reaction to any of the expressions, scoring negative reactions as 1 and nonnegative reactions as 0. That is, when the children reported feeling a negative emotion ("mad," "sad," or "scared") in response to negative conflict expressions, their responses were scored as 1. When a child reported nonnegative feelings (e.g., "okay" or "happy") in response to negative expressions, a score of 0 was given. This procedure served as a manipulation check for emotional responding. The degrees or levels of emotional negativity that the children reported feeling in response to the mother and father were rated on a 5-point Likert-type scale derived from the sliding scale used by the participants (e.g., 0 = rating given for positive reactions to negative expressions, 1 = very little; 2 = a little; 3 = sort of a lot; 4 = a lot; 5 = a whole lot). Therefore, in effect, responses were scored on a 1 to 5 scale for negative reactions.

Ratings for the level of complexity of problem-solving strategies provided by the children for the conflicting adults were based on a coding system used in a previous study by Shifflett-Simpson and Cummings (1996) in which participants' responses were categorized into one of three quality levels (i.e., 1 = no solution, 2 = general solution, and 3 = specific/complex solution). A code of no solution was given for responses such as "S/he could do nothing" or "I don't know." A general solution consisted of strategies that were not specific to the issue being discussed or solution strategies that were vague or simplistic, such as "S/he could play a game," "S/he could go outside," or "S/he could take a break." A specific/complex solution included strategies that specifically related to the issue being discussed or included a more detailed solution for the problem, such as "They could go out to dinner and then it wouldn't matter that the mom hadn't fixed dinner yet"; "The mom could stop making so many long-distance calls, and the dad could get reimbursed for his long-distance calls"; or "S/he could pick up his/her things more around the house and help out more." Trained coders achieved interrater agreement for the level of complexity codes (k = .95).

We assessed personal intervention strategies on five different dimensions. These dimensions included approaching the mother only (e.g., "I would tell the mom to calm down," "I'd help my mom get dinner ready," etc.); approaching the father only (e.g., "I'd tell my dad not to get angry," "I'd help my dad clean the house," etc.); approaching both parents (e.g., "I'd tell my mom to calm down and my dad not to get angry," "I'd help them both clean the house," etc.); active avoidance of parental conflict (e.g., "I'd go to my room," "I'd leave," etc.); and hostile reaction to parental conflict (e.g., "I'd yell at them to stop fighting," "I would be angry with them and break them apart," etc.). These
dimensions were also scored with the one-zero coding format previously mentioned. Again, coders achieved interrater agreement for all types of interventions (ks = .86, .89, .98, .96, and .95, respectively).

Last, we assessed the degree of confidence that each participant had in his or her ability to resolve parental conflict, using the 5-point Likert-type scale previously mentioned (1 = very little to 5 = a whole lot). In sum, we coded several areas of interest for each specific conflict expression and kept scales associated with each vignette. Specifically, each type of interaction was associated with scales for the (a) degree of negative emotionality experienced by the participants, (b) level of problem-solving complexity, (c) type of personal intervention, and (d) confidence in one's ability to resolve parental conflict.

Results

To assess participants' responses regarding the areas of interest, we conducted repeated measures analyses of variance with two between-subjects factors (i.e., Age and Gender) and one within-subjects factor (i.e., Endings, with eight levels of negative expression, including avoidant body orientation, avoidance via a barrier, exasperation, fear, intimidation, sadness, silent treatment, and verbal anger without resolution). Tukey tests were used for all post hoc comparisons.

Emotional Negativity in Response to Parental Displays of Unresolved Nonverbal and Verbal Conflict

A significant endings main effect was found for participants' level of emotional negativity in response to nonverbal expressions displayed by the mother, F(7, 50) = 5.67, p < .001. Contrast tests revealed that fear (M = 2.77, SD = 1.91) produced more negative feelings than all nonverbal expressions except sadness (M = 1.87, SD = 1.60). Verbal anger (M = 2.27, SD = 1.87) also produced greater negativity than did the silent treatment (M = 1.21, SD = 1.67).

A significant endings main effect was also found for participants' level of emotional negativity in response to nonverbal conflict expressions displayed by the father, F(7, 50) = 5.99, p < .001. As with reactions toward the mother, participants reacted more negatively toward the fathers' displays of fear (M = 2.74, SD = 2.07) than to any of the other nonverbal endings except sadness (M = 1.90, SD = 1.84).

Children reacted similarly to most forms of nonverbal conflict expressions; however, they reported feeling most negative in reaction to parental displays of fear (M = 2.77, SD =
Means and standard deviations for responses to parental displays of the negative conflict expressions can be found on Table 3.

**Level of Complexity of Solutions Suggested for the Parents' Conflict**

Analyses regarding the level of complexity in the solutions given for the mother revealed significant main effects for endings, $F(7, 50) = 2.34, p < .05$, and gender, $F(1, 56) = 7.85, p < .01$. No significant contrasts were found for the endings main effect. However, we found gender differences that suggested solutions generated by girls were more complex ($M = 2.21, SD = 0.78$) than those generated by boys ($M = 1.97, SD = 0.81$). Regarding the level of complexity in the solutions given for the father, no significant main effects or interactions were found.

**Types of Personal Intervention Strategies**

Significant results were found only for the interventions of approaching both parents, active avoidance, and hostile reactions. Analyses of interventions in which both parents would be approached revealed an age main effect, $F(2, 56) = 3.97, p < .05$, which suggested that young children ($M = 0.44, SD = 0.50$) and preadolescents ($M = 0.33, SD = 0.47$) were more likely to approach both parents than were adolescents ($M = 0.19, SD = 0.40$). In regard to participants' reports that they would avoid parental conflict, an age main effect, $F(2, 56) = 3.35, p < .05$, suggested that younger children ($M = 0.19, SD = 0.40$) were more likely than preadolescents ($M = 0.01, SD = 0.23$) or adolescents ($M = .004, SD = 0.21$) to report that they would avoid intervening in parental disputes. Means and standard deviations can be found on Table 4.

Although we found an endings main effect for hostile reactions toward disputing adults, $F(7, 50) = 2.82, p < .05$, contrast tests produced no significant differences between endings. In addition, an age difference approached significance, $F(2, 56) = 2.84, p < .10$ (ns), for hostile reactions, suggesting that more hostility was reported by younger children ($M = 0.30, SD = 0.46$) than by preadolescents ($M = 0.13, SD = 0.30$) or adolescents ($M = 0.13, SD = 0.33$) in response to the adults' conflict.

**Level of Children's Confidence in Their Ability to Successfully Resolve Parental Disputes**

A main effect for age, $F(2, 56) = 8.63, p < .01$, was found for participants' confidence in their ability to resolve a parental dispute. Again, contrast tests indicated that younger children had more confidence ($M = 3.61, SD = 1.36$) than preadolescents ($M = 2.91, SD = 1.29$) and adolescents ($M = 2.43, SD = 1.21$) in their ability to resolve interparental conflict. Furthermore, contrast tests also revealed that preadolescents were significantly more confident in their conflict-resolution abilities than were adolescents.
Discussion

The findings of this study imply that nonverbal conflict behaviors used in parental disputes do not go unnoticed by children. Rather, children do react negatively to nonverbal conflict in ways that are similar to their reactions toward verbal conflict, as reflected in their reports of heightened negativity, hostility, and active avoidance. It is important to note that the evidence of negative emotional responding found in this experimental study contradicts findings based on retrospective reports that concluded that nonverbal conflict behavior was not associated with increased distress in children (Jenkins & Smith, 1991).

One of the key findings was that adults' displays of fear produced greater feelings of negativity than any other nonverbal ending except sadness. It may be that fear produces more negativity than anger because it represents a more direct threat to children's emotional security. That is, a child may view a fearful parent as being more vulnerable and less capable of providing protection than an angry parent. Although the expression of fear was counterbalanced, its presentation as the first and last expression shown (depending on which tape was viewed) may have added to its impact. However, the intensity of each expression was deemed to be similar across actors, and contexts should have prevented the portrayal of this expression as being more intensely negative than the other expressions shown. In future research on nonverbal expressions of conflict, perhaps more than one scenario depicting each expression could be displayed. Such a method would allow researchers to assess reactions to these expressions to overcome any limitations produced by counterbalancing single depictions of expressions.

Despite significant endings effects, many comparisons among the nonverbal anger conditions were nonsignificant, suggesting that children evaluate the meaning of anger or conflict and not only the form conflict takes. Moreover, specific nonverbal anger contexts did not appear to add to the negative implication of conflict for the children. This finding is also consistent with the theory that meaning is a more important factor than form in terms of children's appraisals of conflict (Davies & Cummings, 1994; Grych & Fincham, 1990).

Several reactions toward nonverbal conflict varied as a function of age. First, the younger children reacted differently from the older children in their conflict interventions. As expected, the younger children were more likely than the adolescents to actively avoid intervening in parental conflict. Those avoidant reactions suggest that conflict is more distressing and, perhaps, more threatening for younger children. However, when the younger children did propose interventions, they were more likely than adolescents to
approach both parents rather than to show a preference for interacting with one parent over the other. The younger children also reported higher confidence levels than the older children in their ability to resolve nonverbal conflict, indicating that they may hold a more simplistic understanding of conflict and conflict resolution because of their lack of exposure to problem solving. Future researchers should examine how confidence levels, as well as avoidant reactions, relate to underdeveloped problem-solving skills and a limited exposure to problem solving between parents.

Regarding gender differences, girls generated more complex solutions for the mother than boys did. It is possible that girls offer more complex solutions because they are more likely than boys to react to parental conflict with assumptions of personal responsibility (Cummings et al., 1991), increased self-blame (Cummings, Davies, & Simpson, 1994), and increased mediation (EI-Sheikh & Reiter, 1996; Vuchinich, Emery, & Cassidy, 1988). Although it is not clear why girls did not differ from boys in their solutions for the father, it may be that, in addition to the aforementioned factors, girls identify more with their mother and thus are able to generate more complex solutions for her.

The children's reports of emotional and behavioral dysregulation, as well as assessed coping deficits in response to nonverbal forms of conflict, highlight the implications of these findings for the emotional security hypothesis. First, in the area of children's emotional regulation, we found that nonverbal conflict expressions produced negative emotional responding. Second, girls proposed that they would attempt to regulate parental behavior by becoming more directly involved mediators in parental disputes involving nonverbal conflict behavior. Third, compared with older children, younger children's higher confidence levels demonstrated internal representations of coping abilities that may reflect a poorer understanding of the complexity of conflict.

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In future studies, researchers should examine children's actual behavior in response to nonverbal conflict behaviors displayed by their parents during marital disputes. For example, nonverbal behaviors expressed by a child's actual parents in a videotaped marital interaction could be coded and then assessed on several variables, including (a) the presence of specific behaviors displayed by the parents, (b) when these behaviors were expressed, and (c) the duration and intensity levels of such behaviors. In addition to viewing analogue vignettes similar to those used in this study, children could watch their own parents' videotaped interaction. Researchers could videotape the children viewing their parents' interaction and could note the children's actual responses, comparing those responses with the children's reported perceptions of their own behavior (e.g., "When the parents expressed fear did the child actually become more agitated as she or he reported would happen?" or "Which parental behaviors actually produced sadness vs. perceptions
of sadness in the child?"). Researchers could reduce human subjects review board concerns by obtaining parental permission before showing the videotaped interactions to the children.

In addition, because we did not consider individual differences in temperament in this study, we are not certain whether temperamental differences influenced emotional reactivity to the various negative endings. For example, heightened negativity toward conflict may be more likely for children with difficult temperaments than for children with easy temperaments (Cummings & Davies, 1994). The participants in this study represented a wide range of ages. To date, there are few temperament assessment measures that are useful with older populations, which makes it difficult for researchers who study older participants, such as adolescents, to accurately measure temperament. As advances are made in this area, researchers should become more capable of considering the effect of temperament on reactions toward nonverbal conflict.

In closing, the results of this study show that children's appraisals of the meaning of parental conflict, as it affects their emotional security, do not differ as a function of whether that conflict is expressed in a verbal or nonverbal fashion. In their active appraisals of family conflict, children may deem nonverbal expressions of conflict to be as threatening to their emotional well-being as angry verbal conflict. Moreover, adults' nonverbal expressions of fear may add significantly to the negative emotional security implications of conflicts. Thus, the goal for future research is to continue to focus on understanding the heterogeneity of conflict. Only by acknowledging the multidimensional nature of conflict, can researchers attain a better understanding of the specific processes and stimulus characteristics that influence children's reactions to marital conflict.

| TABLE 1 |
|-----------------|---------------------------------|
| Nonverbal Endings or Behaviors and Descriptions. |
| Ending or Behavior | Description |
| Avoidance via a barrier | Couples placed objects (e.g., books, newspapers) in front of their faces to avoid looking at their partners. |
| Avoidant body orientation | Couples turned their bodies away and averted their gaze away from their partners. |
| Exasperation | Couples expressed heavy sighs, rolling of eyes, shaking heads in displeasure, and placed hands on hips (arms akimbo stance) while facing partners. |
| Intimidation | Couples pointed their index finger |
at their partners, lowered their eyebrows in a frown, and looked threateningly with an angry facial affect at their partners.

Silent treatment
Couples displayed long stares at their partners but did not lower their eyebrows into a frown and displayed a neutral facial affect.

Fear
Couples displayed frightened facial affect with widened eyes, mouth agape, and body shaking.

Sadness
Couples displayed crying, rubbing of eyes, lowered heads, and eyes and mouth in a downward position.

Physical affection
Couples displayed handholding, hugs, and backpatting while sitting next to their partners.

Positive facial affect
Couples smiled widely and winked at their partners.

TABLE 2
Order of Conditions on Videotape 1

<table>
<thead>
<tr>
<th>Couple</th>
<th>Argument stem</th>
<th>Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Going out for dinner</td>
<td>Sadness</td>
</tr>
<tr>
<td>2</td>
<td>Cost of the phone bill</td>
<td>Intimidation</td>
</tr>
<tr>
<td>1</td>
<td>Verbal positive discussion</td>
<td>(No ending added)</td>
</tr>
<tr>
<td>2</td>
<td>Going out for dinner</td>
<td>Verbal anger (no resolution)</td>
</tr>
<tr>
<td>1</td>
<td>Cost of the phone bill</td>
<td>Avoidance via a barrier</td>
</tr>
<tr>
<td>2</td>
<td>Cost of the phone bill</td>
<td>Exasperation</td>
</tr>
<tr>
<td>1</td>
<td>Cleaning the house</td>
<td>Avoidant body orientation</td>
</tr>
<tr>
<td>2</td>
<td>Going out for dinner</td>
<td>Verbal anger (resolution)</td>
</tr>
<tr>
<td>1</td>
<td>Physical affection</td>
<td>(No ending added)</td>
</tr>
<tr>
<td>2</td>
<td>Cleaning the house</td>
<td>Silent treatment</td>
</tr>
<tr>
<td>1</td>
<td>Positive facial affect</td>
<td>(No ending added)</td>
</tr>
<tr>
<td>2</td>
<td>Cleaning the house</td>
<td>Fear</td>
</tr>
<tr>
<td>1</td>
<td>Resolution</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>Resolution</td>
<td>--</td>
</tr>
</tbody>
</table>

TABLE 3
Means for Children's Negative Feelings in Response to Parental Conflict Expressions

<table>
<thead>
<tr>
<th>Ending</th>
<th>Mother</th>
<th>SD</th>
<th>Father</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoidance via a barrier</td>
<td>1.58</td>
<td>1.82</td>
<td>1.47</td>
<td>1.77</td>
</tr>
<tr>
<td>Avoidant body orientation</td>
<td>1.71</td>
<td>1.98</td>
<td>1.68</td>
<td>1.91</td>
</tr>
<tr>
<td>Exasperation</td>
<td>1.63</td>
<td>2.03</td>
<td>1.47</td>
<td>1.77</td>
</tr>
<tr>
<td>Fear</td>
<td>2.77</td>
<td>1.91</td>
<td>2.74</td>
<td>2.07</td>
</tr>
<tr>
<td>Intimidation</td>
<td>1.45</td>
<td>1.83</td>
<td>1.56</td>
<td>1.77</td>
</tr>
<tr>
<td>Sadness</td>
<td>1.87</td>
<td>1.60</td>
<td>1.90</td>
<td>1.84</td>
</tr>
<tr>
<td>Silent treatment</td>
<td>1.21</td>
<td>1.67</td>
<td>1.08</td>
<td>1.65</td>
</tr>
<tr>
<td>Verbal anger</td>
<td>2.27</td>
<td>1.81</td>
<td>2.03</td>
<td>1.89</td>
</tr>
</tbody>
</table>

TABLE 4
Age Group Means for Personal Interventions to Approach Both Parents and Active Avoidance

<table>
<thead>
<tr>
<th>Age group</th>
<th>Approach both parents</th>
<th>M</th>
<th>SD</th>
<th>Active avoidance</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Younger children</td>
<td>0.44</td>
<td>0.50</td>
<td></td>
<td>0.19</td>
<td>0.40</td>
<td></td>
</tr>
<tr>
<td>Preadolescents</td>
<td>0.33 (a)</td>
<td>0.47</td>
<td></td>
<td>0.01</td>
<td>0.23</td>
<td></td>
</tr>
<tr>
<td>Adolescents</td>
<td>0.19 (a)</td>
<td>0.40</td>
<td></td>
<td>0.00</td>
<td>0.21</td>
<td></td>
</tr>
</tbody>
</table>

Note. The means of younger children differ at p < .001 from (a) the means for adolescents in regard to approaching both parents and for preadolescents for active avoidance in the Tukey honestly significant difference comparison. Means in the same column that share the same subscript differ at p < .01 in the Tukey honestly significant difference comparison.

REFERENCES


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