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MOTHER-CHILD DIALOGUE ABOUT EMOTIONS AND PRESCHOOLERS' EMOTIONAL COMPETENCE

ABSTRACT. Conversations about emotions between preschoolers and their mothers constitute an important form of shared meaning. As groundwork for a child's developing theory of mind, such conversations are expected to predict aspects of children's emotional competence. Forty-seven preschoolers and their mothers looked at a picturebook in which characters displayed emotions on almost every page; although the emotions were central to the plot, it was up to each mother and child (dyad) whether to discuss them or not. Conversations were transcribed and coded for frequency and function of emotional language as well as for specific emotions to which both mother and child referred. In general, mothers talked more than their children did about emotions, yet the frequency of emotional utterances that served as simple comments or to guide the other's behavior did not differ for mothers and children. As expected, patterns of emotional language of mothers and children were related to indices of positive social-emotional development.

Emotional competence is central to a child's ability to interact and form relationships with others (Parke, 1994; Saarni, 1990). That is, a child's successful interaction with others depends not only on the comprehension of a given emotional situation but also on the ability to appropriately react to such stimuli. Preschoolers are surprisingly adept at several of the key aspects of emotional competence. For example, they can understand the emotions expressed during attempts to initiate interaction or to resolve conflict with peers (Barden, Zelko, Duncan, & Masters, 1980; Denham & Zoller, 1991; Fabes, Eisenberg, McCormick, & Wilson, 1988; Stein & Levine, 1989; Strayer, 1986). They can also regulate their own emotions within such social situations, both to minimize the deleterious effects of their negative emotions and to share positive emotions with others (Denham, 1986; Kopp, 1989; Sroufe, Schork, Motti, Lawroski, & LaFre-niere, 1984). Finally, they also are capable of empathic involvement with others' emotions (Denham, 1986). This investigation was primarily concerned with predicting individual differences in these elements of preschoolers' emotional competence.

The development of emotional competence begins early in life. Perhaps because of the immediacy, salience, and importance of emotion in their social

transactions between children construct a theory of their own and others' feelings (Bretherton & Beechly, 1982; Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986). The development of emotional competence does not proceed in a nonsocial vacuum, however. Children learn much from parents regarding such emotional competence (Eisenberg & Fabes, 1994; Eisenberg, Fabes, Carlo, & Karbon, 1992; Halberstadt, 1991). Parents' verbalizations undoubtedly assist children in learning about emotions and thus socialize the children's use of emotional language, understanding of emotions, expression of emotion, and reactions to peers' emotions.

In particular, parent-led conversations about the names, causes, and consequences of different emotions may aid the child's active attempts to link expressions, situations, and words into coherent, predictable schema about emotional experience (Bullock & Russell, 1986). As Kopp (1989, p. 346) has stated, ". . . caregivers help [young children] move their arousal up and down, [they] start to discriminate and recognize the broad configuration of different feeling states and then slowly acquire associations between . . . actions . . . and changes in their feeling states." (Words in brackets were added.)

For example, Dunn and her associates have specified naturally occurring conversations about feelings between mothers and their 18- to 36-month-old children (Dunn, Bretherton, & Munn, 1987; Dunn & Brown, 1991; Dunn & Munn, 1985). By the time toddlers reach 18-20 months old, mothers and children discuss the causes of emotions, particularly with respect to the toddlers' own emotions. Bretherton and colleagues found that 20-month-olds appropriately expressed the following physiological and emotional states: sleepiness, pain, distress, disgust, moral conformity, and affection (Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986). For instance, after being scolded, a 21-month-old participant stated, "I love Mommy. I want to hold Mommy" (Bretherton et al., 1986, p. 536). Young children and their mothers also use emotional language that fulfills a variety of functions (e.g., socialization, explaining, guiding behavior, questioning; see Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986).

Moreover, developmental changes can be discerned in the content and context of young children's emotional language (Brown & Dunn, 1991, 1992): From 24 to 36 months, children increased their reference to others' inner states, increased reflective discussion and efforts to manipulate the feelings and behaviors of others, and referred more frequently to causes and consequences of inner states. Mothers changed their emotional expressions in a parallel manner: They referred to others' thoughts, feelings, and desires, and their use of affective labels to guide or control behavior decreased. From 33 to 47 months, conversations between mothers and children about feelings decreased, whereas those between siblings increased. At 33 months, conversations about emotion were characterized by all discourse partners' reference to the child's feelings and mothers' talk about behavioral control and altruism (i.e., guiding the child's behavior). By 47 months, children used more causal talk about emotion and cited more diverse themes.

Individual differences in mothers' usage of emotional language and in usage of its various functions may teach children to use affective descriptors in specific ways. Such individual differences in the emotional language of older preschoolers and their mothers were noted in this study. Specifically, we examined differences in the frequency of affective label usage between mothers and children of varying ages and genders. Second, we investigated relations between mothers' and their children's use of emotional language. We expected that mothers' emotional language usage would exceed their children's for most, but not necessarily all, linguistic functions and emotion types. Further, we expected that mothers' and children's emotional language functions and emotion types would be related (e.g., mothers who used questioning techniques would have children who commented on and explained emotions).

Emotional language facilitates children's intrapersonal control, giving them new and powerful forms of self-control and self-expression (Greenberg, Kusche, & Speltz, 1991; Hesse & Cicchetti, 1982; Kopp, 1989). First, it "provides young children with an especially powerful tool for understanding emotions" (Kopp, 1989, p. 349). Such linguistic tools allow children to state their feelings, to understand feedback on these feelings, to process causal associations between events and emotions, and to discover ways to manage their own emotions (Kopp, 1989). Thus, conversations about emotions, although not ubiquitous within family discourse, are undeniably valuable. Both total emotional language usage and specific function usage predict children's current and later understanding of emotion (Brown & Dunn, 1992; Denham, Cook, & Zoller, 1992; Dunn, Bretherton, & Munn, 1987; Dunn, Brown, & Beardsall, 1991; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991).

Dunn, Bretherton, and Munn (1987) showed that mothers' and older siblings' emotional language used with 18-month-old target children was positively associated with each child's speech about emotions at 24 months. Brown and Dunn (1992) found that children who talked to their mothers about emotions had mothers who talked to them about emotions, at both 33 and 47 months. Children's talk to siblings was associated with siblings' talk to children, as well.

Emotional language used at 36 months, both child to mother and mother to child, was related to children's affective understanding at 6 years (Dunn, Brown, & Beardsall, 1991). Dunn, Brown, Slomkowski, Tesla, and Youngblade (1991) examined the link between mother-child emotional language at 33 months and understanding of emotion at 40 months. In that study, both the child's emotional language and mother-to-child emotional language (especially the child's talk about causes of emotions) were related to their affective understanding via a puppet measure (Denham, 1986). In both studies, these associations were not mediated by the children's verbal fluency or general linguistic experience.

In my earlier work (Denham, Cook, & Zoller, 1992), mothers' emotional language accuracy was related to their children's ability to label emotional expressions. Mothers who repeated children's emotional language had children who displayed greater comprehension of affective situations. In addition, mothers who talked more about emotions during simulations had children with greater knowledge of emotions. Mothers who discussed the causes of emotions had children who not only performed better at labeling emotional expressions, but also verbally enumerated more causes of emotions 1 year later (Denham, Zoller, & Couchoud, 1994). Perhaps these mothers' openness in discussing emotions enabled their children to go beyond simply recognizing the covariation of emotions and their typical eliciting situations; these children could independently articulate quite varied, sophisticated reasons for basic emotions. Thus, parental talk about their own and the child's emotions related to the child's growing causal reasoning about the common situations in which emotions occur (Dunn, Brown, & Beardsall, 1991; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991).

During their second and third years, toddlers also come to know that emotions are directly sharable. They begin to use affective language to see that their emotional needs are met and to regulate their own expression of emotion (e.g., to obtain comfort, support, or attention; to express pleasure or affection; to maintain a happy state; or to anticipate, achieve, or avoid other affective states; Dunn & Brown, 1991). In this study, we explored the relations between the mother-child dyad's usage of emotional language and intrapersonal control (i.e., young children's abilities to understand emotion at a developmentally appropriate level and to regulate their own emotion by maintaining relative positivity). Our expectations were that children who experienced more complex, emotionally related discourse with their mothers would be more adept at those elements of emotional competence.

Use of emotional language also may enhance preschoolers' attempts at interpersonal regulation (i.e., their abilities to influence and get along with others; Kopp, 1989). For example, children learn to use affective descriptors to influence others' emotional states in comforting, teasing, and joking (Dunn & Brown, 1991). Children who can use emotional language to attain social goals in these flexible ways may be more skilled with their peers. We examined the relations between the mother-child dyad's emotional language usage and children's ability to respond positively to peers' emotions. Again, we expected that children who experienced more complex, emotionally related discourse with their mothers would be more adept at this element of emotional competence.

In summary, this study's four main goals were to examine the following: (1) differences in frequency and function of usage of emotional language between mothers and children; (2) relations between mothers' and their children's usage of emotional language; (3) relations between usage of emotional language and young children's abilities to understand emotion and to regulate their own emotions (i.e., intrapersonal control); and (4) relations between usage of emotional language and children's ability to respond positively to peers' emotions (i.e., interpersonal control). In addition, it seemed possible that the effect of these socialization predictors would be moderated by a child's age. Therefore, we also explored interactions of age and socialization predictors.

Method

Participants

Participants were mothers and their 47 preschool-aged children (23 boys and 24 girls; mean age, 44.53 months; age range, 33-56 months). All the children came from middle- to upper-middle-class homes (Hollingshead index, $M = 49.49$, $SD = 6.61$) and attended a preschool that was affiliated with a large state university. This study was part of a larger longitudinal investigation of social-emotional development during the preschool years.

Procedures 1 and 2: Parent-child emotional language coding. The storybook task was conducted during the dyad's visit to the author's university laboratory, following mother-child free and structured play sessions. First, mother and child were seated at a table; the mother was asked to discuss an emotion-laden story-book with her child (Greif, Alvarez, & Tone, 1984). In the story, a family acquires a new puppy whose experiences, such as almost getting run over and wetting the son's bed, elicit many emotions. The task was developed as a semistructured teaching experience; it therefore included emotional expressions of happiness, surprise, sadness, anger, and fear (from Izard, Dougherty, & Hembree, 1980). Instructions were deliberately general, in order to elicit patterns of individual differences in mother-child communications about emotions.

Maternal and child language were transcribed from videotape. Emotional language was coded. Such language included explicit reference to internal emotion states, such as happy, sad, angry, or afraid, as well as words such as like (when it referred to enjoyment or dislike, but not volition) and cry or laugh (as behavioral manifestations of emotions). The coding system was that of Denham, Cook, and Zoller (1992) and Zahn-Waxler, Ridgeway, Denham, Usher, and Cole (1993).

The following categories were used to assess communication about emotion during the parent-child interaction (see Appendix A for examples of each linguistic function category and Zahn-Waxler et al., 1993, and Appendix B for examples of each emotion category):

1. Words that referred to discrete emotions, as well as to behavioral expressions of emotion (e.g., hitting, crying, hugging, want), were counted. The numbers of original positive and negative terms were tallied. Qualifiers of these positive and negative terms (e.g., "a little," "very") also were totaled. Repetitions of the other's affective labels also were noted, but they were not included in the tally for emotion words.
2. Functions of utterances containing emotion words were noted as follows: (a) commenting -- noting someone's feelings without further explanation or clarification; (b) explaining or clarifying the causes and/or consequences of emotions or rectifying misunderstandings; (c) questioning; (d) invoking emotions of the characters in attempts to guide behavior (e.g., "His mommy should help him, he's so sad"); (e) socialization of emotion -- confirmation, disconfirmation, or denial (e.g., "Just because he's mad, he shouldn't hit the puppy"). Utterances could serve more than one function; that is, they could be double-coded for linguistic function.
3. We also coded type of utterance, according to Izard's discrete emotions (Izard, 1971), happiness, sadness, anger, fear, interest, scorn, and love. (Disgust occurred too infrequently to code.)

We conducted reliability analyses for function category, using two independent coders' data from 27 transcripts. Percentage agreements for emotional utterance occurrence were 90 for both mother and child; kappas were .81 and .80, respectively. Function category percentage agreements were 84 and 87 for mother and child, respectively; kappas for both equaled .74 (Denham, Cook, & Zoller, 1992). Reliability of emotion type was assessed via Pearson correlations between two independent coders' data for 21 randomly selected participants. We used this means of analysis because frequencies rather than category differentiation were highlighted (see Appendix B for results for each dyad member and emotion type).

Procedures 3 and 4: Emotional competence measures. Children's emotional competence was assessed via observation and structured interview in the preschool classroom. The examiners were uninformed of all other results, as well as the study's hypotheses. Data were collected over a 6-month period, during which mother-child laboratory visits also took place. The female undergraduate assistants spent at least 4 hr freely interacting with children in the setting before beginning to work with them.

To assess intrapersonal control, which is a normative understanding of emotional expressions and situations, a familiar adult female administered the following tasks in the participants' preschool, embedding the tasks within naturalistic play sessions.

1. Affective labeling. Examiners assessed young children's abilities to recognize facial expressions in verbal and nonverbal response modalities. Children examined four flannel faces, on which the expressions of happy, sad, angry, and afraid were drawn (from Izard et al., 1980). The experimenter asked children to name each facial expression, presented in random order. Next, she asked them to point to the four facial expressions in response to requests of "Show me the ---- face." Cronbach's alpha for this measure equaled .62.

The expressions on the faces have been validated with a sample of 41 adults. Happy, sad, and angry faces were correctly identified by 85 to 95% of the adults, whereas the fearful face was correctly identified by 65% of the sample. Wagner, MacDonald, and Manstead (1986) have corroborated that fearful expressions are the most difficult to identify, even for adults.

2. Affective situation. Knowledge was next assessed in an emotion perspective-taking task, which explored children's knowledge of others' feelings in situations that elicit unequivocal emotional reactions, such as happiness at being given an ice cream cone, or fear at having a nightmare (Borke, 1971; Denham, 1986). Puppets enacted eight such vignettes, accompanied by the puppeteer's standardized vocal and visual emotion cues (Izard et al., 1980). To indicate how the puppet felt, participants were asked to affix to the puppet one of four flannel faces used in the expression labeling task (i.e., happy, sad, angry, or afraid). The protagonist puppet was the same sex as the participant. Cronbach's alpha for this task was .80 (see Appendix C for examples of facial, vocal, and bodily cues of the flannel faces, puppet, and puppeteer; Izard et al., 1980).

For each item of the two tasks, participants received 2 points for a correct answer and 1 point for correctly identifying the answer's positive or negative dimension (e.g., picking the sad face rather than the correct angry one). Thus, the highest possible score for both emotional labeling and emotional situation tasks was 16; Cronbach's alpha for the labeling/situations aggregate equaled .64.

3. Self-generated causes of emotions. In an open-ended, seminaturalistic interview embedded within play, participants viewed and discussed four puppets on which were drawn happy, sad, angry, and fearful expressions (commercially available from the "Feelings Factory"; see Table 3). Because of its relatively greater verbal nature, this measure was administered an average of 6 months after the mother-child laboratory visit (M age at testing = 50.53 months, $SD = 5.52$, range = 39-62 months).

The tester first asked the child to identify the emotion displayed by each puppet. If the child's answer was incorrect, he or she was corrected before continuing. Then the tester said, "What made the puppet feel this way?", pointing at each puppet in random order. To encourage the generation of elaborated causes for each emotion, testers increased the reality of the play by suggesting that participants put the puppet on their own hand and giving them the choice to call it by their own or their best friend's name.

Testers used standard probes to encourage children to give more than one cause for each emotion and to ensure that children's meanings could be understood. For example, after each response, the tester would say, "I bet you can tell me some more reasons why ----- is -----," until the child demurred. If the child's response was unclear, the tester would say, "Can you tell me more about -----?" If children were uncooperative, testers suggested in enthusiastic voices, "I know ----- has felt -----lots of times! And you can tell me all about it!"

All participants' responses were audiotaped and transcribed. Repetitive responses, such as "I get angry when my buddies fight" and "I get angry when Shawn hits me" counted as one response. The score used for each emotion in this study, then, was the number of appropriate, independent reasons given; thus, fluency of causal elaboration of emotions was measured. The causes aggregate equaled the sum of the standard score for all four emotions; its Cronbach alpha equaled .72.

All cases were coded for interrater reliability. Two judges reviewed transcripts, using criteria for causes of emotion from Stein and Jewett (1986) and Campos and Barrett (1984; e.g., happiness caused by attaining a goal or desire, anger caused by goal blockage, sadness caused by loss, fear caused by the likelihood of an unwanted occurrence). "Appropriateness" was defined as elaborated scenarios for causes of emotion fitting these general criteria: percentage agreement between the two judges on occurrence of an accurate cause for the four emotions was .98. Examples of causes given for each emotion included happiness (getting a present, tickles from Mom, playing with friends), sadness (a rainy day, broken toys, Mommy being angry, getting hit by a friend), anger (waiting, fighting, friends won't play), and fear (waves at the beach, being lost, riding a two-wheel bike, someone says "boo").

4. Intrapersonal control: observed emotions. Children were observed during free play via combination focal event/scan sampling (Altmann, 1974; Denham, 1986; Denham, McKinley, Couchoud, & Holt, 1990; Strayer, 1980). Each of three observers worked from a randomly ordered roster for each class, observing focal children in turn for 5-min periods timed by a stopwatch that beeped to signal the end of the period.

Frequencies of happy, sad, angry, fearful, hurt, and "other" emotions, operationally defined according to broad facial, vocal, and behavioral indices, were tallied during each focal period (duration of each was not coded; emotional events ended when the child resumed a neutral expression). For example, happiness was indexed by smiles, singing, laughter, and voices with a "pearly," relaxed pitch. Sadness, in contrast, was marked by hypotonicity, possible crying, inner corners of eyebrows lifted and corners of lips down, and slow, steady-pitched speech. Anger was evidenced behaviorally, by throwing, pushing, and hitting; facially, by brows shoved down, tense lower lips, and staring; and through clipped or abrupt speech and, possibly, yelling. Fear or tension was shown behaviorally by jumpiness, worried looks, uncertainty, and muscular tension (or even tension bursts, as in tapping feet or fingers), with vigilant posture. Tense/fearful participants' brows were tight, raised, and drawn together, and their voices were high-pitched, with rapid speech.

Children were observed for potential emotional displays for a mean total of 40.67 min (SD = 12.14 min) over the 6-month period. A fourth observer (the first author) joined each primary observer in the classroom, serving as reliability coder for a subset of observation periods at the beginning, middle, and end of the months of observation.

Each coder provided reliability data for an average of seven 5-min focal periods. Over these periods, 195 emotions (120 happy, 31 angry, 22 sad, 18 fearful, 3 hurt, and 1 "other") were observed. For the entire system (i.e., all six categories of emotion), the mean percentage agreement across observers was 91% (range 89-95%); mean kappa was .74 (range .68-.84).

In this study, we used measures of the rates of happiness, sadness, anger, and fear, expressed in numbers of displays per minute observed. Mean percentage agreements across observers for happiness, sadness, anger, and fear were 92, 78, 84, and 70%, respectively (there were fewer occurrences of sadness and fear during reliability observations).

Interpersonal control: Observed reactions to emotions of peers. The same observers watched target peers' reactions to focal participants' emotions in the classroom. Reactions were mutually exclusive, but they could occur successively. After noting emotional displays emitted by focal children, observers scanned peers within approximately 3 ft of the focal child. The observers scanned the children from left to right, coding their reactions to the focal child's emotions. After the scan was completed, observers returned to observation of the focal child to see whether the same, new, or no emotion was being displayed (see Altmann, 1974). If the same emotion was still in evidence, no new occurrence of emotion was noted, but the scan of peers was begun again (thus, children could show more than one reaction per peer emotion, although this happened rarely). Mean percentage agreement for the total system equaled .82; mean kappa equaled .78.

We used the following codes: (a) matching positive emotions, such as happiness, 87% agreement; (b) matching negative emotions, such as anger or sadness, 87% agreement; (c) helping (verbal or physical, including defending; stopping an offensive activity; giving information or strategies; assistance with tasks; or getting, giving, or moving an object not in one's previous possession), 75% agreement; (d) care/concern (physical comforting, questioning, reassuring, or looking quite concerned), 83% agreement; (e) sustained neutral attention, or "looking" for 3 or more s, 82% agreement; and (f) ignoring, 89% agreement. Reactions to peer emotion displays were divided by the number of peer emotion displays each child observed ($M = 26.19$; $SD = 13.65$).

Results

Procedure 1: Frequency of Emotional Language

Means and standard deviations for mother and child total emotional talk, qualifiers, and repetitions, as well as function categories, are shown in Table 1. Indications from *t* tests for correlated means were that mothers talked more than children, used more qualifiers, and repeated their children's utterances more, $t(46) = 8.31, 6.79,$ and $3.86, ps < .001,$ respectively.

A within-subject MANCOVA with within factor of person and constant co-variate of socioeconomic status (SES) was performed, with emotional language function categories as dependent variables. Before reporting the findings, however, it is appropriate to indicate intercorrelations within maternal and child linguistic function categories (see Tables 2 and 3; for these and succeeding tables of intercorrelations, categories that had a mean frequency of less than .10 were deleted because of their limited range).

Intercorrelations for linguistic functions of mothers' emotional language are shown in Table 2. In general, mothers who explained the characters' emotions also used techniques of repeating the child's emotional utterances and questioning, in addition to using emotional language in socializing or guiding behavior. Mothers who qualified their emotional language also used comments, explanations, and questions, and those who used simple comments also repeated their children's utterances.

No main effect or interaction involving age or gender was significant. The effect of person was, however, significant, $F(5,42) = 19.01, p < .001,$ with mothers using more emotional language overall. Univariate follow-up analyses revealed that mothers used more explanations, questions, and socializing language, $F_s(1,43) = 61.16, 52.40,$ and $9.53, ps < .001, .001,$ and $.01,$ respectively (see Table 1). Mothers and children did not differ in their frequency of usage of comments and guiding language.

The covariate was related to the dependent variables as a whole, $F(5,41) = 4.22, p < .01.$ Univariate follow-up analyses showed that less socioeconomically

advantaged mothers used more explanations, questions, and socializing language than more advantaged mothers did, $F_s(1,45) = 4.03, 10.81,$ and $5.59,$ $ps < .01$ and $.05,$ respectively.

A second within-subject MANCOVA with within factor of person and constant covariate of SES was performed, with emotion word types as dependent variables. The effect of person was significant, $F(6,36) = 16.25, p < .001,$ with mothers using more emotional language overall. Univariate follow-up analyses revealed that mothers used more terms for all emotion types, $F_s(1,41) = 55.19, 19.97, 28.84, 45.99, 16.56,$ and $30.63, ps < .001,$ for happiness, sadness, anger, fear, scorn, and love, respectively (see Table 4). The covariate was not significantly related to the dependent variables as a whole, $F(6,35) = 1.64, p > .05.$

Intercorrelations among mothers' emotion type usage can be seen in Table 5. Mothers' use of happiness terms was positively associated with their use of anger and interest terms. Their use of sadness terms was associated with their use of anger terms, their use of anger terms was associated with their use of interest terms, and their use of fear terms was associated with their use of interest terms. So, in general, there was a discernible pattern of mothers' use of the basic discrete emotional terms.

Intercorrelations among children's emotion type usage can be seen in Table 6. Children's use of happiness terms was positively associated with their use of sadness, anger, and interest terms. Their use of sadness terms was associated with their use of anger, interest, and love terms. Their use of anger terms was associated with their use of interest and love terms. Their use of fear terms was associated with their use of interest terms. Thus, in general, there was a discernible pattern, similar to that for mothers, of children's reference to the basic discrete emotions. The children's pattern, however, also included love terms.

Procedure 2: Relations Between Mother and Child Emotional Language

Correlations among total talk, qualifiers, and function categories for mother and child are shown in Table 7; similar cross-correlations for mother and child affective labels are shown in Table 8. Mothers' and children's repetitions were not related, $r(45) = .12.$

Results shown in Table 7 indicate that mothers who exhibited more total emotional language had children who also used more emotional language. But the manner of dialogue between mother and child also can be seen in the patterns of function correlations. That is, mothers who used more simple comments in their depiction of the story had children who asked more questions, whereas mothers who used more explanations had children who used more total emotional language, with more comments and more guiding and socializing language. Simple comments by mothers appeared to leave children with the need for more questions, whereas explanations stimulated children's more sophisticated emotional expressions.

Mothers who asked questions also had children who showed more emotional language overall, with more comments and explanations. When mothers used more guiding language, children also used more guiding and socializing language. Dyads became involved in the dramatic plot of the story, especially in discussing the acceptability of the protagonist-children's behavior in the emotion-laden situations. Thus, in summary, maternal storytelling techniques of questioning, explaining, and guiding language engaged their children in emotionally rich discussions.

Mothers' use of happiness terms was associated with children's use of happiness, sadness, anger, and interest terms (see Table 8). Mothers' use of sadness terms was associated with their children's use of happiness, sadness, anger, fear, and love terms. Maternal usage of anger terms was associated with children's mention of happiness, sadness, anger, and interest terms, and it tended to be associated with their use of love terms. Mothers' use of fear terms was associated with children's similar use of fear terms and of scorn terms. Interest term usage by mothers was associated with children's use of fear and interest terms. Maternal scorn term usage was associated with children's use of happiness and fear terms. Thus, in general, mothers' use of the basic discrete affective types was associated with their children's use of these types.

Procedure 3: Prediction of Emotional Competence -- Intrapersonal Control

We set up multiple regression analyses to predict emotional competence via indices of mother's and children's use of emotional language (see Tables 9 and 10). Given the relatively small sample size relative to the large number of potential predictors, spurious inflation of R^2 was a concern. We formulated a regression strategy that included only those variables whose zero-order correlations with the criterion had been significant. Such strategies are appropriate in exploratory investigations such as this one, where many independent variables have been measured and a final model explaining the dependent variable has not been reached (Afifi & Clark, 1990, p. 187). This logic applies in the current investigations, because our goal was to identify variables that best explained the levels of the various criterion variables.

Thus, potential demographic predictors for Step 1 were age and gender, with children's emotional utterance categories and then maternal emotional utterance categories as potential entrants on later steps. Full results, including betas at entry, R^2 at each step, and significance levels of each, are shown in Tables 9 and 10, for intrapersonal and interpersonal control, respectively.

Understanding of emotion. The affective labeling/situations aggregate was predicted by children's age and by maternal socialization language, negatively weighted. The causes aggregate was also positively predicted by age and by maternal emotion questions. Hence, maternal questions, but not their socializing language, appeared as good predictors of understanding emotion.

Observed emotions. Rate of happiness was predicted by maternal repetitions, weighted negatively, and mothers' use of qualifiers. Rate of fear was predicted by mothers' use of socializing language and by their socioeconomic status. Thus, mothers who used socializing language or repeated their children's emotional language, unaccompanied by clear qualifications of emotional elements in the story plot, had children who showed less positivity as measured by happiness and fear. Rates of sadness and anger were not significantly predicted.

Procedure 4: Prediction of Emotional Competence--Interpersonal Control

Reactions to peers' emotions. Matching peers' negative emotions was predicted by gender (boys showed more of this behavior) and by mothers' use of guiding language. It was also predicted by maternal use of scorn terms. Matching positive emotions was predicted by children's questions about emotions and by maternal guiding language. Hence, maternal guiding language in differing profiles (gender-based for matching negative emotions, and child language for matching positive emotions) was associated with affective matching. Mothers may use guiding language when children are more reactive.

Helping in response to peer emotion was predicted by maternal questions about emotion. Helping was also predicted by maternal use of fear and sadness terms. Concern in response to peer emotion was predicted by mothers' use of love terms, and negatively by their use of anger terms. Thus, when mothers ask questions that require children to consider the emotional content of the story, and when they highlight fear and sadness and love rather than anger, children respond to their peers' distress in a prosocial manner.

Ignoring was predicted by child use of sadness terms, negatively weighted. Children who did not focus on the distress of story characters similarly ignored

their peers. Looking at peer emotions was negatively predicted by both child age and maternal use of scorn terms.

Age Differences in Contributions of Maternal Emotional Language Predictors

We also evaluated age differences in prediction via hierarchical regression equations, as follows: Child age and the maternal emotional language predictor were entered on the first step; the interaction term (i.e., Child Age x Maternal Emotional Language Predictor) was entered on the second step. If the interaction term's contribution to R^2 was significant in this equation, separate regression equations for older and younger children (with age split at the median, 43 months) were used to assess age differences in the uniqueness of each maternal emotion language predictor. The Maternal Emotional Language predictor x Age interactions were found to be significant for the prediction of child happiness, matching negative emotions, and helping, $\beta_8 = -2.01$, 3.38, and -1.23 , $p < .06$, $.04$, and $.10$, respectively.

In subsequent equations predicting child happiness, $\beta_{\text{younger}} = -.120$ for maternal repetition of emotional language, $F(1,21) = 0.31$, ns. In contrast, $\beta_{\text{older}} = -.386$, $F(1,22) = 3.86$, $p < .06$. Therefore, maternal repetition of children's emotional language was a negative predictor only for older children's happiness.

In subsequent equations predicting matching negative emotions, $\beta_{\text{younger}} = .753$ for maternal scorn terms, $F(1,21) = 27.44$, $p < .001$, but $\beta_{\text{older}} = .288$, $F(1,22) = 1.98$, ns. Therefore, maternal scorn terms were positive predictors only for younger children's matching of peers' negative emotions.

In subsequent equations predicting helping, $\beta_{\text{younger}} = .520$ for maternal fear terms, $F(1,21) = 7.77$, $p < .01$, but $\beta_{\text{older}} = -.140$, $F(1,22) = 0.44$, ns. Therefore, maternal use of fear terms was a positive predictor only for younger children's helping after peers' emotions.

Discussion

In this study, we aimed to examine the following: (a) differences in frequency of emotional language usage between mothers and children; (b) relations between mothers' and their children's emotional language usage; (c) the relations between emotional language and children's abilities to understand emotion and to regulate their own emotion; and (d) the relations between emotion language usage and children's ability to respond positively to peers' emotions.

Procedures 1 and 2: The Topography of Mother-Child Emotional Discussions

Emotion-laden storybook reading provided a rich description of the complex intersubjectivity between preschoolers and their mothers during discussions about emotions. Mothers used more frequent emotional language than children did in most function (and all emotion type) categories; further, mothers' questioning techniques, guiding language, and explanations about the storybook character's emotions appeared to be effective techniques for stimulating emotional language in the children. Thus, both mean differences in emotional language frequencies and cross-correlations suggest that mothers are still leading these emotional language dialogues, whereas children use less sophisticated emotional utterances (see also Brown & Dunn, 1991, 1992).

There were, however, two important exceptions to the overall finding on mean differences: Children already were using affective words as frequently as their mothers were in simple comments and guiding behavior. Mothers who used such language had children who also did so. As Dunn and colleagues (Dunn & Brown, 1991; Dunn & Munn, 1985) have amply demonstrated for toddlers, children are quite capable of discussing emotion, when motivated to do so within relationships. Moreover, young children find the guiding function of emotional language quite useful, and they can be adept at employing it.

It also should be noted that the cross-correlations between mother and child language usage illustrated here cannot be used to deduce direction of effect. Nonetheless, it is clear that affective language usage was dyadic; if one member of the dyad used it, so did the other (Brown & Dunn, 1991, 1992). One could envision at least one child-to-mother discourse pattern depicted by these correlations: When children used guiding or socializing language or simple comments, mothers explained. Also, maternal affective comments and child questioning sequences could be initiated by either dyad member. When either child or mother used terms referring to any of the basic emotions, the other dyad member referred to that basic emotion, and others, as well. Sequential analyses of the discourse could be useful in disentangling these directions.

Procedures 3 and 4: Prediction of Emotional Competence

Beeghly, Bretherton, and Mervis (1986) have called for evidence of relations between children's and mothers' internal state language and children's social development; this investigation begins to answer their call. Analyses of the functions and type of affective language highlight the impact of emotional language on other areas of emotional competence.

Children's intrapersonal and interpersonal affective control were predicted in understandable ways by their own and their socializing agents' use of emotional language. Overall, the picture of positive contributors to emotional competence includes maternal and child questioning. Conversely, maternal repetitions of child emotional language, as well as socializing or guiding language, predicted less mature patterns of emotional competence.

Regarding intrapersonal control, initial findings again suggest the primacy of the contributions of maternal emotional language (at least in the relatively structured context of picturebook reading; cf. Dunn, Brown, & Beardsall, 1991, and Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991, who have provided support for the contributions of both mother and child emotional language used during ongoing interaction, to later understanding of emotions). For example, mothers who used a teaching tactic of questioning without accompanying socializing language had children who showed greater affective knowledge. Children were more able to self-regulate and remain positive when anxiety was not aroused by mothers' overdependence on repetition. When mothers used socializing language, children showed more fear in preschool.

It is easy to imagine that open dialogue about emotional events in the story could be part of a familial pattern of fostering children's poise with emotional issues in general. Questioning, in particular, may prompt children to identify and process their own ideas about emotion. Children's greater understanding of emotions, positive expressiveness, and prosocial reactions to peers' emotions (e.g., mothers' questions about emotions also figured in the prediction of helping after seeing peers' emotions) may be logical outcomes of such a familial pattern. Earlier evidence (Denham, Cook, & Zoller, 1992) also has pointed to the dysregulating effects, for both dyad members, of maternal guiding language and repetitions of the child's emotional language.

The negative outcomes for maternal socializing language, in contrast, were more surprising. After all, the message within such statements is conspicuous (see Appendix A), and it should teach the child about emotions. Perhaps, however, mothers who use this technique are almost too didactic and "preachy," unfortunately engendering in their children guilt, tension, or even boredom, about the entire topic of emotion. This use of socializing language unaccompanied by moderating influences within mother-child discourse may backfire because it activates guilt and anxiety, which generalize to the peer setting, or because children learn to "tune out." [1]

Interpersonal control epitomized by matching others' emotions was predicted by maternal guiding language. Such discourse may arouse the child's

empathy. Then, the attendant profile of child gender and child gender the valence of emotion that the child is most likely to match, and/or the maturity of the child's behavioral responses to peer emotions.[2]

Types of emotions focused upon by mother and child predicted interpersonal control aspects of emotional competence. For example, maternal reference to scorn predicted children's matching of peers' negative emotions; mothers' reference to such contemptuous emotion may have served as a model for children's reactions to peers. In contrast, when mothers clarified the negative emotions of the story characters and also highlighted love among them, children were more prosocial toward their peers. Children's accentuation of characters' sadness also predicted more mature, other-focused reactions to peers.

Implications and Conclusions

This study has helped to further delineate the picture of relevance of mother-child discourse about emotions. Complementarity of emotional language between mothers and their young children has been demonstrated in yet another setting (see also Brown & Dunn, 1991, 1992), and the contribution of such language to new areas of emotional competence has been confirmed. Thus, our basic knowledge of preschoolers' emotional development has been expanded.

This investigation has applied implications as well. For example, what type of emotional discourse should mothers be encouraged to foster? The results of this investigation suggest that mothers' discussions of emotions in relaxed, natural encounters such as picturebook reading promote children's emotional competence. In particular, mothers asking questions about others' feelings, not being too moralistic, and elucidating both others' distress and one's love for others seemed to be fruitful techniques that contributed to these children's emotional competence via intra- and interpersonal control. Mothers' use of guiding language and references to scorn appeared to arouse these children, but usually in negative ways. Furthermore, we discovered a few clear age differences in productive approaches.

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1. The view that mothers' emotional language in this setting is a leading contributor to emotional competence should not be taken to imply that there were no intrapersonal emotional competence correlates of children's emotional language. But there were very few; for example, children's emotion explanations were related to later enumerated causes for fear.
2. Likewise, there were a few child emotion correlates of interpersonal aspects of emotional competence. One was children's socialization language (negatively associated with matching negative emotions); however, its incidence was so rare that it was not included in the regression analyses reported on here. Further, helping was predicted by an aggregate of children's questioning and explaining positive emotions, which also was not reported on here.

TABLE 1
Descriptive Statistics: Linguistic Function

	Mother		Child	
	M	SD	M	SD
Total talk[a]	19.23	10.77	6.19	6.30[*]
Qualifiers	2.51	2.33	0.21	0.72[*]
Repetitions	1.89	2.48	0.41	0.77[*]
Comments	5.34	4.72	4.32	4.68
Explanations	7.36	5.61	0.91	1.70[*]
Questions	7.77	6.75	0.70	1.02[*]
Guiding	0.55	0.86	0.53	1.61
Socialization	0.49	1.04	0.02	0.15[*]

a probability levels for univariate $F(1,43)$, or correlated t s for total talk, qualifiers, and repetitions.

* $p < .001$.

TABLE 2
Intercorrelations of Linguistic Functions of Maternal Emotional Language

Maternal measure	1	2	3	4	5	6	7
1. Qualify	--						
--		.35[b]					
2. Comment			.71[c]				
--				.28[a]			
3. Explain					.07		
--						.16	
4. Question							-.03
--							
5. Guide							
--							
6. Socialize							
--							
7. Repetitions of child							
--							

[a] $p < .05$. [b] $p < .01$. [c] $p < .001$, two-tailed.

TABLE 3
Intercorrelations of Linguistic Functions of Child Emotional Language

Child measure	1	2	3	4	5	6	7
1. Qualify	--.50[*]	.40[*]	.18	-.10	-.04	.08	
2. Comment		--	.43[*]	.18	.08	-.11	.04
3. Explain			--	-.11	-.11	-.08	.44[*]
4. Question				--	.18	.19	-.02
5. Guide					--	.23	-.08
6. Socialize						--	-.03
7. Repetitions of mother							--

* p < .001, two-tailed.

TABLE 4
Descriptive Statistics: Emotion Type

Emotion	Mother		Child	
	M	SD	M	SD
Happiness	5.90	4.35	1.38	1.94[*]
Sadness	2.52	2.13	1.12	1.42[*]
Anger	4.74	3.97	2.14	2.65[*]
Fear	3.40	2.52	0.88	1.60[*]
Interest	1.33	1.71	0.31	0.90[*]
Scorn/contempt	0.24	0.76	0.10	0.37
Love	1.79	1.72	0.29	0.74[*]

a Probability levels for univariate F(1,43).

* p < .001.

TABLE 5
Intercorrelations of Maternal Emotional Language:
Emotion Type

Emotion	1	2	3	4	5	6
1. Happiness	--	.24	.58[**]	.12	.39[*]	.06
2. Sadness		--	.41[*]	.16	.23	-.07
3. Anger			--	.06	.33[*]	.20
4. Fear				--	.47[**]	.03
5. Interest					--	.03
6. Love						--

* p < .01. ** p < .001, two-tailed.

TABLE 6
Intercorrelations of Child Emotional Language:
Emotion Type

Emotion	1	2	3	4	5	6
1. Happiness	--	.61[**]	.39[*]	.22	.63[**]	.02
2. Sadness		--	.42[*]	.17	.45[*]	.34[*]
3. Anger			--	.06	.33[*]	.39
4. Fear				--	.37[*]	.07
5. Interest					--	-.14
6. Love						--

* p < .01. ** p < .001, two-tailed.

TABLE 7
Cross-Correlations of Emotional Language Between Mother
and Child: Linguistic Function

Legend for Chart:

- A - Maternal measure
- B - Child measure: 1
- C - Child measure: 2
- D - Child measure: 3
- E - Child measure: 4
- F - Child measure: 5
- G - Child measure: 6
- H - Child measure: 7

A	B	C	D	E	F	G	H
1. Talk	.29[a]	.12	.25[a]	.12	.22	.23	.08
2. Qualify	.03	.17	-.01	-.04	.14	.08	.22
3. Comment	-.12	.05	-.02	-.23	.28[a]	-.18	-.17
4. Explain	.34[b]	.09	.26[d]	.14	.14	.32[a]	.34[b]
5. Question	.49[c]	.27[a]	.50[c]	.37[b]	.13	.01	.00
6. Guide	.08	-.20	.01	.01	-.11	.33[b]	.43[c]
7. Socialize	.11	.09	.06	.10	.06	.11	.07

[d] $p < .10$. [a] $p < .05$. [b] $p < .01$. [c] $p < .001$, two-tailed.

TABLE 8
Cross-Correlations of Emotional Language Between Mother
and Child: Emotion Type

	Child measure					
	1	2	3	4	5	6
1. Happiness	.42[b]	.33[b]	.43[c]	-.01	.22	-.09
2. Sadness	.35[b]	.40[b]	.32[a]	-.12	.00	.02
3. Anger	.41[b]	.29[a]	.62[c]	-.10	.22	-.01
4. Fear	-.01	.29[a]	.07	.38[b]	.44[c]	-.12
5. Interest	.43[c]	.09	.30[a]	.16	.34[b]	-.10
6. Love	.07	.34[d]	.25[a]	-.14	.00	.16

[d] $p < .10$. [a] $p < .05$. [b] $p < .01$. [c] $p < .001$, two-tailed.

TABLE 9
Prediction of Emotional Competence: Intrapersonal Control

Criterion	Zero-order r	beta at entry	R ²
Emotion labeling/situations aggregate			
Sex		.28[*]	.161[*]
Child age		.24[a]	
Maternal socialization language	-.33[*]	-.268[*]	.229[**]
Causes aggregate			
Child age		.26[a]	.070[a]
Maternal questions		.25[a]	.191[*]
Rate of happiness			
Maternal repetitions	-.29[*]	-.290[*]	.084[*]
Rate of fear			
SES		.26[a]	.069[a]
Maternal socializing language		.24[a]	.189[*]

[d] $p < .10$. * $p < .05$. ** $p < .01$.

TABLE 10
Prediction of Emotional Competence: Interpersonal Control

Criterion	Zero-order r	beta at entry	R ²
Matching peers' negative emotions			
Gender	-.30[*]	-.295[*]	.087[a]
Maternal guiding language		.26[a]	.141[a]
Child sadness terms	-.25[a]	-.211	.131[a]
Maternal scorn terms	.41[**]	.379[**]	.273[**]
Matching positive emotions			
Children's questions	.27[a]	.267[a]	.071[a]

Maternal guiding language	.31[*]	.346[*]	.189[*]
Helping			
Maternal questions	.30[*]	.295[*]	.085[*]
Maternal fear terms	.35[**]	.315[*]	.180[**]
Maternal sadness terms	.29[*]	.239[a]	
Concern			
Maternal anger terms	-.27[a]	-.345[a]	.199[**]
Maternal love terms	.29[*]	.361[*]	
Ignoring			
Child sadness terms	-.31[*]	-.309[*]	.096[*]
Looking			
Age	-.32[*]	-.325[*]	.106[*]
Maternal scorn terms	-.30[*]	-.237[a]	.160[a]

[a] $p < .10$. * $p < .05$. ** $p < .01$.

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APPENDIX A

Examples of Linguistic Function Coding Categories for Emotional Language

Coding category	Example Maternal language
Qualifier positive	They're real surprised when they see the box.
Qualifier negative	The little girl is very upset.
Comment positive	The little boy is laughing and saying "ha."
Comment negative	Now the little girl is getting angry at the dog.
Explain positive	The boy went and got the dog in his arms and everybody's happy again.
Explain negative	Now the parents are very angry, when he hits the dog.
Question positive	So you think she's happy?
Question negative	Does he look sad?

Guide positive	I'm sorry--did I hit you?
Guide negative	They've got the puppy so he won't get hurt by the schoolbus.
Socialize positive	Daddy was happy because he brought the puppy home to share.
Socialize negative	You should never scold, never hit, a dog.
	Child language
Qualifier positive	They're real surprised about the present.
Qualifier negative	He doesn't have a very happy face.
Comment positive	[Mother: "How does the boy look?"] Happy.
Comment negative	The mom is yelling.
Explain positive	He's happy, not sad, [because] he's laughing.
Explain negative	They're mad because he won't give his sister the puppy.
Question positive	She is happy, isn't she?
Question negative	Why does he wanna spank the dog?
Guiding positive	He wants to get happy.
Guiding negative	She wants the toy so she can stop crying. The mommy says, "You guys! Stop the fighting!"
Socialize positive	None
Socialize negative	We don't hit cats with baseball bats.

APPENDIX B
Examples of Emotion Type Coding Categories for
Emotional Language

Emotion category		Example
Happiness	Mother (.91):	Why do you think she's smiling? Why is she laughing?
	Child (.85):	Oh! They're happy! Look! Now they're happy!
Sadness	Mother (.67):	Why is she sad? Now the little girl is crying and the mommy doesn't look very happy.
	Child (.87):	She's sad because she wants to pet him.
Anger	Mother (.91):	I think somebody's getting yelled at for hitting the puppy. The mommy and daddy are yelling--they're mad.
	Child (.86):	He's mad.
Fear	Mother (.83):	They were frightened and dropped their bags and grabbed the dog and brought it to safety. See the worried looks?
	Child (.96):	He looks so scared.
Interest	Mother (.95):	They look interested, don't they, because they don't know what it is.
	Child (.83):	Mommy, they are curious!
Scorn	Mother (.91):	You know how they tease each other like that?
	Child (.36):	I hate checkers.
Love	Mother (.92):	And the dog says, "Boy this is

Child (.61): fun! I like you!
Taffy likes his food. Maybe we
can pet him.

Note. Pearson product-moment correlations for each emotion type for mother and child are shown in parentheses; all except child scorn were significant at the $p < .001$ level, $df = 19$.

APPENDIX C
Indicators of Emotion Shown by Puppets and Puppeteer in
Emotion Labeling and Situations Criterion Measures

Emotion	Hand puppet's body language	Puppeteer's facial cues	Puppeteer's vocal tones
Happy	"Bounces," spreads arms	Broad smile, wide eyes	"Pearly" relaxed tones
Sad	Wipes eyes, head downcast	Eyes and mouth down-turned	Whiny, crying tones
Angry	Clenched	Eyebrows down, lips pursed	Gruff, growling, clipped, abrupt
Afraid	Hands up, rigid	Eyes wide, mouth gaping	High-pitched, unwavering

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