16

Feeling and Understanding: Early Emotional Development

Ross A. Thompson and Kristin H. Lagattuta

Emotional development in early childhood offers a window into the psychological growth of the child. Young children's efforts to comprehend emotions reveal their developing grasp of the workings of the mind and the influence of emotion on personal well-being and social relationships. Their everyday struggles to manage strong feelings, particularly negative emotions, reflect their awareness of the need to regulate intense emotions and to abide by social and cultural conventions. The appearance of self-conscious emotions, such as guilt, pride, and shame, reflects the powerful connection between children's emotional lives and their developing sense of self. Each of these conceptual achievements is intimately connected to everyday family experiences and relationships in which young children learn about emotions, including their causes and consequences. Emotional development thus both contributes to children's growing social competence and derives from their advancing psychological understanding. This is contrary to a theoretical tradition in psychology that regards emotions as disorganizing or inimical to sophisticated thought or behavior.

Contemporary research on early emotional development highlights both the sophistication of young children's thinking about emotion, and the depth and vulnerability of their emotional lives. Children's conceptual understanding of emotions develops early because emotional experiences comprise a salient, powerful, and central force in their everyday lives and relationships. Children learn about emotion in family climates, some of which offer a secure setting for emotion communication and understanding, while others impose emotional challenges that threaten to exceed children's coping capacities and compromise their developing knowledge and skills. Contrary to a tradition that has viewed young children as simple emotion thinkers who lack capacities for the depths of sadness or grief that adults experience, contemporary scholarship highlights that young children have surprisingly complex emotion concepts, and early experiences can, for some, create enduring vulnerability to emotion-related problems in childhood and in the years that follow.

Emotions are among the most biologically basic features of human functioning that are deeply rooted in the developing brain (Panksepp, 1998). At the same time, emotional development reflects the most important conceptual and relational influences in early childhood. Our purpose is to survey the landscape of this expanding research field. We begin by discussing the conceptual foundations of emotional development in infancy and early childhood, describing how children's earliest knowledge about the causes of emotions are based on broader, richer forms of psychological understanding. Recognizing that young children do not achieve these conceptual insights on their own, we then consider how the emotional climate of the family influences children's emotional capacities, understanding, and communication to others. Because one of the signal achievements in early childhood is the development of a sense of self, we consider the appearance of self-referential emotions such as pride, shame, guilt, and embarrassment in a third section, along with children's growing empathic capacities. Finally, we describe recent discoveries in children's ability to regulate their emotions.

Emotion Understanding

Early in infancy, babies convey a surprisingly rich tapestry of emotions, including happiness, sadness, fear, anger, and surprise, that are often accompanied by compelling vocal expressions (Izard, 1991). Anyone who has been around a crying infant, for example, knows the urgency with which caregivers attempt to soothe the baby. During the months and years that follow, children's emotional expressions become increasingly organized to convey a broader variety of more subtle emotional messages (Camras, 2000). One of the most interesting features of emotional development, however, is the growth of emotion understanding. As with the development of emotional expressions, there are surprisingly early and sophisticated achievements in children's comprehension of emotion during infancy and the preschool years.

Infant and toddler years

Critical foundations for children's emotion understanding are formed during the infant and toddler years. Indeed, before children are able to talk about and reflect on emotional experiences, they develop the ability to identify facial and vocal displays of emotion and to recognize how people's emotions are connected to their actions. As a result, infants begin to look to the emotional expressions of caregivers to guide their behavior in unfamiliar situations.

During the first year, infants develop an awareness of how different emotions "look" and "sound." Starting around 5 to 7 months of age, infants can distinguish between facial displays of some negative (sad, mad, afraid) and positive/neutral (happy, surprise) emotions, and they prefer displays in which emotional voices and facial emotion expressions are congruent versus incongruent (Bornstein & Arterberry, 2003; Walker-Andrews, 1997; Walker-Andrews & Dickson, 1997). Remarkably, recent research has shown that even

3½-month-olds can discriminate between facial displays of happiness, sadness, and anger when they are posed by their mothers instead of by strangers (Montague & Walker-Andrews, 2002). Infants as young as 5 months also react differentially to negative and positive emotions conveyed through speech. Young infants respond with positive affect to happy "approval" vocalizations (speech with melodic, exaggerated rise–fall F_o contours) and they express negative affect to angry "prohibition" vocalizations (speech with a sharp, staccato vocal intonation) – even when the utterances are spoken in non-native languages (Fernald, 1996). Although these early emotion concepts are immature relative to older children's and adults' conceptual knowledge, these nascent emotion categories likely enable very young children to more efficiently encode, store, and retrieve emotion-related information, much the same way as any type of category functions.

By 9 to 12 months, infants know that people's emotions are often directed towards objects, people, or events in the environment, and convey useful information about how to respond (Moses, Baldwin, Rosicky, & Tidball, 2001; Phillips, Wellman, & Spelke, 2002). For example, if a mother emotes positively toward an novel object (e.g., an unfamiliar toy), infants are more likely to approach the object, whereas if the mother exhibits fear, the infant is more likely to avoid that object and/or stay close to the mother. This phenomenon is commonly known as "social referencing" (Saarni, Mumme, & Campos, 1998). Interestingly, maternal "anger" expressions often lead to uncertainty in the infant about whether to approach or avoid the object (Barrett, Campos, & Emde, 1996). Not only do infants "socially reference" emotion information in response to another's facial expressions of emotion, but they also do so in response to emotionally expressive vocalizations (Mumme, Fernald, & Herrera, 1996).

This transition to knowing that people's emotions are often directed toward people, objects, or events in the world (e.g., "He likes cats"; "She's mad at her mom") is a watershed in children's emotion understanding and in their developing psychological knowledge more broadly. Indeed, the development of "secondary intersubjectivity" (i.e., sharing knowledge or emotions about objects or people beyond the caregiver–infant dyad; Trevarthen, 1998) is one of the hallmark achievements in children's early understanding of people's mental states – what another person wants, intends, knows, thinks, and feels emotionally (see Baldwin & Moses, 1996; Malle, Moses, & Baldwin, 2001; Wellman & Lagattuta, 2000). Further evidence that 9- to 12-month-olds are becoming increasingly interested in people's emotional evaluations about objects or events is their increased sensitivity to people's eye gaze direction (e.g., Butterworth, 1991), their use of a pointing gesture to call attention to nearby objects (e.g., Woodward & Guajardo, 2002), and their motivation to establish joint attention, or "shared looking," with social partners at an object or event (Adamson & Bakeman, 1991). The absence of these behaviors at this age can, in fact, signal developmental delays that may warrant professional attention. The first birthday also heralds the emergence of toddlers' comprehension of other people as intentional agents who act in planful ways (Tomasello & Rakoczy, 2003).

After several months of this pointing, gesturing, vocalizing, and emoting about objects and people in everyday social interactions, 18-month-olds reveal an entirely new level of emotion understanding. They realize that not everyone reacts the way they do. People can differ in their preferences and emotions (Meltzoff, Gopnik, & Repacholi, 1999). Repacholi and Gopnik (1997) presented 14- and 18-month-olds with two bowls: one

containing broccoli, the other, goldfish crackers. Not surprisingly, nearly all children clearly preferred the goldfish crackers. Next, children watched the experimenter facially and verbally express emotions that either agreed with the toddler's preferences (i.e., "match" condition – delight with the goldfish and disgust with the broccoli) or disagreed with the child's preferences ("mismatch" condition – disgust with the goldfish and love of broccoli). The experimenter then extended her hand to the child and said, "I want more, can you give me some more?" Results showed that the 18- but not 14-month-olds reliably gave the experimenter the food she desired in both the match and mismatched condition. In contrast, the 14-month-olds overwhelmingly offered the tasty goldfish crackers – what they, themselves, desired.

Eighteen-month-olds' recognition that people can have different emotional evaluations of the same object coincides with several other advances in young children's emotional and psychological knowledge that we discuss later, including greater interest in and talk about people's mental and emotional states, the emergence of self-awareness and the subsequent development of self-conscious emotions like pride, guilt, and shame, and the development of empathy. Taken together, toddlers have become psychologically minded in a way that heralds the beginnings of deeper forms of emotional understanding.

Preschool years

As preschoolers develop more sophisticated ideas about the causes of emotion, they often focus on the situations that evoke emotion, or how emotions can be caused by *external events* (e.g., falling down, receiving a present, having an argument). Children as young as age 3 to 4 can pair these kinds of familiar situations with appropriate emotional reactions. Interestingly, "happy situations" are the easiest for them to identify (see Denham, 1998, for a review). Harris (1989) argues that young children learn to pair emotions with situations based on their experiences with a "two-part script." If preschoolers are given one part of the script, either the emotion or the situation, they can fill in the other part. For example, young children can easily reason that getting presents make a person happy, and that a person will feel sad if their pet dies. But preschoolers' range of emotion scripts is limited, and they are not very good at matching up more complex emotions that have no distinctive facial expressions, such as guilty, disappointed, relieved, grateful, and jealous (see Harris, Olthof, Terwogt, & Hardman, 1987). This capacity emerges after the preschool years.

Although knowledge about common eliciting situations for basic emotions is an essential foundation for the early development of young children's knowledge about feelings (Denham, 1998), such a "script-like" understanding of emotion falls short in explaining why individual people often have different, and even opposite, emotional reactions to the same event. In order to explain such *person-specific* emotions (e.g., why Mary is sad, but Jill is happy upon seeing a dog), children must understand that specific emotions are elicited by the meaning that events have for individuals in relation to their prior intentions, desires, beliefs, thoughts, and memories. Thus, children's ability to understand the person-specific nature of emotions is critically connected to their developing understanding of people as *psychological* beings with internal mental lives, what is known as a "theory

of mind" (see Wellman & Lagattuta, 2000, and Barr, this volume). Indeed, recent research on preschoolers' emotion understanding reveals that early emotion concepts are intertwined with children's developing understanding about the psychological world.

Starting around 2 to 3 years of age, children develop an understanding that what people *desire* affects how they feel. They recognize that people feel good, for example, when they get what they want and feel bad when they do not (e.g., Wellman & Banerjee, 1991; Wellman & Bartsch, 1988; Yuill, 1984). Wellman and Woolley (1990) showed 2-year-olds a series of vignettes where a character wanted to find a particular object (e.g., a cat). The character either finds what he or she wanted, finds nothing, or finds an attractive substitute (e.g., a bunny). Children were asked to predict whether the person felt happy or sad. Results showed that even 2-year-olds consistently predicted that the person would feel happy if they found the desired object (100% correct predictions), but feel sad if he or she found nothing (91% correct predictions) or found a substitute (72% correct predictions). When 3- to 5-year-olds (and adults) are asked to describe prototypic "happy" or "sad" situations, the large majority of their scenarios describe getting or doing what one desires as the cause of happiness, and not getting or doing what one wants as leading to sadness (Harter & Whitesell, 1989). Importantly, however, 3- to 5-year-olds experience difficulty reasoning about desire–emotion links in situations where a person has a negative desire (e.g., a child wants to hit a classmate with a ball) or when the means for fulfilling a desire is immoral or prohibited (Arsenio & Lover, 1995; Lagattuta, in press; Yuill, 1984; Yuill, Perner, Peerbhoy, & Emde, 1996).

Young children also come to understand that emotions can be influenced by people's knowledge or beliefs about a situation. For example, Wellman and Banerjee (1991) presented 3- and 4-year-olds with stories such as this: "Jeff visited his grandma and when he got to her house he saw that it was purple. He was very surprised." When asked to explain the cause of Jeff's surprise, preschoolers often appealed to the character's beliefs (e.g., "He's surprised because he didn't think it would be purple"). Thus, young children evidence knowledge that the emotion of "surprise" is based on a person not knowing or expecting a certain outcome. Related studies by Harris and his colleagues (e.g., Harris, Johnson, Hutton, Andrews, & Cooke, 1989) have further shown that, starting around the ages of 5 and 6, children appreciate that emotions can even be based on mistaken beliefs about the world. That is, they know that even if Ellie's favorite drink is not in the cup, she will feel happy (before drinking it) if she *thinks* it is there (see also Hadwin & Perner, 1991; Ruffman & Keenan, 1996).

Adult knowledge about the psychological causes of emotions goes beyond just understanding that people's desires and beliefs about *current* circumstances influence people's emotions. We recognize that emotions are also frequently caused by thinking or being reminded about *past* experiences. In a series of studies, Lagattuta, Wellman, and Flavell (1997) examined developmental changes in children's knowledge about the connections between people's emotions, their thoughts, and their individual life histories. They presented 3- through 6-year-olds with scenarios featuring characters who experience a sad event (e.g., doll broken by circus clown) and then, many days later, start to feel the same negative emotion after seeing a reminder of that past experience (e.g., seeing the clown that broke the doll, the doll's bottle, a photograph of the doll). Children were asked to explain the cause of the characters' current sadness. Results showed that many 3-year-olds,

the majority of 4-year-olds, and nearly all 5- and 6-year-olds could explain that a person's emotions were elicited by thinking about the past for at least one story trial (e.g., "She's sad because she remembers her dolly"), with the consistency of these "thinking explanations" increasing significantly over the preschool years. In a separate task, children as young as 3 years demonstrated understanding that changes in thought can cause changes in emotion. That is, they consistently predicted that people who experienced a negative event (e.g., losing a cat) would "feel better" if they thought about a distracting activity (e.g., what snack they were going to eat) and "feel worse" if they thought most about the negative event.

Additional studies by Lagattuta and Wellman (2001) further examined the situations where 3- to 7-year-olds do and do not make such life-historical, mental explanations for emotions. Scenarios varied in whether the event made the target character feel "happy" versus "sad"/"mad," whether or not the target character's current emotion was typical or atypical for the current circumstances (e.g., Anne feels mad after the clown gives her a balloon, versus Anne feels mad after the clown soaks her with a water balloon), and whether or not two people in the same situation experienced the same or different emotions. Results indicated that young children (3- to 5-year-olds) only provided cognitively based emotion explanations for someone who was experiencing a *negative* emotion that *mismatched* a current, typically positive situation (e.g., Anne feels mad after the clown gives her a balloon). Not until the ages of 6 to 7 years did children consistently demonstrate knowledge about the connections between thoughts and emotions in other contexts (e.g., matched or mismatched positive emotions, matched negative emotions). Interestingly, then, although children younger than 7 or 8 rarely suggest mental strategies (e.g., thinking positive thoughts) to feel better or cope in negative situations (Harris, 1989), they do develop early knowledge about how negative thoughts can make a person feel bad even in a positive situation.

Young children's developing psychological and emotional knowledge is reflected not only in their responses to hypothetical story tasks, but also in how they talk about emotions during their everyday conversations. Between the ages of 2 and 5 years, children's receptive and productive vocabulary to describe emotions expands significantly (Bretherton & Beeghly, 1982; Bretherton, Fritz, Zahn-Waxler, & Ridgeway, 1986; Dunn, Bretherton, & Munn, 1987). Children also talk more often about emotions of people besides themselves (Smiley & Huttenlocher, 1989), and comment more frequently about emotions experienced in the past or expected for the future (Kuebli & Fivush, 1992; Lagattuta & Wellman, 2002). Moreover, children's talk about emotions expands beyond simple labels and descriptions (e.g., "He's sad") to focus more on explaining the causes of emotions (e.g., "He's sad because nobody will play with him"), or seeking emotion explanations from others (e.g., "Why is he sad?") (Bretherton & Beeghly, 1982; Dunn & Brown, 1993; Lagattuta & Wellman, 2002). During the same period, children also begin conversing more frequently about mental states, including discussing causal connections between people's internal psychological states and their emotions or behaviors (e.g., "He's sad because he thought he would get a toy, but didn't") (Bartsch & Wellman, 1995; Hickling & Wellman, 2001; Lagattuta & Wellman, 2002). Notably, parents and children more often focus these rich conversations about the causes of emotions, past

emotions, and mind–emotion connections on negative as opposed to positive emotions, perhaps because they are more troubling and arousing (see Lagattuta & Wellman, 2002). We will return to the significance of negative emotions in our later section on emotion communication and regulation in the family.

In summary, during the preschool and early grade-school years, children's expanding language skills afford them frequent opportunities to talk about, explain, reflect on, and learn about their own emotional experiences and the feelings of people around them. Between the ages of 3 and 5, children reveal understanding about the situational determinants of emotions. Yet, contrary to previous conclusions that preschoolers are simple "situationists" when it comes to understanding emotion causes, many recent studies indicate that young children achieve remarkably early insights into how people's minds – including their desires, beliefs, and thoughts – can influence their emotional well-being. Moreover, young children not only recognize that emotions are elicited by events or appraisals of the "here and now," but they also understand that current emotions can be meaningfully shaped by people's unique past experiences. Research on parent–child conversations suggests that talk about and reflection on negative emotions may play an especially important role in the development of children's early understanding of emotions.

Emotional Development and Close Relationships

How do young children develop such a sophisticated understanding of emotion? Certainly one reason is that emotional experiences are highly salient events that young children strive to comprehend. Witnessing a sibling's distress or trying to manage fear focuses a child's attention on the causes and consequences of strong feelings. Children are not alone in their efforts to understand emotion, however. Emotional development is significantly shaped by the broader emotional climate of the family (Gottman, Katz, & Hooven, 1997), including how parents and children talk about their own and others' emotional experiences.

The most salient emotional experiences of newborns and young infants often occur during periods of social interaction with a caregiver, such as during feeding, comforting, holding, and playing (Saarni et al., 1998). Beginning in infancy, a parent's sensitive responsiveness to the child's emotional signals (such as crying and smiling) and support during everyday routines and stressful experiences encourage the growth of security and emotional well-being (Cassidy, 1994; Thompson, 1994). Over the course of the first year, infants begin to expect their parents to share their positive feelings and intervene helpfully when they are distressed (Capatides & Bloom, 1993; Thompson, 1998). These kinds of sensitive, responsive transactions and secure parent–child relationships together help regulate developing emotions and psychobiological stress systems. In fact, a toddler's physiological arousal to stressful situations is buffered by the presence of a sensitive parent (Gunnar & Donzella, 2002). In stressful situations with a parent present, toddlers with a secure relationship with the parent did not show elevations in cortisol,

while toddlers with an insecure relationship with the parent showed cortiso elevations (Gunnar & Donzella, 2002; see also Gunnar, this volume; Nachmias, Gunna Mangelsdorf, Parritz, & Buss, 1996).

One way this buffering occurs is through "social referencing." As earlier noted, infant and toddlers are attuned to the emotional expressions of others, and frequently turn t – or "socially reference" – those they trust for emotional guidance when faced with upset ting, frightening, confusing, or other challenging circumstances. Young children respond to these situations more positively and competently when adults provide reassuring emo tional cues (e.g., smiles, soothing words, a relaxed posture) compared to when the emo tional signals they receive from parents are negative or ambivalent (see Saarni et al., 1998). Moreover, adults who are sensitive to a toddler's emotional signals also more effectively guide their child's efforts to cope with new challenges or situations (Nachmias et al., 1996). In general, a secure parent–child attachment relationship is associated with enhanced emotion understanding, greater cooperation, less negativity and decreased aggression in close relationships, as well as other indications of positive emotional growth in early childhood (see Thompson, 1999, for a review).

The emotional climate of the home consists not only of how parents respond to a child's emotions, but also how emotion is expressed among family members (Denham, 1998; Eisenberg, Cumberland, & Spinrad, 1998). Parents are salient models of emotional responsiveness to their offspring. By their behavior, they help children define acceptable forms of emotional expression and self-control, including the appropriate emotional responses for specific situations (such as when disagreeing with another). Parents' negative emotions provide particularly salient lessons in how and whether disturbing emotions such as anger are confronted and resolved, as well as the degree to which close relation-ships are preserved or strained by intense emotional exchanges (Cummings & Davies, 1994). Parents also provide salient examples of when emotions must be masked, muted, or accentuated. These types of parental behaviors foster in children more generalized styles of responding to the emotions of others (e.g., in sympathetic, avoidant, dismissing, denigrating, or other ways) and the capacity to adapt their emotional reactions to widely varying circumstances.

For all of these reasons, the findings of an extensive research literature are unsurprising: children tend to be more positive and exhibit greater emotional well-being in families characterized by positive emotional expressivity and, conversely, are more emotionally negative in family settings saturated with conflict and in which parents respond dismis-sively or punitively to children's emotional expressions (Denham, 1998; Eisenberg et al., 1998; Halberstadt & Eaton, 2002). In one study, for example, preschoolers who showed high amounts of negative emotionality during free play with peers had parents who responded punitively, harshly, and with distress to the child's negative emotion at home (Fabes, Leonard, Kupanoff, & Martin, 2001). These children were not only negative but were also low in social competence with peers, as independently indexed by teacher reports.

Children learn not only by observing their parents' emotional actions and reactions but also through conversations in which emotion is the central topic or through direct instruction. During their everyday conversations with parents, young children frequently label, describe, ask questions, provide explanations, and learn about the causes and con-

sequences of people's feelings. Not surprisingly, then, parents who discuss emotions more frequently and with greater elaboration have children with more accurate and richer conceptualizations of emotion (Denham, 1998; Denham, Zoller, & Couchoud, 1994; Dunn, 1996; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991; Thompson, Laible, & Ontai, 2003).

Parent–child conversations support the development of emotional understanding in many ways. In discussions about past experiences, witnessed events, or while reading stories, parents can help interpret what another person is feeling, clarify the causes of someone's emotions, link emotion in another person to the child's own experience, ask questions of children that further their understanding of the consequences of emotional arousal, and coach children in strategies for managing feelings (Thompson et al., 2003). Parents and children devote considerably more effort to discussing the causes of negative in comparison to positive emotions because negative emotion is conceptually more complex and is also more troubling, and thus there is a stronger inherent urgency to regulate or prevent intense negative feelings (Lagattuta & Wellman, 2002). Some research indicates that parents also talk about emotion differently with daughters than with sons: they use more elaboration and have a greater relational focus in their emotion-related conversations with daughters (Fivush, 1998).

When discussing emotion with their children, parents frequently incorporate the cultural beliefs, moral evaluations, and assumptions about causality that are part of how people think about their feelings in everyday circumstances. These cultural beliefs and values embedded in everyday conversation influence the early development of emotion understanding. Children in western and non-western cultures differ, for example, in their beliefs about whether anger or shame is the more appropriate emotional response to interpersonal difficulty, and whether it is suitable to express negative feelings in such situations (Cole, Bruschi, & Tamang, 2002). As a consequence, children learn about emotion in conversations that link emotion to standards of conduct and social awareness. This likely explains why parental conversational references to feelings are an even more significant predictor of early conscience development than are parents' explicit references to rules (Laible & Thompson, 2000).

Parents also directly coach emotion and emotional self-control in offspring, especially in circumstances when the child's emotional demeanor is important to manage (such as during religious services, birthday parties, or a doctor's visit). More broadly, the general emotional climate of the family defines the daily emotional demands with which young children must cope: how regularly young children encounter another family member with strong feelings (of anger, happiness, sadness, or other emotions), how children's emotional responses are affected by the emotions around them (e.g., feeling anxious in a conflicted family environment), and the sense of emotional security that is either fostered or undermined by the overall emotional quality of family interaction (Cummings & Davies, 1994).

A young child's emotional growth is socialized not only by parent–child interaction but also by encounters with siblings at home and with peers outside the home. Indeed, young children talk about feelings and thoughts more frequently with friends and siblings than they do with their mothers (Brown, Donelan-McCall, & Dunn, 1996), and these conversations contribute to children's developing psychological and emotional

understanding (Hughes & Dunn, 1998). Sibling interactions provide unique contexts for promoting the growth of emotion expression and understanding, such as pretend play that permits animated role-taking of feelings and coping strategies (Dunn et al., 1991; Youngblade & Dunn, 1995), sibling conflict that involves negotiating desires and needs with other family members (Dunn & Herrera, 1997), and sibling jealousy that provokes siblings to compete with each other for parental attention and affection (Volling, McElwain, & Miller, 2002). Young children can also observe the causes and consequences of the salient emotions evoked by peer interactions. This is especially important in view of the significance of emotional understanding for social competence (Rubin, Coplan, Nelson, Cheah, & Legace-Seguin, 1999). Emotional understanding with peers enhances the incentives for prosocial behavior and buffers aggressive conduct among preschoolers, contributes to the quality of social skills that elicit peer acceptance or rejection, and fosters the emergence of enduring friendships in early childhood (Dunn, 2004; Rubin et al., 1999). Indeed, because young peers are much less accepting and accommodating social partners than are parents and other adults, peer groups are likely to provide unique incentives for children to learn how to comprehend and respond appropriately to others' feelings (see also Fabes, Gaertner, & Popp, this volume).

These social influences are important because emotion understanding is a foundation for social competence in early childhood. Individual differences in preschoolers' emotional competence – defined as capability in emotional expressiveness, emotion regulation, and emotion knowledge – predict teacher and peer measures of social competence both concurrently and in kindergarten (Denham, Blair, DeMulder, Levitas, Sawyer, Auerbach-Major, & Queenan, 2003). The emergence of individual differences in "emotional competence" (Saarni, 1999) or "affective social competence" (Halberstadt, Denham, & Dunsmore, 2001) in the preschool years is important in shaping children's social skills and dispositions in ways that have implications not only for friendship and peer status but also for academic competence, self-image, and emotional well-being (Thompson & Raikes, in press).

Early Emotional Vulnerability

The importance of the family environment as a laboratory of early emotional development is underscored by the realization that even young children can experience the severity of trauma, depths of sadness and grief, and capacities for uncontrollable anger and aggression that traditionally were viewed as possible only at older ages (Shonkoff & Phillips, 2000). Young children who are witnesses to domestic violence, for example, are more likely to exhibit internalizing symptoms (such as depression and anxiety) and externalizing symptoms (such as aggression) as well as showing signs of post-traumatic stress disorder (Rossman, Bingham, & Emde, 1997; Rossman, Hughes, & Rosenberg, 2000). Comparable symptomatology can be observed in young children who have been maltreated (Cicchetti & Toth, 2000; Macfie, Cicchetti, & Toth, 2001). Young children also exhibit symptomatology of depression (Robinson & Garber, 1995), anxiety disorders (Vasey & Dadds, 2001), conduct and behavioral disorders (Owens & Shaw, 2003; Shaw,

Gilliom, Ingoldsby, & Nagin, 2003), and other serious forms of affective psychopathology. The risk of serious psychological problems increases when children are in threatening or traumatizing circumstances like those described above, but psychological symptomatology certainly is not inevitable, and many children in these situations do not develop serious problems, especially when they have available to them social support and other resources for effective coping.

The emotional climate of the home is often a significant contributor to these emotional vulnerabilities in young children (Thompson & Calkins, 1996; Thompson, Flood, & Goodvin, in press). Children in homes characterized by marital conflict, for example, often seek to re-establish the emotional security they have lost by intervening in parental arguments, monitoring parental moods, and otherwise striving to manage their emotions in a conflicted home environment (Cummings & Davies, 1994; Davies & Forman, 2002). Frequent coercive and negative family interactions sometimes extend beyond the home to antagonistic peer interactions (Reid, Patterson, & Snyder, 2002).

Young children of parents with affective disorders like depression are also at heightened risk of emotional problems because of the caregiver's limited accessibility as a source of emotional support for the child (Goodman & Gotlib, 1999). For example, Dawson and her colleagues showed that infants of depressed mothers were more likely to exhibit affective and neurobiological disturbances when interacting with their mothers as well as with a non-depressed caregiver. As preschoolers, these children continued to exhibit behavioral and brain differences when compared with the offspring of non-depressed mothers or mothers whose depression had remitted (Dawson et al., 2003). Other studies have further shown that harsh parenting is an important predictor of which children will later develop behavioral problems, especially as parenting interacts with the child's temperamental vulnerability (Rubin, Burgess, Dwyer, & Hastings, 2003; Owens & Shaw, 2003; Shaw et al., 2003).

In short, the sensitivity of young children to the family emotional climate is a double-edged sword. In well-functioning families it enhances the development of skills in emotion understanding and self-regulation, but in families torn by parental psychopathology, domestic violence, or other significant disorders, it can contribute to enduring emotional vulnerability.

Although the emotional problems arising in children in these circumstances are not typically self-correcting, they can be remediated through therapeutic efforts emphasizing family assistance, social support to the child, and efforts to help children recover age-appropriate coping skills. For young children exposed to domestic violence, for example, programs that provide parenting support to mothers and that assist young children in comprehending their family experiences have proven beneficial (Graham-Berman & Hughes, 2003).

Emotional Development and the Self

Emotional development in early childhood is deeply related to a child's growing sense of self. As young children develop self-awareness and self-understanding late in the second

year and in the third year, their emotional repertoire broadens to encompass self-conscious emotions like pride, shame, guilt, and embarrassment (Barrett, 1998; Lewis, 2000). The indications of developing self-awareness during this period are readily observable (Thompson, 1998). Toddlers begin to recognize their mirror images before the second birthday, revealing an objective awareness of their physical appearance. Between 18 and 36 months, children increasingly refer to themselves verbally ("Andy big!"), ascribe emotions to themselves, describe themselves by gender and by other characteristics or behaviors, assert their competence by doing things for themselves, and become more interested in how they are evaluated by others (see Thompson & Goodvin, 2005, for a review).

The emergence of self-conscious emotions derives from the enhanced self-awareness of the young child. As a result, the simple joy of success becomes accompanied by looking and smiling to an adult and calling attention to the feat (pride), and sadness in the presence of a disapproving adult grows into efforts to avoid the caregiver's approbation (shame) or make amends (guilt). Young children's experience of the self-conscious emotions deepens in the fourth and fifth years with further growth in self-understanding, especially as children begin to attribute psychological characteristics or traits to themselves, such as describing themselves as shy (Eder, 1989).

Self-conscious evaluative emotions like pride, shame, and guilt require not only self-awareness, but also an external standard against which the child's characteristics or performance is evaluated (Thompson, Meyer, & McGinley, 2006). Young children appear to be particularly sensitive to the behavioral expectations of people who matter to them, and may even view these expectations as normative obligations in a manner resembling what Piaget called "moral absolutism" (Thompson, et al., 2006; Wellman & Miller, in press). The young child's search for normative standards of conduct coincides with the salient reactions of parents, whose responses to the successes and failures of their offspring not only directly induce feelings of pride, guilt, or shame, but also cognitively structure the child's understanding of the causes of these emotions (Stipek, 1995). Parents do this by explicitly linking their response to the standards the parent has previously conveyed ("You know better than to hit your sister!"), invoking salient attributions of responsibility ("Why did you hit her?"), and often directly inducing the self-referent evaluation and emotion ("Bad boy!"). Kochanska's research on the development of conscience and guilt has shown that parental reactions to children's behavior as well as the child's personal capacities for self-regulation critically contribute to the growth of the child's "moral self" (e.g., Kochanska, Gross, Lin, & Nichols, 2002).

Parental and personal responses to others' negative feelings also influence the development of empathy in early childhood (Zahn-Waxler, 2000). The sight and sound of another's distress, fear, or anger is a motivationally complex and stressful event for young children because of their limited understanding of its causes and its threats to their personal security. Consequently, young children may respond with sympathetic feelings and prosocial assistance to the upset person, or, alternatively, they may seek personal comfort or ignore, laugh at, or even aggress toward the other person. When adults can assist the children's understanding of the emotions they are witnessing, especially by clarifying causality and responsibility, raw empathic arousal is more likely to become channeled into prosocial versus antisocial initiatives, including admitting culpability or feeling guilt when the child is responsible (Zahn-Waxler & Robinson, 1995).

Another achievement in emotional development during this period also relates to the growth of self-understanding and psychological awareness. At age 4 to 5, when advances in their emerging "theory of mind" enable young children to comprehend how people act on the basis of beliefs that may, or may not, be correct, they begin to appreciate their own capacities for emotional deception. As young as age 4, therefore, they begin to manage their emotional expressions in social situations, using the "display rules" that cause them to feign delight in a disappointing gift, or look nonchalant in the face of teasing (Banerjee, 1997; Cole, 1986). Although it is not until middle childhood that children's understanding of display rules and their functioning flourishes (Jones, Abbey, & Cumberland, 1998; Saarni, 1999), their growing appreciation of the social deception of one's emotional expressions contributes to a broader discovery: one can disguise one's true feelings and thus retain the privacy of emotional experience. In light of how cultural values concerning the self and the social world vary, it is unsurprising that children in western and non-western cultures differ from the age of 6 in their understanding of the social conventions governing the social expression of positive and negative emotions (Cole et al., 2002; Cole & Tamang, 1998). Even within western cultures the display rules conveyed to boys and girls differ. It is more appropriate for girls than for boys, for example, to display feelings of sadness or fear (Fivush, 1998).

Development of Emotion Regulation

During early childhood, competencies in emotion regulation emerge (Cole, Martin, & Dennis, 2004; Eisenberg & Morris, 2002; Thompson, 1994). Emotion regulation consists of the external aids (such as another's comfort) and internal strategies (such as redirecting disturbing thoughts) for managing emotional arousal. Young children have diverse motives for managing their emotions: to feel better in stressful circumstances (such as during family conflict), elicit support (e.g., after a tricycle crash), manage fear and act courageously (such as when confronting a bully), affirm relationships (by managing the frustration of taking turns), comply with social rules (such as remaining quiet in church), and for many other reasons. At the same time that young children are learning to manage the *expression* of emotions by using display rules, therefore, they are also acquiring skills at regulating emotional *arousal* itself.

Initially, parents are primarily responsible for managing the emotions of infants and young children. They do so by directly intervening to soothe a distressed baby, responding appropriately and helpfully to the toddler's emotional signals, regulating the emotional demands of the home and other familiar settings, altering the child's construal of emotionally arousing experiences (such as trips to the dentist or exciting playground rides), and coaching children on social expectations or strategies for emotional management (Thompson, 1990). At the same time, the security and confidence that young children derive from their relationships with caregivers offer support for emotion regulation because the adult's supportive companionship and assistance provide immediate reassurance (Cassidy, 1994; Thompson, 1998). The parent's immediate intervention in a

stressful experience and the general security of the parent–child relationship each contribute to helping infants and young children regulate their feelings.

As children grow older, they become more capable of managing emotions for themselves. Besides knowing when and how to seek comfort from an adult, preschoolers can also be observed making active efforts to avoid or ignore emotionally arousing situations, redirecting their attention or activity in more emotionally satisfying ways, substituting new goals for those that have been frustrated, using distraction or reassuring self-talk, seeking further information about challenging situations, and in other ways (see review by Thompson, 1990). Furthermore, as they proceed into middle childhood, children become proficient at enlisting more internally directed, psychological strategies for emotional self-regulation, such as altering their thoughts or attributions of motives. In these ways, skills of emotion self-regulation follow the development of more sophisticated forms of emotional understanding – enlisting children's increased understanding of the situational and mental determinants of emotion.

Like emotional understanding, a child's capacity for emotional self-regulation is critical to social competence and peer acceptance because skills of emotional self-control are necessary for managing aggressive impulses, responding appropriately to peers' feelings, maintaining friendship, and cooperating with a group (Rubin et al., 1999). Emotional self-regulation is also important for academic success because capacities to follow instructions, focus attention, and cooperate with teachers and peers in a classroom require managing feelings and behaviors (Thompson & Raikes, in press). In one study with socio-economically disadvantaged preschool boys, for example, Gilliom and colleagues found that children's emotion regulation strategies during a frustrating task at age 3½ – such as shifting attention away from the sources of frustration or seeking information about the situation – predicted children's cooperativeness and externalizing behavior at school age (Gilliom, Shaw, Beck, Schonberg, & Lukon, 2002). Conclusions such as these underscore the significance of the emotional skills that children acquire in early childhood for understanding and managing their emotions in multiple contexts.

Conclusion

Emotional development is intimately connected to the most fundamental facets of psychological growth in early childhood. Young children's developing understanding of the causes and consequences of emotion is related to their broader comprehension of how people's desires, needs, thoughts, and intentions affect behavior. Young children's capacities to interpret and respond adaptively to emotions are also deeply tied to their experience in family relationships that socialize emotional experience in complex ways. Their experience of self-conscious emotions, together with their developing capacities for empathy and their growing understanding of display rules, are each related to a young child's unfolding self-understanding. As young children develop emotional capacities and become increasingly aware of the causes and consequences of emotional experiences, their skills of emotional self-regulation emerge, built on the incentives for emotional self-control found in close relationships.

Because emotional growth is intimately related to the most psychologically constructive features of early development, individual differences in emotional development index many of the child's broader psychological competencies. When the emotional climate of the home is troubled, as we have noted, children reveal these difficulties in affective problems or difficulties in emotional self-control. Thus, even very young children can experience the peaks of emotional delight as well as the depths of intense fear, anxiety, and depression. High levels of emotional negativity in the family not only create emotional vulnerabilities for young children but also can jeopardize their ability to form successful social relationships outside of the home. Children who are frequently rejected or disliked by their peers, for example, often exhibit deficiencies in their capacities to appropriately "read" and respond to the feelings of other children. For these reasons, understanding better the bases of individual differences in early emotional development is important not just because of the strong connections between emotional growth and other facets of psychological growth, but also because emotional disturbances are often the first and most apparent index of other difficulties in children's lives.

These conclusions, based on current research on early emotional development, are an important and welcomed contrast to traditional views of emotion in young children, which have typically emphasized the disorganizing, irrational features of early emotional experience, and the inability of young children to experience emotion with the depth or intensity of adults. This growing awareness of the sophistication of young children's understanding of emotions and of the complexity of feeling that young children are capable of experiencing, together with the importance of children's close relationships for emotional growth, mandates vigorous further research in this area.

References

Adamson, L. B., & Bakeman, R. (1991). The development of shared attention during infancy. In R. Vasta (Ed.), *Annals of child development* (Vol. 8, pp. 1–41). London: Kingsley.

Arsenio, W., & Lover, A. (1995). Children's conceptions of sociomoral affect: Happy victimizers, mixed emotions, and other expectancies. In M. Killen & D. Hart (Eds.), *Morality in everyday life: Developmental perspectives* (pp. 87–128). Cambridge: Cambridge University Press.

Baldwin, D. A., & Moses, L. J. (1996). The ontogeny of social information gathering. *Child Development, 67,* 1915–1939.

Banerjee, M. (1997). Hidden emotions: Preschoolers' knowledge of appearance–reality and emotion display rules. *Social Cognition, 15,* 107–132.

Barrett, K. (1998). The origins of guilt in early childhood. In J. Bybee (Ed.), *Guilt and children* (pp. 75–90). San Diego: Academic Press.

Barrett, K., Campos, J. J., & Emde, R. N. (1996). Infants' use of conflicting emotion signals. *Cognition and Emotion, 10,* 113–135.

Bartsch, K., & Wellman, H. (1995). *Children talk about the mind.* Oxford: Oxford University Press.

Bornstein, M. H., & Arterberry, M. E. (2003). Recognition, discrimination, and categorization of smiling by 5-month-old infants. *Developmental Science, 6,* 585–599.

Bretherton, I., & Beeghly, M. (1982). Talking about internal states: The acquisition of an explicit theory of mind. *Developmental Psychology, 18,* 906–921.

Bretherton, I., Fritz, J., Zahn-Waxler, C., & Ridgeway, D. (1986). Learning to talk about emotions: A functionalist perspective. *Child Development, 57*, 529–548.

Brown, J. R., Donelan-McCall, N., & Dunn, J. (1996). Why talk about mental states? The significance of children's conversations with friends, siblings, and mothers. *Child Development, 67*, 836–849.

Butterworth, G. (1991). The ontogeny and phylogeny of joint visual attention. In A. Whiten (Ed.), *Natural theories of mind* (pp. 223–232). Oxford: Blackwell.

Camras, L. A. (2000). Surprise! Facial expressions can be coordinative motor structures. In M. Lewis & I. Granic (Eds.), *Emotion, development, and self-organization* (pp. 100–124). New York: Cambridge University Press.

Capatides, J. B., & Bloom, L. (1993). Underlying processes in the socialization of emotion. In C. Rovee-Collier & L. P. Lipsitt (Eds.), *Advances in infancy research* (Vol. 8, pp. 99–135). Norwood, NJ: Ablex.

Cassidy, J. (1994). Emotion regulation: Influences of attachment relationships. In N. A. Fox (Ed.), *The development of emotion regulation and dysregulation: Biological and behavioral aspects. Monographs of the Society for Research in Child Development, 59*(2–3, Serial No. 240), 228–249.

Cicchetti, D., & Toth, S. L. (2000). Developmental processes in maltreated children. In D. J. Hansen (Ed.), *Nebraska Symposium on Motivation: Vol. 46. Motivation and child maltreatment* (pp. 85–160). Lincoln: University of Nebraska Press.

Cole, P. M. (1986). Children's spontaneous control of facial expression. *Child Development, 57*, 1309–1321.

Cole, P. M., Bruschi, C. J., & Tamang, B. L. (2002). Cultural differences in children's emotional reactions to difficult situations. *Child Development, 73*, 983–996.

Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development, 75*, 317–333.

Cole, P. M., & Tamang, B. L. (1998). Nepali children's ideas about emotional displays in hypothetical challenges. *Developmental Psychology, 34*, 640–646.

Cummings, E. M., & Davies, P. (1994). *Children and marital conflict: The impact of family dispute and resolution.* New York: Guilford.

Davies, P. T., & Forman, E. M. (2002). Children's patterns of preserving emotional security in the interparental subsystem. *Child Development, 73*, 1880–1903.

Dawson, G., Ashman, S. B., Panagiotides, H., Hessl, D., Self, J., Yamada, E., & Embry, L. (2003). Preschool outcomes of children of depressed mothers: Role of maternal behavior, contextual risk, and children's brain activity. *Child Development, 74*, 1158–1175.

Denham, S. A. (1998). *Emotional development in young children.* New York: Guilford.

Denham, S. A., Blair, K. A., DeMulder, E., Levitas, J., Sawyer, K., Auerbach-Major, S., & Queenan, P. (2003). Preschool emotional competence: Pathway to social competence. *Child Development, 74*, 238–256.

Denham, S. A., Zoller, D., & Couchoud, E. A. (1994). Socialization of preschoolers' emotion understanding. *Developmental Psychology, 30*, 928–936.

Dunn, J. (1996). The Emanuel Miller Memorial Lecture 1995. Children's relationships: Bridging the divide between cognitive and social development. *Journal of Child Psychology & Psychiatry, 37*, 507–518.

Dunn, J. (2004). *Children's friendships: The beginnings of intimacy.* Oxford: Blackwell.

Dunn, J., Bretherton, I., & Munn, P. (1987). Conversations about feelings between mothers and their young children. *Developmental Psychology, 23*, 132–139.

Dunn, J., & Brown, J. R. (1993). Early conversations about causality: Content, pragmatics, and developmental change. *British Journal of Developmental Psychology, 11*, 107–123.

Dunn, J., Brown, J. R., Slomkowski, C., Tesla, C., & Youngblade, L. (1991). Young children's understanding of other people's feelings and beliefs: Individual differences and their antecedents. *Child Development, 62,* 1352–1366.

Dunn, J., & Herrera, C. (1997). Conflict resolution with friends, siblings, and mothers: A developmental perspective. *Aggressive Behavior, 23,* 343–357.

Eder, R. A. (1989). The emergent personologist: The structure and content of 3½-, 5½-, and 7½-year-olds' concepts of themselves and other persons. *Child Development, 60,* 1218–1228.

Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry, 9,* 241–273.

Eisenberg, N., & Morris, A. S. (2002). Children's emotion-related regulation. In R. Kail (Ed.), *Advances in child development and behavior* (Vol. 30, pp. 190–229). San Diego: Academic.

Fabes, R. A., Leonard, S. A., Kupanoff, K., & Martin, C. L. (2001). Parental coping with children's negative emotions: Relations with children's emotional and social responding. *Child Development, 72,* 907–920.

Fernald, A. (1996). Approval and disapproval: Infant responsiveness to vocal affect in familiar and unfamiliar languages. *Child Development, 64,* 657–674.

Fivush, R. (1998). Gendered narratives: Elaboration, structure, and emotion in parent–child reminiscing across the preschool years. In C. P. Thompson & D. J. Herrmann (Eds.), *Autobiographical memory: Theoretical and applied perspectives* (pp. 79–103). Mahwah, NJ: Erlbaum.

Gilliom, M., Shaw, D. S., Beck, J. E., Schonberg, M. A., & Lukon, J. L. (2002). Anger regulation in disadvantaged preschool boys: Strategies, antecedents, and the development of self-control. *Developmental Psychology, 38,* 222–235.

Goodman, S. H., & Gotlib, I. H. (1999). Risk for psychopathology in the children of depressed mothers: A developmental model for understanding mechanisms of transmission. *Psychological Review, 106,* 458–490.

Gottman, J. M., Katz, L. F., & Hooven, C. (1997). *Meta-emotion: How families communicate emotionally.* Mahwah, NJ: Erlbaum.

Graham-Berman, S. A., & Hughes, H. M. (2003). Intervention for children exposed to interparental violence (IPV): Assessment of needs and research priorities. *Clinical Child and Family Psychology Review, 6,* 189–204.

Gunnar, M. R., & Donzella, B. (2002). Social regulation of the cortisol levels in early human development. *Psychoneuroendocrinology, 27,* 199–220.

Hadwin, J., & Perner, J. (1991). Pleased and surprised: Children's cognitive theory of emotion. *British Journal of Developmental Psychology, 9,* 214–234.

Halberstadt, A. G., Denham, S. A., & Dunsmore, J. C. (2001). Affective social competence. *Social Development, 10,* 79–119.

Halberstadt, A. G., & Eaton, K. L. (2002). A meta-analysis of family expressiveness and children's emotion expressiveness and understanding. *Marriage & Family Review, 34,* 35–62.

Harris, P. L. (1989). *Children and emotion: The development of psychological understanding.* Oxford: Blackwell.

Harris, P. L., Johnson, C. N., Hutton, D., Andrews, G., & Cooke, T. (1989). Young children's theory of mind and emotion. *Cognition and Emotion, 3,* 379–400.

Harris, P. L., Olthof, T., Terwogt, M. M., & Hardman, C. E. (1987). Children's knowledge of the situations that provoke emotion. *International Journal of Behavioral Development, 10,* 319–343.

Harter, S., & Whitesell, N. R. (1989). Developmental changes in children's understanding of single, multiple, and blended emotion concepts. In C. Saarni & P. L. Harris (Eds.), *Children's understanding of emotion* (pp. 81–116). Cambridge: Cambridge University Press.

Hickling, A. K., & Wellman, H. M. (2001). The emergence of children's causal explanations and theories: Evidence from everyday conversation. *Developmental Psychology, 37*, 668–683.

Hughes, C., & Dunn, J. (1998). Understanding mind and emotion: Longitudinal associations with mental-state talk between young friends. *Developmental Psychology, 34*, 1026–1037.

Izard, C. E. (1991). *The psychology of emotions.* New York: Plenum.

Jones, D. C., Abbey, B. B., & Cumberland, A. (1998). The development of display rule knowledge: Linkages with family expressiveness and social competence. *Child Development, 69*, 1209–1222.

Kochanska, G., Gross, J. N., Lin, M. H., & Nichols, K. E. (2002). Guilt in young children: Development, determinants, and relations with a broader system of standards. *Child Development, 73*, 461–482.

Kuebli, J., & Fivush, R. (1992). Gender differences in parent–child conversations about past emotions. *Sex Roles, 27*, 683–698.

Lagattuta, K. H. (2003). When you shouldn't do what you want to do: Young children's understanding of desires, rules, and emotions. *Child Development.*

Lagattuta, K. H., & Wellman, H. M. (2001). Thinking about the past: Young children's knowledge about links between past events, thinking, and emotion. *Child Development, 72*, 82–102.

Lagattuta, K. H., & Wellman, H. M. (2002). Differences in early parent–child conversations about negative versus positive emotions: Implications for the development of emotion understanding. *Developmental Psychology, 38*, 564–580.

Lagattuta, K. H., Wellman, H. M., & Flavell, J. H. (1997). Preschoolers' understanding of the link between thinking and feeling: Cognitive cuing and emotional change. *Child Development, 68*, 1081–1104.

Laible, D. L., & Thompson, R. A. (2000). Mother–child discourse, attachment security, shared positive affect, and early conscience development. *Child Development, 71*, 1424–1440.

Lewis, M. (2000). Self-conscious emotions: Embarrassment, pride, shame, and guilt. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (pp. 563–573). New York: Guilford.

Macfie, J., Cicchetti, D., & Toth, S. L. (2001). The development of dissociation in maltreated preschool-aged children. *Development and Psychopathology, 13*, 233–254.

Malle, B. F., Moses, L. J., & Baldwin, D. A. (Eds.). (2001). *Intentions and intentionality: Foundations of social cognition.* Cambridge, MA: MIT Press.

Meltzoff, A. N., Gopnik, A., & Repacholi, B. M. (1999). Toddlers' understanding of intentions, desires and emotions: Explorations of the dark ages. In P. D. Zelazo & J. W. Astington (Eds.), *Developing theories of intention: Social understanding and self-control* (pp. 17–41). Mahwah, NJ: Erlbaum.

Montague, D. P., & Walker-Andrews, A. S. (2002). Mothers, fathers, and infants: The role of person familiarity and parental involvement in infants' perception of emotion expressions. *Child Development, 73*, 1339–1352.

Moses, L. J., Baldwin, D. A., Rosicky, J. G., & Tidball, G. (2001). Evidence for referential understanding in the emotions domain at twelve to eighteen months. *Child Development, 72*, 718–735.

Mumme, D. L., Fernald, A., & Herrera, C. (1996). Infants' responses to facial and vocal emotional signals in a social referencing paradigm. *Child Development, 67*, 3219–3237.

Nachmias, M., Gunnar, M., Mangelsdorf, S., Parritz, R. H., & Buss, K. (1996). Behavioral inhibition and stress reactivity: The moderating role of attachment security. *Child Development, 67*, 508–522.

Owens, E. B., & Shaw, D. S. (2003). Predicting growth curves of externalizing behavior across the preschool years. *Journal of Abnormal Child Psychology, 31*, 575–590.

Panksepp, J. (1998). *Affective neuroscience.* London: Oxford University Press.

Phillips, A. T., Wellman, H. M., & Spelke, E. S. (2002). Infants' ability to connect gaze and emotional expression to intentional action. *Cognition, 85,* 53–78.

Reid, J. B., Patterson, G. R., & Snyder, J. (2002). *Antisocial behavior in children and adolescents: A developmental analysis and model for intervention.* Washington, DC: American Psychological Association.

Repacholi, B., & Gopnik, A. (1997). Early reasoning about desires: Evidence from 14- and 18-month-olds. *Developmental Psychology, 33,* 12–21.

Robinson, N. S., & Garber, J. (1995). Social support and psychopathology across the life span. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Vol. 2. Risk, disorder, and adaptation* (pp. 162–209). New York: Wiley.

Rossman, B. B. R., Bingham, R. D., & Emde, R. N. (1997). Symptomatology and adaptive functioning for children exposed to normative stressors, dog attack, and parental violence. *Journal of the American Academy of Child & Adolescent Psychiatry, 36,* 1089–1097.

Rossman, B. B. R., Hughes, H. M., & Rosenberg, M. S. (2000). *Children and interparental violence: Impact of exposure.* Philadelphia: Taylor & Francis.

Rubin, K. H., Burgess, K. B., Dwyer, K. M., & Hastings, P. D. (2003). Predicting preschoolers' externalizing behaviors from toddler temperament, conflict, and maternal negativity. *Developmental Psychology, 39,* 164–176.

Rubin, K. H., Coplan, R. J., Nelson, L. J., Cheah, C. S. L., & Lagace-Seguin, D. G. (1999). Peer relationships in childhood. In M. H. Bornstein & M. E. Lamb (Eds.), *Developmental psychology: An advanced textbook* (4th ed., pp. 451–501). Mahwah, NJ: Erlbaum.

Ruffman, T., & Keenan, T. R. (1996). The belief-based emotion of surprise: The case for a lag in understanding relative to false belief. *Developmental Psychology, 32,* 40–49.

Saarni, C. (1999). *The development of emotional competence.* New York: Guilford.

Saarni, C., Mumme, D. L., & Campos, J. J. (1998). Emotional development: Action, communication, and understanding. In N. Eisenberg (Ed.), *Handbook of child psychology: Vol. 3. Social, emotional and personality development* (5th ed., pp. 237–309). New York: Wiley.

Shaw, D. S., Gilliom, M., Ingoldsby, E. M., & Nagin, D. S. (2003). Trajectories leading to school-age conduct problems. *Developmental Psychology, 39,* 189–200.

Shonkoff, J. P., & Phillips, D. A. (Eds.). (2000). *From neurons to neighborhoods: The science of early childhood development.* Washington, DC: National Academy Press.

Smiley, P., & Huttenlocher, J. (1989). Young children's acquisition of emotion concepts. In C. Saarni & P. L. Harris (Eds.), *Children's understanding of emotion* (pp. 27–49). Cambridge: Cambridge University Press.

Stipek, D. (1995). The development of pride and shame in toddlers. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions* (pp. 237–252). New York: Guilford.

Thompson, R. A. (1990). Emotion and self-regulation. In R. A. Thompson (Ed.), *Nebraska Symposium on Motivation: Vol. 36. Socioemotional development* (pp. 383–483). Lincoln: University of Nebraska Press.

Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. In N. A. Fox (Ed.), *The development of emotion regulation and dysregulation: Biological and behavioral aspects. Monographs of the Society for Research in Child Development, 59*(2–3, Serial No. 240), 25–52.

Thompson, R. A. (1998). Early sociopersonality development. In N. Eisenberg (Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (5th ed., pp. 25–104). New York: Wiley.

Thompson, R. A. (1999). Early attachment and later development. In J. Cassidy & P. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (pp. 265–286). New York: Guilford.

Thompson, R. A., & Calkins, S. (1996). The double-edged sword: Emotional regulation for children at risk. *Development and Psychopathology, 8*(1), 163–182.

Thompson, R. A., Flood, M. F., & Goodvin, R. (in press). Social support and developmental psychopathology. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Vol. III. Risk, disorder, and adaptation* (2nd ed.). New York: Wiley.

Thompson, R. A., & Goodvin, R. (2005). The individual child: Temperament, emotion, self, and personality. In M. Bornstein & M. E. Lamb (Eds.), *Developmental psychology: An advanced textbook* (5th ed., pp. 391–428). Mahwah, NJ: Erlbaum.

Thompson, R. A., Laible, D. J., & Ontai, L. L. (2003). Early understanding of emotion, morality, and the self: Developing a working model. In R. V. Kail (Ed.), *Advances in child development and behavior* (Vol. 31, pp. 137–171). San Diego: Academic.

Thompson, R. A., Meyer, S., & McGinley, M. (2006). Understanding values in relationship: The development of conscience. In M. Killen & J. Smetana (Eds.), *Handbook of moral development*. (pp. 267–297). Mahwah, NJ: Erlbaum.

Thompson, R. A., & Raikes, H. A. (in press). The social and emotional foundations of school readiness. In J. Knitzer, R. Kaufmann, & D. Perry (Eds.), *Early childhood mental health*. Baltimore: Paul H. Brookes.

Tomasello, M., & Rakoczy, H. (2003). What makes human cognition unique? From individual to shared to collective intentionality. *Mind & Language, 18,* 121–147.

Trevarthen, C. (1998). The concept and foundations of infant intersubjectivity. In S. Braten (Ed.), *Intersubjective communication and emotion in early ontogeny* (pp. 15–46). New York: Cambridge University Press.

Vasey, M. W., & Dadds, M. R. (Eds.). (2001). *The developmental psychopathology of anxiety.* London: Oxford University Press.

Volling, B. L., McElwain, N. L., & Miller, A. L. (2002). Emotion regulation in context: The jealousy complex between young siblings and its relations with child and family characteristics. *Child Development, 73,* 581–600.

Walker-Andrews, A. S. (1997). Infants' perception of expressive behaviors: Differentiation of multimodal information. *Psychological Bulletin, 121,* 437–456.

Walker-Andrews, A. S., & Dickson, L. R. (1997). Infants' understanding of affect. In S. Hala (Ed.), *The development of social cognition* (pp. 161–186). Hove: Psychology Press.

Wellman, H. M., & Banerjee, M. (1991). Mind and emotion: Children's understanding of the emotional consequences of beliefs and desires. *British Journal of Developmental Psychology, 9,* 191–214.

Wellman, H. M., & Bartsch, K. (1988). Young children's reasoning about beliefs. *Cognition, 30,* 239–277.

Wellman, H. M., & Lagattuta, K. H. (2000). Developing understandings of mind. In S. Baron-Cohen, H. Tager-Flusberg, & D. Cohen (Eds.), *Understanding other minds: Perspectives from developmental cognitive neuroscience* (2nd ed., pp. 21–49). New York: Oxford University Press.

Wellman, H. M., & Miller, J. G. (in press). Including deontic reasoning as fundamental to theory of mind. *Psychological Review.*

Wellman, H. M., & Woolley, J. D. (1990). From simple desires to ordinary beliefs: The early development of everyday psychology. *Cognition, 35,* 245–275.

Woodward, A. L., & Guajardo, J. J. (2002). Infants' understanding of the point gesture as an object-directed action. *Cognitive Development, 17,* 1061–1084.

Youngblade, L. M., & Dunn, J. (1995). Individual differences in young children's pretend play with mother and sibling: Links to relationships and understanding of other people's feelings and beliefs. *Child Development, 66,* 1472–1492.

Yuill, N. (1984). Young children's coordination of motive and outcome in judgments of satisfaction and morality. *British Journal of Developmental Psychology, 2,* 73–81.

Yuill, N., Perner, J., Pearson, A., Peerbhoy, D., & Emde, J. (1996). Children's changing understanding of wicked desires: From objective to subjective and moral. *British Journal of Developmental Psychology, 14,* 457–475.

Zahn-Waxler, C. (2000). The development of empathy, guilt, and internalization of distress: Implications for gender differences in internalizing and externalizing problems. In R. J. Davidson (Ed.), *Anxiety, depression, and emotion* (pp. 222–265). New York: Oxford University Press.

Zahn-Waxler, C., & Robinson, J. (1995). Empathy and guilt: Early origins of feelings of responsibility. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions* (pp. 143–173). New York: Guilford.