

# Family-Peer Connections: The Roles of Emotional Expressiveness within the Family and Children's Understanding of Emotions

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CASSIDY, JUDE; PARKE, ROSS D.; BUTKOVSKY, LAURA; and BRAUNGART, JULIA M. *Family-Peer Connections: The Roles of Emotional Expressiveness within the Family and Children's Understanding of Emotions*. CHILD DEVELOPMENT, 1992, 63, 603-618. The purpose of this study was to explore patterns of parent and child emotional expressiveness within the family context, to examine links between these patterns and children's peer relations, and to examine whether these links might be mediated by children's understanding of emotions. Subjects were 61 kindergarten and first-grade white, middle-class children and their parents. Parent and child expressiveness were assessed in a laboratory ring-toss game designed to elicit a range of emotional responses. Parent expressiveness in the home was also assessed with Halberstadt's Family Expressiveness Questionnaire. The questionnaire, completed by both mother and father, assesses a range of emotions in a variety of settings typical of many families, and consists of items tapping both positive and negative expressiveness. Children were interviewed about their understanding of emotions across a broad range of areas. Results indicated that maternal expressiveness (home) and paternal expressiveness (home and laboratory) but not children's expressiveness with parents were associated with children's peer relations. Although children's understanding of emotions was generally not associated with family expressiveness, understanding predicted children's peer relations. In addition, children's understanding influenced the links between maternal expressiveness in the home and peer relations and between paternal expressiveness in the laboratory and peer relations. This pattern of results underscores the importance of the emotional climate of the family for the development of children's social relations with peers.

Following considerable theoretical interest in connections between the family and peer systems (Hartup, 1979; Piaget, 1932; Sullivan, 1953; Youniss, 1980), there has been a recent increase in empirical work examining these connections. Several com-

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ponents of family experience have been found to relate to child functioning with peers. Variation in parental child-rearing practices, for instance, has emerged as an important factor. Findings from a number of studies indicate that parents who are warm, responsive, and consistent disciplinarians have children who are more competent with peers than those with parents who are harsh, rejecting, and/or excessively permissive (Baumrind, 1967, 1971; Winder & Rau, 1962). Infant-parent attachment also has been consistently associated with relations with both familiar and unfamiliar peers in toddlerhood and preschool (Easterbrooks & Lamb, 1979; LaFreniere & Sroufe, 1985; Pastor, 1981; Troy & Sroufe, 1987; Waters, Wippman, & Sroufe, 1979). More recently, parent-child interaction patterns (e.g., during rough-and-tumble play [MacDonald & Parke, 1984], during parental instruction [Gottman & Fainsilber Katz, 1989], and during board-game play [Putallaz, 1987]) and parental belief systems (e.g., maternal endorsement of aggression [Pettit, Dodge, & Brown, 1988] and maternal discipline styles [Hart, Ladd, & Burlison, 1990]) have also been found to relate to peer competence.

The component of family functioning examined in the present study is emotional expressiveness within the family. Choice of this component is based on theory and research suggesting that emotions are important in peer relations (Denham, 1986; MacDonald & Parke, 1984; Sroufe, 1982) and that families may be important contexts in which children learn about emotions (Campos, Barrett, Lamb, Goldsmith, & Stenberg, 1983; Lewis & Saarni, 1985; Tomkins, 1962, 1963). Experiences within an expressive family may provide young children with either specific skills or more global characteristics that serve them well given that their peer relations may be based in large part on non-verbally mediated play interactions.

The majority of relevant research examines parental expressiveness. The proposition that parental expressiveness may be important for peer relations grows from earlier research suggesting that parental expressiveness is related to child functioning (and indeed can influence child functioning) in important ways. There are several sets of relevant literature. First, the social referencing literature indicates that parents' emotional expressions guide both behavioral and emotional responses of infants as young as 8.5 months in both exploratory (visual cliff) and

social (unfamiliar stranger) contexts (Boccia & Campos, 1989; Dickstein & Parke, 1988; Sorce, Emde, Campos, & Klinnert, 1985). Second, the study of parents with affective disorders provides evidence that depressed mothers have infants who show more muted, depressed expressions (Baumrind, 1971; Cohn, Matias, Tronick, Lyons-Ruth, & Connell, 1986; Field, 1984; Field et al., 1988). Third, several experimental studies indicate that parental manipulation of their own expressiveness directly influences infant expressiveness. For instance, mothers' posed emotional expressions lead to differential infant emotional responses in infants as young as 10 weeks of age (Haviland & Lelwica, 1987). Similarly, with toddlers, mothers' simulations of distress have been found to lead to child displays of empathy (Zahn-Waxler, Radke-Yarrow, & King, 1979). Fourth, studies of college students reveal that those from emotionally expressive families (as rated by the students) describe themselves as more emotionally expressive (Balswick & Avertt, 1977; Burrowes & Halberstadt, 1987; King & Emmons, 1989), and are described by peers (Burrowes & Halberstadt, 1987; King & Emmons, 1989) and by confederates in a laboratory conversation task as more emotionally expressive (Halberstadt, 1986). Finally, such emotion-related aspects of parenting as parental talk about emotion (Dunn, Bretherton, & Munn, 1987) and parental "emotional availability" (Sorce & Emde, 1981) are thought to have important implications for child functioning.

The domain of peer relations is an area of child functioning that has been linked to parental expressiveness in several studies. In one study, mothers' concern with feelings in a play session with their children was related to children's social status (Putallaz, 1987). In another, adolescent reports of greater family expressiveness were positively related to a confederate's perceptions of the subject as friendly and outgoing (Halberstadt, 1984). Finally, parents of popular children have been found to show more positive affect than parents of rejected children during parent-child interaction (Parke et al., 1989). Although the connection between peer relations and child expressiveness within the family has been less extensively examined, a similar link has been established. In several studies (MacDonald, 1987; MacDonald & Parke, 1984; Parke et al., 1989), preschoolers who showed relatively greater expressiveness during physical play with their parents were found to

have better peer relations. Taken together, these sets of studies indicate connections of both child and parent expressiveness with peer relations.

A central purpose of the present study was to expand on this previous research (*a*) by exploring parental emotional expression in two contexts—in everyday family-related situations and in a structured laboratory game situation, and (*b*) by examining connections between family expressiveness in the home and children's ongoing social relations with peers in school. In addition, because child expressiveness is a component of family expressiveness, we included child expressiveness in our examination of family-peer links. Earlier findings of connections between expressiveness and peer relations (Halberstadt, 1984; MacDonald & Parke, 1984; Putallaz, 1987) led to an expectation of connections of both parental and child expressiveness with child peer relations. In particular, it was predicted that children with more expressive parents would have better peer relations. Similarly, it was expected that children who were themselves more expressive with their parents would also have better peer relations.

An additional purpose of this study was examination of mother-father similarities and differences in expressiveness. It was expected that in these middle-class intact families, both mothers and fathers would report and show greater positive than negative expressiveness. In addition, based on extensive previous reports of greater expressiveness in women than men (e.g., Balswick & Avertt, 1977; Hall, 1979), it was anticipated that mothers would report and show greater expressiveness than fathers. Here, we expand on previous research by recognizing that mothers' and fathers' expressiveness may relate to child functioning in different ways, and we examine the correlates of mothers' expressiveness and of fathers' expressiveness separately.

A final purpose of this study was the examination of a possible mediator of the link between expressiveness within the family context and children's peer relations. The mediator examined here was children's emotional understanding. The expectation that children's emotional understanding may mediate the link between family expressiveness and peer relations arises from research traditions involving extensive and convergent findings (*a*) that family processes influence social understanding (Costanzo &

Dix, 1983; Hart et al., 1990; Pettit et al., 1988; Smetana, Kelly, & Twentyman, 1984), and (*b*) that successful peer relations hinge on competent social understanding and social skills (e.g., Asher & Renshaw, 1981; Dodge, 1986; Hymel & Rubin, 1985). Thus, in the model proposed here, experiences within expressive families may enhance emotional understanding (viewed as a form of social understanding), which in turn may relate to competent relations with peers. For instance, it may be that expressive parents provide their children with opportunities to understand the meaning of particular expressions (i.e., emotion recognition skills). There is evidence to suggest both that such understanding may be acquired through parent-child interaction and/or parental modeling (Camras et al., 1988; Daly, Abromovitch, & Pliner, 1980; Parke et al., 1989), and that it is important for successful social interaction (Buck, 1975; Custrini & Feldman, 1989; Denham, 1986; Goldman, Corsini, & deUrioste, 1980; Walden & Field, 1990). In addition, children of expressive parents may also be provided with opportunities for increased understanding of the emotional reactions that their own behaviors elicit from others. This opportunity for increased understanding may enhance social relationships, as one characteristic of rejected children is that they do not consider the consequences of their actions (Rubin & Krasnor, 1986). A recent study in which social understanding did, in fact, emerge as a mediator of family-peer connections (Pettit et al., 1988) also led us to examine whether emotional understanding is such a mediator.

In addition to providing information about a possible mediator of family-peer links, examination of emotional understanding in this study addresses further important issues. One issue relates to emotional understanding and the family context. Despite extensive theoretical proposals that the understanding of emotions develops within a social context (Campos et al., 1983; Gordon, 1989; Lewis & Saarni, 1985), only recently has the family been examined in this regard (e.g., Dunn, 1988; see also Denham, McKinley, Couchoud, & Holt, 1990, for additional discussion of the importance of investigating the socialization of emotional understanding). Another issue relates to emotional understanding and its correlates with children's functioning. Understandably, most initial research on children's emotional understanding has focused on its developmental course (Harris, 1989). Relatively lit

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tle attention has been devoted to examining individual differences in children's understanding of emotions and the correlates of these differences. There is some indication, however, that at least some specific components of emotional understanding may be connected to peer relations. For instance, understanding of the situational determinants of emotions has been found to relate to prosocial behavior (Denham, 1986), and understanding related to the use of personalized information in making inferences about others' responses to affect-laden events has been found to relate to social status (Gnepp, 1989) (see also Cutrona & Feshbach [1979], Denham et al. [1990], Ford [1982], and Iannotti [1985]). In the present study, our goal was to examine multiple indices, each of which may be a component of the complex construct of emotional understanding.

In sum, this study was designed to examine further connections between expressiveness within the family context and children's peer relations. It was predicted that children with more expressive parents would have better peer relations, and, similarly, that children who were themselves more expressive would also have better peer relations. Furthermore, it was expected that children's understanding of emotions would be associated with children's peer relations, and that this understanding would mediate the links between the family and peer systems.

### Method

#### *Subjects*

Subjects were 61 white, middle-class kindergarten and first-grade children (33 girls, 28 boys) from 22 Champaign-Urbana, Illinois, public schools. Fifty-six mothers and 43 fathers participated, and both parents participated in 41 families. Over 90% of families contacted agreed to participate. Families were paid \$25 for their participation.

#### *Procedure*

In order to generate sociometric information, all children in participating kindergarten and first-grade classrooms were administered a rating scale measure of peer acceptance (Singleton & Asher, 1977). Based on sociometric data, children who ranged across the spectrum of social acceptance were randomly selected. Along with one of their parents, the 61 participating children visited the laboratory. At that time, children were individually interviewed about their understanding of emotion, while parents

were given a questionnaire about their expressiveness in the home to complete and return by mail. In order to complement the home-based measure of parental expressiveness, and in order to obtain an observational measure of both parent and child expressiveness, children and their parents were asked to play a laboratory game designed to tap emotional responses to a theoretically based set of events. Approximately 2 weeks later, most children returned to the lab with the second parent and participated in a similar game with the second parent. Order of accompanying parent was randomly counterbalanced, so that some children came first with mothers and some first with fathers.

#### *Measures*

*Children's peer acceptance.*—Each child received a score reflecting how much his or her classmates liked to play with the child. Classmates used a 5-point rating scale consisting of five faces ranging from a large frown through neutral to a large smile to indicate their responses to the experimenter's statement, "Point to the face that shows how much you like to play with this child" (Singleton & Asher, 1977). In order to overcome any potential memory or reading problems, individual photographs of each child in the class were used. A child's score was computed first as the average rating score received from same-sex peers. To permit comparison of scores across classrooms, average rating scores were then converted to standard scores, using means and standard deviations for each sex in each classroom. This measure of peer acceptance has been used extensively with both older and younger children (Ladd, 1981; Oden & Asher, 1977; Putallaz, 1987), and there is evidence to suggest that sociometric rating scales are more reliable than nomination procedures for use with younger age groups (Asher, Singleton, Tinsley, & Hymel, 1979; Hymel, 1983). That the children in the sample covered a wide range of acceptance levels is indicated by the range of scores received, from 2.05 to 4.70.

*Parental reports of emotional expressiveness in the home.*—Halberstadt's (1986) Family Expressiveness Questionnaire (FEQ) was used to examine the frequency of the parent's emotional expressiveness in the home, and thus to reflect children's exposure to emotional expression. Forty hypothetical affective scenarios were presented, in relation to which parents rated the frequency of their own expressiveness on 9-point scales. Both mothers and fathers

were asked to complete the questionnaire independently. Items cover a range of emotions in a variety of settings typical of many families. The questionnaire consists of both positive and negative items. Halberstadt (1986) reported that this scale has good internal consistency and reliability over time, and presented data suggesting that family expressiveness was significantly positively related to clarity of spontaneous emotional expression in a structured situation. (See Halberstadt, Cassidy, Stifter, Parke, & Fox, 1991, for additional information about the psychometric properties of this measure.)

Because Halberstadt's (1986) original use of the FEQ differed from ours (in Halberstadt's study, college students reported about their parents), a factor analysis (Promax rotation) was performed on the responses of all parents in the present study. Two factors (based on a screen test) emerged: a positive factor and a negative factor. These two factors accounted for 42% of the variance. All but four of the items (subsequently dropped) loaded on these two factors. (A similar two-factor solution emerged in a recent factor analysis with 243 college students [Miller, 1989].) The two factors used here in data analyses are similar, although not identical, to Halberstadt's (1986) 20-item positive and 20-item negative subscales. All analyses were also conducted using Halberstadt's two subscales; results were highly similar to those reported here, and are available from the first author. Table 1 contains the factor weights, eigenvalues, and labels for each factor.

Both mothers' and fathers' responses to the expressiveness questionnaire (for the total scale [36 items] and for both factors) were internally consistent (in all cases, Cronbach's alphas  $> .92$ ).

*Observed parent and child emotional expressiveness.*—Parent and child expressiveness were observed within the context of a game that was designed to elicit both positive (e.g., happiness, positive excitement) and negative (e.g., sadness, disappointment, frustration) emotions. The game was a form of the familiar "Beat the Buzzer" game. During one session, children threw rings on a peg, and in the other they threw balls in a box. Children played four games per session and received a prize each time they won ("Beat the Buzzer"). Without the child's or parent's knowledge, the buzzer was variably controlled so that each child won the first game, lost the second and third

games, and won the last game. Only the parent and child were in the playroom during the game.

Two mother, two father, and four child (two with mother and two with father) measures, all based on 5-point scales, were derived from this procedure. For each individual, expressiveness was examined for each of the four trials of the game, and scores for the four trials were averaged. Positive and negative expressiveness were examined separately. The positive and negative scales ranged from a "1" indicating no affect, to a "5" indicating either considerable positive (laughing, excited pleasure) or negative (anger, intense frustration, intense sadness) expressiveness. Child expressiveness was measured separately during the game with mother and during the game with father.

Two independent coders, blind to additional information about the child, coded the videotapes. Child and parent tapes were coded independently, as were mother and father tapes; the coder who rated the child in one session rated the parent in the other. A split-screen videotape technique was used, and the coder did not view the individual she was not coding. Coders were trained to at least 80% reliability before beginning coding. Interrater reliability was assessed for a randomly selected 20% of subjects. Agreement (within 1 scale point) of 81% was attained for parental positive expressiveness, of 93% for parental negative expressiveness, of 97% for child positive expressiveness, and of 92% for child negative expressiveness.

*Children's understanding of emotions.*—In examining emotional understanding, we focused on several aspects of emotional understanding (e.g., recognition, causality, reactions to emotions) that, based on previous research, we assumed would be of particular importance in predicting adjustment with peers. A 15-item interview was designed for this study to tap this broad range of children's understanding of emotions. Children were shown four photographs (one at a time), each of a single same-sex child posing one of the following emotions: happiness, sadness, anger, and fear (in this order). Photographs were selected by a group of developmental psychology faculty and graduate students who identified them as clear exemplars of each emotion. Subjects were asked all questions about one emotion before the interviewer moved to the next picture. Questions were

TABLE 1

FACTOR WEIGHTS AND EIGENVALUES FOR FAMILY EXPRESSIVENESS QUESTIONNAIRE

	Factor 1: Positive	Factor 2: Negative
1. Showing forgiveness to someone who broke a favorite possession .....	.61	
2. Thanking family members for something they have done .....	.54	
3. Crying when a loved one goes away for some time .....	.37	
4. Praising someone for good work .....	.60	
5. Apologizing for being late .....	.35	
6. Expressing exhilaration after an unexpected triumph .....	.30	
7. Expressing excitement over one's future plans .....	.54	
8. Demonstrating admiration .....	.50	
9. Expressing deep affection or love for someone .....	.78	
10. Telling someone how nice they look .....	.68	
11. Spontaneously hugging a family member .....	.60	
12. Expressing concern for the success of other family members .....	.54	
13. Offering to do somebody a favor .....	.54	
14. Snuggling up to a family member .....	.70	
15. Trying to cheer up someone who is sad .....	.65	
16. Telling family members how happy you are .....	.84	
17. Expressing gratitude for a favor .....	.70	
18. Surprising someone with a little gift or favor .....	.57	
19. Saying "I'm sorry" when one realizes one was wrong .....	.64	
20. Expressing sympathy for someone's troubles .....	.47	
21. Expressing sorrow when a pet dies .....	.37	
22. Telling a family member how hurt you are .....	.47	.34
23. Showing contempt for another's actions .....		.53
24. Expressing anger at someone else's carelessness .....		.64
25. Sulking over unfair treatment by a family member .....		.66
26. Blaming one another for family troubles .....		.54
27. Showing how upset you are after a bad day .....		.63
28. Putting down other people's interests .....		.50
29. Showing dislike for someone .....		.40
30. Expressing embarrassment over a stupid mistake .....		.50
31. Going to pieces when tension builds up .....		.47
32. Expressing disappointment over something that didn't work out .....	.33	.39
33. Quarreling with a family member .....		.56
34. Expressing dissatisfaction with someone else's behavior .....		.59
35. Expressing momentary anger over a trivial irritation .....		.68
36. Threatening someone .....		.50
Eigenvalues .....	8.26	4.29
Interfactor correlation = .17		

NOTE.—Because the original instructions called for college students to rate expressiveness within their family of origin, instructions were changed to request adults to describe their own expressiveness within their current family context. Items 3 and 27 above have been modified because they previously tapped situations likely to apply to children rather than adults. Item numbers used here differ from those used by Halberstadt (1986). All factor loadings >.30 are presented here.

designed to address six conceptual categories, tapping the child's thoughts about (a) identification of the emotion, (b) experience of the emotion, (c) circumstances leading to the emotion, (d) expression of the emotion, (e) action responses to the display of the emotion, and (f) feeling responses to the display of the emotion.

Responses were coded as indicating the presence or absence of understanding according to criteria which varied with the specifics of the question. Responses re-

flecting understanding were those in which the child was able to identify the emotion, acknowledge experiencing the emotion, provide scenarios for appropriate circumstances under which the emotion might be elicited, acknowledge expressing the emotion, and reveal understanding of appropriate responses (in both actions and feelings) to others' expression of emotions. Detailed coding guidelines are available from the first author.

One coder with no additional information about the child (or about the child's re-

sponses to questions about other emotions) coded all interviews from verbatim transcripts. A second coder, also with no information about the child or other responses, independently coded a randomly selected 25% of the interviews. Kappas tapping intercoder agreement for each question ranged from .78 to 1.0.

In order to examine whether empirical support existed for combining responses to the 15 questions into the six proposed conceptual categories described above, a matrix of phi coefficients was examined. For this sample size, a phi coefficient of .26 was statistically significant. Five categories met the requirement that phi coefficients among variables be greater than .30 (mean = .52), and that the patterns of relations be similar across emotions. In four of these five categories, phi coefficients among variables were greater than .40. An additional criterion, that phi coefficients *between* categories be small (here, mean = .10), provided support for the examination of the sixth category consisting of a single identification question. Within each category, the number of responses indicating understanding were summed to create scale scores. Interview questions are listed in Table 2.

The most accurate picture of the nature of children's understanding may be provided by assessment of children's understanding across a range of domains. To provide empirical support for the construction of such a total scale score, we used responses in all six domains to conduct a principal components analysis, in which the first principal component accounts for the maximum amount of the total variance of the correlation matrix. The first component in the present analysis, therefore, is expected to reflect children's total understanding of emotions. Because of the predominance of negative loadings in the feeling-response domain, the total emotional understanding score was computed by summing scores only on the remaining five domains. See Table 3 for the loadings of the principal components analysis.

## Results

Results are presented in three parts. We begin by examining family expressiveness. Then we examine connections between family expressiveness and children's emotional understanding. Finally, we present models that test the extent to which family expressiveness and children's emotional under-

TABLE 2  
CHILDREN'S UNDERSTANDING OF EMOTIONS: INTERVIEW QUESTIONS

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Identification	1. How do you think this kid is feeling?
Emotional Experience	2. Do you ever feel like this?
	3. Do you ever feel this way when you're with any of the kids at school?
Causes of Emotion	4. What kinds of things make you feel this way?
	5. Can you give me an example of a time you felt this way? (Then what happened?)
	6. Let's pretend you saw another kid looking this way. Why do you think he/she might be looking like that?
Emotional Expression	7. When you feel this way, do you show it, let other people see how you feel?
	8. If you felt this way, would you let your mom see you looking like this?
	9. If you felt this way, would you let your dad see you looking like this?
Action Response	10. If your mom saw you looking this way, what would she do?
	11. If your dad saw you looking this way, what would he do?
	12. If you saw another kid looking this way, what would you do?
Feeling Response	13. If your mom saw you looking this way, how would she feel?
	14. If your dad saw you looking this way, how would he feel?
	15. If you saw another kid looking this way, how would you feel?

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NOTE.—Questions were asked in the following order, 1, 2, 4, 7, 8, 10, 13, 9, 11, 14, 5, 3, 6, 15, 12.

TABLE 3

PRINCIPAL COMPONENT LOADINGS FOR CHILDREN'S UNDERSTANDING OF EMOTIONS

Domain of Understanding	Loading
Identification:	
Happy .....	.37
Sad .....	.13
Mad .....	.19
Afraid .....	.41
Emotional experience:	
Happy .....	.43
Sad .....	.46
Mad .....	.49
Afraid .....	.52
Causes of emotion:	
Happy .....	.79
Sad .....	.66
Mad .....	.80
Afraid .....	.56
Emotional expression:	
Happy .....	.46
Sad .....	.53
Mad .....	.57
Afraid .....	.56
Action response:	
Happy .....	.49
Sad .....	.54
Mad .....	.57
Afraid .....	.56
Feeling response:	
Happy .....	.56
Sad .....	-.52
Mad .....	-.40
Afraid .....	-.31
Eigenvalue .....	6.42
Variance explained (%) .....	27

standing predict peer acceptance, and whether family-peer links are mediated by child emotional understanding.

#### *Parental and Child Emotional Expressiveness*

In this section, we first examine maternal and paternal expressiveness within the family context at home as well as during the laboratory game. Next we examine child expressiveness with each parent during the game and report connections between parent and child expressiveness.

Parental expressiveness within the daily home environment, as assessed with Halberstadt's (1986) Family Expressiveness Questionnaire, was examined in families in which both mothers and fathers provided data. A  $2 \times 2$  (sex of parent  $\times$  type of emotion) repeated-measures analysis of variance (ANOVA) was conducted. Both similarities and differences between mothers and fathers

emerged. A significant main effect for type of emotion,  $F(1,40) = 61.09$ ,  $p < .001$ , revealed that, on average, both mothers and fathers reported expressing significantly more positive than negative emotions (see Table 4). However, this ANOVA also revealed a significant main effect for sex of parent,  $F(1,40) = 8.16$ ,  $p < .001$ . Compared to fathers, mothers reported expressing significantly more total emotions, as well as significantly more positive and significantly more negative emotions. There was no significant interaction between sex of parent and type of emotion. A significant correlation between positive expressiveness and negative expressiveness emerged for mothers,  $r(41) = .33$ ,  $p < .05$  (all correlations are one-tailed), but not for fathers. Correlations between mothers' and fathers' expressiveness for positive and for negative emotions were nonsignificant.

In order to examine parental expressiveness during the laboratory-based game, a  $2 \times 2$  (sex of parent  $\times$  type of emotion) repeated-measures ANOVA was conducted on families in which both mothers and fathers provided data. A significant main effect emerged for type of emotion,  $F(1,43) = 114.09$ ,  $p < .001$ . Both mothers and fathers exhibited more positive than negative expressiveness during the game (see Table 4). There was no significant main effect for sex of parent, suggesting that mothers and fathers showed similar levels of both positive and negative expressiveness. The interaction between sex of parent  $\times$  type of emotion was significant,  $F(1,43) = 10.10$ ,  $p < .01$ , with mothers expressing particularly little negative emotion,  $t(43) = 2.56$ ,  $p < .01$ . A significant correlation between positive expressiveness and negative expressiveness was revealed for fathers,  $r(44) = .41$ ,  $p < .01$ . A significant correlation did not emerge for mothers, a finding which should be interpreted with caution given that the rate of negative expressiveness was particularly low for mothers. Mothers' and fathers' positive behaviors were significantly correlated,  $r(44) = .37$ ,  $p < .05$ , but their negative behaviors were not.

Cross-context (i.e., home and laboratory) correlations yielded three significant findings for mothers, but none for fathers. Mothers who reported more positive expressiveness in the home exhibited more positive expressiveness during the game,  $r(40) = .32$ ,  $p < .05$ . Similarly, mothers who reported more overall expressiveness in the home showed more positive expressiveness,  $r(40)$



TABLE 4  
MEANS AND STANDARD DEVIATIONS OF MATERNAL AND PATERNAL EXPRESSIVENESS

	Mothers	Fathers
Expressiveness in the home ( $N = 41$ ):		
Positive .....	6.67 (.82)	5.81 (.68)
Negative .....	6.00 (.84)	5.36 (.72)
Total .....	12.47 (1.58)	11.18 (1.31)
Expressiveness during game-play ( $N = 44$ ):		
Positive .....	4.76 (1.42)	4.31 (1.38)
Negative .....	2.63 (.58)	3.00 (.72)
Total .....	7.39 (1.60)	7.31 (1.80)

NOTE.—These figures include the families in which both mothers and fathers provided data. Analyses including all mothers and fathers yielded similar results. Standard deviations are given in parentheses.

= .37,  $p < .05$ , and total expressiveness,  $r(40) = .32$ ,  $p < .05$ , during the game. No significant cross-parent, cross-context correlations emerged.

Children's expressiveness was examined through use of a  $2 \times 2 \times 2$  (sex of child  $\times$  sex of parent  $\times$  type of emotion) repeated-measures ANOVA. A significant main effect for type of child emotion emerged,  $F(1,42) = 12.45$ ,  $p < .001$ , but not for sex of child or sex of parent. Children exhibited more positive than negative expressiveness toward their parents. All interactions were nonsignificant. Correlations among children's expressiveness variables revealed three of six significant findings: children with higher positive expressiveness with their mothers showed higher positive expressiveness,  $r(44) = .53$ ,  $p < .001$ , and lower negative expressiveness,  $r(44) = -.36$ ,  $p < .05$ , with their fathers; children who showed higher negative expressiveness with their mothers showed higher negative expressiveness with their fathers,  $r(44) = .32$ ,  $p < .05$ . Positive and negative expressiveness to the same parent were not significantly related.

Child expressiveness was related to parent expressiveness in the laboratory in several ways. Children's positive expressiveness with mothers was related to mothers' positive expressiveness, and children's positive expressiveness with fathers was related to fathers' positive expressiveness ( $r = .27$  and  $.32$ , respectively, both  $p < .05$ ). In addition, children's positive expressiveness with mother was related to mothers' negative expressiveness,  $r(59) = .31$ ,  $p < .05$ . No sig-

nificant correlations emerged between children's negative expressiveness toward either mothers' or fathers' expressiveness. Children's expressiveness was also not related to any measure of parental expressiveness in the home.

#### *Children's Emotional Understanding: Connections with Expressiveness*

ANOVAs testing for gender effects on the emotional understanding variables were nonsignificant.

Correlations performed to explore the degree to which child emotional understanding related to both parents' and children's emotional expressiveness were all nonsignificant with one exception—mothers who reported more negative expressiveness in the home had children who reported expressing more emotions,  $r(56) = .28$ ,  $p < .05$ .

#### *Predictors of Children's Peer Acceptance*

In this section, we report connections between the family expressiveness variables and peer acceptance. We also examine connections between child emotional understanding and peer acceptance, and whether this understanding affects the family-peer links.

To this end, hierarchical regression analyses were used. Because of the sample size, and in order to reduce the number of variables in the regression model, positive and negative expressiveness were first combined to form a total expressiveness score for the home and one for the laboratory. (Both positive and negative expressiveness were highly correlated with total expressiveness,

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for both the home and laboratory [mean = .76; range .42 to .94].) Then the correlations between each expressiveness variable and peer acceptance were examined. The expressiveness variables that were significantly correlated with peer acceptance were used in the regression model.

Two sets of hierarchical regression models are presented—one for mothers and one for fathers. Step 1 of these models includes the expressiveness variables that previously showed significant associations with peer acceptance. Step 2 adds children's understanding of emotions, yielding a test of whether the new regression model explains additional variance. Furthermore, when the addition of new variables to the model results in a drop in the weights of the original predictors whereby previously significant predictors become nonsignificant, we can conclude that the new variable is affecting the relation between the original predictors and the outcome (Pedhazur, 1982). Step 3 consists of interaction terms. When the interaction term equals the product of two continuously scored predictors, interpretive and computational problems can result (Rovine & von Eye, 1991). For example, the multiplicative interaction term tends to be highly correlated with each of the predictors from which it was derived; multicollinearity can result, making the regression coefficients more difficult to interpret (Affi & Clark, 1984). In order to circumvent such difficulties, we created a dichotomous interaction term that represents membership in a hypothesized category, as suggested by Rovine and von Eye (1991). Those individuals who are in the hypothesized group are given a "1" and the remaining individuals are given a "0."

Categories for the interaction term were created in two steps. First, each predictor was dichotomized at the median to yield a low group and a high group. Then, the newly created dichotomous variables were crossed to form a  $2 \times 2$  matrix. Subsequently, individuals become a member in one of four groups: low/low, low/high, high/low, high/high. We hypothesized that either the low/low group (i.e., low maternal expressiveness/low emotional understanding) or the high/high group would significantly pre-

dict peer relations. Because we are testing two different interaction terms, we enter the interaction terms in two separate steps (3a and 3b). In step 3a, the low/low interaction term is included; in step 3b, the high/high interaction term is included instead.

In the model examining mothers' expressiveness, the first step revealed that mothers' total expressiveness in the home significantly predicted children's peer acceptance (see Table 5). Mothers who reported higher levels of expressiveness had children who were more accepted by their peers. The second step, in which children's understanding of emotions was added to the model, revealed that: (a) children with greater understanding of emotions were more accepted by peers; (b) the addition of children's understanding of emotions explained significantly greater variance;<sup>1</sup> and (c) children's emotional understanding partly influenced the association between maternal expressiveness and children's peer acceptance (indicated by the fact that the beta weight for maternal expressiveness dropped [but not to zero] and was no longer significant). In step 3, the interaction terms were nonsignificant.

The second set of models in Table 5 examined fathers' expressiveness. Results indicated both similarities to and differences from the model examining mothers' expressiveness. Step 1 revealed that paternal total expressiveness in the home, like maternal total expressiveness, significantly predicted children's peer acceptance. In addition, paternal total expressiveness within the laboratory game context also significantly predicted children's peer acceptance. In both cases, more expressive fathers had children who were more accepted by their peers. In step 2, the addition of children's understanding of emotions to the model revealed that, as was the case with mothers, (a) children with greater understanding of emotions were more accepted by peers, and (b) the addition of children's understanding of emotions explained significantly greater variance. In addition, children's emotional understanding partly influenced the association between paternal expressiveness during the game in the laboratory and children's peer acceptance. However, in con-

<sup>1</sup> Given that the total emotional understanding score was significantly correlated with children's peer relations, we examined whether the individual scales of emotional understanding equally predicted social acceptance. Correlations of individual subscales with social acceptance were all significant, ranging from .27 to .46. According to a Fisher's  $z$  test, these correlations are not significantly different from each other.

TABLE 5

HIERARCHICAL REGRESSION MODELS: PREDICTING CHILDREN'S PEER ACCEPTANCE FROM PARENTAL EXPRESSIVENESS AND CHILDREN'S UNDERSTANDING OF EMOTIONS

Predictors	<i>F</i> ( <i>df</i> )	Standardized $\beta$	Adjusted $R^2$	$\Delta$ Adj. $R^2$	<i>F</i> $\Delta$ Adj. $R^2$ ( <i>df</i> )
Model examining maternal expressiveness:					
Step 1:					
Maternal total expressiveness (home) .....	4.91* (1,54)	.29*	.07	...	
Step 2:					
Maternal total expressiveness (home) .....	...	.20	...	...	
Understanding of emotions .....	10.55*** (2,53)	.46***	.26	.19	13.35*** (1,52)
Model examining paternal expressiveness:					
Step 1:					
Paternal total expressiveness (home) .....	4.69* (2,40)	.31*	.15	...	
Paternal total expressiveness (lab) .....	...	.30*	...	...	
Step 2:					
Paternal total expressiveness (home) .....	9.61*** (3,39)	.29*	.38	.23	14.10*** (1,38)
Paternal total expressiveness (lab) .....	...	.21	...	...	
Understanding of emotions .....	...	.49***	...	...	

\*  $p < .05$ .

\*\*\*  $p < .001$ .

trast to the maternal models, children's understanding of emotions did not influence the connection between fathers' expressiveness in the home and peer acceptance. In step 3, as was the case for mothers, the interaction terms were nonsignificant.<sup>2</sup>

## Discussion

The findings of this study reveal connections between emotional expressiveness within the family context and children's peer relations. For mothers, reported expressiveness in the home predicted children's peer relations. For fathers, expressiveness in both the home and laboratory contexts predicted peer relations. These findings support the notion that children's experiences of parental emotional expressiveness can have important consequences for their peer relationships.

The possibility that the context of emotions may have different meanings for mothers and for fathers is suggested by this study. For instance, the present finding that mothers reported greater expressiveness within the family context in the home than fathers for both positive and negative emotions matches a great body of literature that finds women more expressive than men (Balswick & Avertt, 1977; Hall, 1979). Within the family context, this finding fits with the commonly held stereotype of the mother as the "emotional broker" in the family, and with findings that it is generally the wife who raises emotional issues for discussion within the marriage (Gottman & Krokoff, 1989; Weiss, Hops, & Patterson, 1973). In contrast, within the laboratory game situation, mothers and fathers did not differ in their expressiveness. It may be that in this more playful, gamelike situation, fathers are more expres-

<sup>2</sup> Data were also gathered from peer and teacher reports about children's social behaviors with classmates. These data are of secondary interest to the present study and are available from the first author.

sive than they are in other settings. The possibility that play may be a context that fathers particularly enjoy is supported by evidence that fathers' interactions with their young children are more frequently associated with play than are mothers' (see Lamb, 1981, for a review). Furthermore, even in families where mothers are observed to be generally both more positively and more negatively expressive than fathers, fathers are nonetheless observed to engage in more physical affection and to show greater warmth and playful/joking behavior with their children than are mothers (Russell & Russell, 1987). Thus, the possibility that relative amounts of mothers' and fathers' expressiveness may be highly context-related is consistent with previous literature.

The findings presented here provide evidence of a modest degree of consistency of expressiveness within families. For instance, for both positive and negative expressiveness, children more expressive with mother are also more expressive with father. Similarly, parental positive (but not negative) expressiveness with the child is related to children's positive expressiveness with that parent; for example, children whose mothers are more positively expressive with them, are, in turn, more positively expressive with their mothers. In both cases, it is likely that factors of both child temperament and within-family similarities contribute to these patterns. In addition, a modest similarity between spouses emerged. During the game, but not at home, mothers' and fathers' positive behaviors were significantly related.

In contrast to parental expressiveness, child expressiveness with the parent during the game was not related to children's peer relations. This finding is particularly surprising given that it is the children who are the participants in both the family and peer systems. There are several possible explanations for this unexpected finding. One is that a true connection between children's expressiveness and peer relations is not evident because of the context used here. Thus, it may be that examination of children's expressiveness within the family at home would reveal connections between children's expressiveness and their peer relations not evident when viewing children's expressiveness within the game context. Or, it may be that children use emotions differently with parents and peers, and that it is children's expressiveness with peers but not parents that relates to child peer acceptance.

Clearly, important future work will require extension to include examination of children's expressiveness at home and within the context of peer interaction. Taken together, the findings of child and parent expressiveness suggest that parental expressiveness influences peer relations in ways unrelated to child expressiveness with parents. Following Tomkins's affect theory (1962, 1963), which proposes that parental expressiveness can have an impact on a variety of aspects of child functioning, it may be that some other component of child functioning influenced by parental expressiveness (e.g., the child's self-esteem, confidence, sense of well-being), in turn, influences children's peer relations.

As expected, a connection between children's emotional understanding and peer relations emerged from these data. Emotions are central to social interaction (Harris, 1989), and it is easy to conceive that understanding of emotion-related experiences, of the meaning of emotions, of the causes of emotions, and of the responses appropriate to others' emotions would both influence and be influenced by social relations with peers. Our finding of this connection meshes with findings of connections between other components of social understanding and peer relations (Asher & Renshaw, 1981; Dodge, Pettit, McClaskey, & Brown, 1986; Hart et al., 1990). In fact, it is interesting to note that previous studies of social understanding may have incorporated emotional understanding without identifying it as a specific component of social understanding. Even when cognition or behavior has been the focus, it is likely that affective dimensions have been involved; the extent to which child responses are based on affective components as opposed to purely cognitive or behavioral components has not been clear. Future studies that examine emotional understanding as well as other elements of social understanding (e.g., social rules, social expectations) will permit examination of the extent to which emotion versus nonemotion elements are critical factors in relation to social competence, and will provide greater understanding of the processes at work.

Although emotional understanding was related to children's peer relations, it was not related to family expressiveness. Thus, the proposed model that expressiveness leads to understanding, which, in turn, leads to peer relations, was not supported here. In future work focusing on identification of

precursors of emotional understanding, it will be important both to examine other family-related variables and to continue to examine emotional expressiveness as assessed in other ways. Examination of the role of non-family factors will also be important.

Although children's emotional understanding was not significantly associated with family expressiveness, children's emotional understanding did appear to affect the *links* between family expressiveness and children's peer relations. Findings from the hierarchical multiple regression analyses suggest that understanding may partially influence the effect that parental expressiveness has on peer acceptance. For example, a child's greater understanding of emotions, which can be obtained in ways other than through family expressiveness, may serve as a buffer against the poor peer relations often associated with living in a family that expresses little emotion.

The present study is, of course, correlational, and does not directly speak to direction of effects (Bell, 1968). Although the model proposed here moves from family expressiveness and emotional understanding to peer relations, other models are possible. One possible pathway moves from peer relations to parental expressiveness. It is possible that children who are socially skilled with their peers, in turn, elicit more expressiveness from their parents. However, this pathway may be less likely given that the parent reports of home-based expressiveness describe parents' general expressiveness in the home and not only their expressiveness in relation to the target child. This pathway may be more applicable to expressiveness during the game with the target child. Another possible pathway moves from peer relations to emotional understanding. The likelihood that the experiences connected with successful peer relations would contribute to increased emotional understanding must be considered.

There are several important caveats that should be considered when interpreting the findings of this study. First, the most important of these relates to the implications of our findings of connections between parental expressiveness and positive outcome. It would be an error to believe that heightened expressiveness in any form is beneficial. These findings must be considered within the context of the general emotional climates of the families in this sample. To begin with,

the intact, middle-class families who here reported relatively greater expressiveness may actually have fallen in the middle of the total expressiveness spectrum. Certainly one would expect that extreme negative expressiveness would be associated with poor child outcome. In this sample, low negative expressiveness may reflect parental withdrawal. In addition, these families reported significantly greater positive than negative expressiveness. In fact, *no* parent reported greater negative than positive expressiveness. Within the context of families with greater negative than positive expressiveness, the meaning and correlates of negative expressiveness may be quite different, with negative expressiveness having negative, rather than positive, correlates (Bretherton, 1989). The possibility that context can influence children's responsiveness to patterns of expressiveness in such a manner emerged from a recent study in which enacted anger was more disturbing to children from distressed marriages than to children from nondistressed marriages (Cummings, Pellegrini, Notarius, & Cummings, 1989).

A second caveat relates to the fact that parent reports are used as the only measure of expressiveness in the home. Although a self-report measure can have important advantages in assessing family expressiveness (e.g., no observer effect; a greater time-sampling period), observational studies of home-based family expressiveness are needed as well. Third, there is a need for a more differentiated definition of expressiveness in which individual components or dimensions, such as intensity, duration, appropriateness, clarity, and frequency, are examined separately and in combination to better determine the aspects of the construct that account for its impact on children. In addition, studies in which emotionality as well as expressiveness are examined can provide important information about children's emotional experiences. Fourth, there may be important developmental shifts in children's responsivity to parental expressiveness and in children's expressiveness with parents which need to be examined. Finally, in relation to children's understanding of emotions, the possibility that understanding may relate to children's IQ must be considered. Nonetheless, we find it striking that parent reports of their own expressiveness, as well as fathers' expressiveness during a laboratory game, are associated with child data provided by kindergarten and first-grade peers. In addition, our findings

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contribute to knowledge about the potential role of social (in this case, specifically emotional) understanding in influencing family-peer connections. This study underscores the importance of examining emotional expression in families, and reveals a previously undemonstrated component of the link between the family and peer systems.

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