Socioemotional Development in Infancy

4

Stories of Life-Span Development: Darius and His Father

An increasing number of fathers are staying home to care for their children (Lamb, 2010). Consider 17-month-old Darius. On weekdays, Darius' father, a writer, cares for him during the day while his mother works full-time as a landscape architect. Darius' father is doing a great job of caring for him. He keeps Darius nearby while he is writing and spends lots of time talking to him and playing with him. From their interactions, it is clear that they genuinely enjoy each other's company.

Last month, Darius began spending one day a week at a child-care center.

His parents selected the center after observing a number of centers and interviewing teachers and center directors. His parents placed him in the center because they wanted him to get some experience with peers and his father to have some time out from caregiving.

Darius' father looks to the future and imagines the Little League games Darius will play in and the many other activities he can enjoy with his son. Remembering how little time his own father spent with him, he is dedicated to making sure that Darius has an involved, nurturing relationship with his father.

When Darius' mother comes home in the evening, she spends considerable time with him. Darius is securely attached to both his mother and his father.

In Chapter 3, you read about how infants perceive, learn, and remember. Infants also are socioemotional beings, capable of displaying emotions and initiating social interaction with people close to them. The main topics that we explore in this chapter are emotional and personality development, attachment, and the social contexts of the family and child care. ■

emotion Feeling, or affect, that occurs when a person is in a state or interaction that is important to them. Emotion is characterized by behavior that reflects (expresses) the pleasantness or unpleasantness of the state a person is in or the transactions being experienced.

Emotional and Personality Development

Anyone who has been around infants for even a brief time can tell that they are emotional beings. Not only do infants express emotions, but they also vary in temperament. Some are shy and others are outgoing. Some are active and others much less so. Let's explore these and other aspects of emotional and personality development in infants.

Emotional Development

Imagine what your life would be like without emotion. Emotion is the color and music of life, as well as the tie that binds people together. How do psychologists define and classify emotions, and why are they important to development? How do emotions develop during the first two years of life?

What Are Emotions?

For our purposes, we will define **emotion** as feeling, or affect, that occurs when a person is in a state or an interaction that is important to him or her, especially to his or her well-being. Especially in infancy, emotions have important roles in (1) communication with others and (2) behavioral organization. Through emotions, infants communicate important aspects of their lives such as joy, sadness, interest, and fear (Witherington & others, 2010). In terms of behavioral organization, emotions influence infants' social responses and adaptive behavior as they interact with others in their world (Easterbrook & others, 2013; Thompson, 2013a).

Psychologists classify the broad range of emotions in many ways, but almost all classifications designate an emotion as either positive (pleasant) or negative (unpleasant). Positive emotions include happiness, joy, love, and enthusiasm. Negative emotions include anxiety, anger, guilt, and sadness.

Biological and Environmental Influences

Emotions are influenced both by biological foundations and by a person's experiences (Easterbrooks & others, 2013; Thompson, 2013a, b). For example, children who are blind from birth and have never observed the smile or frown on another person's face smile and frown in the same way that children with normal vision do. Moreover, facial expressions of basic emotions such as happiness, surprise, anger, and fear are the same across cultures.

These biological factors, however, are only part of the story of emotion. Biological evolution has endowed human beings to be emotional, but embeddedness in relationships and cultural contexts provides diversity in emotional experiences (Tamis-LeMonda & Song, 2013). Display rules—rules governing when, where, and how emotions should be expressed—are not universal. For example, researchers have found that East Asian infants display less frequent and less intense positive and negative emotions than do non-Latino White infants (Cole & Tan, 2007). Throughout childhood, East Asian parents encourage their children to show emotional reserve rather than to be emotionally expressive (Chen & others, 1998).

How do East Asian mothers handle their infants' and children's emotional development differently from non-Latina White mothers?

| Joy | Sadness | Fear | Surprise |

Figure 4.1 Expression of Different Emotions in Infants

Emotions serve important functions in our relationships (Slatcher & Trentacosta, 2012). As we discuss later in this section, emotions are the first language with which parents and infants communicate (Duncombe & others, 2012). Emotion-linked interchanges provide the foundation for the infant's developing attachment to the parent (Thompson, 2013a, b).

Early Emotions

Emotions that infants express in the first six months of life include surprise, interest, joy, anger, sadness, fear, and disgust (see Figure 4.1). Other emotions that appear in infancy include jealousy, empathy, embarrassment, pride, shame, and guilt; most of these occur for the first time at some point in the second half of the first year or during the second year. These later-developing emotions have been called self-conscious or other-conscious emotions because they involve the emotional reactions of others (Lewis, 2007, 2010).

Some experts on infant socioemotional development, such as Jerome Kagan (2010), conclude that the structural immaturity of the infant brain makes it unlikely that emotions that require thought—such as guilt, pride, despair, shame, empathy, and jealousy—can be experienced in the first year. Thus, both Kagan (2010) and Joseph Campos (2009) argue that so-called "self-conscious" emotions don't occur until after the first year, a view that increasingly reflects that of most developmental psychologists.

Emotional Expressions and Relationships

Emotional expressions are involved in infants' first relationships. The ability of infants to communicate emotions permits coordinated interactions with their caregivers and the beginning of an emotional bond between them (Easterbrooks & others, 2013; Thompson, 2013c). Not only do parents change their emotional expressions in response to those of their infants (and each other), but infants also modify their emotional expressions in response to those of their parents. In other words, these interactions are mutually regulated. Because of this coordination, the interactions between parents and infants are described as *reciprocal*, or *synchronous*, when all is going well. Sensitive, responsive parents help their infants grow emotionally, whether the infants respond in distressed or happy ways (Wilson, Havighurst, & Harley, 2012).

Crying Cries and smiles are two emotional expressions that infants display when interacting with parents. These are babies' first forms of emotional communication. Crying is the most important mechanism newborns have for communicating with their world. Cries may also provide information about the health of the newborn's central nervous system. Newborns even tend to respond with cries and negative facial expressions when they hear other newborns cry (Dondi, Simion, & Caltran, 1999). However, a recent study revealed that newborns of depressed

basic cry A rhythmic pattern usually consisting of a cry, a briefer silence, a shorter inspiratory whistle that is higher pitched than the main cry, and then a brief rest before the next cry.

anger cry A cry similar to the basic cry, with more excess air forced through the vocal cords.

pain cry A sudden outburst of loud crying without preliminary moaning, followed by breath holding.

mothers showed less vocal distress when another infant cried, reflecting emotional and physiological dysregulation (Jones, 2012).

Babies have at least three types of cries:

- **Basic cry:** A rhythmic pattern that usually consists of a cry, followed by a briefer silence, then a shorter whistle that is somewhat higher in pitch than the main cry, then another brief rest before the next cry. Some experts believe that hunger is one of the conditions that incite the basic cry.

- **Anger cry:** A variation of the basic cry, with more excess air forced through the vocal cords.

- **Pain cry:** A sudden long, initial loud cry followed by the holding of the breath; no preliminary moaning is present. The pain cry may be stimulated by physical pain or by any high-intensity stimulus.

What are some different types of cries?

Most adults can determine whether an infant's cries signify anger or pain (Zeskind, Klein, & Marshall, 1992). Parents can distinguish among the cries of their own baby better than among those of another baby.

Should parents respond to an infant's cries? Many developmental psychologists recommend that parents soothe a crying infant, especially in the first year. This reaction should help infants develop a sense of trust and secure attachment to the caregiver. A recent study revealed that mothers' emotional reactions (anger and anxiety) to crying increased the risk of subsequent attachment insecurity (Leerkes, Parade, & Gudmundson, 2011). And another recent study found that problems in infant soothability at 6 months of age were linked to insecure attachment at 12 months of age (Mills-Koonce, Propper, & Barnette, 2012).

Smiling Smiling is a critical social skill and a key social signal (Witherington & others, 2010). Two types of smiling can be distinguished in infants:

- **Reflexive smile:** A smile that does not occur in response to external stimuli and appears during the first month after birth, usually during sleep.

- **Social smile:** A smile that occurs in response to an external stimulus, typically a face in the case of the young infant. Social smiling occurs as early as two months of age.

reflexive smile A smile that does not occur in response to external stimuli. It appears during the first month after birth, usually during sleep.

social smile A smile in response to an external stimulus, which, early in development, typically is a face.

stranger anxiety An infant's fear and wariness of strangers that typically appears in the second half of the first year of life.

Fear One of a baby's earliest emotions is fear, which typically first appears at about 6 months and peaks at about 18 months. However, abused and neglected infants can show fear as early as 3 months (Witherington & others, 2010). The most frequent expression of an infant's fear involves **stranger anxiety,** in which an infant shows fear and wariness of strangers.

Stranger anxiety usually emerges gradually. It first appears at about 6 months in the form of wary reactions. By 9 months, fear of

CHAPTER 4 SOCIOEMOTIONAL DEVELOPMENT IN INFANCY

strangers is often more intense, and it continues to escalate through the infant's first birthday (Emde, Gaensbauer, & Harmon, 1976).

Not all infants show distress when they encounter a stranger. Besides individual variations, whether an infant shows stranger anxiety also depends on the social context and the characteristics of the stranger. Infants show less stranger anxiety when they are in familiar settings. For example, in one study, 10-month-olds showed little stranger anxiety when they met a stranger in their own home but much greater fear when they encountered a stranger in a research laboratory (Sroufe, Waters, & Matas, 1974). Also, infants show less stranger anxiety when they are sitting on their mothers' laps than when they are in an infant seat several feet away from their mothers (Bohlin & Hagekull, 1993). Thus, it appears that when infants feel secure they are less likely to show stranger anxiety.

Who the stranger is and how the stranger behaves also influence stranger anxiety in infants. Infants are less fearful of child strangers than of adult strangers. They also are less fearful of friendly, outgoing, smiling strangers than of passive, unsmiling strangers (Bretherton, Stolberg, & Kreye, 1981).

separation protest An infant's distressed crying when the caregiver leaves.

social referencing "Reading" emotional cues in others to help determine how to act in a particular situation.
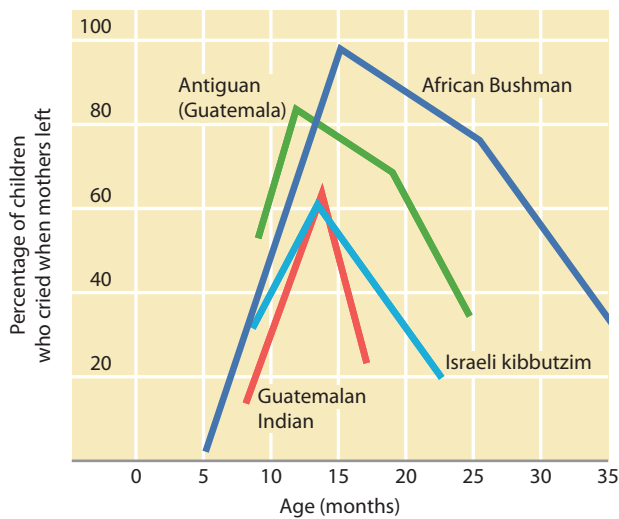
In addition to stranger anxiety, infants experience fear of being separated from their caregivers. The result is **separation protest**—crying when the caregiver leaves. Separation protest tends to peak at about 15 months among U.S. infants. A study of four different cultures found, similarly, that separation protest peaked at about 13 to 15 months (Kagan, Kearsley, & Zelazo, 1978). As indicated in Figure 4.2, the percentage of infants who engaged in separation protest varied across cultures, but the infants reached a peak of protest at about the same age—just before the middle of the second year.

Figure 4.2 **Separation Protest in Four Cultures**
Note that separation protest peaked at about the same age in all four cultures in this study (13 to 15 months) (Kagan, Kearsley, & Zelazo, 1978). However, 100 percent of infants in an African Bushman culture engaged in separation protest compared with only about 60 percent of infants in Guatemalan Indian and Israeli kibbutzim cultures. *What might explain the fact that separation protest peaks at about the same time in different cultures?*
Reprinted by permission of the publisher from *Infancy: Its Place in Human Development* by Jerome Kagan, Richard B. Kearsley, and Philip R. Zelazo, p. 107, Cambridge, Mass.: Harvard University Press. Copyright © 1978 by the President and Fellows of Harvard College.

Social Referencing Infants not only express emotions like fear but also "read" the emotions of other people (Cornew & others, 2012). **Social referencing** involves "reading" emotional cues in others to help determine how to act in a particular situation. The development of social referencing helps infants interpret ambiguous situations more accurately, as when they encounter a stranger (Pelaez, Virues-Ortega, & Gewirtz, 2012). By the end of the first year, a parent's facial expression—either smiling or fearful—influences whether an infant will explore an unfamiliar environment.

Infants become better at social referencing in the second year of life. At this age, they tend to "check" with their mother before they act; they look at her to see if she is happy, angry, or fearful.

Emotional Regulation and Coping

During the first year, the infant gradually develops an ability to inhibit, or minimize, the intensity and duration of emotional reactions (Calkins, 2012; Morasch & Bell, 2012). From early in infancy, babies put their thumbs in their mouths to soothe themselves. In their second year, they may say things to help soothe themselves. When placed in his bed for the night, after a little crying and whimpering, a 20-month-old was overhead saying, "Go sleep, Alex. Okay." But at first, infants depend mainly on caregivers to help them soothe their emotions, as when a caregiver rocks an infant to sleep, sings lullabies, gently strokes the infant, and so on.

temperament An individual's behavioral style and characteristic way of responding emotionally.

Caregivers' actions influence the infant's neurobiological regulation of emotions (Easterbrooks & others, 2013; Thompson, 2013a, b). By soothing the infant, caregivers help infants modulate their emotions and reduce the level of stress hormones (de Haan & Gunnar, 2009). Many developmental psychologists believe it is a good strategy for a caregiver to soothe an infant before the infant gets into an intense, agitated, uncontrolled state (Thompson, 2013a, b).

Later in infancy, when they become aroused, infants sometimes redirect their attention or distract themselves in order to reduce their arousal. By age 2, children can use language to define their feeling states and identify the context that is upsetting them (Calkins & Markovitch, 2010). A 2-year-old might say, "Doggy scary." This type of communication may cue caregivers to help the child regulate emotion.

Contexts can influence emotional regulation (Easterbrooks & others, 2013; Thompson, 2013a). Infants are often affected by fatigue, hunger, time of day, which people are around them, and where they are. Infants must learn to adapt to different contexts that require emotional regulation. Further, new demands appear as the infant becomes older and parents modify their expectations. For example, a parent may take it in stride if a 6-month-old infant screams in a restaurant but may react very differently if a 1½-year-old starts screaming.

Temperament

Do you get upset easily? Does it take much to get you angry or to make you laugh? Even at birth, babies seem to have different emotional styles. One infant is cheerful and happy much of the time; another seems to cry constantly. These tendencies reflect **temperament,** or individual differences in behavioral styles, emotions, and characteristic ways of responding. With regard to its link to emotion, temperament refers to individual differences in how quickly the emotion is shown, how strong it is, how long it lasts, and how quickly it fades away (Campos, 2009).

Describing and Classifying Temperament

How would you describe your temperament or the temperament of a friend? Researchers have described and classified the temperaments of individuals in different ways. Here we examine three of those ways.

Chess and Thomas' Classification
Psychiatrists Alexander Chess and Stella Thomas (Chess & Thomas,

What are some ways that developmentalists have classified infants' temperaments? Which classification makes the most sense to you, based on your observations of infants?

1977; Thomas & Chess, 1991) identified three basic types, or clusters, of temperament:

- **Easy child:** This child is generally in a positive mood, quickly establishes regular routines in infancy, and adapts easily to new experiences.
- **Difficult child:** This child reacts negatively and cries frequently, engages in irregular daily routines, and is slow to accept change.
- **Slow-to-warm-up child:** This child has a low activity level, is somewhat negative, and displays a low intensity of mood.

In their longitudinal investigation, Chess and Thomas found that 40 percent of the children they studied could be classified as easy, 10 percent as difficult, and 15 percent as slow to warm up. Notice that 35 percent did not fit any of the three patterns. Researchers have found that these three basic clusters of temperament are moderately stable across the childhood years.

One study revealed that young children with a difficult temperament showed more problems when they experienced low-quality child care and fewer problems when they experienced high-quality child care than did young children with an easy temperament (Pluess & Belsky, 2009).

easy child A child who is generally in a positive mood, who quickly establishes regular routines in infancy, and who adapts easily to new experiences.

difficult child A child who tends to react negatively and cry frequently, who engages in irregular daily routines, and who is slow to accept new experiences.

slow-to-warm-up child A child who has a low activity level, is somewhat negative, and displays a low intensity of mood.
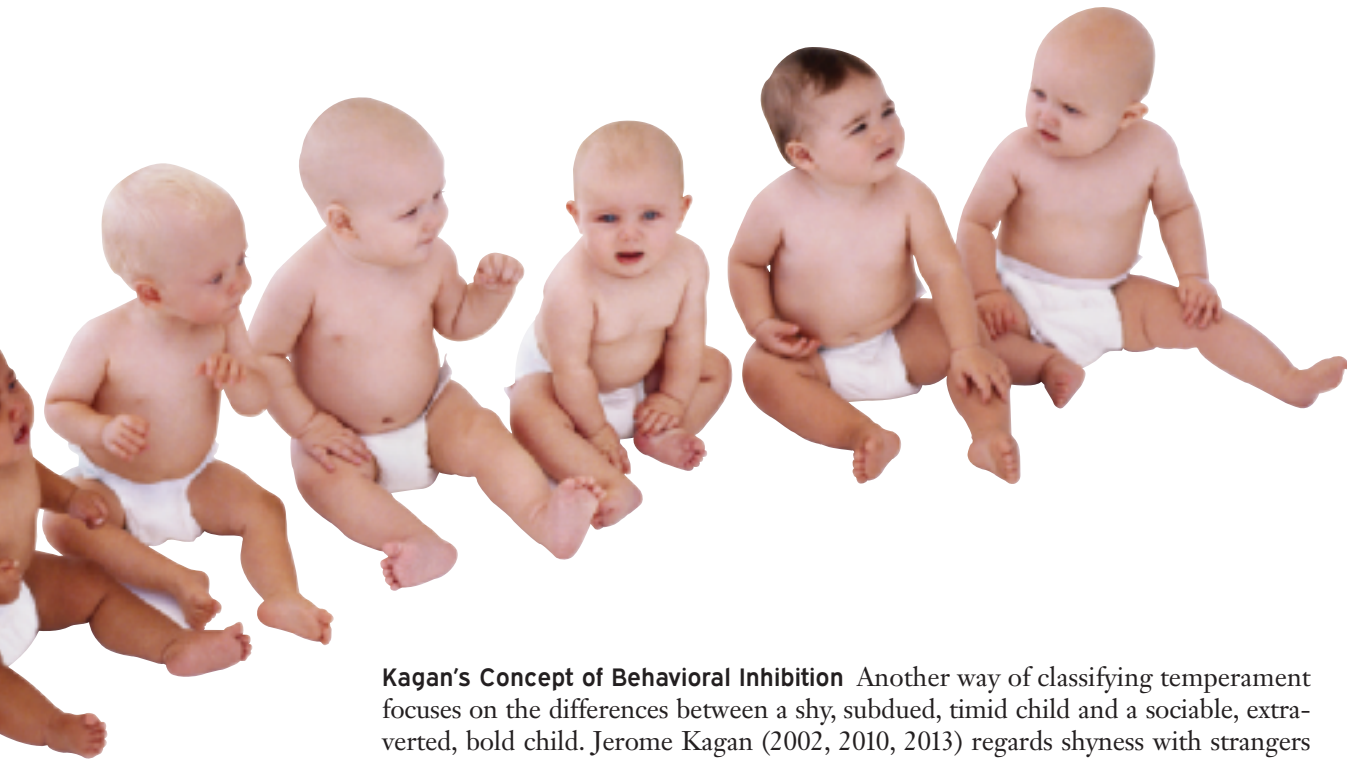
Kagan's Concept of Behavioral Inhibition Another way of classifying temperament focuses on the differences between a shy, subdued, timid child and a sociable, extraverted, bold child. Jerome Kagan (2002, 2010, 2013) regards shyness with strangers (peers or adults) as one feature of a broad temperament category called *inhibition to the unfamiliar:* Inhibited children react to many aspects of unfamiliarity with initial avoidance, distress, or subdued affect, beginning around 7 to 9 months. A recent study revealed that behavioral inhibition at 3 years of age was linked to shyness four years later (Volbrecht & Goldsmith, 2010). In another study, shyness/inhibition in infancy/childhood was linked to social anxiety at 21 years of age (Bohlin & Hagekull, 2009).

Effortful Control (Self-Regulation) Mary Rothbart and John Bates (2006) stress that effortful control (self-regulation) is an important dimension of temperament. Infants who are high in effortful control show an ability to keep their arousal from getting too intense and have strategies for soothing themselves. By contrast, children who are low in effortful control are often unable to control their arousal; they are easily

agitated and become intensely emotional. A recent study found that infants of mothers who were more stressed had a lower level of effortful control while infants of extraverted mothers showed a higher level of effortful control (Gartstein & others, 2012).

An important point about temperament classifications such as Chess and Thomas' and Rothbart and Bates' is that children should not be pigeonholed as having only one temperament dimension, such as "difficult" or "negative affectivity." A good strategy when attempting to classify a child's temperament is to think of temperament as consisting of multiple dimensions (Bates, 2012a, b). For example, a child might be extraverted, show little emotional negativity, and have good self-regulation. Another child might be introverted, show little emotional negativity, and have a low level of self-regulation.

The development of temperament capabilities such as effortful control allows individual differences to emerge. For example, although maturation of the brain's prefrontal lobes must occur for any child's attention to improve and the child to achieve effortful control, some children develop effortful control while others do not. And it is these individual differences in children that are at the heart of what temperament is (Bates, 2012a, b).

Biological Foundations and Experience

How does a child acquire a certain temperament? Kagan (2010) argues that children inherit a physiology that predisposes them to have a particular type of temperament. However, through experience they may learn to modify their temperament to some degree. For example, children may inherit a physiology that predisposes them to be fearful and inhibited but then learn to reduce their fear and inhibition to some degree.

How might caregivers help a child become less fearful and inhibited? An important first step is to find out what frightens the child. Comforting and reassuring the child, and addressing their specific fears, are good strategies.

Biological Influences Physiological characteristics have been linked with different temperaments (Frodl & O'Keane, 2012; Kagan, 2013; Mize & Jones, 2012). In particular, an inhibited temperament is associated with a unique physiological pattern that includes a high and stable heart rate, high levels of the hormone cortisol, and high activity in the right frontal lobe of the brain (Kagan, 2010). This pattern may be tied to the excitability of the amygdala, a structure in the brain that plays an important role in fear and inhibition. Twin and adoption studies also suggest that heredity has a moderate influence on differences in temperament within a group of people (Plomin & others, 2009).

Too often the biological foundations of temperament are interpreted as meaning that temperament cannot develop or change. However, important self-regulatory dimensions of temperament such as adaptability, soothability, and persistence look very different in a 1-year-old and a 5-year-old (Easterbrooks & others, 2013). These temperament dimensions develop and change with the growth of the neurobiological foundations of self-regulation (Calkins, 2012).

Gender, Culture, and Temperament Gender may be an important factor shaping the context that influences temperament. Parents might react differently to an infant's temperament based on whether the baby is a boy or a girl (Gaias & others, 2012). For example, in one study, mothers were more responsive to the crying of irritable girls than to that of irritable boys (Crockenberg, 1986).

Similarly, the reaction to an infant's temperament may depend in part on culture (Fung, 2011; Rothbart, 2011). For example, an active temperament might be valued in some cultures (such as the United States) but not in others (such as China) (Gartstein & others, 2009). Indeed, children's temperament can vary across cultures. For example, behavioral inhibition is valued more highly in China than in North America (Cole & Tan, 2007). Also, a recent study revealed that U.S infants showed more temperamental fearfulness while Finnish infants

engaged in more positive affect, such as effortful control (Gaias & others, 2012).

In short, many aspects of a child's environment can encourage or discourage the persistence of temperament characteristics (Bates, 2012a, b; Easterbrooks & others, 2013). One useful way of thinking about these relationships applies the concept of goodness of fit, which we examine next.

Goodness of Fit and Parenting

Goodness of fit refers to the match between a child's temperament and the environmental demands the child must cope with. Suppose Jason is an active toddler who is made to sit still for long periods and Jack is a slow-to-warm-up toddler who is abruptly pushed into new situations on a regular basis. Both Jason and Jack face a lack of fit between their temperament and environmental demands. Lack of fit can produce adjustment problems (Rothbart, 2011). Researchers have found that decreases in infants' negative emotionality are linked to higher levels of parental sensitivity, involvement, and responsivity (Wachs & Bates, 2010).

What are some good strategies for parents to adopt when responding to their infant's temperament?

Many parents don't come to believe in the importance of temperament until the birth of their second child. They viewed their first child's behavior as stemming from how they treated the child. But then they find that some strategies that worked with their first child are not as effective with the second child. Some problems experienced with the first child (such as those associated with feeding, sleeping, and coping with strangers) may not arise with the second child, but new problems arise. Such experiences strongly suggest that children differ from each other very early in life, and that these differences have important implications for parent-child interaction (Rothbart, 2011).

What are the implications of temperamental variations for parenting? Decreases in infants' negative emotionality occur when parents are more involved, responsive, and sensitive when interacting with their children (Bates, 2012a, b; Penela & others, 2012). Temperament experts Ann Sanson and Mary Rothbart (1995) also recommend the following strategies for temperament-sensitive parenting:

- *Attention to and respect for individuality.* One implication is that it is difficult to generate general prescriptions for "good parenting." A goal might be accomplished in one way with one child and in another way with another child, depending on each child's temperament. Parents need to be flexible and sensitive to the infant's signals and needs.

- *Structuring the child's environment.* Crowded, noisy environments can pose greater problems for some children (such as a "difficult child") than for others (such as an "easy child"). We might also expect that a fearful, withdrawing child would benefit from slower entry into new contexts.

- *Avoid applying negative labels to the child.* Acknowledging that some children are harder to parent than others is often helpful, and advice on how to handle particular kinds of difficult circumstances can be helpful. However, labeling a child "difficult" runs the risk

How Would You...?

As a social worker, how would you apply information about an infant's temperament to maximize goodness of fit?

of becoming a self-fulfilling prophecy. That is, if a child is identified as "difficult," people may treat him or her in a way that elicits "difficult" behavior.

Personality Development

Emotions and temperament are key aspects of personality, the enduring personal characteristics of individuals (Shiner & DeYoung, 2013). Let's now examine characteristics that are often thought of as central to personality development during infancy: trust, the development of a sense of self, and progress toward independence.

Trust

According to Erik Erikson (1968), the first year of life is characterized by the trust-versus-mistrust stage of development. Upon emerging from a life of regularity, warmth, and protection in the mother's womb, the infant faces a world that is less secure. Erikson proposed that infants learn trust when they are cared for in a consistently nurturant manner. If the infant is not well fed and kept warm on a consistent basis, a sense of mistrust is likely to develop.

In Erikson's view, the issue of trust versus mistrust is not resolved once and for all in the first year of life. It arises again at each successive stage of development, and the outcomes can be positive or negative. For example, children who leave infancy with a sense of trust can still have their sense of mistrust activated at a later stage, perhaps if their parents become separated or divorced.

The Developing Sense of Self

It is difficult to study the self in infancy mainly because infants cannot tell us how they experience themselves. Infants cannot verbally express their views of the self. They also cannot understand complex instructions from researchers.

A rudimentary form of self-recognition—being attentive and positive toward one's image in a mirror—appears as early as 3 months (Mascolo & Fischer, 2007; Pipp, Fischer, & Jennings, 1987). However, a central, more complete index of self-recognition—the ability to recognize one's physical features—does not emerge until the second year (Thompson, 2006).

One ingenious strategy to test infants' visual self-recognition is the use of a mirror technique in which an infant's mother first puts a dot of rouge on the infant's nose. Then, an observer watches to see how often the infant touches its nose. Next, the infant is placed in front of a mirror and observers detect whether nose touching increases. Why does this matter? The idea is that increased nose touching indicates that the infant recognizes itself in the mirror and is trying to touch or rub off the rouge because the rouge violates the infant's view of itself; that is, the infant thinks something is not right, since it believes its real self does not have a dot of rouge on it.

Figure 4.3 displays the results of two investigations that used the mirror technique. The researchers found that before they were 1 year old, infants did not recognize themselves in the mirror (Amsterdam, 1968; Lewis & Brooks-Gunn, 1979). Signs of self-recognition began
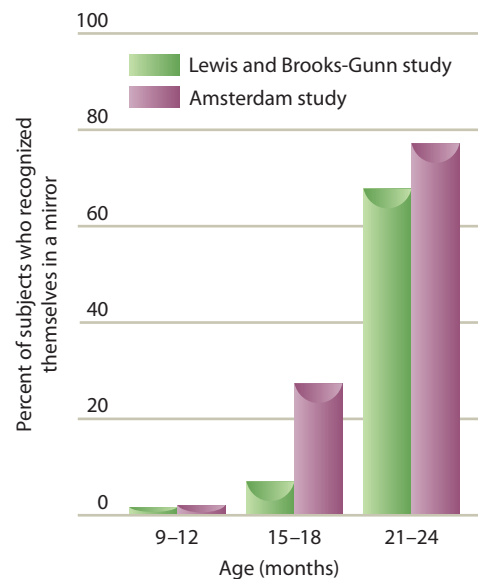

Figure 4.3 The Development of Self-Recognition in Infancy The graph shows the findings of two studies in which infants less than 1 year of age did not recognize themselves in the mirror. A slight increase in the percentage of infant self-recognition occurred around 15 to 18 months of age. By 2 years of age, a majority of children recognized themselves. *Why do researchers study whether infants recognize themselves in a mirror?*

to appear among some infants when they were 15 to 18 months old. By the time they were 2 years old, most children recognized themselves in the mirror. In sum, infants begin to develop a self-understanding, called self-recognition, at approximately 18 months of age (Hart & Karmel, 1996; Lewis, 2005).

In one study, biweekly assessments of infants from 15 to 23 months of age were conducted (Courage, Edison, & Howe, 2004). Self-recognition emerged gradually over this period, first appearing in the form of mirror recognition, followed by use of the personal pronoun and then by recognizing a photo of themselves. These aspects of self-recognition are often referred to as the first indications of toddlers' understanding of the mental state of "me," "that they are objects in their own mental representation of the world" (Lewis, 2005, p. 363).

Late in the second year and early in the third year, toddlers show other emerging forms of self-awareness that reflect a sense of "me" (Thompson & Virmani, 2010). For example, they refer to themselves by saying "Me big"; they label internal experiences such as emotions; they monitor themselves, as when a toddler says, "Do it myself"; and they say that things are theirs (Bullock & Lutkenhaus, 1990; Fasig, 2000). A recent study revealed that it is not until the second year that infants develop a conscious awareness of their own bodies. This developmental change in body awareness marks the beginning of children's representation of their own three-dimensional body shape and appearance, providing an early step in the development of their self-image and identity (Brownell & others, 2010).

Independence

Not only does the infant develop a sense of self in the second year of life, but independence also becomes a more central theme in the infant's life. Erikson (1968) stressed that independence is an important issue in the second year of life. Erikson's second stage of development is identified as autonomy versus shame and doubt. Autonomy builds as the infant's mental and motor abilities develop. At this point, not only can infants walk, but they can also climb, open and close, drop, push and pull, and hold and let go. Infants feel pride in these new accomplishments and want to do everything themselves, whether the activity is flushing a toilet, pulling the wrapping off a package, or deciding what to eat. It is important to recognize toddlers' motivation to do what they are capable of doing at their own pace. Then they can learn to control their muscles and their impulses themselves. Conversely, when caregivers are impatient and do for toddlers what they are capable of doing themselves, shame and doubt develop. To be sure, every parent has rushed a child from time to time, and one instance of rushing is unlikely to result in impaired development. It is only when parents consistently overprotect toddlers or criticize accidents (wetting, soiling, spilling, or breaking, for example) that children are likely to develop an excessive sense of shame and doubt about their ability to control themselves and their world.

Erikson also argued that the stage of autonomy versus shame and doubt has important implications for the development of independence and identity during adolescence. The development of autonomy during the toddler years gives adolescents the courage to be independent individuals who can choose and guide their own future.

How Would You…?

As a human development and family studies professional, how would you work with parents who showed signs of being overly protective or critical to the point of impairing their toddler's autonomy?

Social Orientation and Attachment

So far, we have discussed how emotions and emotional competence change as children develop. We have also examined the role of emotional style; in effect, we have seen how emotions set the tone of our experiences in life. But emotions

also write the lyrics because they are at the core of our interest in the social world and our relationships with others.

Social Orientation and Understanding

As socioemotional beings, infants show a strong interest in their social world and are motivated to orient themselves toward it and to understand it. In earlier chapters we described many of the biological and cognitive foundations that contribute to the infant's development of social orientation and understanding. We will call attention to relevant biological and cognitive factors as we explore social orientation; locomotion; intention, goal-directed behavior and cooperation; and social referencing. Discussing biological, cognitive, and social processes together reminds us of an important aspect of development that was pointed out in Chapter 1—that these processes are intricately intertwined (Diamond, 2009).

Social Orientation

From early in their development, infants are captivated by the social world. Young infants stare intently at faces and are attuned to the sounds of human voices, especially their caregiver's (Gaither, Pauker, & Johnson, 2012; Lowe & others, 2012). Later, they become adept at interpreting the meaning of facial expressions. Face-to-face play often begins to characterize caregiver-infant interactions when the infant is about 2 to 3 months of age. Such play reflects many mothers' motivation to create a positive emotional state in their infants (Thompson, 2006, 2013a, b).

Infants also learn about the social world through contexts other than face-to-face play with a caregiver (Easterbrooks & others, 2013). Even though infants as young as 6 months show an interest in each other, their interaction with peers increases considerably in the latter half of the second year. Between 18 and 24 months, children markedly increase their imitative and reciprocal play—for example, imitating nonverbal actions like jumping and running (Eckerman & Whitehead, 1999). One recent study involved presenting 1- and 2-year-olds with a simple cooperative task that consisted of pulling a lever to get an attractive toy (Brownell, Ramani, & Zerwas, 2006) (see Figure 4.4). Any coordinated actions of the 1-year-olds appeared to be coincidental rather than cooperative, whereas the 2-year-olds' behavior was characterized as active cooperation to reach a goal.

Figure 4.4 The Cooperation Task
The cooperation task consisted of two handles on a box, atop which was an animated musical toy, surreptitiously activated by remote control when both handles were pulled. The handles were placed far enough apart that one child could not pull both handles. The experimenter demonstrated the task, saying, "Watch! If you pull the handles, the doggie will sing" (Brownell, Ramani, & Zerwas, 2006).

Locomotion

Recall from earlier in the chapter how important independence is for infants, especially in the second year of life. As infants develop the ability to crawl, walk, and run, they are able to explore and expand their social world. These newly developed self-produced locomotor skills allow the infant to independently initiate social interchanges on a more frequent basis.

Locomotion is also important for its motivational implications (Adolph & Berger, 2013; Adolph & Robinson, 2013). Once infants have the ability to move in goal-directed pursuits, the rewards gained from these pursuits lead to further efforts to explore and develop skills.

Intention, Goal-Directed Behavior, and Cooperation

The ability to perceive people as engaging in intentional and goal-directed behavior is an important social-cognitive accomplishment, and this initially occurs toward the end of the first year (Thompson, 2013a, b). Joint attention and gaze-following help the infant understand that other people have intentions (Bedford & others, 2012). By their first birthday, infants have begun to direct their caregiver's attention to objects that capture their interest (Heimann & others, 2006).

Infants' Social Sophistication and Insight

In sum, researchers are discovering that infants are more socially sophisticated and insightful at younger ages than was previously envisioned (Thompson, 2006, 2013a, b). This sophistication and insight is reflected in infants' perceptions of others' actions as intentionally motivated and goal-directed and their motivation to share and participate in that intentionality by their first birthday (Tomasello & Hamann, 2012). The more advanced social-cognitive skills of infants could be expected to influence their understanding and awareness of attachment to a caregiver.

Attachment

Attachment is a close emotional bond between two people. There is no shortage of theories about infant attachment. Three theorists discussed in Chapter 1—Freud, Erikson, and Bowlby—proposed influential views of attachment.

Freud theorized that infants become attached to the person or object that provides them with oral satisfaction. For most infants, this is the mother, since she is most likely to feed the infant. Is feeding as important as Freud thought? A classic study by Harry Harlow (1958) indicates that the answer is no (see Figure 4.5).

Harlow removed infant monkeys from their mothers at birth; for six months they were reared by two surrogate (substitute) "mothers." One surrogate mother was made of wire, the other of cloth. Half of the infant monkeys were fed by the wire mother, half by the cloth mother. Periodically, the amount of time the infant monkeys spent with either the wire or the cloth mother was computed. Regardless of which mother fed them, the infant monkeys spent far more time with the cloth mother. Even if the wire mother, but not the cloth mother, provided nourishment, the infant monkeys spent more time with the cloth mother. And when Harlow frightened the monkeys, those who were "raised" by the cloth mother ran to that mother and clung to it; those who were raised by the wire mother did not. Whether the mother provided comfort seemed to determine whether the monkeys associated that mother with security. This study clearly demonstrated that feeding is not the crucial element in the attachment process and that contact comfort is important.

Physical comfort also plays a role in Erik Erikson's (1968) view of the infant's development. Recall Erikson's proposal that during the first year of life infants are in the stage of trust versus mistrust. Physical comfort and sensitive care, according to Erikson (1968), are key to establishing a basic level of trust in infants. The infant's sense of
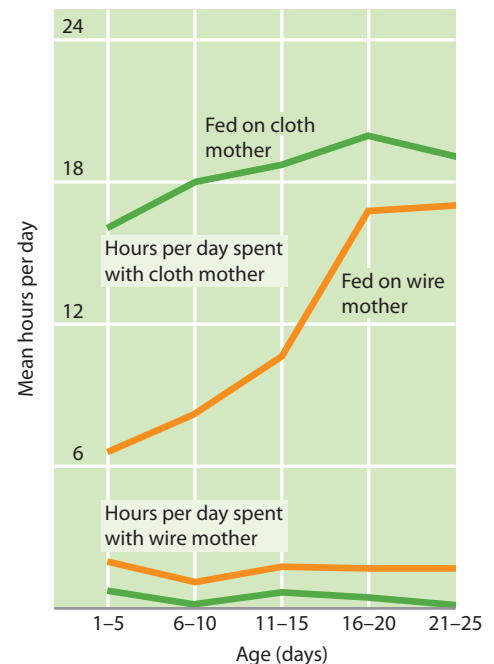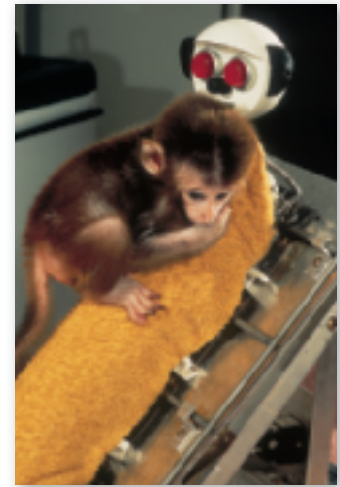

Figure 4.5 Contact Time with Wire and Cloth Surrogate Mothers
Regardless of whether the infant monkeys were fed by a wire or a cloth mother, they overwhelmingly preferred to spend contact time with the cloth mother. *How do these results compare with what Freud's theory and Erikson's theory would predict about human infants?*

trust, in turn, is the foundation for attachment and sets the stage for a lifelong expectation that the world will be a good and pleasant place.

The ethological perspective of British psychiatrist John Bowlby (1969, 1989) also stresses the importance of attachment in the first year of life and the responsiveness of the caregiver. Bowlby believed that both the infant and its primary caregivers are biologically predisposed to form attachments. He argued that the newborn is biologically equipped to elicit attachment behavior. The baby cries, clings, coos, and smiles. Later, the infant crawls, walks, and follows the mother. The immediate result is to keep the primary caregiver nearby; the long-term effect is to increase the infant's chances of survival (Thompson, 2006).

Attachment does not emerge suddenly but rather develops in a series of phases, moving from a baby's general preference for human figures to a partnership with primary caregivers. Following are four such phases based on Bowlby's conceptualization of attachment (Schaffer, 1996):

- *Phase 1: From birth to 2 months.* Infants instinctively direct their attachment to human figures. Strangers, siblings, and parents are equally likely to elicit smiling or crying from the infant.
- *Phase 2: From 2 to 7 months.* Attachment becomes focused on one figure, usually the primary caregiver, as the baby gradually learns to distinguish between familiar and unfamiliar people.
- *Phase 3: From 7 to 24 months.* Specific attachments develop. With increased locomotor skills, babies actively seek contact with regular caregivers, such as the mother or father.
- *Phase 4: From 24 months on.* Children become aware of other people's feelings, goals, and plans and begin to take these into account in directing their own actions.

Bowlby argued that infants develop an *internal working model* of attachment, a simple mental model of the caregiver, their relationship to him or her, and the self as deserving of nurturant care. The infant's internal working model of attachment with the caregiver influences the infant's, and later the child's, subsequent responses to other people (Roisman & Groh, 2011). The internal model of attachment also has played a pivotal role in the discovery of links between attachment and subsequent emotion, understanding, conscious development, and self-concept (Thompson, 2013d).

Individual Differences in Attachment

Although attachment to a caregiver intensifies midway through the first year, isn't it likely that the quality of a baby's attachment experiences varies? Mary Ainsworth (1979) thought so. Ainsworth created the **Strange Situation,** an observational measure of infant attachment in which the infant experiences a series of introductions, separations, and reunions with the caregiver and an adult stranger in a prescribed order. In using the Strange Situation, researchers hope that their observations will provide information about the infant's motivation to be near the caregiver and the degree to which the caregiver's presence provides the infant with security and confidence.

Based on how babies respond in the Strange Situation, they are described as being securely attached or insecurely attached (in one of three ways) to the caregiver:

- **Securely attached babies** use the caregiver as a secure base from which to explore the environment. When in the presence of their caregiver, securely attached infants explore the room and examine toys that have been placed in it. When the caregiver departs, securely attached infants might protest mildly; when the caregiver returns, these infants reestablish positive interaction with her, perhaps by smiling or climbing on her lap. Subsequently, they often resume playing with the toys in the room.

Strange Situation An observational measure of infant attachment that requires the infant to move through a series of introductions, separations, and reunions with the caregiver and an adult stranger in a prescribed order.

securely attached babies Babies that use the caregiver as a secure base from which to explore their environment.

- **Insecure avoidant babies** show insecurity by avoiding the caregiver. In the Strange Situation, these babies engage in little interaction with the caregiver, are not distressed when she leaves the room, usually do not reestablish contact with her upon her return, and may even turn their back on her. If contact is established, the infant usually leans away or looks away.

- **Insecure resistant babies** often cling to the caregiver and then resist her by fighting against the closeness, perhaps by kicking or pushing away. In the Strange Situation, these babies often cling anxiously to the caregiver and don't explore the playroom. When the caregiver leaves, they often cry loudly and then push away if she tries to comfort them upon her return.

- **Insecure disorganized babies** are disorganized and disoriented. In the Strange Situation, these babies might appear dazed, confused, and fearful. To be classified as disorganized, babies must show strong patterns of avoidance and resistance or display certain specified behaviors, such as extreme fearfulness around the caregiver.

insecure avoidant babies Babies that show insecurity by avoiding their mothers.

insecure resistant babies Babies that often cling to the caregiver, then resist her by fighting against the closeness, perhaps by kicking or pushing away.

insecure disorganized babies Babies that show insecurity by being disorganized and disoriented.

What is the nature of secure and insecure attachment?

Do individual differences in attachment matter? Ainsworth proposed that secure attachment in the first year of life provides an important foundation for psychological development later in life. The securely attached infant moves freely away from the caregiver but keeps track of where she is through periodic glances. The securely attached infant responds positively to being picked up by others and, when put back down, freely moves away to play. An insecurely attached infant, by contrast, avoids the caregiver or is ambivalent toward her, fears strangers, and is upset by minor, everyday separations.

If early attachment to a caregiver is important, it should relate to a child's social behavior later in development. For some children, early attachments seem to foreshadow later functioning (Bretherton, 2012; Brisch, 2012). In an extensive longitudinal study conducted by Alan Sroufe and his colleagues (2005), early secure attachment (assessed by the Strange Situation at 12 and 18 months) was linked with positive emotional health, high self-esteem, self-confidence, and socially competent interaction with peers, teachers, camp counselors, and romantic partners through adolescence. And a recent meta-analysis found that disorganized attachment was more strongly linked to externalizing problems (aggression and hostility, for example) than were avoidant attachment and resistant attachment (Fearon & others, 2010).

An important issue regarding attachment is whether infancy is a critical or sensitive period for development. The studies just described show continuity, with secure attachment in infancy predicting subsequent positive development in childhood and adolescence. For some children, though, there is little continuity. Not all research reveals the power of infant attachment to predict subsequent development (Roisman & Groh, 2011; Thompson, 2013d). In one longitudinal study, attachment classification in infancy did not predict attachment classification at 18 years of age (Lewis, Feiring, & Rosenthal, 2000). In this study, the best predictor of an insecure attachment classification at 18 was the occurrence of parental divorce in the intervening years. Consistently positive caregiving over a number of years is likely an important factor in connecting early attachment with the child's functioning later

developmental cascade model
Involves connections across domains over time that influence developmental pathways and outcomes.

in development. Indeed, researchers have found that early secure attachment and subsequent experiences, especially maternal care and life stresses, are linked with children's later behavior and adjustment (Thompson, 2013d). For example, a longitudinal study revealed that changes in attachment security/insecurity from infancy to adulthood were linked to stresses and supports in socioemotional contexts (Van Ryzin, Carlson, & Sroufe, 2011). These results suggest that attachment continuity may reflect stable social contexts as much as early working models. The study just described (Van Ryzin, Carlson, & Sroufe, 2011) reflects an increasingly accepted view of the development of attachment and its influence on development. That is, it is important to recognize that attachment security in infancy does not always by itself produce long-term positive outcomes, but rather is linked to later outcomes through connections with the way children and adolescents subsequently experience various social contexts as they develop.

The Van Ryzin, Carlson, and Sroufe (2011) study reflects a **developmental cascade model,** which involves connections across domains over time that influence developmental pathways and outcomes (Cicchetti, 2013; Masten, 2013). Developmental cascades can include connections between a wide range of biological, cognitive, and socioemotional processes (attachment, for example), and also can involve social contexts such as families, peers, schools, and culture. Further, links can produce positive or negative outcomes at different points in development, such as infancy, early childhood, middle and late childhood, adolescence, and adulthood.

In addition to challenging the assumption that secure attachment in infancy serves as a critical or sensitive period, some developmentalists argue that the secure attachment concept does not adequately consider certain biological factors in development, such as genes and temperament. For example, Jerome Kagan (1987, 2002) points out that infants are highly resilient and adaptive; he argues that they are evolutionarily equipped to stay on a positive developmental course, even in the face of wide variations in parenting. Kagan and others stress that genetic characteristics and temperament play more important roles in a child's social competence than the attachment theorists, such as Bowlby and Ainsworth, are willing to acknowledge (Bakermans-Kranenburg & van IJzendoorn, 2011). For example, if some infants inherit a low tolerance for stress, this, rather than an insecure attachment bond, may be responsible for an inability to get along with peers. One study found links between disorganized attachment in infancy, a specific gene, and levels of maternal responsiveness (Spangler & others, 2009). In this study, infants with the short version of the gene—serotonin transporter gene 5-HTTLPR—developed a disorganized attachment style only when their mothers were slow in responding to them.

Another criticism of attachment theory is that it ignores the diversity of socializing agents and contexts that exists in an infant's world. A culture's value system can influence the nature of attachment (Mistry, Contreras, & Dutta, 2013). In northern Germany, for example, expectations for an infant's independence may be responsible for infants showing little distress upon a brief separation from the mother, whereas the Japanese mother's motivation for extreme close proximity to her infant may explain why Japanese infants become upset when they are separated from the mother. Also, in some cultures infants show attachments to many people. Among the Hausa (who live in Nigeria), both grandmothers and siblings provide a significant amount of care for infants (Harkness & Super, 1995). Infants in agricultural societies tend to form attachments to older siblings, who have major responsibility for their younger siblings' care. Researchers recognize the importance of competent, nurturant caregivers in an infant's development (Grusec & others, 2013).

In the Hausa culture, siblings and grandmothers provide a significant amount of care for infants. *How might these variations in care affect attachment?*

At issue, though, is whether or not secure attachment, especially to a single caregiver, is essential (Lamb, 2010; Thompson, 2013d).

Despite such criticisms, there is ample evidence that security of attachment is important to development (Sroufe, Coffino, & Carlson, 2010; Thompson, 2013d). Secure attachment in infancy is important because it reflects a positive parent-infant relationship and provides a foundation that supports healthy socioemotional development in the years that follow.

Caregiving Styles and Attachment

Is the style of caregiving linked with the quality of the infant's attachment? Securely attached babies have caregivers who are sensitive to their signals and are consistently available to respond to the infant's needs (Cassidy & others, 2011; Jin & others, 2012). These caregivers often let their babies take an active part in determining the onset and pacing of interactions in the first year of life. A recent study revealed that sensitive maternal responding was linked to infant attachment security (Finger & others, 2009).

How do the caregivers of insecurely attached babies interact with them? Caregivers of avoidant babies tend to be unavailable or rejecting (Cassidy & others, 2011). They often don't respond to their babies' signals and have little physical contact with them. When they do interact with their babies, they may behave in an angry and irritable way. Caregivers of resistant babies tend to be inconsistent; sometimes they respond to their babies' needs, and sometimes they don't. In general, they tend not to be very affectionate with their babies and show little synchrony when interacting with them. Caregivers of disorganized babies often neglect or physically abuse them (Bernard & others, 2012; Cicchetti, 2013).

Social Contexts

Now that we have explored the infant's emotional and personality development and attachment, let's examine the social contexts in which these occur. We begin by studying a number of aspects of the family and then turn to a social context in which infants increasingly spend time: child care.

The Family

The family can be thought of as a constellation of subsystems—a complex whole made up of interrelated, interacting parts—defined in terms of generation, gender, and role. Each family member participates in several subsystems (Parke & Clarke-Stewart, 2011). The father and child represent one subsystem, the mother and father another; the mother, father, and child represent yet another; and so on.

These subsystems have reciprocal influences on each other, as Figure 4.6 highlights. For example, Jay Belsky (1981) stresses that marital relations, parenting, and infant behavior and development can have both direct and indirect effects on each other. An example of a direct effect is the influence of the parents' behavior on the child. An indirect effect is how the relationship between the spouses mediates the way a parent acts toward the child. For example, marital conflict might reduce the
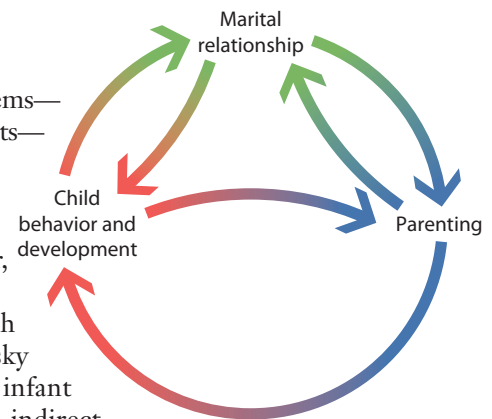

Marital relationship

Child behavior and development

Parenting

Figure 4.6 Interaction Between Children and Their Parents: Direct and Indirect Effects

efficiency of parenting, in which case marital conflict would indirectly affect the child's behavior (Cummings, Braungart-Rieker, & Du Rocher-Schudlich, 2013). The simple fact that two people are becoming parents may have profound effects on their relationship.

The Transition to Parenthood

Whether people become parents through pregnancy, adoption, or stepparenting, they face disequilibrium and must adapt to it. Parents want to develop a strong attachment with their infant, but they still want to maintain strong attachments to their spouse and friends, and possibly to continue their careers. Parents ask themselves how this new being will change their lives. A baby places new restrictions on partners; no longer will they be able to rush out to a movie at a moment's notice, and money may not be readily available for vacations and other luxuries. Dual-career parents ask, "Will it harm the baby to place her in child care? Will we be able to find responsible baby-sitters?"

What kinds of adaptations do parents need to make?

In a longitudinal investigation of couples from late pregnancy until three years after the baby was born, couples enjoyed more positive marital relations before the baby was born than afterward (Cowan & Cowan, 2000, 2009; Cowan & others, 2005). Still, almost one-third reported an increase in marital satisfaction. Some couples said that the baby had both brought them closer together and moved them farther apart; being parents enhanced their sense of themselves and gave them a new, more stable identity as a couple. Babies opened men up to greater concern with intimate relationships, and the demands of juggling work and family roles stimulated women to manage family tasks more efficiently and pay attention to their own personal growth.

The Bringing Home Baby project is a workshop for new parents that emphasizes strengthening their relationship with each other, understanding and becoming acquainted with the baby, resolving conflict, and developing parenting skills (Gottman, 2012). Evaluations of the project revealed that parents who participated improved in their ability to work together as parents; fathers were more involved with their baby and sensitive to the baby's behavior; mothers had fewer symptoms of postpartum depression; and their baby showed better overall development than was the case among parents and babies in a control group (Gottman, 2009; Gottman, Gottman, & Shapiro, 2009).

Other recent studies have explored the transition to parenthood (Brown, Feinberg, & Kan, 2012; Menendez & others, 2011). One study found similar negative change in relationship satisfaction for married and cohabiting women during the transition to parenthood (Mortensen & others, 2012). Another study revealed that mothers experienced unmet expectations in the transition to parenting, with fathers doing less than their partners had anticipated (Biehle & Mickelson, 2012).

Reciprocal Socialization

For many years, socialization was viewed as a one-way process: Children were considered to be the products of their parents' socialization techniques. According to more recent research, however, parent-child interaction is reciprocal (Gault-Sherman, 2011). **Reciprocal socialization** is socialization that is bidirectional. That is, children socialize their parents just as parents socialize their children (Grusec & others, 2013). These reciprocal

reciprocal socialization Socialization that is bidirectional, meaning that children socialize parents, just as parents socialize children.
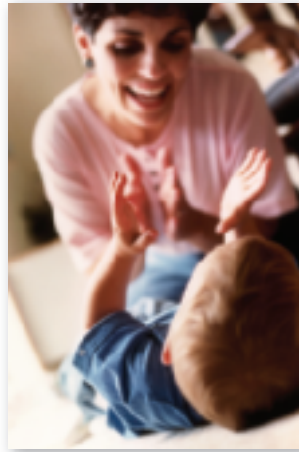
Caregivers often play games with infants such as peek-a-boo and pat-a-cake. *How is scaffolding involved in these games?*

interchanges and mutual influence processes are sometimes referred to as *transactional* (Sameroff, 2009, 2012).

An important form of reciprocal socialization is **scaffolding,** in which parents time interactions in such a way that the infant experiences turn-taking with the parents. Scaffolding can be used to support children's efforts at any age.

The game peek-a-boo, in which parents initially cover their babies, then remove the covering, and finally register "surprise" at the babies' reappearance, reflects the concept of scaffolding. As infants become more skilled at this game, they gradually do some of the covering and uncovering themselves. Parents try to time their actions in such a way that the infant takes turns with the parent.

How Would You…?

As an educator, how would you explain the value of games and the role of scaffolding in the development of infants and toddlers?

Managing and Guiding Infants' Behavior

In addition to sensitive parenting involving warmth and caring that can result in infants being securely attached to their parents, other important aspects of parenting infants involve managing and guiding their behavior in an attempt to reduce or eliminate undesirable behaviors (Holden, Vittrup, & Rosen, 2011). This management process includes (1) being proactive and childproofing the environment so infants won't encounter potentially dangerous objects or situations, and (2) engaging in corrective methods when infants engage in undesirable behaviors, such as excessive fussing and crying, throwing objects, and so on.

One study assessed the discipline and corrective methods that parents had used by the time their infants were 12 and 24 months old (Vittrup, Holden, & Buck, 2006) (See Figure 4.7). Notice in Figure 4.7 that the main method parents used by the time infants were 12 months old was diverting the infants' attention, followed by reasoning, ignoring, and negotiating. Also note in Figure 4.7 that more than one-third of parents had yelled at their infant, about one-fifth had slapped the infant's hands or threatened the infant, and approximately one-sixth had spanked the infant by their first birthday.

Method	12 Months	24 Months
Spank with hand	14	45
Slap infant's hand	21	31
Yell in anger	36	81
Threaten	19	63
Withdraw privileges	18	52
Time-out	12	60
Reason	85	100
Divert attention	100	100
Negotiate	50	90
Ignore	64	90

Figure 4.7 Parents' Methods for Managing and Correcting Infants' Undesirable Behavior
Shown here are the percentages of parents who had used various corrective methods by the time the infants were 12 and 24 months old. *Source:* Based on data presented in Table 1 in Vittrup, Holden, G.W. & Buck, M. (2006). Attitudes predict the use of physical punishment: A prospective study of the emergence of disciplinary practices. Pediatrics, 117, 2055–2064.
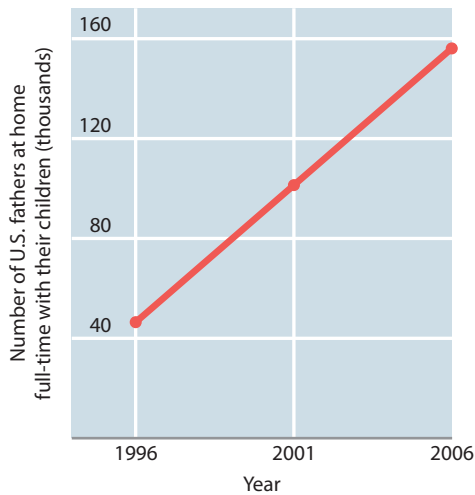
As infants move into the second year of life and become more mobile and capable of exploring a wider range of environments, parental management of the toddler's behavior often triggers even more corrective feedback and discipline (Holden, Vittrup, & Rosen, 2011). As indicated in Figure 4.7, in the study just described, yelling increased from 36 percent at 1 year of age to 81 percent at 2 years of age, slapping the infant's hands increased from 21 percent at 1 year to 31 percent at age 2, and spanking increased from 14 percent at 1 to 45 percent at 2 (Vittrup, Holden, & Buck, 2006).

A special concern is that such corrective discipline tactics not become abusive. Too often what starts out as mild to moderately intense discipline on the part of parents can move into highly intense anger. In Chapter 6, you will read more extensively about the use of punishment with children and child maltreatment.

Figure 4.8

Increase in the Number of U.S. Fathers Staying at Home Full-Time with Their Children

Maternal and Paternal Caregiving

Much of our discussion of attachment has focused on mothers as caregivers. Do mothers and fathers differ in their caregiving roles? In general, mothers on average still spend considerably more time in caregiving with infants and children than do fathers (Blakemore, Berenbaum, & Liben, 2009). Mothers especially are more likely to engage in the managerial role with their children, coordinating their activities, making sure their health-care needs are met, and so on (Parke & Clarke-Stewart, 2011).

However, an increasing number of U.S. fathers stay home full-time with their children (Lamb, 2010). As indicated in Figure 4.8, there was a 300-plus percent increase in stay-at-home fathers in the United States from 1996 to 2006. A large portion of these full-time fathers have career-focused wives who are the primary providers of family income (O'Brien & Moss, 2010). One study revealed that the stay-at-home fathers were as satisfied with their marriage as traditional parents, although they indicated that they missed their daily life in the workplace (Rochlen & others, 2008). In this study, the stay-at-home fathers reported that they tended to be ostracized when they took their children to playgrounds and often were excluded from parent groups.

Observations of fathers and their infants suggest that fathers have the ability to act as sensitively and responsively with their infants as mothers do (Lamb, 2010; Rutherford & Przednowek, 2012). Consider the Aka pygmy culture in Africa, in which fathers spend as much time interacting with their infants as mothers do (Hewlett, 1991, 2000; Hewlett & MacFarlan, 2010). A recent study also found that marital intimacy and partner support during prenatal development were linked to father-infant attachment following childbirth (Yu & others, 2012). And another recent study revealed that fathers with a college-level education engaged in more stimulating physical activities with their infants and that fathers in a conflictual couple relationship participated in less caregiving and physical play with their infants (Cabrera, Hofferth, & Chae, 2011). Remember, however, that although fathers can be active, nurturant, involved caregivers, as in the case of Aka pygmies, in many cultures men have not chosen to follow this pattern (Lamb, 2005).

Do fathers interact with their infants differently from the way mothers do? Maternal interactions usually center on child-care activities—feeding, changing

An Aka pygmy father with his infant son. In the Aka culture, fathers were observed to be holding or near their infants 47 percent of the time (Hewlett, 1991).

diapers, and bathing. Paternal interactions are more likely to include play, especially rough-and-tumble play (Parke & Clarke-Stewart, 2011). They bounce infants, throw them up in the air, tickle them, and so on (Lamb, 1986, 2000). Mothers do play with their infants, but their play is less physical and arousing than that of fathers.

Do children benefit when fathers are positively involved in their caregiving? A study of more than 7,000 children who were assessed from infancy to adulthood revealed that those whose fathers were extensively involved in their lives (such as engaging in various activities with them and showing a strong interest in their education) were more successful in school (Flouri & Buchanan, 2004). However, if fathers have mental health problems, they may not interact as effectively with their infants. A recent study revealed that depressed fathers focused more on their own needs than on their infants' needs and directed more negative and critical speech toward infants (Sethna, Murray, & Ramchandani, 2012).

Child Care

Many U.S. children today experience multiple caregivers. Most do not have a parent staying home to care for them; instead, the children receive "child care"—that is, some type of care provided by others. Many parents worry that child care will have adverse effects such as reducing their infants' emotional attachment to them, retarding the infants' cognitive development, failing to teach them how to control anger, or allowing them to be unduly influenced by their peers. Are these concerns justified?

In the United States, approximately 15 percent of children age 5 and younger experience more than one child-care arrangement. A recent study of 2- and 3-year-old children revealed that an increase in the number of child-care arrangements the children experienced was linked to an increase in behavioral problems and a decrease in prosocial behavior (Morrissey, 2009).

Parental Leave

Today far more young children are in child care than at any other time in U.S. history. About 2 million children in the United States currently receive formal, licensed child care, and uncounted millions of children are cared for by unlicensed baby-sitters. In part, these numbers reflect the fact that U.S. adults cannot receive paid leave from their jobs to care for their young children.

Child-care policies around the world vary (Tolani & Brooks-Gunn, 2008). Europe has led the way in creating new standards of parental leave: In 1992, the European Union (EU) mandated a paid 14-week maternity leave. In most European countries today, working parents on leave receive 70 to 100 percent of the worker's prior wage, and paid leave averages about 16 weeks (Tolani & Brooks-Gunn, 2008). The United States currently allows up to 12 weeks of unpaid leave for parents who are caring for a newborn.

Most countries restrict eligible benefits to women who have been employed for a minimum length of time prior to childbirth. In Denmark, even unemployed mothers are eligible for extended parental leave related to childbirth. In Germany, child-rearing leave is available to almost all parents. The Nordic countries (Denmark, Norway, and Sweden) have extensive gender-equity family leave policies for childbirth that emphasize the contributions of both women and men (O'Brien & Moss, 2010). For example, in Sweden parents can take an 18-month, job-protected parental leave with benefits to be shared by parents and applied to full-time or part-time work.

Variations in Child Care

Because the United States does not have a policy of paid leave for child care, child care in the United States has become a major national concern (Berlin, 2012; Lamb, 2012). Many factors influence the effects of child care, including the age of the child, the type of child care, and the quality of the program.

How are child-care policies in many European countries, such as Sweden, different from those in the United States?

The type of child care varies extensively. Child care is provided in large centers with elaborate facilities and in private homes. Some child-care centers are commercial operations; others are nonprofit centers run by churches, civic groups, and employers. Some child-care providers are professionals; others are untrained adults who want to earn extra money. Figure 4.9 presents the primary care arrangement for U.S. children under age 5 with employed mothers (Clarke-Stewart & Miner, 2008).
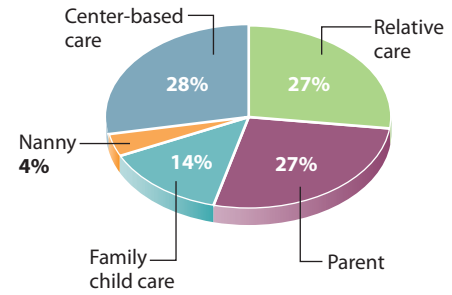
Child-care quality makes a difference. What constitutes a high-quality child-care program for infants? In high-quality child care (Clarke-Stewart & Miner, 2008, p. 273):

> caregivers encourage the children to be actively engaged in a variety of activities, have frequent, positive interactions that include smiling, touching, holding, and speaking at the child's eye level, respond properly to the child's questions or requests, and encourage children to talk about their experiences, feelings, and ideas.

High-quality child care also involves providing children with a safe environment, access to age-appropriate toys and participation in age-appropriate activities, and a low caregiver-child ratio that allows caregivers to spend considerable time with children on an individual basis.

Children are more likely to experience poor-quality child care if they come from families with few resources (psychological, social, and economic) (Carta & others, 2012). Many researchers have examined the role of poverty in quality of child care (Lucas & others, 2008). One study found that extensive child care was harmful to low-income children only when the care was of low quality (Votruba-Drzal & others, 2004). Even if the child was in child care more than 45 hours a week, high-quality care was associated with fewer internalizing problems (anxiety, for example) and externalizing problems (aggressive and destructive behaviors, for example). A recent study revealed that children from low-income families benefited in terms of school readiness and language development when their parents selected higher-quality child care (McCartney & others, 2007).

To read about one individual who provides quality child care to individuals from impoverished backgrounds, see the *Careers in Life-Span Development* profile.

How Would You…?

As an educator, how would you design the ideal child-care program to promote optimal infant development?

Figure 4.9
Primary Care Arrangements in the United States for Children Under 5 Years of Age with Employed Mothers

Center-based care 28% — Relative care 27% — Parent 27% — Family child care 14% — Nanny 4%

Careers in life-span development

Wanda Mitchell, Child-Care Director

Wanda Mitchell is the Center Director at the Hattie Daniels Day Care Center in Wilson, North Carolina. Her responsibilities include directing the operation of the center, which involves creating and maintaining an environment in which young children can learn effectively, and ensuring that the center meets state licensing requirements. Wanda obtained her undergraduate degree from North Carolina A & T University, majoring in Child Development. Prior to her current position, she had been an education coordinator for Head Start and an instructor at Wilson Technical Community College. Describing her chosen career, Wanda says, "I really enjoy working in my field. This is my passion. After graduating from college, my goal was to advance in my field."

Wanda Mitchell, child-care director, working with some of the children at her center.

The National Longitudinal Study of Child Care

In 1991, the National Institute of Child Health and Human Development (NICHD) began a comprehensive longitudinal study of child-care experiences. Data were collected from a diverse sample of almost 1,400 children and their families at 10 locations across the United States over a period of seven years. Researchers used multiple methods (trained observers, interviews, questionnaires, and testing) and measured many facets of children's development, including physical health, cognitive development, and socioemotional development. Following are some of the results of what is now referred to as the NICHD Study of Early Child Care and Youth Development or NICHD SECCYD (NICHD Early Child Care Research Network, 2001, 2002, 2003, 2004, 2005, 2006, 2009).

- *Quality of care.* Evaluations of quality of care were based on characteristics such as group size, child–adult ratio, physical environment, caregiver characteristics (such as formal education, specialized training, and child-care experience), and caregiver behavior (such as sensitivity to children). An alarming conclusion is that a majority of the child care in the first three years of life was of unacceptably low quality. Positive caregiving by nonparents in child-care settings was infrequent—only 12 percent of the children in the study experienced positive nonparental child care (such as positive talk and language stimulation). Further, infants from low-income families experienced lower-quality child care than did infants from higher-income families. When quality of caregivers' care was high, children performed better on cognitive and language tasks, were more cooperative with their mothers during play, showed more positive and skilled interaction with peers, and had fewer behavior problems. Caregiver training and favorable child–staff ratios were linked with higher cognitive and social competence when children were 54 months of age. In recent research involving the NICHD sample, links were found between nonrelative child care from birth to 4 years of age and adolescent development at 15 years of age (Vandell & others, 2010). In this analysis, better quality of early care was related to a higher level of academic achievement and a lower level of externalizing problems at age 15.

- *Amount of child care.* The quantity of child care predicted some outcomes (Vandell & others, 2010). When children spent extensive amounts of time in child care beginning in infancy, they experienced fewer sensitive interactions with their mothers, showed more behavior problems, and had higher rates of illness. In general, when children spent 30 hours or more per week in child care, their development was less than optimal.

- *Family and parenting influences.* The influence of families and parenting was not weakened by extensive child care. Parents played a significant role in helping children regulate their emotions. Especially important parenting influences were being sensitive to children's needs, being involved with children, and providing cognitive stimulation. Indeed, parental sensitivity has been the most consistent predictor of secure attachment (Friedman, Melhuish, & Hill, 2009). An important final point about the extensive NICHD SECCYD research is that findings have consistently shown that family factors are considerably stronger and more consistent predictors of a wide variety of child outcomes than are child-care experiences (quality, quantity, type). The worst outcomes for children occur when both home and child care settings are of poor quality. For example, a recent study involving the NICHD SECCYD data revealed that worse socioemotional

What are some important findings from the national longitudinal study of child care conducted by the National Institute of Child Health and Human Development?

outcomes (more problem behavior, lower levels of prosocial behavior) for children occurred when they experienced both home and child care environments that conferred risk (Watamura & others, 2011).

What are some strategies parents can follow in regard to child care? Child-care expert Kathleen McCartney (2003, p. 4) offers this advice:

- *Recognize that the quality of your parenting is a key factor in your child's development.*
- *Make decisions that will improve the likelihood that you will be good parents.* "For some this will mean working full-time"—for personal fulfillment, income, or both. "For others, this will mean working part-time or not working outside the home."
- *Monitor your child's development.* "Parents should observe for themselves whether their children seem to be having behavior problems." They should also talk with child-care providers and their pediatrician about their child's behavior.
- *Take some time to find the best child care*. Observe different child-care facilities and be certain that you like the one you choose. "Quality child care costs money, and not all parents can afford the child care they want."

How Would You…?

As a psychologist, based on the findings from the NICHD study, how would you advise parents about their role in their child's development versus the role of nonparental child care?

Summary

Emotional and Personality Development

- Emotion is feeling, or affect, that occurs when a person is in a state or an interaction that is important to them. Infants display a number of emotions early in their development, such as by crying, smiling, and showing fear. Two fears that infants develop are stranger anxiety and fear of separation from a caregiver. As infants develop, it is important for them to increase their ability to regulate their emotions.

- Temperament is an individual's behavioral style and characteristic way of responding emotionally. Chess and Thomas classified infants as (1) easy, (2) difficult, or (3) slow to warm up. Kagan proposed that inhibition to the unfamiliar is an important temperament category. Rothbart and Bates emphasized that effortful control (self-regulation) is an important temperament dimension. Goodness of fit can be an important aspect of a child's adjustment.

- Erikson argued that an infant's first year is characterized by the stage of trust versus mistrust. Independence becomes a central theme in the second year of life, which is characterized by the stage of autonomy versus shame and doubt.

Social Orientation and Attachment

- Infants show a strong interest in the social world and are motivated to understand it. Infants are more socially sophisticated and insightful at an earlier age than was previously thought.

- Attachment is a close emotional bond between two people. In infancy, contact comfort and trust are important in the development of attachment. Securely attached babies use the caregiver, usually the mother, as a secure base from which to explore their environment. Three types of insecure attachment are avoidant, resistant, and disorganized. Caregivers of secure babies are more sensitive to the babies' signals and are consistently available to meet their needs.

Social Contexts

- The transition to parenthood requires considerable adaptation and adjustment on the part of parents. Children socialize parents just as parents socialize children. Parents use a wide range of methods to manage and guide infants' behavior. In general, mothers spend more time in caregiving than fathers; fathers tend to engage in more physical, playful interaction with infants than mothers.

- The quality of child care is uneven, and child care remains a controversial topic. Quality child care can be achieved and seems to have few adverse effects on children.

Key Terms

emotion 114
basic cry 116
anger cry 116
pain cry 116
reflexive smile 116
social smile 116
stranger anxiety 116
separation protest 117

social referencing 117
temperament 118
easy child 119
difficult child 119
slow-to-warm-up
   child 119
goodness of fit 121
attachment 125

Strange Situation 126
securely attached
   babies 126
insecure avoidant
   babies 127
insecure resistant
   babies 127

insecure disorganized
   babies 127
developmental cascade
   model 128
reciprocal socialization 130
scaffolding 131

Chapter 4 | SOCIOEMOTIONAL DEVELOPMENT IN INFANCY

Connecting with McGraw Hill **connect**®

Learning Objectives	Assessment Activities	Activity Type	Page Reference
Discuss emotional development in infancy.	Social Smile 2–9 Weeks	Milestones	pp. •••–•••
	Emotional Expression 2 Weeks–3 Years	Milestones	
	Emotional Expression Between 8 and 36 Weeks	Milestones	
Discuss temperament.	Temperament, Esme, 10–15 mos	Milestones	pp. •••–•••
Discuss personality development in infancy.	Development of Autonomy 13–15 Months	Milestones	pp. •••–•••
	Rouge Test at Age 2	Video	
	Self-Awareness	Video	
	Telling a Story at Age 2	Video	
	Trust and Mistrust, Atlas, 4 mos–2 yrs	Milestones	
Describe social orientation/ understanding in infancy.	Interactional Synchrony	Milestones	pp. •••–•••
	Goal-Oriented Behaviors, Yovani, 6–26 mos	Milestones	

(*continued*)

Learning Objectives	Assessment Activities	Activity Type	Page Reference
Describe attachment and its development.	Development of Attachment Between Child and Caregiver 2 Weeks–17 Months	Milestones	pp. •••–•••
	Bowlby's Stages of Attachment	Click & drag activity	
	Attachment Theory	Video	
	Emotions and Attachment, Esme, 13–32 mos	Milestones	
Explain the role of the family in relation to the infant.	Parent-Infant Interaction With An 18-Month-Old	Video	pp. •••–•••
	History of Father Role	Video	
	Paternal Caregivers, 4–12 mos	Milestones	
Explain child care.	Daycare Environment at 3 Years	—Video	pp. •••–•••
	Preschool Teacher Interaction with 4-Year-Olds	—Video	
	Quality Childcare Indicators	—Video	