CHAPTER 1

Attachment as Context for Development

We describe in this chapter how the early parent–child relationship mediates and influences the course of development. Although parenting is not the only influence on development, it is foundational to core developmental domains such as social, emotional, and cognitive development. Attachment theory provides an especially useful perspective on early parent–child interactions. John Bowlby formulated attachment theory, and other researchers, particularly Mary Ainsworth, have validated and refined it. Attachment theory developed out of Bowlby's attempt to understand separation distress in very young children. Bowlby and his colleagues James and Joyce Robertson observed (and filmed) toddlers placed in residential nurseries for several days while their mothers were hospitalized. The intense anger and distress these children expressed, in spite of being adequately cared for physically by staff, suggested a strong reaction to being separated from their mothers. The fact that these toddlers became so distressed, and then depressed and detached, as the separation lengthened suggested that a child's bond with the mother had particular qualities that made their relationship unlike any other. When that tie was temporarily broken, these young children suffered profound emotional reactions, as if they had lost their mothers. These 1- to 2-year-olds were relieved when they were reunited with their mothers, yet they remained very anxious about minor separations (Robertson & Bowlby, 1952; Robertson & Robertson, 1971). From his observations of these children, Bowlby formulated the idea of attachment as a strong emotional tie to a specific person (or persons) that promotes the young child's sense of security. Attachment is now a central concept in developmental understanding. But only 60 years ago, the dominant perspective was that young children valued relationships primarily as a source

of food and safety, and that they should be able to thrive in any relationship that met those needs. Attachment theory has established that the infant or young child needs a consistent relationship with a particular person in order to thrive and develop (Kobak, Zajac, & Madsen, 2016).

Bowlby described attachment as a fundamental need that has a biological basis. The goal of the infant's attachment behavior is to keep close to a preferred person in order to maintain a sense of security. The motivation to stay close and to avoid separation can be seen in an infant who wakes up from a nap and begins to fuss and cry, which alerts the parent to come and pick her up.

Attachment serves as a protective device for the immature young of many species, including humans. Babies need the care of adults to survive, and they have many built-in behaviors—such as making strong eye contact, cooing and vocalizing, and smiling—that attract adults to them. Every baby with a normal neurological system develops a focal attachment to the mother or other primary caregiver. The beginnings of the attachment process between the caregiver and infant can be observed in the early weeks and months as infants become increasingly responsive to familiar people and experience consistent care when they are distressed and sustained positive engagement when they are not. Over the course of the child's first year, the attachment relationship emerges as an organized and stable dyadic system, one that can be reliably measured and is powerfully predictive of later functioning.

HOW ATTACHMENT DEVELOPS

Infants make attachments with specific people. Although a newborn infant may be comforted by anyone who picks him up, he very quickly differentiates his primary attachment figure(s) from others. During the early weeks of life, the caregiver learns the infant's cues and the infant learns the particular qualities of his mother (assuming the mother is the primary caregiver). The baby, through repeated interactions and in the context of consistent and competent care, learns to recognize his mother—what her face looks like, what she smells like, what her touch feels like, and how her voice sounds. Through this process, the infant's attachment becomes specific and preferential. In most cultures, infants' attachments have an order of preference, usually to the mother, then the father, and then siblings, although infants who are in care full time with a single caregiver often develop an attachment to her that is second only to that with the mother.

FUNCTIONS OF ATTACHMENT

Attachment has four main functions: providing a sense of security, regulating affect and arousal, promoting the expression of feelings and communication, and serving as a base for exploration.

Providing a Sense of Security

The implicit goal of attachment is to maintain the infant's feeling of security. When an infant becomes distressed, both parent and infant take actions to restore the sense of security (Bowlby, 1969). For example, an infant becomes upset and communicates this by looking anxious, crying, or moving closer to her mother. The mother moves toward the baby, soothes her with her voice, and picks her up. The baby continues to fuss briefly, then molds to the mother's body, stops crying, and soon begins to breathe more slowly and regularly, indicating a decrease in arousal; her sense of security has been restored. In Bowlby's terms, the infant's distress signal, which is functionally an attachment-seeking behavior, activates the mother's side of the attachment system, and the mother takes steps to calm the baby's distress.

Regulating Affect and Arousal

A second primary function of attachment, as this example suggests, is to regulate the infant's affective states, including effective physiological responses to stress (Cassidy, Jones, & Shaver, 2013) and the synchronization of neurological and behavioral systems (Feldman, 2015). *Arousal* refers to the subjective feeling of being "on alert," with the accompanying physiological reactions of increased respiration and heartbeat and bodily tension. If arousal intensifies without relief, it begins to feel aversive and the infant becomes distressed. The infant then sends out distress signals and moves toward the caregiver. In a secure attachment, the infant is able to draw on the mother for help in regulating distress. The mother's capacity to read an infant's emotions accurately and to provide soothing or stimulation help the infant modulate arousal (Stern, 1985). Over time, infants and parents develop transactional patterns of mutual regulation to relieve the infant's states of disequilibrium. Repeated successful mutual regulation of arousal helps the infant begin to develop the ability to regulate arousal through his own efforts. Through the experience of being soothed, the infant internalizes strategies for self-soothing. Good self-regulation helps the child feel competent in controlling distress and negative emotions.

In contrast, children who have not been helped to regulate arousal within the attachment relationship tend, as they get older, to feel at the mercy of strong impulses and emotions. They have more behavioral problems because they have not developed effective internal ways of controlling their reactions to stressful stimuli (Solomon, George, & de Jong, 1995). In another type of insecure attachment, parents respond negatively to the infant's expressions of distress. The child learns that in order to maintain the attachment, he must inhibit strong feelings, especially negative ones. Over time he internalizes a style of overregulating, minimizing, and avoiding expression of strong emotions (Magai, 1999).

Promoting the Expression of Feelings and Communication

As the attachment relationship develops during the first 6 months of life, it becomes the vehicle for sharing positive feelings and learning to communicate and play. For example, a 6-month-old infant initiates a game of peek-a-boo (previously taught to her by her father) by pulling a diaper over her face. Her father responds by saying, "Oh, you want to play, huh?," and pulls the diaper off, saying, "Peek-a-boo!" and smiling and looking into the baby's eyes. The baby smiles and begins to wave her arms and kick her feet. The father says warmly, "Oh, you like to play peek-a-boo, don't you?" The baby vocalizes, then begins to pull the diaper over her face again in order to continue the game.

This example indicates how attachment is established and how it is perpetuated. Attachment develops out of transactions: The infant expresses a need to be fed, to be played with, to be comforted—and the parent responds. These transactions, when they go well, reveal important qualities of the attachment relationship: mutually reinforcing, synchronous behaviors on the part of the parent and infant, a high degree of mutual involvement, attunement to each other's feelings, and attentiveness and empathy on the part of the parent (Stern, 1985).

However, even in the most secure attachment, synchrony is not always present. Parents are not always optimally responsive and attuned, nor do they need to be. Transactions between infant and parent show moment-to-moment variability in the degree of synchrony, attunement, and mutual responsiveness. Interactional mismatches between baby and parent are commonplace, and they temporarily interfere with the infant's ability to regulate affects. An indicator of secure attachment is the ability of the parent and infant to use interactive coping skills to repair such mismatches when they occur, thus restoring equilibrium for the infant and for the attachment relationship (Tronick & Gianino, 1986a). For example, when a parent is preoccupied or even distressed, the infant watching her begins to feel out of touch—which is a minor mismatch. The baby may whine or, alternatively, smile and kick his feet to attract the mother's attention. As the mother responds, the mismatch ends and the feeling of security is reestablished. Siegel (2001) notes, "Repair is . . . important in helping to teach the child that life is filled with inevitable moments of misunderstandings and missed connections that can be identified and connection created again" (p. 79).

Serving as a Base for Exploration

Later in development, especially from age 1 onward, the attachment relationship becomes *a base for exploration*. Attachment theorists consider the motivation to explore and learn about the world and to develop new skills to be as intrinsic in infants as attachment motivation. Bowlby (1988) pointed out that the attachment and exploratory behavioral systems operate in tandem.

The confidence with which the child ventures out depends a great deal on her confidence in her attachments. Indeed, confidence in the primary attachment figure becomes confidence in oneself. Consequently, if a toddler has a secure base in her attachment relationship, she will feel free to explore her environment, with the implicit awareness that the caregiver is available if needed (Grossmann, Grossmann, Kindler, & Zimmerman, 2008). Since she is not concerned about attachment, exploratory behavior dominates (Bowlby, 1969). Her confidence allows her to interact with her environment in an open and curious way. The child who explores confidently has learned through experience that "my parent looks out for me." This sense of security allows her to focus on developmental tasks and to feel competent (Cassidy, 2016; Sroufe, Egeland, Carlson, & Collins, 2005). On the other hand, a toddler who is anxious about whether her caregiver will be responsive and protective may be inhibited from exploring because emotionally she remains focused on ensuring that her attachment figures are available (Lieberman, 1993).

PATTERNS OF ATTACHMENT

Beginning in the mid-1960s, Mary Ainsworth began to apply Bowlby's attachment theory in a series of studies that would lead to a more specific understanding of the dynamics of attachment and to the identification of three distinct patterns of attachment. First, Ainsworth (1967) did an anthropological field study of mother–infant interaction patterns of the Ganda people of Uganda through intensive observation. She found that maternal responsiveness and sensitivity and infant reactions to separation were the most important indicators of the quality of attachment behavior. Her initial observational studies of American mothers and infants confirmed the main findings of the Ganda study and provided beginning support for the validity of attachment theory across cultures. However, Ainsworth also observed cultural differences between the Ganda and American infants' ability to handle stress. The American babies, when observed in the home, seemed less stressed by very brief separations from the mother or by the presence of strangers than did the Ganda infants. The Ganda infants were much more likely to initiate attachment behavior (to cry, protest, or try to follow) when the mother left the room than were the American babies. The Ganda babies, who were almost always with their mothers, consequently had fewer early separation experiences than did the American infants.

To take into account the American infants' greater tolerance for separation, Ainsworth devised an experimental procedure called the "Strange Situation" to create a more stressful situation to elicit attachment behavior. This procedure aims to create mild but increasing stress on the attachment relationship, so that the researcher can observe and identify the infant's attachment strategies and the degree of security involved. In the Strange Situation, mother and baby (12–18 months old) come into a room the infant has not seen before.

After a brief period of play, while the mother sits and watches, a stranger enters the room. After the stranger talks with the mother, the mother briefly leaves the room and returns. Then the stranger leaves. Next, the mother leaves the baby alone for a short time and returns. Ainsworth found that the infant's response to the mother's return was the most sensitive indicator of attachment quality. Securely attached infants showed characteristic responses when reunited with the mother, and insecurely attached infants also reacted in distinctive ways, indicating that by age 1, infants have already developed differentiated expectations of their parents' response when they are distressed (Kobak et al., 2016). In Ainsworth's original study, infants between 9 and 12 months and their mothers were observed for a total of 72 hours at home prior to the Strange Situation procedure. These independent home observations correlated positively with ratings obtained from the Strange Situation procedure. Thus, the validity of the Strange Situation as a research tool for the assessment of attachment in middle-class American samples was established via independent observations.

ATTACHMENT CLASSIFICATIONS

Ainsworth's observational and experimental studies identified the characteristics of secure attachment and delineated two types of anxious or insecure attachment. A third type of insecure attachment has been described by Mary Main (Main & Solomon, 1990). The attachment classifications are

- Group A: Insecure-avoidant
- Group B: Secure
- Group C: Insecure-ambivalent/resistant
- Group D: Insecure-disorganized/disoriented

Infants in each attachment category present distinctly different reactions to the separation and reunion episodes of the Strange Situation procedure. These differences are seen not merely as reactions to the experimental situation but rather as outcomes of the history of attachment qualities and strategies that have developed over time (Ainsworth, Blehar, Waters, & Wall, 1978).

Secure Attachment

The infants rated as secure (Group B) showed confidence in the attachment relationship, even though they varied in how distressed they became in response to separation. When the mother returned, they tended to greet her positively, to look relieved and happy, and to move close to her. If distressed, they wanted to be picked up, and they quickly calmed in response to the parent's attention and soothing. In these securely attached infants, there was an expected pattern of exploratory versus attachment-seeking behavior: "When

they were alone with their mothers, they explored actively, showing very little attachment behavior. Most of them were upset in the separation episodes and explored little. All of them responded strongly to the mother's return in the reunion episodes, the majority seeking close bodily contact with her" (Ainsworth, 1982, p. 16).

Ainsworth's prior in-home studies of these infants and mothers showed that the mothers of the secure infants were responsive, emotionally available, and loving. These babies coped with the stress of a brief separation because they were confident of their parents' responsiveness. Secure infants were able to express their feelings openly, including positive and negative affect, without the necessity of defending against negative feelings. They showed confidence in their parents' ability to accept their full range of feelings and to help them regulate distressing feelings (Main & Hesse, 1990).

Secure attachments have a positive impact on later development. Children with a history of secure attachment are more confident about exploring their environment and more open to learning. This is first evident in the toddler phase, when the child uses the mother as a base from which to explore, but it persists in later development. Good attachment relationships tend to generalize to future relationships. Longitudinal studies by Sroufe and colleagues (2005) confirm that general differences between secure and insecure attachment patterns persist from infancy through the preschool and elementary school years. Children judged as securely attached at 12 and 18 months were seen at 42 months as more flexible and resourceful. They had fewer behavior problems, sought attention from teachers in positive ways, and effectively elicited their teachers' support when distressed. They showed less negative affect and more age-expected control of impulses. They got along with other children well and showed a capacity for empathy. Studies of these children in later childhood showed similar associations between secure attachment history and social competence (Weinfield, Sroufe, & Egeland, 2000).

Security in infancy gets development off to a good start, but it should not be considered an "inoculation" against future disruptions of development, which can occur in response to changes in quality of attachment. For example, a preschool child who was securely attached as an infant may move to an insecure attachment—with negative developmental effects—in response to severe stressors on caregivers, such as divorce or the death of a spouse (Thompson, 2000). However, children with histories of secure attachment who move to insecurity can more easily rebound to security as stressors decrease (Kobak & Madsen, 2008; Weinfield et al., 2000). Overall, ongoing secure attachment promotes and protects adaptive development throughout childhood.

Insecure-Avoidant Attachment

The infants classified as insecure-avoidant (Group A) showed very little attachment behavior during the entire Strange Situation procedure. They played independently, did not appear distressed when the mother left,

and—strikingly—when she returned, they ignored her, showed blank or restricted affect, paid attention to the toys, and actively avoided contact, even when the parents tried to get their attention. They gave the impression of self-reliance, conveying that the attachment was not important. Given the normal importance of attachment for an infant, attachment theorists have described the avoidant pattern as a defensive strategy. The in-home study suggested why an avoidant defense might be needed: The avoidant babies were frequently ignored and actively rejected by their mothers. Parents spoke of their infants in negative terms, often with inaccurate characterizations of the baby's behavior, such as "He's just crying to spite me." The mothers were seen as angry, both in general and specifically, at the infant. They were intolerant of the infant's distress and tended to reject or punish the infant for being distressed.

Out of these interactions, avoidant babies develop precocious defenses against feelings of distress, which are split off from consciousness, and the defense mechanism of isolation of affect emerges. Avoidant infants tend not to show upset in situations that are distressing for most infants; rather, they appear somber, expressionless, or self-contained. Evidence for these patterns of defensive suppression comes from studies that measured infants' heart rates during the Strange Situation. Both secure and avoidant infants had measurably similar physiological responses to stress during the separation episodes—but the secure infants expressed their distress, whereas the avoidant infants appeared outwardly unconcerned (Spangler & Grossmann, 1993). However, the avoidant pattern should not be equated with nonattachment. Rather, the defensive strategy of avoidance is the baby's way of staying close to the parent while protecting herself from overt rejection: "The infant can maximize her proximity to the mother and optimize her felt security by doing nothing and showing nothing" (Stern, 1995b, p. 427). Avoidant infants have learned to expect rejection and, in response, in Bowlby's terms, their attachment behavior becomes "deactivated." They tend not to look to their mothers for help in regulating arousal and affects. Correspondingly, as toddlers, avoidant infants tend to focus their attention away from the parent (and from their own internal states) and toward the outside world. Instead of striking a flexible balance between exploration and attachment as the need arises, they pursue action and exploration in a rigid and self-reliant way (Main, Kaplan, & Cassidy, 1985).

In longitudinal studies, preschoolers judged avoidant in infancy have higher levels of hostility and unprovoked aggression and negative interactions with other children (Sroufe et al., 2005). They generalize the defenses of avoidance and self-reliance to other relationships. Instead of expressing distress and asking for help with disappointment, they are likely to sulk or withdraw. Because they are emotionally distant and often behave in negative ways, avoidant preschoolers tend to be viewed more negatively and subjected to more discipline by their teachers, thus reinforcing and confirming their untrusting assumptions about attachment.

DYNAMICS OF AVOIDANT ATTACHMENT: A CASE EXAMPLE

The following observation describes an interaction that has the qualities associated with avoidant attachment. Ms. Jones, a teen mother, age 16, and her 8-month-old daughter Erica were videotaped in a free-play session. As Erica plays with a busy box, Ms. Jones leans back against the wall and says, "I'm not going to bother you." Erica picks up an inflated ball, which her mother peremptorily takes away from her. Then her mother points to colors on the ball, saying, "Can you say 'red'?" while Erica struggles to get the ball. As Erica crawls onto her mother's leg, she says, "Get offa me." The infant guidance worker suggests, "Maybe she's trying to get close to you." The mother responds, "No, she's trying to get over here without going around." Erica does not look at her mother, and her face appears impassive throughout the session. Erica knocks over a toy telephone and her mother says, "No! You know better." The worker asks, "Do you think she knows better?" and Ms. Jones answers, "Yes." The worker persists: "What is she supposed to know better about?" "Lots of things, like crying for nothing, or beating on stuff." The worker says, "When 8-month-old babies beat on stuff, they're just trying to make noise." Ms. Jones stands up and insists, "Not this little girl. She's destructive."

Ms. Jones moves to a corner of the room at a distance from her daughter. Erica does not react to her mother's leaving her side and continues to play with the telephone. Several times her mother calls her to come across the room. Erica looks at her without expression and continues to play. Ms. Jones says, "Bad baby," then goes back and tries to engage her by demonstrating how to press the levers on the busy box. Instead of imitating her mother, Erica puts her fingers in her mouth. Her mother roughly pulls them out. Erica begins to cry and turns away from her mother, who says, "Hey, what's your problem?" The worker asks, "Does she ever just like to be cuddled?" Erica's mother says, "No, not really—maybe when she's sleepy." "Do you hold her then?" "Nope, I give her a bottle and lay her down and shut out the light." The worker says, "You know, it feels pretty good to be held." Ms. Jones responds with a dismissive laugh, turns away from the worker, and holds up a mirror to Erica: "Want to see the ugly baby?" Then she picks up Erica and puts her at the top of the playroom slide. She says, "Go down!" and laughs when Erica looks apprehensive. Then she helps her slide down. The worker says, "It looked like she was scared." Ms. Jones replies, "It shouldn't have scared her."

The themes in Ms. Jones's view of Erica are dismissal of her needs for nurturance, ignoring her distress, attributing negative intentions to her, and characterizing her in negative terms. Both mother and daughter seem more comfortable when they are disengaged from each other. During the brief times they are engaged, both of them are involved with the toys rather than each other. Ms. Jones puts physical and emotional distance between herself and her baby, as if denying the importance of attachment, and Erica, in a matching response, concentrates on the toys and ignores her mother. Observing their

mutual avoidance makes the worker feel sad and anxious, and she focuses her interventions on encouraging closeness. In response, seeming to confirm the attachment pattern, Ms. Jones dismisses the worker's statements and turns away from her.

Insecure-Ambivalent/Resistant Attachment

Infants classified as insecure-ambivalent/resistant (Group C) showed behavior in the Strange Situation that conveyed a strong need for attachment but a lack of confidence in its availability. Consequently, they reacted intensely to the separation. Ainsworth (1982) describes the heightened affect and ambivalence of these toddlers: "These children were anxious even in the preseparation episodes. All were very upset by separation. In the reunion episodes they wanted close bodily contact with their mothers, but they also resisted contact and interaction with her, whereas Group B babies had shown little or no resistance of this sort" (p. 16). The insecure-ambivalent/resistant babies were distressed and angry, and they could not be soothed by contact with their mothers. The in-home study described the mothers as inconsistently responsive to their infants' attachment-seeking behavior: "The conflict of the C babies is a simple one—between wanting close bodily contact and being angry because their mothers do not consistently pick them up when they want to be held or hold them for as long as they want. Because their mothers are insensitive to their signals C babies lack confidence in their responsiveness" (p. 18). The infants' heightened affect and ambivalent behavior reflect their anxious uncertainty about how their parent will respond.

The ambivalent/resistant pattern predicts later disturbances in the child's capacity for autonomous behavior. Because the child is uncertain of her parent's responsiveness, she tends to focus on the parent's behavior and moods, to the exclusion of other interests. These toddlers remain preoccupied with attachment, at the expense of exploration. Their separation worries persist into the preschool and school-age years, long after children with secure attachment histories have mastered normative separation fears. Longitudinal studies have linked the Group C category with behavioral inhibition and lack of assertiveness in preschool children and with social withdrawal and poor peer interaction skills in early school-age children (Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989). The development of social competence is a major task of middle childhood, and children with an ambivalent/resistant attachment history are less successful at mastering it (Sroufe et al., 2005).

INSECURE-AMBIVALENT/RESISTANT ATTACHMENT IN A PRESCHOOLER: A CASE EXAMPLE

The potential interference of an ambivalent attachment on development is illustrated by the behavior of a 4-year-old at a child care center. I (Davies) observed Andrew in a scenario that his teachers said was occurring daily. While Andrew's mother talked with a teacher as she was dropping him

off, he watched her alertly with a tight, tense expression. When his mother said goodbye, he grabbed her around the legs and began to cry angrily. She disengaged from his grasp and passed him to the teacher, who tried to comfort Andrew by holding him. He cried louder as his mother left, then pushed the teacher away and lay on the floor in a full-blown tantrum. After 2 minutes, Andrew went to his cubby and sat morosely, sucking the hem of his security blanket. Ten minutes later, he searched out his favorite teacher, then shadowed her, staying as close to her as possible throughout the morning. Andrew's behavior was also notable for what it did not include—active play and involvement with other children. In the preschool years, play and social interaction facilitate development. This very insecure child remained caught up in attempts to maintain his attachments, which diminished his interest in the normal 4-year-old activities that support development.

Insecure-Disorganized/Disoriented Attachment

Mary Main and her colleagues have identified a third type of insecure attachment, which they label as insecure-disorganized/disoriented (Group D). Compared to the other insecure patterns, this pattern represents a much less organized and consistent approach to dealing with an attachment relationship that the infant experiences as insecure. These infants show contradictory behavior when reunited with the mother after a separation. For example, the infant greets the mother happily and raises her arms to be picked up, then turns away, becomes motionless, and looks dazed. Or the infant shows simultaneous contradictory behavior—walking toward the parent with head averted or smiling at the parent and looking fearful at the same time. In this pattern, the behavior of the infant appears confused and disorganized, and her attempts to reestablish attachment are interrupted by internal conflicts. The infant may also appear afraid of the parent, and instead of approaching the parent may go to the stranger or engage in self-stimulating behavior. Disorganized infants appear to lack a trustworthy/reliable strategy for eliciting comfort when they feel stressed. They do not seem to clearly signal the need for help from the parent in regulating affect. Lacking internal or mutual strategies for regulating distressing feelings, they tend to remain aroused. This persistent distress, in turn, contributes to their internal sense of disorder and has an ongoing negative impact on their ability to self-regulate (Barnett, Ganiban, & Cicchetti, 1999).

The source of this dilemma for disorganized infants is parental behavior that frightens them. The infant's attempt to use attachment behavior to reduce distress collapses because the parent who is supposed to be a source of security is also a source of fear: "The essence of disorganized attachment is fright without solution" (van IJzendoorn, Schuengel, & Bakermans-Kranenberg, 1999, p. 226; see also Abrams, Rifkin, & Hesse, 2006). Two factors contributing to the development of this attachment pattern have been identified: a history of unresolved trauma in the parent and direct maltreatment of the

child by the parent. With the first factor, the contradictory behavior of disorganized infants is mirrored in the attachment behavior of their parents. A high percentage of parents with disorganized/disoriented infants have histories of unresolved childhood trauma, such as the early loss of a parent, abuse, or witnessing of parental violence (Lyons-Ruth, Yellin, Melnick, & Atwood, 2005). They are anxious, fearful people who project trauma-based fears onto the present. Their infants are often alarmed and frightened by their intense expression of fearful emotions: "Frightening behavior on the part of the still-traumatized parent should lead to a disorganized/disoriented infant, since the infant is presented with an irresolvable paradox wherein the haven of safety is at once the source of alarm" (Main & Hesse, 1990, p. 180).

Other researchers have found that very high percentages of abused infants are classified as disorganized/disoriented in the Strange Situation (Barnett et al., 1999). The intense approach–avoid conflict in the behavior of Group D infants has been linked to fear of the parent, uncertainty about how a parent will react, and a history of contradictory responses by the parent, ranging from inviting closeness to angry rejection and physical or sexual abuse (van IJzendoorn et al., 1999). Other parental factors associated with the disorganized/disoriented classification are bipolar depressive illness and active alcoholism or drug addiction, conditions that tend to involve extreme and contradictory behavior (DeMulder & Radke-Yarrow, 1991; Melnick, Finger, Hans, Patrick, & Lyons-Ruth, 2008). There is also evidence that disorganized attachment is a symptom of the disintegrative effects of multiple interacting risk factors on families. Families characterized by poverty, parental psychiatric disturbance, parental substance abuse, and history of abuse of the parent in childhood have much higher rates of Group D attachment. Across studies of infants in middle-class families not beset by multiple risk factors, the disorganized/disoriented classification rate averages 15%, whereas families in poverty show rates ranging from 25 to 34%. In studies of abused infants, rates of this pattern are much higher, ranging from 48 to 90% (Cichetti, Rogosch, & Toth, 2006; van IJzendoorn et al., 1999). When a family is overwhelmed by many risk factors, the likelihood of attachment disorganization and child maltreatment is greater.

Follow-up studies show that disorganized/disoriented attachment predicts high rates of controlling behavior toward parents and aggression toward peers in preschool and school-age children (Lyons-Ruth & Jacobvitz, 2016). In school-age children, a history of this attachment pattern may predict poor self-confidence and lower academic ability (Moss & St. Laurent, 2001). Disorganized attachment in infancy has also been linked to the use of dissociation as a preferred defense later in development (Lyons-Ruth & Jacobvitz, 2016). The altered mental state in dissociation involving "blanking out" or "going somewhere else" is consistent with the frozen, trancelike states observed in these infants (Hesse & Main, 1999). However, as with most developmental constructs, while it is unquestionably important to understand the relationship between early maltreatment and later maladaptation, we do well to remind

ourselves that we are dealing in probabilities, not certainties. For example, while insecure-disorganized/disoriented is more common among maltreated infants, it is does not mean that maltreatment necessarily occurred, so we must exercise caution in attributing such a specific history for any given family (Granqvist et al., 2017). Clearly, excessive stress in early life may both compromise the quality of the attachment relationship and cause the child to overrely on that relationship. For example, a recent study showed that while toddlers living in impoverished families were less likely to form secure attachment relationships, they appear to rely more on the attachment relationship to buffer stress, if to a nonoptimal degree (Johnson, Mliner, Depasquale, Troy, & Gunnar, 2018). Said another way, attachment security moderates the association of stressors, such as poverty, and the effects of those stressors on healthy child development. So while a secure attachment relationship is a critically important milestone for any child, those with an insecure attachment history will be especially vulnerable to even modest levels of adversity early in development.

Multiple Attachments

Although the mother appears to be the primary attachment figure in all cultures, infants can and do establish attachments with multiple caregivers, including fathers, grandparents, older siblings, and other relatives. Day care providers also become attachment figures (Ahnert, Pinquart, & Lamb, 2006). In two-parent families, the infant's second most important attachment is usually with the father. In Western cultures at least, father–infant attachment tends to be expressed in play interactions and therefore encourages the infant's exploration (Grossmann et al., 2008). Fathers' ability to play in sensitive and emotionally attuned ways promotes secure father–child attachment (Parke, 2004).

In cultures that organize caretaking collectively, infants develop multiple attachments, although preference for the mother tends to prevail (Mesman, van IJzendoorn, & Sagi-Schwartz, 2016). In the Efé culture of Zambia, for example, mothers care for infants collectively, nursing and comforting infants of other mothers (Morelli & Tronick, 1991). But even when multiple attachments are the norm, children tend to have a limited number of attachment figures, whom they view in a hierarchy, with the mother in first place (Cassidy, 2016).

The possibility of multiple attachments raises the question of whether an infant can have both secure and insecure attachments. Bowlby (1969) argued that the child would develop multiple patterns based on differences in the quality of his relationships with separate significant caregivers. Infants and toddlers do form different types of attachment with different caregivers. In cases where a child has an insecure attachment with a mother, a secure attachment with another important caregiver—father, grandparent, or regular child care provider—may take on a compensatory protective function (Howes & Ritchie, 1998; Howes & Spieker, 2016).

ATTACHMENT, CLASS, AND CULTURE

Early skeptics questioned whether attachment, as defined by Ainsworth's research, is a middle-class phenomenon. But the link between parental sensitivity and attachment security has consistently been supported in studies of middle- and lower-class samples, including samples that were racially and ethnically mixed and samples that were either primarily African American or European American (Ward & Carlson, 1995). However, in the high-risk conditions of poverty and other major stressors, attachment security classifications may be different at different points in time due to the impact of environmental stressors on the parent's ability to maintain responsive attachment behavior (Weinfield et al., 2000).

Cross-cultural studies have yielded somewhat different percentages across attachment categories, which have been explained in terms of culturally based limitations of the Strange Situation procedure, rather than in terms of large disparities in the percentages of securely attached infants. Early studies of Japanese infants, for example, assigned very high proportions of infants to the anxious-ambivalent/resistant category, based on their extreme reactions to the separation episode and their inability to become calm when the mother returned. Recall that the Strange Situation was created to induce mild stress in American infants, who generally have many experiences of separation from parents, and American culture encourages independence and self-reliance. Japanese culture has very different emphases, as Takahashi (1990) points out:

> The Japanese have long favored child-rearing methods in which a caregiver is always near the infant, such as co-sleeping, co-bathing and carrying the child on the mother's back. . . . Thus Japanese culture treats "being left alone" in striking contrast to American culture. In Japanese culture, it is therefore plausible that the extent of the strangeness of the "Strange Situation," and the accompanying stress go way beyond the bounds of "mild." Some infants, identified as type C babies by the procedure, even if securely attached to the mother, were too disturbed to be pleased at the reunion with her. . . . An objectively identical procedure does not necessarily guarantee applicability to other cultures. (pp. 27–29)

However, a recent study of attachment in Japanese 6-year-olds (who, by then, were accustomed to separations) did not show high percentages of Group C attachment and, in fact, found distributions of secure and insecure attachments paralleling those of other cultures (Behrens, Hesse, & Main, 2007).

Nevertheless, the comments of Takahashi (1990) on Japanese infants point to a more general idea: Different values and practices of caregiving influence the expression of attachment behavior across cultures. Many cultures value interdependence and group affiliation, and these themes are reflected in practices such as "wearing" the infant or keeping her within reach, nursing on demand, nursing as a primary response to distress, and cosleeping (Morelli & Tronick, 1991; Small, 1998). Such cultures tend to have lower rates of type

insecure-avoidant (Group A) attachment (Mesman et al., 2016; True, Pisani, & Oumar, 2001). By contrast, in Western cultures, the values of independence and self-reliance find expression in caregiving practices such as bottle feeding or early weaning from breastfeeding, expecting infants to "play independently," allowing distressed babies to "cry it out," providing infants with less physical contact with caregivers, and expecting babies to sleep alone and go to sleep by themselves. These cultures tend to have higher rates of insecure-avoidant attachment (Mesman, van IJzendoorn, & Sagi-Schwartz, 2016).

Studies of very different cultures show rates of secure attachment in the range of 65–70%; rates among the insecure categories vary and may be more influenced by cultural practices. However, the research of Sagi and colleagues (1985; Sagi, van IJzendoorn, Aviezer, Donnell, & Mayseless, 1994) on attachment in Israeli kibbutz infants implies that cultural practices may promote insecurity. The kibbutz philosophy aims to promote collective support and cooperation in children by organizing their lives so that they identify with the peer group equal to or even more than the family. Consequently, in some kibbutz communities, beginning in early infancy children slept in groups in houses separate from their parents. Adult child care providers were present, but the infants had no access to their parents at night. Studies of these children showed an unusually low rate of secure attachment (56%), as well as an unusually high rate of Group C (ambivalent) attachment (37%). This degree of insecurity was particularly striking because companion studies of Israeli children living *with* their parents in kibbutzim and in Israeli cities both showed secure attachment at a rate of 80% (Sagi et al., 1985, 1994). Since the children were comparable in background (middle-class, two-parent families), the researchers concluded that "collective sleeping, as experienced by infants as a time during which mothers were largely unavailable and inaccessible, was responsible for the greater insecurity found in this group. Inconsistent responsiveness was inherent in the reality of these infants" (van IJzendoorn & Sagi-Schwartz, 2008, p. 890).

THE UNIVERSALITY OF ATTACHMENT

Attachment behavior across mammalian species points to biological and evolutionary bases for attachment. In humans, the mother's and infant's initial orientation to each other is influenced by built-in complementary endocrine reactions. Hormones released at birth promote intense alertness in the infant, which allows him to respond to his mother's initial touches and emotional overtures. Right after delivery, a corresponding release of hormones in the mother creates feelings of well-being and openness to bonding with the infant. The infant's first suckling at the breast stimulates the mother's secretion of oxytocin, a hormone associated with caring and social interaction (Eisler & Levine, 2002). Observational research documents the behavioral expressions of these biological processes. In all cultures, mothers engage in face-to-face

behavior with new babies, holding them at an optimal distance (about 28 inches) that allows the baby to focus on the mother's face and encourages eye contact. Mothers speak to babies slowly in higher-pitched tones and exaggerate their facial expressions, encouraging the infant to "take in" the mother. These early behaviors in mothers evoke synchronous responses in infants, creating the initial bonds on which attachment is built (Eibl-Eibesfeldt, 1989). The evolutionary significance of attachment formation is that it promotes survival, keeping the infant safe by ensuring that she will remain close to a protective adult (Simpson & Belsky, 2016).

Although cross-cultural studies identify variations in attachment behavior and caregiving practices, attachment is a *human* phenomenon across cultures (Posada et al., 2002). What factors seem to be universal? A baby needs to have an attachment to a primary caregiver (or, in many cultures, to a set of primary caregivers). Consistency, sensitivity, and contingent responsiveness on the part of the primary caregivers are essential to the baby's psychological development. Across cultures, secure-base behavior—the child's ability to use the caregiver for relief of distress and support for exploration—has been identified as a marker of secure attachment (Waters & Cummings, 2000).

ATTACHMENT AND FUTURE DEVELOPMENT

Sroufe (1989) points out that "the dyadic infant–caregiver organization precedes and gives rise to the organization that is the self. The self-organization, in turn, has significance for ongoing adaptation and experience, including later social behavior. . . . Each personality, whether healthy or disordered, is the product of the history of vital relationships" (p. 71). Many longitudinal studies have tested this idea. Overall, they have found impressive links between quality of attachment in infancy and later development. Secure attachment in infancy and toddlerhood predicts social competence, good problem-solving abilities, and other personality qualities associated with successful adaptation in later childhood, adolescence, and early adulthood (Sroufe et al., 2005). Insecure attachment has been similarly linked to problematic behavior and social difficulties in later development. Although other factors such as infant temperament and environmental risk factors influence outcomes, *the overwhelming evidence of empirical studies makes clear that quality of attachment is a fundamental mediator of development.*

Internalization of Working Models of Attachment

How are patterns of attachment carried forward as the child develops? Bowlby (1973) pointed out that the child gradually develops a working model of attachment based on how he has been cared for and responded to within the attachment relationship. Over the first few years of life, working models become stabilized as expectations of how relationships work and what one can

expect of other people in terms of responsiveness and care. Correspondingly, models of the self in relationships also develop. The young child internalizes assumptions about how effective she is in using relationships, how valued she is, and how worthy of receiving care. The infant whose attachment initiatives have been responded to appropriately over time is likely to develop working models that say, in essence, "I can expect that people will respond to me with interest, concern, and empathy. My actions are effective in communicating my needs and maintaining my attachments." As children get older, parents' ways of communicating their sense of attachment also shape and reinforce working models. Parents who express empathy, talk openly about their child's distress, and balance support with encouragement of autonomy promote secure working models (Bretherton & Munholland, 2016).

A central component of working models is a view of the self within relationships, which contributes strongly to the child's self-representation. Children with a history of secure attachment are likely to develop a positive sense of self, whereas children with insecure attachments are more likely to develop disturbances in the view of self and in the capacity to maintain self-esteem (Bowlby, 1973). Working models also include a view of one's ability to regulate arousal and cope with stress. Infants who have been effectively helped with regulation of arousal through the soothing and contingent responding of their caregivers develop effective internal and social strategies for regulating affect and arousal and become more competent at coping with stress. By contrast, infants who have experienced high levels of arousal and intense affect without the help of mutual regulation are likely to internalize a view of the self as ineffective or out of control and to develop maladaptive coping strategies, such as affective numbing or hyperactivity, leading to aggression and tantrums.

Working Models as Organizers of Experience

Once established, working models become unconscious filters and organizers of the child's perceptions of relationships. They increasingly guide how the child appraises what is happening in relationships and how he behaves with others (Bowlby, 1980). By the third year, the working models developed through the child's primary attachment relationships have become relatively stable and are now applied to other relationships. The 3-year-old with a history of secure attachment tends to expect that child care providers will be interested, supportive, and responsive. The child with a history of insecure attachment may mistrust the intentions and emotional responsiveness of other adults. In either case, the child unconsciously attempts to organize, shape, and perhaps control new relationships to make them fit his internal working models.

At the same time, assuming that parental behavior in relation to the child remains relatively constant, the child's working models are continually being reinforced through ongoing transactions with parents. Although working

models can change through changes in parenting style and experiences in new relationships, such change becomes increasingly harder after ages 3–4, when models "become incorporated as stable interpersonal tendencies that endure over time" (Lyons-Ruth & Zeanah, 1993, p. 17). An obvious example is that many children who enter foster care following removal from the parents because of physical abuse behave in ways that seem intended to provoke abusive responses from foster parents. When the child projects working models in this way, the responses of others often reinforce those models, stabilizing them further. For example, if the foster parent reacts negatively (though not abusively) to the abused child's provoking behavior, the child's affective experience with the new caregiver feels consistent with abuse, and his working models are confirmed (Sroufe et al., 1999).

However, many abused children do not continue to reenact old relationships; instead, they are gradually influenced by the responsive and empathic behavior of new caregivers. Although working models tend to be powerful and persistent, they can be changed through good care. Working models can be altered in negative directions, as well as by family changes such as divorce or a parent's illness, and even by such normative events as the birth of a second child (Teti, Sakin, Kucera, Corns, & Das Eisen, 1996). My (Davies) next-door neighbors' new baby was born as I worked on this chapter in the second edition (2004). Their 18-month-old son, an alert and easygoing toddler, began to cry frequently. I saw his father carrying him around the backyard while he cried inconsolably. His father told me, "His mom is busy with the baby, and he just wants her. I can't seem to calm him down like usual." It was easy to suspect that the child's previously secure working model, which may have included the feeling "I am the only one they love," was challenged by his observations of his mom's attention to the baby. These sensitive parents responded with empathy to this toddler's sense of loss, which helped restore his sense of security and prevented a negative change in his working models.

As these examples suggest, there are qualifications to the idea that attachment classifications and working models are stable over time. When Bowlby (1980) tied the concept of developmental pathways to attachment theory, he was explicitly leaving room for the possibility that life experiences may alter working models of attachment. He argued that significant new relationships, new opportunities, or new risks can change an individual's working models, either positively or negatively. The idea that attachment style is consistent over time has been supported by longitudinal studies of middle-class children. These children, who grow up in relatively protected circumstances, demonstrate high rates of continuity in attachment styles (Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). Children first assessed as infants were reevaluated at ages 19–20. There was significant continuity of security of attachment at the time of the second assessment. However, 28% of these middle-class children changed attachment categories, mostly from secure to insecure. Nearly every individual moving to an insecure rating had encountered negative life events, such as a parent's death, parental divorce, life-threatening illness, psychiatric

disorder in a parent, or physical or sexual abuse by a family member (Waters et al., 2000).

By contrast, poor children, whose parents often experience negative life events as a result of poverty, show much less continuity in attachment patterns (Weinfield et al., 2000). Early secure attachment may give way to insecure patterns because of the ongoing multiple risks associated with poverty. For example, a single parent who loses her job and becomes homeless also suffers in her ability to provide responsive caregiving. Negative changes in attachment security are more likely when a parent is overwhelmed by multiple risk factors (Fearon & Belsky, 2016).

PARENTAL MODELS OF ATTACHMENT

Research on the parent's side of attachment has identified three major factors affecting the caregiver's capacity for responsiveness: (1) the caregiver's internal working models of caregiving, assumed to be derived from her own early experiences with being cared for (Main et al., 1985); (2) parental risk factors, such as mental illness or substance abuse; and (3) whether the caregiver is receiving outside support from other adults. In this section, we focus on the first issue and discuss the issues of parental risk factors and support for parents in Chapters 3 and 4.

Bowlby (1988) argued that working models of attachment tend to persist throughout life and that they are particularly activated by parenthood, thus setting the stage for transmission of attachment patterns across generations. This theory has been confirmed by a number of studies showing the direct effects of the mother's family-of-origin relationships on her parenting practices (Lyons-Ruth, Zeanah, & Benoit, 2003).

Mary Main and her colleagues (1985) have explored the persistence of working models into adulthood and their effects on parenthood. Main did studies of attachment patterns of middle-class children at ages 1 and 6 and found a high rate of consistency. Children assessed as securely or insecurely attached at age 1 were almost always classified the same at age 6. The parents of these children were also interviewed using the Adult Attachment Interview, a protocol designed to elicit information about their working models of attachment through a discussion of memories related to attachment and past and current relationships with their parents. Finally, the results of the Adult Attachment Interview were matched with the attachment classifications of the children. The parents' representations of attachment strongly correlated with the attachment classifications independently assigned to the children, suggesting that "parents induct their infants into a way of relating that is consistent with their own secure or conflicted/defensive models of self in relationships" (Bretherton & Munholland, 2008, p. 118; also see Riggs & Jacobvitz, 2002). This matching of adult and child attachment classifications has been replicated repeatedly in research, including cross-cultural studies (Behrens et al.,

2007; Hesse, 2016). Prospective studies using the Adult Attachment Interview with pregnant women have found that the parent's adult attachment classification prior to the baby's birth *predicts* the infant's attachment classification at 1 year of age in about 70% of infants (Benoit & Parker, 1994; Ward & Carlson, 1995). These studies present a striking demonstration of the power of parental working models in shaping attachments.

Characteristics of Secure Adults

The parents who were rated as having secure working models based on the Adult Attachment Interview had five primary characteristics. They (1) valued attachment relationships; (2) believed that their attachment relationships had a major influence on their personality; (3) were objective and balanced in describing their relationships; (4) showed a readiness of recall and ease in discussing attachment, which seemed to suggest that they had reflected on their experience; and (5) took a realistic rather than an idealistic view of their parents and their own attachment experiences (Main et al., 1985).

Many of the secure adults described good early experience and relationships with parents, but some described difficult histories that included trauma and loss. What distinguished the adults who were judged secure was not their actual experiences but how well they had remembered, understood, and integrated their early experience. The quality of their discourse distinguished them from the adults judged insecure. Their accounts of their attachment relationships tended to be fluent, coherent, and organized, and they were easily able to include negative and positive feelings about their experiences. This last point matches Ainsworth's (1982) finding that securely attached infants are able to openly express a full range of emotions. Talking about their attachment experiences did not seem to make the parents overly anxious or cause them to resort to obvious defense mechanisms. This result is consistent with findings about trauma. People who have experienced trauma but are able to recall and understand what happened are less likely to suffer from posttraumatic stress disorder or other trauma-related problems. Additionally, even adults who experienced ongoing stress and disrupted early relationships, including harsh or rejecting parenting, can develop a secure attachment profile as adults. This adult attachment style is known as "earned secure attachment" (Roisman, Padrón, Sroufe, & Egeland 2002). Longitudinal studies revealed a group with this earned secure style parented much like adults with histories of secure attachment. While individual differences and sources of resilience likely play an important role for this earned secure group, they typically experienced relationships in later childhood or adolescence with involved, caring, and healthy adults. Additionally, for some in the earned secure group, corrective relationships in adulthood with friends, therapists, or romantic partners have been found to be of critical importance (Roisman, Haltigan, Haydon, & Booth-LaForce, 2014).

Characteristics of Insecure Adults

Adults whose working models reflected insecure attachments generally felt less positive about attachment relationships, tended to deny the influence of attachment experiences on their personality, and did not seem objective in their descriptions. Beyond these general considerations, the insecure parents fell into three main patterns, which tended to match the Ainsworth attachment classifications of their infants: dismissive, preoccupied, and unresolved.

Dismissive Adults

Parents in this pattern "dismissed attachment relationships as being of little concern, value or influence" (Main et al., 1985, p. 91). They did not have vivid memories of attachment experiences and tended to describe current relationships with their parents as distant or cut off. The parents who dismissed the importance of attachment were likely to have avoidant infants, who tended to turn away from parents and to depend on themselves rather than seeking attachment.

Preoccupied Adults

In the second insecure pattern, "the parents seemed preoccupied with dependency on their own parents and actively struggled to please them" (Main et al., 1985, p. 91). They tended to hold themselves responsible for difficulties in their attachment relationships and to idealize their parents. They showed anxiety about their current relationships and tended to worry about how others perceived them. Bowlby (1980) suggested that such parents must have learned to turn against the self in order to maintain a sense of attachment; they "excluded" from awareness their parents' uncaring and inconsistent responses and developed images of the self as undeserving or unlovable (Bretherton & Munholland, 2016). The infants of preoccupied parents most often were classified as ambivalent, the pattern in which infants are anxious about the availability of their caregivers.

Unresolved Adults

These parents had histories of unresolved trauma in childhood, including physical and sexual abuse. Many had experienced the death of a parent during childhood and had ongoing symptoms of disordered mourning. They continued to be fearful about loss and had irrational views, such as blaming themselves for being abused or for "causing" the death of a parent (Main & Hesse, 1990). Their accounts of attachment were disorganized and lacked coherence. If they started to describe childhood traumatic experiences (e.g., the death of a parent or physical or sexual abuse), they often lost track of what they were saying, fell silent, or abruptly switched topics without showing any awareness

that the quality of their discourse had disintegrated (Hesse & Main, 2006). The infants of these fearful parents were most often classified as disorganized/disoriented.

Defensive Processes in Insecure Parents

The characteristics of the discourse of all three types of insecure parents also distinguished them from secure parents: Their discourse was hard to follow, self-contradictory, apparently irrational, or shifted without clear transition from topic to topic. Many seemed unaware of contradictions, particularly between the general and the specific. For example, a parent might state that her mother was "wonderful and understanding," then go on to describe severe beatings or times she had lied to avoid her mother's wrath—without noting the difference between the two representations of her parent. These stories suggested a defensive idealization of the parent(s) that was not integrated with the specific realities of the relationship (Hesse, 1999).

Alternatively, many of the parents of insecurely attached children insisted that they had almost no memory of their childhood and, in particular, claimed that they could not recall much about attachment relationships, again suggesting defensive processes at work. Bowlby (1980) labeled such memory problems "defensive exclusion of information." Defensive exclusion is motivated by the wish to avoid painful memories and stems from painful and negative attachment experiences. An aversive attachment leads to early emotional detachment, which in turn diminishes the salience of attachment relationship memories (Bowlby, 1980).

Recent research using the Adult Attachment Interview identifies another parental pattern of thought predictive of disorganized attachment: The parent alternates between "globally devaluing" and identifying with attachment figures, particularly in terms of hostility or helplessness (Lyons-Ruth et al., 2005). For example, a parent says about her father, "He never showed anything but disgust for me" and, later in the interview, states, "I'm just like him." A parent's split and disorganized representation of attachment leads to extreme inconsistent caregiving responses that "in turn, generate complementary patterns of disorganized helpless and contradictory responses from the infant around the need for closeness and comfort" (Lyons-Ruth & Jacobvitz, 2016, p. 675).

In summary, parents who have secure relationships with their children give coherent descriptions of positive and negative elements of their childhood without strong defensiveness. Parents who have insecure relationships with their children either dismiss the importance of attachment or are preoccupied by attachment issues. They may represent attachment figures in mutually contradictory ways. Main and colleagues (1985, p. 100) emphasize the influence of defensive processes on insecure working models and current attachment behavior: "Where the parent's own experiences and feelings are not integrated, restrictions of varying types are placed on attention and the flow of

information with respect to attachment. These restrictions appear in speech in the form of incoherencies and in behavior as insensitivities." These defense-based working models interfere with the parents' ability to perceive the child's attachment signals accurately and may cause them to ignore attachment cues or to distort the child's signals to make them fit with their own attachment preoccupations.

ATTACHMENT THEORY AND FAMILY SYSTEMS THEORY

There is significant overlap in attachment theories and family systems theories. Both emphasize the transactional nature of relationships. Both accept ideas of circular causality and multigenerational transmission of relationship patterns. Minuchin's (1974) typology of interactions in family systems—adaptable, disengaged, enmeshed, and chaotic—closely parallels the attachment patterns of secure, avoidant, ambivalent, and disorganized/disoriented, as well as the adult attachment classifications of autonomous, dismissive, preoccupied, and unresolved (Byng-Hall, 1999).

In the clinical situation, a multigenerational approach to understanding current interactions in a family typically finds repetition in patterns of relationships, conflicts, and modes of coping with conflict or distress. The concept of working models suggests why these intergenerational repetitions occur. For example, family therapists have identified the common pattern of the "parental child," a child who is implicitly assigned the job of taking care of a parent, often a parent who is depressed. Bowlby (1978) has described this concept, using different terms, as an expression of working models of attachment. When a parent inverts the parent–child relationship by requiring the child to take care of him or her, the child may learn that the only reliable way to receive love is to bestow care. Bowlby labeled the working model of attachment that develops out of this inversion as "compulsive caregiving." When a person who has learned to be a compulsive caregiver becomes a parent, he or she may not only be possessive and protective of a child but also reenact the inversion of the parent–child relationship. The child is unconsciously viewed as the person who "should," at long last, provide the parent with love. When there is more than one child, the parent may choose the child with whom she most identifies to become the caregiver.

Byng-Hall (1999) illustrates the usefulness of integrating attachment and family systems perspectives with his description of the "too close–too far" couple relationship. This relational system is conflicted and maladaptive because one partner has an avoidant/dismissive style of responding to attachment concerns, whereas the other partner has an ambivalent/preoccupied style. Byng-Hall notes, "Their strategies for the same thing—how to maintain secure attachments—are directly opposite" (p. 634). Attachment dynamics between parents become a context of their children's development. A child

of these avoidant–ambivalent parents can easily become triangulated into his parents' conflicted dynamics. By contrast, two parents with secure/autonomous attachment styles present their child with an experience of the family system as a secure base (Brassard & Johnson, 2016).

Family therapy approaches that incorporate attachment theory have been developed to address interactions based on negative working models (Moran, Diamond, & Diamond, 2005). These often emphasize the value of exploring parents' individual working models as a basis for understanding and changing their interactions and parenting practices (Brassard & Johnson, 2016).

THE ATTACHMENT PERSPECTIVE IN THE ASSESSMENT OF YOUNG CHILDREN

For practitioners, the utility of the research findings that have validated attachment theory is that they orient us to observe interactional sequences and to look for congruency between parental working models of attachment and infant/child attachment patterns. Like family systems theory, attachment research teaches that parent and child behaviors tend to be complementary. Parents with working models derived from histories of secure attachment are responsive to their children, who in turn tend to develop secure attachments and positive working models. In contrast, parents who dismiss the importance of attachment are likely to dismiss their children's needs for comforting and nurturance. When these negative attitudes carry over into caretaking transactions, such children are likely to adopt the avoidant pattern.

Although research contributes to our clinical understanding, it is important to distinguish between research instruments and clinical assessment. The Ainsworth Strange Situation and Main's Adult Attachment Interview reliably reveal attachment patterns when applied to individuals in a research setting. However, they are not directly transferable to practice. Research procedures require adherence to protocol, whereas clinical practice requires the flexibility to adapt assessment strategies to the needs and unique presentation of each client. Assessment depends on careful observation of interactions, usually across two or more interviews, as well as on a broad exploration of family history, developmental history, and ecological contexts (Zeanah, Larrieu, Heller, & Valliere, 2000). Nevertheless, knowledge of attachment patterns derived from research allows the practitioner to identify interactions and behaviors that suggest a particular type of attachment. For example, on a home visit, a worker notes that a parent treats her baby roughly while changing his diaper and seems frustrated over having to care for him. At the same time, the baby does not look at his mother, turning his head away when she comes near. These observations, which must be supported by future observations, suggest an avoidant attachment.

It is helpful, too, to listen carefully to how a parent represents her child and their relationship. A parent with secure models of attachment is likely

to talk about her baby in ways that sound "objective," that are consistent with the baby's level of development, that reflect attempts to understand the infant's perspective, and that seem congruent with the clinician's observations of the baby and the parent–child relationship (Rosenblum, 2004; Zeanah, 2007). Attending to the quality of the parent's discourse also offers clues about quality of attachment. For example, a parent's inconsistent and disjointed discourse when he is asked about memories of his parents suggests that his "state of mind with respect to attachment" reflects insecure models that affect his relationship with his child (Hesse, 1999, p. 421). The following extended case example demonstrates the application of attachment concepts in an assessment.

KELLY AND HER MOTHER: A CASE EXAMPLE

Referral: Background Information

Kelly Keeney's mother referred her 21-month-old daughter for evaluation at the recommendation of the staff at an infant and toddler center, which cared for her full time while her mother attended a community college in a large city. Ms. Keeney, a 20-year-old, Irish American single parent, lived with her daughter in a small apartment near the urban campus. Ms. Keeney's income was derived from Aid to Families with Dependent Children (AFDC) and student loans. She was a competent student and had plans to transfer to a 4-year college and get a degree in nursing.

The center director's knowledge of infant development and attachment was reflected in the way she framed the staff's concerns about Kelly. Even though she had attended the center for nearly a year, Kelly was not demonstrating attachment to any single caregiver, and the staff reported feeling out of touch with her. She did not make eye contact, did not initiate many interactions, and often ignored their directions even though she seemed to understand them. She did not interact much with other children, though it is important to note that she was one of only two children over 1 year of age attending the center. She seemed reckless and impulsive in her movements and often fell, but she usually did not cry or seek comfort when she hurt herself. The director said that Ms. Keeney was a concerned parent but that she also seemed self-preoccupied and perhaps did not provide stimulation appropriate to a toddler.

Parent Interview

Ms. Keeney said she was worried about Kelly's development. She had recently taken a child development course and phrased her concerns in developmental terminology: Did Kelly's short attention span mean that she was behind in cognitive development? She was not speaking very much—did this signal a language delay? Ms. Keeney agreed that there might be an attachment

problem. She said that Kelly had not been a cuddly baby and that she wouldn't hug or kiss her when she dropped her off or picked her up at the center. She explained that Kelly had been born prematurely and had to be hospitalized for 2 weeks after birth: "I was still in classes, and I couldn't spend a lot of time with her when she was in the hospital, so maybe she didn't bond to me." Ms. Keeney also wondered whether Kelly was a lot like herself. Her mother had told her that she was never a cuddly baby, and she felt that she had been an unhappy and withdrawn child. She did not want Kelly to repeat her unhappy childhood but worried that this was already beginning to happen. Ms. Keeney was eager to receive help and was open in reporting Kelly's history and her own childhood history.

Interacting Histories

Ms. Keeney reported the details of her pregnancy and Kelly's birth in an even, matter-of-fact manner that seemed incongruent with the emotionally difficult circumstances she was describing. This inconsistency immediately raised questions about her own defensive style and whether her defenses might hamper her ability to see Kelly's affects accurately. During her first year in college, she became involved with Kelly's father. Just before learning that she was pregnant, he broke up with her and dropped out of school. When she told him she was pregnant, he told her he did not want to resume the relationship. Her mother was furious that she was pregnant and insisted that she get an abortion. However, Ms. Keeney realized in retrospect that she had delayed the abortion decision until it was too late because she had continued to hope that Kelly's father would come back to her. As the pregnancy progressed, her mother shifted to insisting she give the baby up for adoption at birth. When Ms. Keeney said that she intended to keep the baby, her mother threatened to cut off all contact and, once, threatened to kill herself. Ms. Keeney summarized this period in a bland tone: "Yeah, it was a hard time, but by the time Kelly was born, I wanted her."

The stress on Ms. Keeney caused by these losses and betrayals during pregnancy was intensified by the difficult circumstances of Kelly's premature birth. Ms. Keeney had enrolled in the winter term, hoping that she would be able to complete the term. This was unrealistic and evidenced a denial of the impact of the coming baby on her life, since her due date was a full month before the end of the term. When Kelly was born 5 weeks prematurely, she felt totally unprepared. She had not bought a crib or taken childbirth classes—she had been concentrating on her schoolwork rather than thinking about the baby.

A Premature and Ill Infant and an Unprepared Parent

Although Kelly weighed nearly 5 pounds at birth, her lung development was immature. She was diagnosed with severe respiratory distress and placed in a neonatal intensive care unit (NICU). Shortly after birth, Kelly's lungs collapsed and her condition became grave; she was placed on a ventilator. Five

days later, her lung condition had improved sufficiently for the ventilator to be removed. She made steady progress until she was discharged 2 weeks after birth.

Ms. Keeney recalled the period of Kelly's hospitalization as chaotic and painful, although when she reported the following events, there was again a discrepancy between her bland affect and the painful content. Up to Kelly's premature birth, the pregnancy had been "easy." Ms. Keeney was alone during the birth. When she called her parents, her mother threatened suicide if she did not give the baby up for adoption. In contrast, her father was supportive and concerned about the baby's condition. When Kelly's lungs collapsed, Ms. Keeney was told that she might not survive. She again called her mother, who said that it "might be for the best if she died." She recalled feeling frightened and numb during the few days in which Kelly's condition was critical. Ms. Keeney's account of the period after she was discharged and Kelly remained in the NICU suggests loneliness and a sense of disorganization. She visited Kelly nearly every day but recalled that there were some days when "there was no one to take me." With the encouragement of the nursing staff, she began to nurse Kelly when she was about 2 weeks old. Her mother called her several times, urging her to give up the baby. When she refused, her mother told her that she was ruining her life and then cut off contact. When she called Kelly's father, he was neutral and unwilling to visit the hospital. Ms. Keeney recalled this conversation as extremely painful because she had fantasized that he would come back to her when the baby was born.

Ms. Keeney remembered Kelly's first year as increasingly stressful as she tried to manage full-time schooling and the care of an infant. In the early months, Kelly had been a quiet and undemanding infant who could be taken everywhere, including to class, and so hardly disrupted her life. But as she became more active and mobile, Ms. Keeney felt more and more intruded upon by the baby's presence. She found a full-time sitter when Kelly was 6 months of age. Ms. Keeney began encouraging her daughter to play by herself and spent as much time as she could studying when they were at home. She was often frustrated by Kelly's increasingly demanding behavior. The pattern of expecting Kelly to play on her own had persisted up to the time of the evaluation.

Parental Background

Ms. Keeney described growing up primarily in terms of a difficult relationship with her mother and a supportive but somewhat distant relationship with her father. Her parents' marriage had been conflicted for as long as she could remember. Her mother had often threatened divorce and suicide as a means of controlling her father. Ms. Keeney remembered that she had been very frightened by her mother's frequent threats to leave the family or to kill herself. Bowlby (1973) has described how parental threats of abandonment or suicide cause separation anxiety and a focus on the moods of the parent because the child is confronted with the possibility of losing a primary attachment figure.

Ms. Keeney's memories of her childhood overlapped with her concerns about Kelly. She was worried that Kelly would grow up too distant from others, and noted she had been that kind of child. She herself had been a premature and ill infant. Her mother had told her that she had been a baby who didn't like being held; this attribution rang true for her because she remembered never wanting to be hugged or kissed when she was a child. She was withdrawn in school and did not remember having many friends. She said, "I was the kid no one liked because I was always whining and crying."

Observations of Attachment

I (Davies) observed Kelly in three settings: my clinic office, the family's apartment, and the child care center. During the first part of the office visit, Ms. Keeney's mood was upbeat, and she spoke and played with Kelly in an animated way. Kelly appeared happy about her mother's responsiveness. As they played together with a toy house, Ms. Keeney put a mother and baby in bed together, and Kelly laughed happily. When Ms. Keeney suggested putting the baby in the playpen, Kelly's affect became solemn. Ms. Keeney put the baby in the playpen and said that it was time for her nap. Kelly became distressed, whining irritably, jerking away from her mother and crawling behind a chair. A moment later, she began playing peek-a-boo, and Ms. Keeney joined in. Then she asked Kelly if she was sleepy and went over to hug her, but Kelly pulled away from her angrily.

After repeated observations of their interaction, I realized that this first observation had contained some important themes in their attachment. They could enjoy each other. Kelly was delighted when her mother played with her. However, when her mother introduced themes of disengagement into the play by suggesting that the baby be put in the playpen for a nap, Kelly withdrew from the joint play and became fussy. She reengaged her mother with peek-a-boo but became angry and fussy again when Ms. Keeney suggested that she might be sleepy. The pattern of their interactions indicated that Kelly wanted her mother's attention and that Ms. Keeney tended to set limits on how much she would respond to Kelly's bids for attention. Kelly became irritable but kept trying to engage her mother. Kelly was both intensely focused on the attachment and angry because she expected rejection and lack of attunement. Their interactions seemed to approximate Ainsworth's Group C: insecure-ambivalent/resistant.

These attachment themes were more clearly presented during the home visit. Ms. Keeney seemed preoccupied and depressed. She told me that the evaluation had stimulated many sad feelings about her loss of Kelly's father and that she had been feeling down for the last 2 days. Kelly looked somber, and I was struck immediately by the way her affect mirrored her mother's. Kelly was pleased when I gave her my attention. However, her mother wanted to talk to me and suggested that she play in the bedroom, which was blocked from the living room, where we sat, by a wooden gate. I said that one reason

for my visit was to see Kelly in her home, and that I would like to be able to observe her. Ms. Keeney told Kelly to play with her toys. As Ms. Keeney became engrossed in describing her own distress, Kelly became provocative and aggressive. She threw toys in her mother's direction and against the walls. Her behavior seemed angry, yet her expression was more blank than angry. Ms. Keeney seemed perplexed by her behavior. She asked Kelly if she was thirsty and got her some juice, which the child accepted but did not drink. When she continued to throw toys, her mother decided that Kelly must be tired. She took her into the bedroom and put her in her crib. I was struck by the fact that Ms. Keeney could not read Kelly's affects or perceive her wish for attention. Rather, her caretaking focused on controlling Kelly's intrusions into our conversation. She did not seem aware that what she was saying might be distressing to Kelly. Affectively, she seemed remote from her and preoccupied with her own memories. Nor in her self-preoccupation did she seem able to think about Kelly's perspective. Over the two sessions, I noticed how attuned and reactive Kelly was to her mother's moods: When Ms. Keeney was serious, Kelly was somber; when Ms. Keeney was depressed or preoccupied, Kelly protested with aggressive behavior; when her mother was cheerful and animated, Kelly would mirror her positive affect and try to engage her.

At the child care center, I observed Ms. Keeney say goodbye to Kelly. She hugged her and Kelly returned the hug, but her face was blank and she looked away from her mother as she left. She seemed to withdraw emotionally. Yet I did not think this indicated, as suggested by the child care staff, that she was "unresponsive." Having previously observed Kelly's ambivalent behavior toward her mother, which seemed to express her need for more attention and more attunement from her, I believed her withdrawal was a defensive response to the distress of separation. Over the next 45 minutes I noticed that Kelly was acutely interested in the comings and goings of adults. She greeted each adult who came into the room and said goodbye when anyone left. The day I observed her, she was the only toddler at the center; she played by herself. Although caregivers were present, they did not actively join in her play. In fact, they were preoccupied with caring for the infants and tended to leave Kelly to her own devices. It appeared that the staff, like her mother, tended to expect Kelly to be independent and self-reliant. On Kelly's side, she made few approaches to the teachers. It appeared that she might be generalizing to other caregivers an expectation that she could not count on responsiveness if a caregiver was preoccupied.

Clinical Hypotheses Based on an Attachment Perspective

Prior to Kelly's birth, Ms. Keeney experienced her pregnancy as the cause of significant losses. Both her boyfriend and her mother rejected her because she was pregnant. She went through the pregnancy without support and without the affirmation of anyone who could share her normal excitement and

apprehensions. Understandably, her attitude toward pregnancy was ambivalent. On the one hand, she acknowledged the reality of the coming baby by seeking prenatal care and by imagining what the baby would be like. On the other, her positive attitude toward the pregnancy was primarily supported by the fantasy of getting back together with her boyfriend and forming a family. When he avoided her and refused her overtures, the fantasy could not be sustained, and she increasingly felt intruded upon by the pregnancy. Her attempts to stave off grief over losing Kelly's father by continuing in school influenced her denial of the impact of the pregnancy on her life. She registered for a full schedule of classes even though her due date was 1 month before the end of the term.

The crisis of Kelly's premature birth brought together forces that served to deepen Ms. Keeney's ambivalence. She faced the possibility of her infant's death. Recent research has found high rates of posttraumatic stress disorder (PTSD) symptoms in mothers of high-risk premature infants, and Ms. Keeney's story of the threat to her infant's life strongly suggests traumatization (Nix & Ansermet, 2009). When it became clear that Kelly would survive, Ms. Keeney had to relate to her in a context, the NICU, where caregiving and decisions about the baby were controlled by medical personnel. Studies of ill and premature babies suggest that parents often feel like visitors and onlookers and find it difficult to feel close to their baby, with the result that their confidence as parents is compromised (Minde, 2000). Ms. Keeney had little opportunity to hold and care for Kelly until she was nearly 2 weeks old. This is not an unusual circumstance for the parents of ill, premature infants, but it added to Ms. Keeney's sense of distance from Kelly that had already been established by her preoccupation with grief and its denial during her pregnancy.

After Kelly was discharged, Ms. Keeney continued going to class, often taking the baby with her. Consonant with her own needs, Ms. Keeney saw Kelly as a quiet, undemanding baby who could be taken anywhere and who hardly disrupted her life at all. Her early caregiving, while well intentioned, was somewhat mechanical and attuned more to her own needs than to Kelly's. Her lack of attunement was not merely the result of her attempts to go on with her life as it had been before Kelly's birth—she was also depressed. A chronic dysthymia had been made more severe by losses, rejection, and an internalization of her mother's blame for having and keeping Kelly. Ms. Keeney's depression led to her inconsistent responsiveness to Kelly.

Parental Depression and Attachment

Psychological unavailability over time due to maternal depression is linked with insecure attachment (Fearon & Belsky, 2016), particularly Ainsworth's C classification, insecure-ambivalent/resistant (Teti, Gelfand, Messinger, & Isabella, 1995). If a parent is unavailable emotionally during infancy and early childhood, the child is likely to develop working models that are consistent

with depressive symptoms; that is, the child's working model of attachment is that attachment figures are unavailable and uncaring, and the working model of the self is that "I am unlovable and unworthy of love" (Bowlby, 1988). By ages 3–6 months, infants of depressed mothers look depressed themselves, showing more emotional withdrawal and gaze aversion, less positive affect, and lower activity level than normal infants. In short, they mirror their mother's affects (Field, 1992; Goodman & Brand, 2009). Kelly's "quietness" as an infant was strongly influenced by her mother's depression. Her masked expression, irritability, and limited range of affect as a toddler suggested that she might be internalizing a depressive style. Toddlers of depressed mothers look sadder, speak less, and show less exploratory behavior, and they are at risk for developing depression (Goodman & Brand, 2009; Radke-Yarrow et al., 1995).

Infants of depressed mothers are likely to develop difficulties in regulating feelings (Granat, Gadassi, Gilboa-Schechtman, & Feldman, 2017). Because the mother is preoccupied with depression, she frequently fails to respond to the infant's distress signals. As a consequence, the infant does not receive help in regulating her affects and is likely to withdraw from interactions (Tronick & Gianino, 1986b). Kelly's stoic, withdrawn appearance suggested that she had adopted a defense of withdrawal, which she now generalized to other relationships. However, another trend in Kelly's handling of affects was also clear: She could become very angry, particularly at her mother. Ms. Keeney acknowledged that she had felt intruded upon by Kelly's increasing mobility and activity level as she moved toward toddlerhood. She responded by developing new expectations for Kelly. Instead of expecting her to be quiet and adaptable, now Ms. Keeney required her to be more "independent," to play by herself. In response to these expectations, to her mother's attempts to limit their interaction, and to her mother's continuing depression, Kelly began to react with aggression. Unable to draw on her attachment relationship or on her own meager internal controls, Kelly tended to react with angry behavior to disappointment in her mother's responses to her.

Projections of Working Models

The quality of attachment was also influenced by Ms. Keeney's projections of her internal working models onto Kelly and her relationship with her. Although she wanted to see Kelly as a happy child, her perceptions of her were strongly influenced by her self-perception as a silent, withdrawn child. Her view of Kelly was further complicated by the merging of these negative self-images with her thoughts about Kelly (Zeanah, 2007). Kelly was associated with her rejection by her mother and boyfriend. Her mother's near-explicit message was "Since you will not give up Kelly, I want nothing to do with you; if you had not had her, I would still love you." She also had fantasized that her boyfriend would have returned if she had not become pregnant. Thus, her view of Kelly was linked to her model of herself as the unworthy child who "caused" others to reject her.

The parental side of her working models was also evident. Based on these models, it seemed "right" to think that Kelly should not make emotional demands on her and that she should push Kelly toward precocious autonomy and separation, as her mother had required of her. Further evidence of the carryover of her early working models was Ms. Keeney's difficulty in seeing Kelly's distress as attachment related. Instead, she tended to displace the distress away from the relationship by misattributing it to Kelly's internal states—hunger or sleepiness. Ms. Keeney was working hard to avoid her loneliness and neediness, which were rooted in a childhood sense of deprivation in attachment relationships, her recent losses, and the current absence of supportive people in her life. Kelly's neediness threatened her defensive attempts to deny and avoid such feelings in herself. Instead of responding contingently and accurately to Kelly's signals of distress, she conveyed to her daughter that she should shut down her feelings, as she herself had learned to do.

Research and Practice

The case of Kelly and Ms. Keeney illustrates both the uses and the limitations of research knowledge in clinical work. By specifying which variables are relevant and which are excluded from examination, research approaches both clarify and simplify the lives of people being studied. However, attachment research is remarkable in its exploration of the complexity of parent–infant interactions. Knowledge of infant and adult attachment patterns provides us with valuable lenses for viewing real behavior and understanding clients' histories. Nevertheless, when we evaluate individuals and families, we always find that their lives are more complicated than research findings might indicate. For example, if we ask which attachment classifications fit Kelly and Ms. Keeney, we might argue that Kelly presents qualities of both avoidant and ambivalent attachment, while Ms. Keeney seems to embody aspects of preoccupied and unresolved adult attachment.

In practice, establishing the exact attachment pattern is far less important than understanding the specific dynamics characterizing the attachment of a parent and child. Understanding these dynamics both in the present and as a function of Ms. Keeney's working models pointed the way to an intervention plan, which combined individual therapy for Ms. Keeney and parent–child sessions. In the individual therapy, Ms. Keeney explored the impact of her working models on her view of self and her view of Kelly in the context of a supportive relationship with the therapist. The parent–child work emphasized collaborative play activities, the sharing of perceptions and feelings, and positive attention for Kelly from her mother—all aimed at strengthening the parent–child relationship.

Although organizing the treatment using attachment concepts led to a successful intervention, there were clearly other factors to consider besides attachment in formulating the case and designing a treatment plan. Ms. Keeney demonstrated a number of strengths that are not obvious in an account

that is sharply focused on attachment. She was bright, determined to complete her education, able to be warm and loving toward Kelly, and very eager to receive help for Kelly and for herself as a parent. Several risk factors affected the quality of attachment: Ms. Keeney was poor, relatively isolated, lacked the support of other adults for her parenting, and was still struggling with grief over several recent losses. It was necessary to view Kelly's attachment difficulties in the broader context of these parental and environmental risk factors in order for intervention to be successful.

CONCLUSION

In setting the course for our exploration of how development might best guide clinical work we begin, as does human development itself, with the core construct of attachment. Establishing an attachment relationship with the primary caregiver is a critical task of late infancy. The attachment relationship is the context within which early neurological and physiological development occurs. It mediates the emergence of and organization of emotion regulation and highlights the central role of emotion in early personality development. Finally, the attachment relationship influences the emergence and organization of emotion regulation and highlights the central role of emotion in early personality development. For all these reasons, careful assessment of attachment history is central to careful and comprehensive assessment and intervention with young children, and the thoughtful consideration of attachment history remains relevant and important to clinical work with youth in general.

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