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Richard A. Fabes , Nancy Eisenberg , Laura D. Hanish & Tracy L. Spinrad
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Preschoolers' Spontaneous Emotion Vocabulary: Relations to Likability

Richard A. Fabes

Nancy Eisenberg

Laura D. Hanish

Tracy L. Spinrad

Arizona State University

Although there has been growing interest in the development of emotion, a surprisingly small amount of research deals with the vocabulary children use to refer to emotions. In the present study, we examined differences in children's spontaneous use of emotion vocabulary during their naturally-occurring peer interactions and explored these differences in relation to their likability as assessed by their peers. Preschoolers were observed in their interactions with other children and their utterances containing emotion words were recorded. The content, form, and pragmatic function of these emotion words then were analyzed. It was found that with increasing age, emotion vocabulary became more differentiated and complex. Moreover, children who used a larger number of different emotion words, made more references to others' emotional states, and used emotion vocabulary for social functions, were more liked by their peers. Discussion focused on understanding young children's use of emotion vocabulary, the contributions it makes to the quality of their social interactions, and the implications of these for early educators.

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Preschoolers' Spontaneous Emotion Vocabulary: Relations to Likability

Given the growing interest in emotion and its development, there is a surprisingly small amount of research that deals with the vocabulary children use to refer to emotional states. Although emotional communication is possible without language, nonverbal forms of emotional communication are limited to relatively unambiguous here-and-now situations (Dunn, Bretherton, & Munn, 1987). In contrast, verbal communication about emotion enables individuals not only to express, regulate, or explain their own emotions but also to comment on, explain, or influence others' feelings. Moreover, clarification of misunderstandings and the sharing of interpretations of events and actions related to affective experiences become increasingly possible with the onset of language (Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986). The increased understanding that comes from the use of emotion-related vocabulary promotes, maintains, and regulates social interaction (Kopp, 1989). Thus, outside of the immediate emotion-occurring context, it is primarily through language that individuals can inform (or deceive) each other about emotional states.

The importance of verbal communication about emotions has been stressed by researchers working within a transactional framework (Bretherton et al., 1986; Saarni, Mumme, & Campos, 1998). According to this approach, emotional states are viewed as having important intra- and interpersonal regulative functions that help organize personal and interpersonal life (Izard, 1977; Plutchik, 1980). Through mutually understood emotion signals, humans can assess, interpret, predict, and regulate each other's behavior. Thus, the capacity to verbally share information about internal feeling states affects the nature of personal and social interactions.

Because the ability to share information about internal states is an important component of social and emotional competence, it is not surprising that terms denoting emotional states emerge fairly early in language acquisition. Bretherton and Beeghly (1982), using maternal reports, found that emotion-descriptive language emerged at 20 months of age and increased rapidly during the third year. By 2 years of age, young children refer to a range of feeling states in themselves and in others during the course of family conversations (Dunn et al., 1987), although relatively few of the words that children use at this age are emotion words (Bloom, 1993). Additionally, young children's (up to 26 months of age) spontaneous use of emotion language has been found to focus primarily on their own emotional states (Smiley & Huttenlocher, 1989).

Once children acquire the words for naming the emotions they are feeling, they begin to integrate these into their conversations (Bloom, 1993). Moreover, because emotional experiences are relevant and important to them, young children's talk very often focuses on the circumstances, causes, and consequences of their emotional experiences (Bloom & Beckwith, 1989). Thus, language and word learning are important elements of children's affective development (and vice versa; see Bloom & Capatides, 1987), although a considerable part of children's emotionality and emotional expressiveness is already in place long before language develops (Bloom, 1998).

To date, however, information regarding emotion-descriptive vocabulary in children older than 3 years of age is limited (cf. Bamberg, 2000). The lack of data on older children's use of emotion vocabulary is unfortunate because older children are more likely than are younger children to be involved in conversations about emotional states, and these conver-

sations increasingly involve peers and non-family members. This development is an important change as emotion-related conversations with non-family members involve interactions with individuals who are less likely to have experience with each other's tendencies and are less likely to be as understanding of emotional states that are undesirable as are family members (particularly parents). Moreover, with few exceptions (Bloom, 1993; Capatides & Bloom, 1993), those researchers who have examined emotion-descriptive vocabulary have focused primarily on whether or not children have acquired or understand emotion-related terms and or how such terms are used (e.g., Ridgeway, Waters, & Kuczaj, 1985). Thus, although we know that children acquire certain emotion-related vocabulary as early as 18 months, we do not have much information about how these terms are used or their relations to the quality of children's social interactions and relationships.

The primary purpose of the present study was to examine preschool children's spontaneous use of emotional words uttered during naturally-occurring social speech. A second purpose was to examine the relations of children's use of emotion vocabulary to their peer-rated likability. In this study, preschoolers were observed during their routine interactions with other children and their emotion-related utterances were recorded. In addition, children participated in a task in which they indicated how much they liked other children. We then examined the degree to which children's likability was predicted by indexes of emotion vocabulary.

Our definition of "emotion vocabulary" was based primarily on the position adopted by Bretherton et al. (1986). In our work, we included words that relate to discrete emotions (e.g., fear, anger, sadness, etc.), emotion blends (e.g., sorry, embarrassed, etc.), or general hedonic tone (e.g., feel bad, feel good, etc.). We do not, however, include words that refer to physiological states (e.g., pain, sleep, hunger) or other internal state terms (i.e., those referring to cognition, perception, volition, moral judgment, etc.).

In the present study, we were interested in analyzing preschoolers' use of emotional vocabulary in regard to: (a) the range of different emotion-related terms used, (b) the referential structure of emotion-related language (e.g., tense, person), and (c) the pragmatic function of the utterance containing the emotion word (e.g., to express, to explain, or to influence emotional states). Based on the limited research base, we predicted that with increasing age there should be a corresponding increase in the number and variety of emotion-related words used (Dunn et al., 1987). Moreover, we predicted that with development and increased experience in social relationships there will be an increased tendency for children to use emotion words to refer to states beyond their own, currently occurring emotional states (e.g., to talk about emotions in the past or future tense and refer to about others' emotional states).

As noted previously, children's use of emotion language also has been linked to their social and emotional competence. Children's discourse about emotions may reflect children's understanding of others' feeling states, which may be important for peer competence. For example, Denham and Auerbach (1995) found that the use and function of children's emotion language was related to indexes of positive social-emotional development. Additionally, Brown, Donelan-McCall, and Munn (1996) found that the frequency of children's references to mental states (including emotional states) was related to cooperative social interactions with friends and siblings. Thus, emotion language represents an important tool for

regulating emotions (both in one's self and in others) and likely contributes to children's peer acceptance. Based on this logic, we predicted that the differentiated use of emotion vocabulary, particularly in reference to others' emotional states, would be positively related to being liked by others. Moreover, because children who are more positive in their interactions with others are more accepted than those who are relatively more negative (Wasik, 1987), we predicted that peers would like children who evidenced greater proportions of positive emotion vocabulary terms more than those who used fewer positive emotional vocabulary terms. Finally, we predicted that children who are likely to use emotion vocabulary for social purposes (influencing, asking about, or explaining emotional states to others) would be liked more than those who use emotion vocabulary merely to label emotions. This prediction is based on the idea that the use of emotional language for diverse social purposes represents a more advanced level of social and emotional competence, thereby enhancing the responsiveness of the individual to others (Gertner, Rice, & Hadley, 1994). Thus, children who use their emotional vocabulary for social purposes (i.e., not just for commentary) are more likely to meet the communicative demands of the situation and the socially appropriate expectations of those with whom they interact (Redmond & Rice, 1998)

Some sex differences have been reported in young children's use of emotion language.[1] For example, by 70 months of age girls talked more about emotions and used more unique emotion terms in their conversations with parents than did boys (Kuebli, Butler, & Fivush, 1995). In an extension of the same study, Adams, Kuebli, Boyle, and Fivush (1995) found that parents' references to emotions were more frequent and varied with daughters than sons (see also Dunn et al., 1987). Extrapolating from these findings, we expected that girls would use emotion words more often and evidence a greater tendency to refer to others' emotional states than would boys.

Method

Participants and recorders

The spontaneous emotion-related statements directed to other children (i.e., statements directed to other children that denoted an emotional state and contained an emotion-related vocabulary word) of English-speaking preschool children in three university-affiliated classrooms were recorded. Statements were recorded from 50 children (22 boys and 28 girls; approximately 93% of the available children - 4 children did not receive parental permission to participate). Children ranged in age from 49 to 69 months (M = 59.44 months, SD = 9.67) and the majority was from white, middle-class families (90% white, 6% Hispanic, 2% African American, and 2% Asian American). Children's utterances containing emotion-related vocabulary words were recorded by six female undergraduate students (who were unfamiliar with the specific hypotheses of the study).

Procedure

The data collection procedures were designed to sample children's spontaneous use of emotion-related vocabulary during their routine interactions with other children (conversations that took place with teachers or other adults in the classroom were not recorded). Each

[1] In this paper, we use term "sex differences" to refer to differences between boys and girls that are either biological or socially acquired. Thus, the terms sex and gender are used interchangeably.

weekday for 2 months of the fall semester, at least one of the recorders went into the classrooms (generally during free-play in the mid-morning and mid-afternoon hours). The classrooms and playgrounds were divided into 12 areas based upon their general configurations (e.g., block area, swing area, sand area, etc.). Each area was assigned a number and the recorders rotated from one area to the next in numerical order. This procedure allowed us to randomly sample children's language in a wide variety of classroom and playground settings.

The recorder roamed the perimeter of the area and recorded on paper any statement uttered by any child in the designated area that contained an emotion-related vocabulary word. The recorder wrote down the statement verbatim and noted the child's identification code. In addition, the recorder made notes regarding the situation in which the utterance occurred (e.g., Carol and Jennifer were digging in the sand. Jennifer threw sand on Carol and Carol said "I hate you when you do that.") To determine reliability, two recorders were placed into the same designated area at the same time and recorded data independently. The reliability coder was always the same person and she was matched with one of the coders. The pairs simultaneously recorded observations once per week for the 8 weeks of data collection. For each of these days, the two recorders observed children until they collected 9 utterances (72 utterances per observer, a total of 432 utterances - 30% of the total utterances). In 96% of the cases, the recorders agreed on the presence or absence of emotion-related vocabulary statements in the specific utterances recorded for children; thus, they agreed in most cases on whether a specific emotion-related utterance had occurred (range of agreement across coders was 88% to 100%). Mean agreement for the recordings of the data from the two recorders was 90% (range of agreement across coding categories was 83% to 100%).

The recorder then resumed monitoring the area until she completed a total of 5 minutes of observation time (excluding the time required to record the data). The recorder then moved to the next designated area and repeated this process. However, if at any time there was not a minimum of two children in the area, the recorder rotated to the next numbered area.

Likability

At the end of the fall semester, a likability rating measure was administered to all of the children (using procedures similar to those used by Asher, Singleton, Tinsley, & Hymel, 1979). This procedure has been used extensively and although children's play preferences can vary over time, the stability of children's peer acceptance and likability generally has been found to be moderately strong, particularly in the short-term (Cillessen, Bukowski, & Haselager, 2000).

Children were taken to a quiet area by one of four female experimenters (who did not participate in the observational coding). On the table in front of the child were three 3 x 5 inch cards that had simple faces drawn on them. The three faces differed in emotional expressions displayed on them (smile, neutral, frown). The child was told that the faces could be used to show if someone liked or did not like to play with someone else. It was explained that the smile face meant that they liked to play with someone, the frown face meant that did not like to play with someone, and the neutral face meant they sometimes liked but sometimes did not like to play with someone. The experimenter then made sure the

child understood how to use the face scale by asking children to use them to indicate how much they liked to eat ice cream or eating grass. The child was then presented with pictures in random order (one at a time) of all of the children in his or her class and asked to identify the child in the picture. After identifying the name of child in the picture, the child was asked to put each picture by the face that showed if he or she liked or did not like to play with that child.

Each picture placed in the pile by the frown face received a score of 0, and each picture placed by either the neutral face or smile face received a score of 1 or 2, respectively. Thus, higher scores reflected greater liking. A likability score was obtained for each child by computing the mean of the values assigned to each child.[2]

Vocabulary data coding

Taxonomic classification. Children's emotion-related vocabulary words were assigned to a category based upon the specific emotion word used in the sentence (e.g., happy, sad, etc.). Because emotion-related vocabulary can be quite large (e.g., Wiggins, 1979), composite measures were used to classify children's emotion statements. When two emotion-related words were included in a single statement, the statement was double-coded and assigned to both categories. For example, for the statement "He is mad because I was happy," the terms "mad" and "happy" both would be categorized.

The words "good" and "bad" were included only when they referred to a feeling state (e.g., "This makes me feel good") but were excluded when they were used in a moralistic sense (e.g., "He's a good boy.") The terms "scary" and "funny" were included because they represent feelings projected as attributes onto objects or persons that elicit them. The term "sorry" was not coded when it was used as an apology because many of these utterances represent scripted, compliant responses to rule violations rather than true internal states. Finally, the term "like" was not coded when it referred to a similarity ("That's like the time I fell down.")

The composite categories were based on Shaver, Schwartz, Kirson, and O'Connor's (1987) prototypic analysis of emotion terms. Seven emotion clusters were formed. The clusters included: (a) *Preference* – made up of statements related to children's affective desires and included the words "like" or "love"; (b) *Cheerfulness* – made up of statements related to children's merriment and included the words "happy," "fun," and "funny"; (c) *Sadness* – made up of statements related to a feeling of loss and included the words "sad," and "miss"; (d) *Anger* – made up of statements that included the words "angry" and "mad"; (e) *Nonpreference* – made up of statements that related to children's aversions and included the words "don't like," "hate," and "yucky"; (f) *Fear* – made up of statements that included the words "scared", "scary", or "afraid"; and (g) *Other* – made up of all other emotion terms.

[2] We also calculated likability using rating provided only by same-sex children. Although the two ratings of likability were highly correlated (rs = .80 and .78 for boys and girls, $ps < .001$, respectively), the findings generally were stronger when likability was computed using all children than when using only children of the same sex (probably due to increased numbers of children in the calculation of social status).

Referential structural coding. Each statement also was coded for its referential structure (e.g., to whom and when the statement referred). First, each statement was coded in terms of whether it referred to the child's own emotional state (self), or to another person's emotional state (other), or to a combined emotional state (e.g., "We're scared"). The tense of the verb referencing each emotion also was classified (e.g., present, past, future). Once again, when a statement included two emotion words, each emotion word was coded for its referential structure. For the example used earlier ("He is mad because I was happy"), the term "mad" would be designated as present tense and other person, whereas the term "happy" would be scored as past tense and self. Finally, mean length of utterance (MLU) was used as an index of complexity in children's emotion language. MLU was calculated following the procedures reported by Shatz and Gelman (1973).

Pragmatic functional coding. Each emotion-related statement also was coded in terms of its pragmatic function (i.e., the apparent purpose of the statement). Five functional categories were used: (a) *Commentary* – taking note of someone's or one's own internal emotional states without explanation or detailed description (e.g., "I like this." or "He is happy.)", (b) *Explanation* – identifying the causes, antecedents, or consequences of an emotional state (e.g., "She's sad because her mother left."), (c) *Interrogative* – asking questions about emotional states (e.g., "Why is she mad?"), (d) *Intervention* – attempting to change, alter, or direct emotional states (e.g., "Don't feel sad."), and (e) *Deception* – noting a purposeful masking of true emotional states (e.g., "He is pretending to be sad.").

Two judges independently coded the emotion-related vocabulary statements (both were unfamiliar with the purpose and hypotheses of the study). The judges overlapped on approximately 25% of the cases ($n = 350$). Mean percent agreement across all coding categories was 97% (range = 94 to 100% agreement). Kappa coefficients computed for the coding of the structural and functional coding categories ranged from .73 to 1.00 (M kappa = .91).

Results

Over the 2 months of data collection, 1446 emotion-related vocabulary statements were recorded ($M = 28.92$ statements per child; range = 5 to 80 statements, $SD = 28.61$). Five hundred and sixty-eight statements were recorded for boys ($M = 25.82$) and 878 for girls ($M = 31.36$). Mean number of different emotion words used by children was 12.28 ($SD = 5.84$), with boys using an average of 12.18 different emotion words and girls using an average of 12.36 different emotion words (t tests for sex differences in the mean number of words and in the mean number of different words per child were not significant).

Frequency of emotion vocabulary

Because more statements were recorded for some children than for others, proportion scores were calculated for the coding categories for each child based on his/her number and distribution of statements. Table 1 presents the mean proportion (and average frequency) for each emotion cluster. To overcome the problems associated with obtaining normality and homogeneity of variance when using proportion data, a log transformation was performed (Winer, 1971) and the transformed proportion data were used in the following analyses. A 2 (Sex) X 6 (Emotion Cluster) repeated measures analysis of variance with the emotion clusters of cheerfulness, preference, anger, sadness, fear, and nonpreference as within-subjects variables was computed for the transformed proportion of children's utterances

within each cluster as the dependent variables. Omitting the "other" cluster helped to overcome problems due to the fact that the sum of the proportions equaled 1.0.

Only the main effect for emotion cluster was significant, $F(5,245) = 68.06$, $p < .0001$. According to Tukey's tests for repeated measures analyses, children's references to emotions related to preference or nonpreference occurred significantly more often than did other emotion clusters (*ps* < .05; see Table 1).

Table 1.

Mean Proportion (and Frequency) of Emotion Language by Type of Emotion Cluster

Emotion Cluster	*M*	*SD*
Preference	.314[a] (8.96)	.189 (7.38)
Cheerfulness	.099[b] (2.86)	.103 (6.49)
Sadness	.045[b] (1.30)	.059 (1.78)
Anger	.031[b] (.90)	.052 (1.29)
Nonpreference	.367[a] (10.61)	.164 (9.64)
Fear	.067[b] (1.93)	.095 (5.42)
Other	.077 (2.22)	.105 (6.41)

Means with different superscripts are significantly different, *ps* < .01.
N = 50

Referential structure and pragmatic function of emotion vocabulary

Using a similar repeated measures analysis (dropping the lowest proportion category in each case), analyses of the referential structure data revealed that preschoolers' emotion vocabulary was likely to focus on their own emotions rather than on others' emotions and on their current, ongoing emotional states than on past emotional states (see Table 2), *Fs*(1,146) = 50.22 and 67.91, *ps* < .0001, respectively. There were no significant sex differences for either of these aspects of emotion vocabulary.

The repeated measures analysis for the pragmatic functional codings (excluding the "intervention" category as the lowest occurring category) revealed a significant within-subjects effect for category, $F(3,95) = 122.59$, $p < .0001$. Children's emotion-related vocabulary was judged to have primarily a commentary function (accounting for over half the utterances), with the other functional categories each accounting for less than 13% of the utterances (see Table 2).

In summary, children's spontaneous use of emotion vocabulary tended to be focused primarily on what they liked or did not like, and tended to be first person, present tense references that were used primarily to comment on their feelings. Moreover, there were no significant differences between boys' and girls' use of emotion vocabulary.

Table 2.

Mean Proportion of Emotion Language by Structure and Function

Index	*M*	*SD*
Referential Structure Indexes		
Self	.645[a]	.171
Other	.231[b]	.144
Combined	.124	.109
Tense		
Present	.857[a]	.094
Past	.140[b]	.075
Future	.003	.018
MLU	5.91	1.82
Pragmatic Function Indexes		
Commentary	.590[a]	.201
Explanation	.129[b]	.182
Interrogative	.110[b]	.127
Intervention	.072	.078
Deception	.099[b]	.113

Within each type of index, means with different superscripts are significantly different, *p*s < .05. *n* = 50.

Relation of age to children's emotion vocabulary

For these correlational analyses, 21 correlations were computed. From this number, we would expect about one correlation to be significant by chance. The findings revealed 12 significant correlations. Thus, the pattern of findings was well above chance levels.

With age, children were more likely to use a larger number of emotion-related vocabulary words and to use a larger variety of emotion words, *r*s = .29 and .41, *p*s < .05 and .01, respectively (*df*s for all zero-order correlations = 48). Additionally, older children were proportionately more likely to refer to emotional states related to cheerfulness (e.g., being happy, having fun, etc.) than were younger children, $r = .31$, $p < .05$. In contrast, younger children were likely to use emotion terms related to preference or nonpreference, *r*s = -.29 and -.33, *p*s < .05.

Children's age also was related to the referential structure and pragmatic function of their emotion vocabulary. Children were increasingly likely to talk about past emotional states, to talk about the emotional states of others, (e.g., age was inversely related to self-referenced emotional states), and to use longer sentences as they got older, *r*s = .36, -.35, and .30, *p*s < .01, .01, and .05 respectively. With age, children also were more likely to explain, ask questions about emotional states, and note deceptive emotional states, *r*s = .32,

.33, and .40, $ps < .05$, .05, and .01, respectively.[3] Additionally, children were less likely to use emotional vocabulary for commentary purposes as they got older, $r = -.33$, $p < .05$. Thus, with age, children's emotion vocabulary was likely to refer to emotions other than their own, currently occurring emotional states, to become more complex, and was more likely to be used for a wider variety of social functions.

Relations between emotion vocabulary and its structure and function

For these analyses, we computed correlations between the emotion clusters (with the exceptions of the "Other" category) and the various measures listed in Table 2. Thus, there were a total of 72 correlations. Given this, we would expect about 4 correlations to be significant by chance. The findings revealed over double this number of significant correlations. Thus, the patterns of findings again were well beyond chance levels.

In general, children who tended to refer to positive emotional states (e.g., the cheerfulness and preference clusters) also tended to focus on their own emotions, $rs = .50$ and .28, $ps < .005$ and .05, respectively. Additionally, children who used more terms related to preferences were likely to refer to current emotional states, $r = .34$, $p < .05$ and unlikely to explain the causes of emotional states, $r = -.60$, $p < .001$.

For negative emotion vocabulary, there was a positive relation between children's references to nonpreference and their tendencies to focus on current emotional states, $r = .30$, $p < .05$. For references to anger, children were likely to refer to past emotional states and to refer to others' emotional states, $rs = .36$ and .28, $ps < .05$, respectively. Moreover, children who tended to refer to anger also tended to explain emotional states, $r = .34$, $p < .05$. Similarly, children's references to sadness were likely to focus on others' emotional states and to have explanatory functions, $rs = .43$ and .33, $ps < .01$ and .05, respectively.

Relations of emotion vocabulary to children's likability

Boys' and girls' mean ratings of likability were not significantly different ($Ms = 1.12$ and 1.20, $SDs = .55$ and .57, respectively). Based on our predictions, we computed partial correlations of the number of different emotion words used, the proportion of positive emotion vocabulary used, the proportion of references to others' emotional states, and the proportion non-commentary functional statements to children's likability. In these correlations, we controlled for MLU because we wanted to remove the variance in the relations of the indexes of emotion vocabulary to children's likability that was due to the increased language capacities of older children relative to younger children (likability was significantly correlated with MLU, $r = .41$, $p < .01$; all dfs for the partial correlations = 47).

Examination of Table 3 reveals that three of the four indexes of emotion vocabulary predicted to relate to children's likability were significant. Specially, well-liked children were likely to use a larger variety of emotion-related terms, to refer to others' emotional states, and to use emotion language for functions other than commentary on emotional needs and states (i.e., they were likely to use emotion vocabulary to ask questions about, or to explain, emotional states) than were children who were not as well liked.

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[3] When we coded for explicit references to individual differences between others' and one's own emotional states, we found that although these were relatively infrequent occurrences in the overall corpus of children's emotion-related vocabulary (mean proportion = .06), the tendency to make such references increased with age, $r(48) = .40$, $p < .01$.

Table 3.

Partial Correlations (controlling for MLU) of Emotion Language Indexes to Children's Likability

Index	*Partial r*
Number of Different Emotion Words Used	.38**
Proportion of Positive Emotion Language Used	.11
Proportion of References to Others' Emotional States	.44***
Proportion of References with Non-Commentary Functions	.30*

*df*s = 47.
*$p < .05$, **$p < .01$, ***$p < .005$.

Discussion

The results of this study confirm that preschoolers' emotion vocabulary is evident in their spontaneous interactions with peers and that it becomes increasingly differentiated with age. In addition, the data support the argument that children's use of emotion vocabulary is related to how well they are liked by their peers.

The general findings regarding the number of emotion words used suggest that young children possess a range of emotion-related terms and this range increases with age across the preschool years. For all children, over 60% of their emotion-related vocabulary words referred to preference and nonpreference. As children got older, they were more likely to use emotion vocabulary that reflected the subtle nuances of emotions (feeling happy, feeling sad) and focus less on basic likes and dislikes. These data indicate that, with age, preschoolers' emotion vocabulary becomes more discrete and refined, and they begin to use terms that reflect more complex emotions and emotion blends. Such findings can be considered to be consistent with research that indicates that the usual sequence of acquiring knowledge involves acquiring basic level knowledge first, and superoridinate and subordinate knowledge later (Mervis & Crisafi, 1982; Rosch, 1978). Moreover, emotion talk is not just a by-product of the underlying cognitive structure, but also a starting point for the construction of meaning of affect and emotional experiences and interactions (Bamberg, 2000; Ochs, 1996). Thus, children's increasing use of these terms with age contributes to the self-development of emotion knowledge.

Older preschoolers' emotion vocabulary was found to be more likely to focus on others' emotions and on emotions that have already occurred. The increased reference to others' emotional states by older preschoolers may reflect a decrease in egocentrism and may set the stage for other abilities. For example, as a child becomes better able to identify and refer to others' emotional states, his or her ability to make comparisons and note differences between one's own emotional state and those of others also increases (e.g., "He is scared, but I'm not.") Thus, children's ability to detect and refer to individual differences may be

enhanced (see Footnote 3). These references also reflect older children's enhanced ability to understand that the same situation can produce different emotions (Wellman, Harris, Banerjee, & Sinclair, 1995).

The ability to talk about past emotional states may be important in the development of social and emotional competence because these types of utterances reflect (or contribute to) a basic understanding that emotional states can be separate from what one is currently experiencing. In addition, to participate in these conversations, children must coordinate their partner's representation with their own representation of the event. In other data, we have found that young children are more likely to talk about past states when referencing emotions than for almost any other type of internal state (e.g., motivation, physiological; Fabes, Spinrad, Hanish, & Eisenberg, 2000). As such, conversations about past emotional states, particularly in the context of peer interactions, may be especially important for the development of skills related to positive social interactions (Welch-Ross, 1997).

Overall, children used their emotion vocabulary most often to comment on emotional states. With age, however, children were more likely to explain, ask questions, and note deceptive emotional states. These findings suggest that preschoolers' emotion-related vocabulary is used to serve a wider variety of social functions as they get older. Moreover, the function of children's emotion-related vocabulary varied by the type of emotion. For basic preferences and aversions, children's vocabulary was focused more on describing their own current likes and dislikes ("I like raisins"). In contrast, for references to anger and sadness, children's emotion-related vocabulary was relatively more likely to be used to explain others' angry or sad emotions and behaviors (e.g., "He's mad because she hit him.") As children make reference to emotions that are more complex and subtle, they are increasingly likely to talk about others' emotions and are relatively likely to explain them. This finding may be particularly important in regard to negative emotions because they are potentially damaging to oneself and to social interactions. Thus, it is adaptive for children to be concerned with, and attentive to, others' negative emotions states and their causes (Fabes, Eisenberg, Nyman, & Michealieu, 1991).

One goal of our study was to explore how vocabulary about emotional states related to the quality of children's peer relationships. It was found that the number of different emotion words used, the proportion of references to others' emotions, and the use of emotion vocabulary for functions other than expressiveness were positively related to likability. These findings suggest that children who verbalized more emotion terms, referred to others' emotional states more often, and used emotion vocabulary for a wider variety of complex social functions were viewed more positively by their peers. Such findings support the conclusion that the enhanced use and application of emotion vocabulary may reflect an increased awareness that the nature of one's relationships is in part defined by the quality of emotion communicated within the relationship (Saarni, 1997). Moreover, as noted previously, the increased attention to emotional states, particularly others' negative emotional states, may reflect a decrease in egocentrism and an enhanced ability to respond to and regulate others' emotions. These qualities enhance children's social and emotional competence. Additionally, talking about emotions is a constructive way to regulate emotions, and children who use language to regulate their emotions tend to be more socially competent than children who attempt to regulate emotions using less constructive (e.g., aggression) means (Eisenberg, Fabes, Nyman, Bernzweig, & Pinuelas, 1994). This enhanced social and emotional compe-

tence then may contribute to enhanced likability. Importantly, the relations of the indexes of emotion vocabulary to likability were significant even when the complexity of children's language (as reflected by MLU) was controlled. Thus, these findings are not dependent on the overall level of language skills of the children.

Contrary to some research (Kuebli et al., 1995) and our predictions, we did not find sex differences on any of the indexes of emotion language. One reason for this may be the context in which we obtained the sample of children's emotion-related vocabulary. In our study, the discourse was among peers rather than parent-child conversations. Moreover, children's vocabulary was obtained in the context of play activities rather than family interactions. Under these conditions, the types of everyday events that elicit such language may be quite similar for boys and girls. Moreover, the finding that parents directed more emotion language to their daughters than their sons (Kuebli et al., 1995) suggests that the sex differences may be due in part to the discourse that is initiated by parents. The fact that children did not evidence sex differences in emotion language when conversing with peers but may do so in conversations with parents suggests the possibility that young children are sensitive to their conversational partner. Thus, an important avenue for future research is to examine how boys and girls talk about emotion when talking with peers versus adults or with same- versus other-sex peers.

Implications for Early Education

Early childhood educators face a variety of challenges every day, many of which are related to young children's social and emotional needs. Many of these challenges revolve around issues related to how children get along (or do not get along) with others. Thus, young children's interactions, particularly with their peers, are a prime context in which they learn about emotions and emotionally evocative behaviors, and these contexts and experiences are different from what they experience with parents or teachers. Young children's peer interactions frequently are intense and often involve competing goals and desires. Additionally, peers are not likely to be as patient or understanding with emotional outbursts and provocations as are parents or teachers (Hartup & Laursen, 1993; Hartup, Laursen, Stewart, & Eastenson, 1988). As such, peer interactions involve a wide variety and intensity of emotional reactions (Fabes et al., 1991).

In these peer interactions, teachers often encourage children to "use their words" when emotions are evoked - particularly when negative emotions are involved. The findings of the present study suggest that there are important consequences to doing so and that those children who use their words tend to be viewed more positively by their peers. Thus, the ability to communicate emotional experiences through words represents an important socio-emotional skill, and it is during the preschool years that we see rapid (but not full) development of these skills.

Our findings also suggest that it is not just whether children use emotion-related vocabulary that makes a difference, but it also is how they use it that contributes to their likability. Early educators can facilitate young children's social and emotional competence by encouraging them to talk about emotions, particularly when the vocabulary refers to emotions outside of the immediate and personal context. Focusing on discussions of past and future emotions, as well as on others' emotions, may promote greater awareness and responsiveness to emotional states and situations. Additionally, engaging children in conversa-

tions and dialog that reflect the more complex functions of emotions (e.g., explanation, intervention, etc.) contributes to their emotional competence by fostering a fuller understanding of the social nature of emotions.

It may be somewhat surprising that the range of emotion words used by the preschoolers in this study was relatively limited. This finding may be due to the fact that children were observed in free-play activities in a high-quality preschool setting. Thus, most of the children's interactions were positive, engaging, and well-monitored by adults. A wider range and frequency of emotion vocabulary, particularly in reference to negative emotions, may have been found had the data been collected in different contexts, such as at home with parents or siblings, or with different samples and in different cultural contexts. Additionally, it may be the case that our method for collecting children's emotion vocabulary was inherently limited. Our use of *in vivo* transcriptions may not have allowed us to capture the full extent of children's emotion-related vocabulary and it may be necessary to use video or audiotaped recordings of children's language to more fully transcribe children's emotion language and how this language is used.

It also may be the case that emotion vocabulary is used relatively infrequently. In other data, children's emotion vocabulary made up about 13% of their total references to internal states (Fabes et al., 2000). Thus, emotion vocabulary is only one element of children's emotion-related language. Children learn that they can use their words to elicit, maintain, or change emotional states in themselves and in others (Bloom, 1998). Moreover, young children's use of emotion-related words often occurs when they are in a state of neutral affect (Bloom & Beckwith, 1989). For young children, high intensity emotions, particularly negative emotions, make demands on their limited cognitive resources and abilities. Neutral affect appears to promote states of attention needed for attending to and using emotion-related vocabulary. For educators, these findings suggest that children need to learn about the use of emotion-related words and language under neutral conditions - conditions of high intensity emotions may overwhelm them. In support of this, children who spend more time in neutral affect have been found to be earlier word learners (Bloom & Capatides, 1987). Thus, educators may need to find times to teach children about the use of emotion words (and emotions in general) when they are in neutral states.

In summary, the findings of this study provide further evidence of the importance of examining children's spontaneous emotion-related vocabulary. Preschoolers use their emotion-related vocabulary to inform, respond to, and influence others. Moreover, the language of emotion has the ability to dynamically influence children's construction of emotional experiences and interactions (Bamberg, 1997). Although our data are limited in regard to the contexts and sample used, they are in line with the argument that the emergence of an emotional lexicon contributes to the quality of children's everyday social interactions (and vice versa). Early educators can foster children's social and emotional competence by recognizing the importance of promoting its use throughout the course of young children's everyday interactions.

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