Chapter 2

Attachment Disruptions, Reparative Processes, and Psychopathology

Theoretical and Clinical Implications

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In the *Separation* volume of his attachment trilogy, Bowlby (1973) dramatically expanded his theory to account for the contribution of attachment processes to personality development, defensive processes, and psychopathology. In the first section, "Security, Anxiety, and Distress," he used young children's responses to separations to illustrate how a child's perception of a threat to a caregiver's availability elicits feelings of anxiety, anger, and sadness. The second section, "An Ethological Approach to Human Fear," highlighted how lack of access to an available caregiver amplifies the normal fear response to dangerous situations and contributes to pathological levels of fear and anxiety. The final section, "Individual Differences in Susceptibility to Fear: Anxious Attachment," considered how severe or prolonged threats to caregiver availability could contribute to anxious attachment. Bowlby posited that these attachment disruptions become internalized as working models, shape negative interpersonal expectancies, and increase risk for adult psychopathology. In many respects, the theoretical advances in the *Separation* volume established the framework for the next four decades of research on attachment and psychopathology.

We review in this chapter the three major theoretical advances in the *Separation* volume and their implications for the role of attachment in the development and maintenance of psychopathology. We begin with Bowlby's (1973) and Ainsworth's (1990) views that the attachment behavioral system monitors a caregiver's *availability and responsiveness*. This perspective dramatically shifted the focus of attachment research from the study of young children's separations from caregivers to investigations of the quality of *emotional communication* in maintaining attachment bonds. We stress that momentary threats to caregiver availability or responsiveness typically activate *reparative processes* that serve to restore confidence in the attachment bond. Second, Bowlby used young children's reactions to prolonged physical separations from caregivers as a prototype for explaining how more prolonged or severe threats to caregiver availability contribute to anxiety, defenses, and symptomatic expressions of attachment needs. We suggest that these more severe threats to caregiver availability or responsiveness represent a broader class of *attachment injuries or disruptions*. Furthermore, when these injuries remain unrepaired or unresolved, they increase an individual's vulnerability

for psychopathology. Finally, Bowlby used working models or internalized expectancies for caregiver availability and responsiveness to explain both continuity and change in an individual's developmental pathway. We conclude with suggestions for how further investigation of emotional communication, attachment injuries, reparative processes and internalized expectancies for caregivers can guide clinical assessment and treatment of attachment problems experienced by young children, adolescents, and adults.

We note that in order to focus on these three theoretical advances of Bowlby's *Separation* volume, we omit major portions of our previous chapter in the second edition of the *Handbook of Attachment*. That earlier chapter (Kobak & Madsen, 2008) provided an account of the historical context that shaped the evolution of Bowlby's thinking and led up to his clarification of the attachment system's set-goal. Our account in that chapter also highlights Ainsworth's contributions to attachment theory. By translating theory into empirical observations and research methodology, Ainsworth tested and refined Bowlby's ideas and succeeded in communicating the core premises of attachment theory to a much wider audience. Readers interested in Bowlby and Ainsworth's contributions to the evolution of attachment theory may want to return to our earlier chapter.

Emotionally Attuned Communication and Reparative Processes Maintain Secure Attachment Bonds

The *Separation* volume marked a critical shift in defining the set-goal of the attachment system. The early studies of young children's reactions to prolonged physical separations from their caregivers implied that the set-goal of the child's attachment system was monitoring simple physical proximity to a caregiver (Sroufe & Waters, 1977). However, by 3 or 4 years of age, physical separations no longer elicited the same reactions nor presented as serious a threat to the child's bond with a parent. Even in the case of infants, naturalistic observations provided compelling evidence that children monitored not only their caregivers' physical proximity but also their *responsiveness* or ability to provide protection and support during moments of danger, distress, or high need (Ainsworth, 1962). As a result, throughout the *Separation* volume, Bowlby (1973) stressed a new and broader view of the attachment system. In addition to monitoring the caregivers' whereabouts and physical proximity, Bowlby referred to the attachment system as designed to continuously monitor the caregiver's *availability and responsiveness* (Bowlby, 1969/1982).

The expanded view of the child's attachment system shifted attention from observing reactions to separations to observing patterns of *emotional communication* in caregiver–child dyads. In Bowlby's (1969/1982) view, the child's emotions served essential motivational and communicative functions in maintaining the child's attachment set-goal within a comfortable range. For Ainsworth and the researchers who followed, the child's emotional signals and behaviors became a window to the attachment system and provided a context for observing caregiver sensitivity to those signals and behaviors (Ainsworth, Blehar, Waters, & Wall, 1978). When access to a sensitive caregiver was assured, infants could comfortably attend to other matters, such as exploring, affiliating, or resting. However, if the child became distressed, he or she would initiate behaviors to gain assurance and comfort from the caregiver. If efforts to reestablish contact failed or resulted in an insensitive response from the caregiver, infants would protest and direct *anger* toward the caregiver or, alternatively, develop avoidant strategies.

Careful consideration of the motivational and communicative functions of emotions allowed Ainsworth to make inferences about other behavioral systems, such as fear, exploration, and affiliation. As a result, a caregiver's interpretations of a child's displays of fear, anger, or sadness had to be understood as reflecting the child's goals in a particular context. In addition to monitoring a caregiver's availability and responsiveness, young children use emotions to signal how they monitor danger in the environment, explore new learning opportunities, and enjoy social exchanges. Fear signals the child's appraisal of danger, anger signals frustration at the interruption of an enjoyable or goal-directed activity, and sadness signals the child's despair at losing a desired toy or object. Ainsworth's sensitivity ratings focused on how caregivers attended to, interpreted, and responded to their infants' signals in a variety of contexts that took into account children's changing signals and motivational goals. Sensitivity to infant signals required caregivers continually to adapt their inferences about the child's emotional cues to account for the degree to which the child's attachment, exploration, and fear behavioral systems were acti-

vated (Ainsworth & Wittig, 1969). The interplay between the attachment and exploration systems was described as the infant's use of the mother as a "secure base" from which to explore. This balance between the attachment system, whose function is protection, and the exploration system, whose function is learning, provided a mechanism that allowed the child to learn and develop without straying too far away from the caregiver or remaining away for too long (Ainsworth et al., 1978).

Subsequent researchers have struggled with capturing the full complexity of Ainsworth's sensitivity construct and its ratings of acceptance–rejection, accessibility–ignoring, cooperation–interference, and sensitivity (Bretherton, 2013). For example, a caregiver might correctly interpret and respond to the child's signals of distress, yet fail to recognize the child's exploratory behaviors, resulting in an intrusive response. Another caregiver might be quite responsive to the child's exploratory activity but be averse to close bodily contact that would provide the child with a sense of comfort and protection when distressed. At the heart of Ainsworth's sensitivity construct was the notion that the caregiver could make accurate inferences about the child's emotional state and respond appropriately. To read an infant's signals accurately, make inferences about the infant's motivational states, and respond appropriately, caregivers need to adopt the child's perspective. This capacity for *empathic reading and responding* to an infant's changing needs and motivations has been described as *mentalizing* or accurately drawing inferences about the child's wishes, desires, and intentions (Sharp & Fonagy, 2008). This mentalizing capacity has been studied in terms of "mind-mindedness" or the caregiver's ability to understand accurately and comment on the child's mind (Meins, 2013). Research assessing individual differences in mentalizing capacities relies on what caregivers say when interacting with or discussing their child after watching brief replays of video clips featuring their child (Oppenheim & Koren-Karie, 2013).

Emotionally Attuned Communication and Reparative Processes in Childhood and Adolescence

Efforts to study emotionally attuned communication with older children and adults require observing interactions that test caregiver sensitivity and the child or adult's appraisals of the caregiver's availability and responsiveness. Because the attachment system is less frequently activated in older children and adults (Ainsworth, 1990), assessments of emotionally attuned communication can benefit from more structured laboratory or home observations. These paradigms can be designed to elicit interactions that allow observers to rate caregiver sensitivity and the child or adult's expectancies for caregiver availability and responsiveness. In many respects, these structured paradigms draw on particular aspects of daily interactions that Ainsworth observed in the home or village settings. *Safe haven episodes* provide a prototype for activating the attachment systems with cues to danger or threats to a caregiver's availability posed by brief physical separations. These episodes are defined by interactions in which the individual becomes distressed, injured, frightened, or endangered, and actively seeks comfort and protection from the caregiver. Some investigators have used intimidating laboratory equipment or discussions of distressing events to evaluate emotional communication (Simpson, Collins, Tran, & Haydon, 2007). From a behavioral systems perspective, these interactions represent the synchronous operation of the fear and attachment systems. Emotionally attuned interactions can be evaluated by attending to how the individual signals a need for contact and comfort, and the caregiver's response to those signals.

In contrast to safe haven episodes, *secure base episodes* are subtler and occur when the individual faces uncertainty in new or challenging situations. In these situations, an available and responsive caregiver typically responds with encouragement and support. From a behavioral systems perspective, these episodes require the individual to balance exploratory, fear, and attachment motivations in ways that use the caregiver as a resource to support new learning and master new challenges. These situations may become more salient at later phases of development as the individual becomes more self-reliant and less exposed to emergency situations that call for protective responses from the caregiver (Waters & Cummings, 2000). As a result, these types of interactions may play an increasingly important role in shaping the individual's expectancies or forecasts regarding his or her caregiver's availability and responsiveness beyond infancy.

Beginning in early childhood, interactions that require cooperative *negotiation of goal conflicts* play an increasingly important role in maintaining

attachment bonds (Kobak & Duemmler, 1994). The nature of these goal conflicts changes with development. In early childhood, conflicts often involve coordinating the child's need for autonomy and self-assertion with the parent's goal of providing rules to ensure safety and encouraging the internalization of those rules to foster self-regulation (Kochanska & Murray, 2000). In adolescence, the child's need for autonomy must be coordinated with the caregiver's need to monitor, reduce risky behaviors, and ensure safety (Smetana, 2010). In adult attachment relationships, conflicts often center on managing finances, child-rearing differences, or communication. To maintain a "goal-corrected partnership," these goal conflicts require that both individuals engage in cooperative conversations (Bowlby, 1969/1982) that test each individual's capacity to communicate his or her own perspective while empathizing and reflecting on the partner's goals, needs, wishes, and desires. Observational coding of these conversations has consistently linked cooperative negotiation of differences to secure expectancies for caregiver availability and responsiveness (Allen, Moore, Kuperminc, & Bell, 1998; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993; Obsuth, Henninghausen, Brumariu, & Lyons-Ruth, 2014).

Momentary threats to caregiver availability or responsiveness present frequent challenges to maintaining emotionally attuned communication in attachment dyads. These momentary threats, including brief separations, goal conflicts, or competing demands on the caregiver's time and attention, are common in all attachment relationships. Furthermore, such threats typically initiate *reparative processes* that are motivated by a desire to reestablish contact and restore confidence in the relationship. To restore confidence in the caregiver effectively, the individual must directly signal distress and initiate contact; subsequently, the caregiver must accurately read these signals and empathically respond to the individual's need for contact and comfort. An attuned and timely caregiver response typically completes the reparative episode and restores confidence in the caregiver's availability and responsiveness. These *reparative episodes* have been well documented among infants and their caregivers. For instance, laboratory paradigms have used the "still face procedure" to test the infant's reaction to a nonresponsive caregiver (Tronick, 2007). In this procedure, after a period in which the infant becomes distressed and dysregulated, the caregiver and the infants quickly reestablish synchronous interaction, thus restoring the child's confidence in the caregiver's availability. Ainsworth's Strange Situation also illustrates how the infant's confidence in the caregiver can be restored following the distress induced by being left alone in a strange environment (Ainsworth et al., 1978). Following this perceived threat to the caregiver's availability, secure children actively seek contact with the caregiver, effectively gain comfort, and restore their confidence in the caregiver's availability and responsiveness.

Severe or Prolonged Disruptions, Defensive Process, and Psychopathology

> States of anxiety and depression that occur during the adult years, and also psychopathic conditions, can, it is held, be linked in a systematic way to the states of anxiety, despair, and detachment described by Burlingham and Freud.
>
> —John Bowlby (1973, pp. 4–5)

In contrast to the relatively brief threats to caregiver availability that typically activate repair processes, *attachment disruptions* are defined as prolonged or severe threats to a caregiver's availability or responsiveness that create fundamental fear and uncertainty about the caregiver's availability or capacity to respond in moments of danger. When disruptions remain unrepaired, the individual becomes vulnerable to persistent feelings of fear, anger, or sadness, and to defensive strategies that reduce the individual's ability to engage in emotionally attuned communication with caregivers. At moments of high stress, the defenses are likely to break down and result in symptomatic expressions of attachment needs and feelings. In contrast to common forms of insensitive care and insecure attachment, attachment disruptions represent severe threats to the attachment bond and constitute a significant risk for the development and maintenance of psychopathology.

Dysfunctional Emotional and Defensive Responses to Attachment Disruptions

The mechanisms linking attachment disruptions to psychopathology can be found in Bowlby and Robertson's close observations of 2- to 4-year-old children's reactions to prolonged separations from their caregivers (e.g., Bowlby, Robertson, &

Rosenbluth, 1952; Robertson, 1953, 1962). Their descriptions provide a prototype for how disruptions elicit emotional reactions and defensive processes that impair relationship functioning and distort expressions of attachment needs. The observations documented how children's emotional reactions may become dysfunctional when they no longer serve a reparative function of signaling and eliciting a comforting response from a caregiver. These phases, labeled "protest," "despair," and "detachment," echoed many of the descriptions of children's responses to separation provided by other observers (e.g., Burlingham & Freud, 1944; Heinicke & Westheimer, 1966).

Protest is the initial phase, typically lasting from a few hours to a week or more. For example, in one of Bowlby's and Robertson's observations, protest began at the moment a parent prepared to leave a child at the nursery or hospital. The child signaled separation distress in a variety of ways, such as crying loudly, showing anger, following the mother, pounding the door, or shaking his or her cot. Any sight or sound might produce a temporary respite, as the child eagerly checked to see whether it was a sign of the mother's return. The dominant attitude during this phase was hope that the mother would return, and the child actively attempted to regain contact with her. During this phase, efforts by alternative adults to comfort or soothe the child typically were met with little success, and some children actively spurned potential caregivers. Although crying gradually subsided over time, it commonly recurred, especially at bedtime or during the night. Searching for the missing parent often continued on a sporadic basis over a number of days. During the protest phase, the dominant emotions were fear, anger, and distress. Fear and distress signaled a child's appraisal of danger at being separated from a primary attachment figure, while anger served to mobilize and sustain the child's efforts to reestablish contact with the mother.

The despair phase, which succeeded protest, was marked by behaviors suggesting increased hopelessness about the mother's return. Although a child might continue to cry intermittently, active physical movements diminished, and the child withdrew or disengaged from people in the environment. Bowlby (1973) compared this phase to deep mourning, in that the child interpreted the separation as a loss of the attachment figure. He suggested that adults often misinterpreted the reduced activity and withdrawal as signs of the child's recovery from the distress of separation. Sadness accompanied this withdrawn state. Heinicke and Westheimer (1966) also noted that hostile behavior, directed toward another child or toward a favorite object brought from home, tended to increase over time.

A child's active turning of attention to the environment marked the final phase, detachment. In this phase, the child no longer rejected alternative caregivers, and some children even displayed sociability toward other adults or peers. The nature of this phase became most evident during reunion with the mother. A child who reached the phase of detachment showed a striking absence of joy at the mother's return; instead of enthusiastically greeting her, the detached child was likely to appear apathetic. In the Heinicke and Westheimer (1966) study, varying degrees of detachment were reported among 10 children following separations that lasted from 12 days to 21 weeks. On their initial reunion, two of the children seemed not to recognize their mothers, and the other eight children either turned or walked away from their mothers. Children often alternated between crying and showing blank, expressionless faces. Some degree of detachment persisted following the reunions, with five of the mothers complaining that their children treated them like strangers. For many children, detachment and neutrality alternated with clinging and showing fear that the mother might leave again. Following the reunions, children appeared to feel frightened by home visits from observers they knew from the nursery.

Attachment Disruptions among Older Children, Adolescents, and Adults

The phases of protest (anger), despair (sadness), and defensive detachment observed in young children's reactions to prolonged separations from their caregivers provided a prototype for understanding older children's and adults' emotional responses to other types of attachment disruptions. The dysregulated emotions, interpersonal difficulties, and symptomatic expressions that accompany severe threats to caregiver availability often contribute to psychopathology (e.g., Adam & Chase-Lansdale, 2002; Carlson, Egeland, & Sroufe, 2009; Kobak, Little, Race, & Acosta, 2001). Unfortunately, in many cases, the problematic reactions, feelings, and behaviors that result from attachment disruptions are often more evident than the threats to caregiver availability that contributed to

those problems. As a result, the role that attachment disruptions play in the emergence of psychopathology may remain undetected by standard psychiatric assessments and procedures.

In reviewing the literature on older children, adolescents, and adults, it is useful to distinguish between two types of pathogenic attachment disruptions. One type is analogous to the threat to caregiver availability encountered by young children who experience prolonged separations. Although older children and adults are much less likely to perceive prolonged physical separation as a threat to the attachment bond, these individuals remain vulnerable to fears of abandonment or loss of a caregiver. Examples of these disruptions include unexplained separations, perceived loss of the caregiver through desertion or death, and lack of access to a caregiver in a moment of high need. The second type of attachment disruption results from a breakdown in the caregiving system that leads to nearly complete failure of the caregiver to provide protection and guidance. These disruptions represent severe threats to the caregiver's responsiveness and include abdication of the caregiving role, betrayal, and threatening or frightening behavior. Such threats allow the individual to develop strategies for maintaining the relationship with a caregiver who is physically available but unable to serve as a source of safety and protection.

Severe or Prolonged Threats to Caregiver Availability

The perception of physical accessibility remains the most fundamental appraisal of an attachment figure's availability. With age, there are dramatic advances in the cognitive mapping of the attachment figure's whereabouts, the resources for seeking proximity, and the types of distal communication with the attachment figure. Although these advances make distance less of an obstacle to maintaining an attachment bond, the notion that the individual can reunite with the attachment figure if necessary remains a crucial aspect of the caregiver's availability. Furthermore, when lines of communication are closed or cut off, older children and adults can perceive physical separations as a major threat to maintaining an attachment bond. For instance, separations in which a caregiver leaves in an angry or unexplained manner may disrupt a child's ability to plan for reunion and leave the child uncertain about the parent's whereabouts. Bowlby (1973) cited a research study by Newson and Newson (1968) describing how a 4-year-old had become anxious and clingy following her father's desertion of the family 3 months earlier. The child's mother speculated that her child's difficulty with staying at day care resulted from her fear that the mother would also not come back—a speculation supported by the child's repeatedly saying to the mother, "Do you love me? You won't leave me, Mummy, will you?" (Bowlby, 1973, p. 214).

Witnessing violence between parents may also threaten a child's confidence in the parents' availability (Davies & Cummings, 1995, 1998). The child's appraisal of marital violence is likely to include fear that harm may come to one or both parents. In addition, parents living with constant conflict and fear are likely to have reduced capacities to attend to the child. Thus, in addition to fear of harm to the parents, attachment anxiety is increased by uncertainty about the parents' ability to respond to the child's distress and the lack of open communication with both parents. Even in situations with less extreme conflict, parents who become emotionally disengaged from one other and decide to separate or divorce may create fears in the child that the parents will also decide to leave the child. The notion that a parent may leave and not return creates a fundamental threat to physical accessibility. Most parents who divorce make efforts to communicate with the child and reassure the child of their continued availability, which substantially reduces the perceived threat (Bretherton, 1995; see also B. C. Feeney & Monin, Chapter 40, this volume).

Hostile verbal communication creates additional possibilities for attachment disruptions. For instance, without actually leaving, a parent can threaten to leave or to send the child away. Such behavior may occur in disciplinary contexts when the parent has become angry and exasperated with the child. As an example, Bowlby quoted a mother from the Newson and Newson (1968; emphasis added) study:

> "I used to threaten him with the Hartley Road Boys' Home, which isn't a Home anymore; and since then, I haven't been able to do it; but I can always say I shall go down town and see about it you know. And Ian says, "Well, if I'm going with Stuart (7) it won't matter"; so I say, "Well, you'll go to different ones—you'll go to one Home, and *you'll* go to another." But it really got him worried, you know, and I really got him ready one day and I thought I'll take him a walk round, *as if* I was going, you know, and he really *was* worried. In fact, I had to bring him home, he started

> to cry. He saw I was in earnest about it—he *thought* I was, anyway. And now I've only got to threaten him. I say "It won't take me long to get you ready.'"

It is difficult to document the frequency of such statements because many parents are ashamed to admit them to researchers. However, in his review of parenting studies, Bowlby reported that the incidence of such statements was as high as 27% in the Newson and Newson (1968) study of families in England and 20% in a study of parents in the United States (Sears, Maccoby, & Levin, 1957).

Threats of suicide by a desperate parent may elicit even greater anxiety about the parent's availability. In addition to the obvious threat to the parent's physical accessibility, the child is faced with the fear of violence and the prospect of loss. These threats often occur in the context of hostile and conflict-filled relations, which may create the impression that the child's angry feelings toward the parent are responsible for the parent's desperation and despair. Bowlby noted that many children are not only exposed to threats of suicide, but may also actually witness suicide attempts. A parent may also make statements that attribute responsibility for future abandonment to the child. Statements to the child, such as "You will be the death of me," or threats of abandonment that follow a child's misbehavior are likely to confound attachment-related fears with feelings of guilt. This kind of attribution not only shakes the child's confidence in the parent's availability but also leads to negative perceptions of the self.

Over 400,000 children in the United States currently experience prolonged physical separations from biological parents (Zeanah, Shauffer, & Dozier, 2011). Because foster care families have replaced residential nurseries for children removed from the care of their biological parents, new questions about the effects of attachment disruptions with biological parents and the potential formation of bonds to foster parents have been investigated (Stovall-McClough & Dozier, 2004; see Dozier & Rutter, Chapter 30, this volume). These studies suggest that infants and young children in foster care will display attachment behaviors toward their new caregivers within the first few weeks of placement; however, it is uncertain whether such behaviors necessarily indicate the formation of an attachment bond because they do not predict the long-term stability of the placement. In contrast, the foster parent's "commitment" to the foster child measured early in the relationship is a strong predictor of the long-term stability of the placement and of adoption (Dozier & Lindhiem, 2006). These findings illustrate that assessment of foster parents' feelings of commitment to the child yield a better prediction of bond formation than either home or laboratory assessments of the foster child's attachment behavior. The importance of maintaining an enduring attachment bond is further highlighted by a prospective study of foster and maltreated children. Higher rates of behavior problems were found in children who had been placed in foster care compared with children who remained placed with maltreating caregivers, with whom they presumably had maintained an attachment bond (Lawrence, Carlson, & Egeland, 2006). Children who enter the child welfare system not only experience prolonged separation from their biological parents but also face the challenge of repairing the bonds with biological parents or developing an attachment with an alternative caregiver.

Severe or Chronic Threats to Caregiver Responsiveness

The complete absence of an appropriate caregiving response in situations that normally call for nurturance or guidance constitutes a severe threat to confidence in the caregiver's responsiveness to the child's attachment needs. Main and Solomon (1986) first called attention to this type of disruption when they observed a relatively small group of infants who showed unusual behaviors in the Strange Situation, marked by fear, freezing, and disorientation. They assigned these infants to a new classification: "disorganized/disoriented" (D).

The infant D classification has been consistently linked to a variety of adjustment difficulties and to psychopathology (Groh, Roisman, Van IJzendoorn, Bakermans-Kranenburg, & Fearon, 2012; Lyons-Ruth & Jacobvitz, Chapter 29, this volume). In a 6-year longitudinal study, children who were classified as D in infancy developed aggressive behavior problems in preschool and elementary school at much higher rates than other children (Lyons-Ruth, 1996; Lyons-Ruth, Alpern, & Repacholi, 1993; Moss, Cyr, & Dubois-Comtois, 2004; Moss et al., 2006). Longitudinal data from the Minnesota Longitudinal Project indicate that the infant D classification predicts adjustment problems consistently from childhood through adolescence, and that it specifically predicts dissociative symptoms (Carlson, 1998; Sroufe, 2005).

Main and Hesse (1990) traced infants' disorganized behavior to children's perceptions of their caregivers as "frightened or frightening," signaling severe threats to caregiver responsiveness. A potential explanation for caregivers' difficulty in responding to their children's attachment needs was uncovered in interviews about their own childhoods. Parents of D infants showed unusual difficulties discussing loss and trauma during the Adult Attachment Interview (AAI; Hesse & Main, 2006; see Hesse, Chapter 26, this volume). These difficulties were evident from momentary lapses in "monitoring discourse or reason" that included disorientation, loss of monitoring of discourse, and reports of extreme behavioral reactions. The internal focus of these parents, resulting from their own preoccupation with unresolved loss and traumatic experience, was thought to interfere drastically with their capacity to respond to their infants (Main & Hesse, 1990).

Subsequent researchers have further investigated the links among caregiver behavior, severe threats to a caregiver's responsiveness, and disorganized attachment among older children and adolescents (Solomon & George, 2011). Prolonged failure to respond appropriately to the child's needs has been described by George and Solomon (2008) as *caregiver abdication*. This term describes a general breakdown in the caregiving system that includes frightening, maltreating, neglecting, or failing to protect children. These caregiving failures are thought to result from caregivers being flooded and overwhelmed by their own fears, resulting in feelings of helplessness in caring for their children. As children mature, they develop new capacities to manage the feelings of confusion, fear, anger, and sadness that accompany perceptions of the caregiver as frightened or frightening. As a result, older children who perceive severe threats to caregiver responsiveness may develop "controlling strategies" for managing their relationship with the caregiver. These strategies may reduce the child's feelings of confusion and helplessness and provide more predictable interactions with the caregiver that ensure maintenance of the attachment bond. Two types of controlling/disorganized strategies have been observed in caregiver–child interactions: a controlling–hostile pattern and a controlling–caregiving pattern (Lecompte & Moss, 2014; Main & Cassidy, 1988; Obsuth et al., 2014; Solomon & George, 2011; Zanetti, Powell, Cooper, & Hoffman, 2011; see also Solomon & George, Chapter 18, this volume). These patterns have been consistently associated with increased risk for child and adolescent psychopathology.

In addition to the disorganized patterns observed in caregiver–child dyads, severe threats to caregiver responsiveness may also undermine trust and communication in adult attachment relationships. For instance, disruptions in adult relationships are often marked by intense negative affect and by the adults' feelings of helplessness and anger in attempting to respond to their partners' needs. A common dysfunctional pattern of interaction occurs when one partner rigidly pursues the other in a manner that is perceived as critical or nagging, and the partner responds by emotionally disengaging. Such disengagement can take a variety of forms, including contemptuous or aloof responses, silent stonewalling, or actual physical withdrawal from the partner (Gottman, 1994). Although this disengagement may be an effort to escape from a painful interaction, it paradoxically heightens anxious and angry feelings associated with a perceived threat to the partner's availability or responsiveness (Johnson & Greenman, 2006; see Brassard & Johnson, Chapter 35, this volume). Unfortunately, fear of losing the partner or of being hurt is often mixed with defensive anger. As a result, events that have been perceived as threats to the partner's availability or responsiveness are often hidden behind cycles of blame and defensive responses that dominate much of a distressed couple's interactions.

Internal Working Models: Continuity and Change in Developmental Pathways

Bowlby (1973) viewed the transaction between the individual's internal working models and the caregiving environment as the central dynamic that shapes an individual's developmental pathway from infancy through adulthood (Kobak, Cassidy, Lyons-Ruth, & Ziv, 2006). His developmental pathways model accounted for both continuity and change in adaptation. Continuity in a developmental pathway was maintained by internalized expectations for caregiver availability and responsiveness that in turn shaped the individual's interpretation of behavior with caregivers and partners in close relationships. Confident expectancies in a caregiver's availability tended to promote adaptive functioning, while negative or insecure expectancies tended to leave an individual vulnerable to subsequent difficulties. The model also allowed for changes in a pathway. For instance, changes in the caregiving environment could alter an individual

pathway in both positive and negative directions, leading to subsequent revisions in an individual's internal model. Attachment disruptions in childhood, adolescence, or adulthood could have profound effects in shifting an individual's trajectory regarding relationship difficulties and psychopathology.

Internal Working Models and Attachment Disruptions

Bowlby posited internal working models as a mechanism through which interactions with caregivers are internalized. These "working models" or expectancies forecast the caregiver's availability and responsiveness, and allow individuals to adapt their communications with caregivers to assure maintenance of the attachment bond. Expectancies form the core of internal working models and anticipate how the caregiver will respond in variety of contexts given the individual's changing needs and goals. A child who experiences consistent responses that are attuned to his or her changing motivational states will develop confident expectancies in the caregiver's availability and responsiveness. These expectancies conform to a "secure base script" that anticipates how attachment-related events with a particular caregiver typically unfold (e.g., "If I am distressed, I can go to my mother and she will comfort me"; Bretherton & Munholland, 2008; Cassidy, Jones, & Shaver, 2013; Mikulincer, Shaver, Sapir-Lavid, & Avihou-Kanza, 2009; Waters & Rodrigues-Doolabh, 2001; Waters & Waters, 2006).

Internal working models that are organized by secure base scripts provide individuals with valuable resources for coping with attachment disruptions. Secure expectancies predispose individuals toward openly signaling their needs and assuming that these signals will elicit a timely and effective caregiver response. As a result, emotions are more likely to serve their adaptive functions of motivating effective behavior and signaling needs to others. This sense of emotional efficacy in turn allows individuals to develop confidence to explore new situations and master new skills. Thus, nonattachment motivational systems such as exploration and affiliation can take precedence over attachment concerns to facilitate new learning and social interaction (Waters & Cummings, 2000). Older adolescents and adults who have developed the internal resources associated with secure internal working models are likely to show more resilience when they encounter a threat to caregiver availability, as well as a reduced risk for developing psychopathology (Carlson et al., 2009). In contrast, those with insecure internal models may be particularly vulnerable to attachment disruptions and at greater risk for emotional and defensive reactions that undermine relational functioning and increase symptomatic expressions of attachment needs.

Ainsworth's patterns of attachment in the Strange Situation provided initial evidence for the development and assessment of internal working models. Her laboratory observations demonstrated that, by 1 year of age, infants had begun to internalize expectancies for caregiver availability and responsiveness, subsequently organizing how they communicated and behaved toward the caregiver when they were distressed. Later researchers (e.g., Bretherton, 1985; Main, Kaplan, & Cassidy, 1985) extended the assessment of internal models to older children and adults (see Bretherton & Munholland, Chapter 4, this volume). Many of the assessments designed to infer expectancies for caregiver availability and responsiveness share a common strategy of eliciting narratives of events that would typically activate the attachment system and lead an individual to seek protection or comfort from the caregiver. The AAI uses structured prompts designed to elicit memories of times when an individual would normally need comfort or support from the caregiver. Other assessments rely on projective methods or word prompts to generate narratives that can be coded for their degree of adherence to or deviation from the secure base script. Expectancies for caregiver responsiveness can be inferred at the level of behavior or by observing how individuals communicate when they are distressed or in need of support (Kobak & Duemmler, 1994).

Much of the research that followed Ainsworth's work assumed considerable continuity in internal working models from infancy through adulthood (Kobak & Zajac, 2011). Although longitudinal research generally yielded some support for the continuity hypothesis, these effects tend to be quite modest and suggest that internal working models are open to considerable change and revision between early childhood and late adolescence (Booth-LaForce et al., 2014; Haydon, Roisman, Owen, Booth-LaForce, & Cox, 2014; Sroufe, Egeland, Carlson, & Collins, 2005). This substantial instability highlights the need to consider how ongoing experiences in attachment relationships, as well as an individual's exposure to attachment disruptions, may create "lawful discontinuities" in internal working models. In Bowlby's view, internal working models become not only more complex over the course of childhood and adolescence but also more resistant to change. However, even

in adulthood, these models may be amenable to change resulting from new experiences in relationships with partners.

The internal working model concept is essential to understanding the resources an individual brings to coping with attachment disruptions. Expectancies that organize the internal working model that predate the disruption can amplify or reduce the response to the disruption and its impact on relationship functioning and psychopathology. Individuals with secure internal models (organized by confident expectancies for caregiver availability) are likely to bring more resources to interpreting and coping with the relationship disturbance. Not only does a secure internal model enable the individual to cope more effectively, but it is also likely to facilitate more direct emotionally attuned communication with caregivers. The capacity for communicating vulnerable emotions and attachment needs may be very useful in gaining comfort and protection from alternative caregivers or in signaling the individual's need to restore confidence in the disrupted relationship. In situations where alternative caregivers are not available, the confident expectancies and emotional self-efficacy that characterize a secure model may be useful in helping the individual understand the source of the disruption and to maintain resilience in managing attachment-related distress. Unfortunately, the effects of attachment disruptions such as loss or trauma often co-occur with insecure models and expectancies for insensitive care (Zajac & Kobak, 2009). As a result, the insecure models will amplify problematic reactions to attachment disruptions. These models are more likely to activate defensive processes resulting in distorted and symptomatic expression of the anger, fear, and sadness that accompany severe threats to caregiver availability or responsiveness.

The Caregiver's Capacity for Repairing Attachment Disruptions

The caregiver's capacity to empathize and respond sensitively to feelings of hurt, anger, and sadness is the other major factor that moderates the impact of attachment disruptions on relationship functioning and psychopathology. Efforts to assess the contributions of the caregiving environment to continuity and change in developmental pathways have lagged behind efforts to measure internal working models. The degree to which a caregiver's ability or inability to provide sensitive care remains stable across development requires further study, as does the chronic versus transitory nature of factors that overwhelm caregivers and lead to abdication of the caregiving role. The caregiver's capacity to restore trust following an attachment disruption is premised on the notion that the caregiver can recover from (or effectively manage) the factors that produced the disruption. Examples of events that are more amenable to recovery include a caregiver's serious illness or hospitalization, psychological or substance abuse disorders that lead to treatment or remission, and major transitions in adult relationships (e.g., separation and divorce) that allow the caregiver to reestablish a stable support network. Factors that are more chronic and less amenable to recovery include economic adversity, personality disorders that undermine stable relationship functioning, and repeated exposure to loss and/or trauma (Kobak, Cassidy, & Ziv, 2004).

When a caregiver can overcome or manage the adversity that contributed to separation from the child or caregiving abdication, repair is possible. For instance, if an available and responsive caregiver were able to attend to the relationship following a disruption, the disruption could be repaired and confidence in a caregiver's availability and responsiveness restored. The caregiver's central challenges in repairing a disrupted attachment are understanding and empathizing with the child's injured feelings, even when those feelings may be hidden by defensive detachment or expressed in angry and distorted ways that initially distance the caregiver. Responding to these challenges tests the caregiver's ability to be the stronger and wiser person in a damaged relationship (Zanetti et al., 2011). Whereas reestablishing contact and effectively gaining comfort from the primary caregiver might repair some disruptions, other disruptions may be resolved by establishing or strengthening an attachment relationship with an alternative caregiver. These efforts are likely to be most successful when supported by other adults in the caregiver's life or possibly by help from a professional therapist or coach.

Therapeutic Change: Repairing or Resolving Attachment Disruptions

Attachment-based therapies share the common goal of increasing security in attachment relationships, so that those relationships can serve as a resource for helping the individual to manage major sources of stress more effectively. These treatments may target the caregiver and the caregiver's capacity to empathize with the child, emotionally at-

tuned communication in the attachment dyad, and the child or adult's internal working model of the caregiver (Kobak, Zajac, Herres, & Krauthamer-Ewing, 2015). The extent to which attachment disruptions are implicated in attachment-based treatments vary along a continuum (Kobak et al., 2006). On one end are individuals with secure or mildly insecure relationships who encounter severe stress or adversity and require support in managing these problems. These individuals have not likely been exposed to a major disruption, and treatments can focus on improving communication. On the other end of the continuum are individuals who have experienced prolonged or severe threats to caregiver availability and responsiveness, and have developed rigid defenses that distort expressions of attachment needs and feelings. These individuals may require more supportive exploration of attachment disruptions and internal working models in order to repair negative expectancies and defensive reactions that accompany the disruption.

Bowlby (1988) wrote most extensively about individual therapy with adults. The goal of his approach was (1) to provide a secure base from which to access painful expectancies regarding caregiver availability that had been shut away from conscious processing and (2) to allow the client to test the validity of those expectancies in light of current experience. This type of treatment often begins by linking symptomatic expressions of fear and anger to disturbances in attachment relationships. In doing so, a clinician can help the client experience and integrate painful experiences to gain control over symptoms. Accessing previously avoided experiences makes it possible for the individual to update working models and reduce defensively distorted emotions that contribute to miscued communication. Although this description of adult therapy focuses on intrapersonal working models, intrapersonal change is premised on the notion that the interpersonal relationship with the therapist provides a model of open communication about attachment-related experiences (see Slade, Chapter 33, this volume).

Treatments for Caregivers of Young Children

Two of the major attachment-based therapies for young children provide support for caregivers on both ends of the continuum of attachment disturbances and child psychopathology. The Attachment and Biobehavioral Catch-Up (ABC) program focuses on identifying, commenting on, and reinforcing caregiver sensitivity at moments when the child needs comfort; in this way, parents are encouraged to take initiative in the interaction (Bernard et al., 2012; Bernard, Meade, & Dozier, 2013). This intervention has proven effective at increasing caregivers' ability to respond sensitively to children's signals for nurturance and reciprocal interaction in ways that produce enhanced biological regulation for the child. Similarly, the Circle of Security project encourages caregivers to explore how their internal worlds shape their perceptions and reactions to their child (Marvin, Cooper, Hoffman, & Powell, 2002; Powell, Cooper, Hoffman, & Marvin, 2013). In doing so, the intervention is intended to enhance caregivers' capacities for self-regulation, self-awareness of filters that interfere with accurately reading the child's signals, and empathic attunement and response to the child's attachment and exploratory signals. Research has demonstrated the effectiveness of the Circle of Security in changing children's attachment classifications from disorganized to organized (Hoffman, Marvin, Cooper, & Powell, 2006). Other attachment interventions such as toddler–parent psychotherapy focus more on the impact of parents' working models derived from childhood experience on current parent–child interactions (Lieberman, 1992). This approach has produced increased attachment security in a randomized trial with mothers diagnosed with major depressive disorder (Toth, Gravener-Davis, Guild, & Cicchetti, 2013; see Berlin, Zeanah, & Lieberman, Chapter 32, this volume, for a review of early intervention programs designed to enhance attachment security).

Attachment-Based Treatment for Adolescents and Adults

Adolescents and adults have established internal working models that have become more resistant to change over the course of development, thus complicating attachment-based therapy. Furthermore, the negative expectancies that organize internal models are often distorted by well-established defensive strategies that make attachment needs and feelings less apparent to caregivers or therapists. The challenge for attachment-based therapists is to support caregivers in seeing beyond these defensive processes to underlying attachment needs. Connect, a group program for the caregivers of antisocial adolescents, approaches this problem with an extensive 10-session program designed to direct caregivers' attention to adolescents' hidden

attachment needs (Moretti & Obsuth, 2009). In doing so, the curriculum encourages an empathic shift in caregivers that recognizes adolescents' vulnerability and allows for more attuned responding to adolescents' attachment and autonomy needs.

Attachment-based family therapy (ABFT) is designed to uncover adolescents' attachment disruptions or threats to caregiver availability or responsiveness in order to structure a reparative conversation with the caregiver (Diamond et al., 2010). ABFT was designed to treat depressed and suicidal adolescents, using the adolescent's suicidal despair to understand why the he or she could not rely on the caregiver at a moment of distress. After eliciting attachment narratives that support negative expectancies for caregiver availability or responsiveness, the therapist prepares the adolescent to discuss these episodes directly with the caregiver. Caregivers are given advance preparation to support a validating and empathic stance toward the adolescent's vulnerability and attachment needs. The goals of the reparative conversation are to allow the adolescent to signal attachment needs directly and to encourage the caregiver to shift from seeing a depressed and suicidal adolescent to seeing a child in need of understanding, protection, and comfort. Once the therapist establishes a reparative conversation, treatment centers on conversations about the adolescent's challenges and difficulties outside the family, allowing the caregiver to provide a secure base for understanding and support.

Attachment-based marital therapists face similar challenges in treating distressed couples. Marital distress is presumed to be motivated by fears about a partner's availability and responsiveness. As a result, the therapist is faced with the challenge of uncovering "attachment injuries" or perceived threats to a partner's availability and responsiveness (Kobak, Hazan, & Ruckdeschel, 1994; see also Brassard & Johnson, Chapter 35, this volume). Shifting from an externally focused attentional set, in which a partner is viewed as primarily a source of danger, to a more internally focused awareness of the fear and distress caused by the threat to the attachment relationship can be a critical step in marital therapy. When the fears that accompany perceived threats to a partner's availability are openly communicated, the high level of conflict and disengagement found in distressed marriages can be deescalated (Johnson, 1996, 2003). Johnson's approach uses emotion-focused techniques to help distressed partners access attachment fears and vulnerabilities that are hidden behind angry and defensive interaction sequences. This approach has produced increased levels of marital satisfaction in the majority of couples completing treatment (Makinen & Johnson, 2006; see also Brassard & Johnson, Chapter 35, this volume).

Summary

Bowlby's *Separation* volume established the framework for understanding how disturbances in attachment relationships are implicated in the development and maintenance of psychopathology. Although insensitive care and insecure attachment have provided much of the focus for attachment research in nonclinical populations, Bowlby was concerned with more extreme breakdowns in caregiving that we have termed "attachment disruptions." These severe or prolonged threats to a caregiver's availability or responsiveness activate defensive process and symptomatic expressions of attachment-related anger, fear, and sadness that severely compromise an individual's ability to cope with normal stressful and developmental challenges. Caregivers and therapists who work with individuals who have experienced attachment disruptions can use Bowlby's framework to assess the nature of the disruption, determine the degree to which disturbance is implicated in presenting problems, and, most importantly, to develop treatment designed to repair or resolve injuries resulting from attachment disruptions.

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