

CHAPTER 12

Major Principles of Attachment Theory

Overview, Hypotheses, and Research Ideas

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During the past five decades, few theories in psychology have generated as much interest, research, and debate as attachment theory (Bowlby, 1969/1982, 1973, 1980, 1988) and its recent extensions (see Cassidy & Shaver, 2016). Attachment theory is an extensive, inclusive theory of personality and social development “from the cradle to the grave” (Bowlby, 1979, p. 129). Being a lifespan theory, it is relevant to several areas in psychology, including developmental, personality, social, cognitive, neuroscience, and clinical.

Because attachment theory covers the entire life course, it has several fundamental principles and core hypotheses, most of which address how and why people think, feel, and behave in particular ways within relationships at different points of their lives. Given the focus of this volume, our primary goal in this chapter is to provide a brief, representative overview of the key principles and central hypotheses that underlie attachment theory, both as originally articulated by Bowlby and his contemporaries (e.g., Ainsworth, Blehar, Waters, & Wall, 1978) and as expanded upon in recent theory and research (Cassidy & Shaver, 2016).

Attachment theory has two major components: (1) a *normative component*, which ex-

plains modal (species-typical) attachment processes and patterns of behavior in humans, and (2) an *individual-difference component*, which explains individual deviations from modal processes and behavioral patterns. Most of the major principles and hypotheses we discuss in this chapter are normative ones, but we also highlight principles associated with well-established individual differences in attachment patterns (in children) and attachment orientations (in adults), including how they are related to a host of personal and relational processes and outcomes.

We began our work on this chapter by surveying the theoretical and empirical literature on attachment processes across the lifespan and generated an initial list of potential principles and hypotheses. We then asked several leading attachment scholars working in different areas of psychology (e.g., clinical, developmental, personality, social) to indicate what they thought were the most important principles/hypotheses.¹ Informed by this information, we next identified what we believe are nine of the most important, foundational principles and hypotheses that serve as the foundation of attachment theory (see Table 12.1, which serves as a guide to the following discussion).

TABLE 12.1. Major Attachment Principles and Hypotheses

Principle A: Attachment theory is an evolutionary, biologically based theory explaining a predisposition to engage in proximity to important others for safety and survival.

1. All human infants, and certain other species, engage in this behavior (universality hypothesis) as a means of meeting basic physical and emotional needs.
2. The relationship state of engaging in proximity with an important caregiver who can meet basic safety and survival needs is referred to as an attachment.
3. Close others who meet the attachment needs of an individual are attachment figures.

Principle B: The attachment system coexists with other innate behavioral systems, such as the caregiving system, the sexuality system, and the exploration system.

1. All of these systems are important and interrelated.
2. However, the attachment behavioral system comes to the forefront (is dominant) during times of distress, fear, loss, pain, or separation (threat activation hypothesis), motivating proximity seeking to attachment figures.

Principle C: The connection between the attachment and caregiving systems determines whether infants form attachments that are secure or insecure.

1. Attachment-relevant behavior develops largely in response to the quality of early caregiving, such that high-quality and consistent early caregiving—particularly during times of distress—leads to attachment security (sensitivity hypothesis).
2. Early inconsistent, rejecting, or absent caregiving by attachment figures during times of distress leads to attachment insecurity.

Principle D: There are three major functions of attachment relationships—to promote proximity seeking, provide a safe haven, and offer a secure base—all of which facilitate self-regulation and emotion regulation.

1. Proximity seeking promotes safety and survival of the individual, through either greater physical closeness to an attachment figure or internalized feelings of closeness to an attachment figure (felt security).
2. A safe haven helps the individual regulate emotions during times of actual or perceived distress/threat.
3. A secure base allows the individual to explore the world and develop greater autonomy, growth, competence, eventually resulting in better self-regulation and psychological development.

Principle E: Attachment figures, and types of attachments to them (secure vs. insecure), shape internal working models (mental representations) of the self and others.

1. Internal working models consist of preverbal and verbal memories, which shape cognitions, perceptions, emotions, attitudes, and behaviors toward the self, others, and the world more generally.
2. In infants and young children, the organization of attachment behavior (e.g., expressing distress, seeking comfort, being soothed by comforting) varies based on prior caregiving experiences with attachment figures (e.g., parents or other caregivers). Children are classified as secure, ambivalent (anxious), avoidant, or disorganized based on their responses to their attachment figures. These responses are viewed as adaptive given the specific nature of the child's caregiving environment.
3. Over time, internal working models become more elaborate and important, eventually developing into adult attachment orientations, which include anxiety, avoidance, and disorganization (with low scores on these dimensions representing security).

Principle F: The attachment system is relevant from “the cradle to the grave.”

1. Internal working models based on an individual’s entire attachment history with various caregivers guide cognitions, perceptions, emotions, attitudes, and behaviors across the individual’s entire life.
2. Attachment orientations in adulthood are relatively stable within people across time and context; they are “trait-like,” particularly attachment security (stability hypothesis).
3. However, attachment orientations can change in response to attachment-relevant events/contexts (e.g., therapy, experiences that sharply contradict existing internal working models) (change hypothesis).

(continued)

TABLE 12.1. (continued)

Principle G: Attachment security is an inner resource that can facilitate resilience (broaden-and-build hypothesis), whereas attachment insecurity is a vulnerability often associated with poorer life outcomes.

1. Mental health outcomes
2. Interpersonal difficulties

Principle H: Individuals have specific reactions when they are separated from or lose their attachment figures.

1. They experience three stages of grief: protest, despair, and detachment.
2. Each of these responses serves an adaptive purpose.

Principle I: The attachment system, although universal, is culturally dependent and promotes culturally specific forms of adaptation and development.

1. In some cultures, most individuals develop secure attachments, because they are exposed to sensitive and appropriate caregiving by their attachment figures/caregivers (normativity and sensitivity hypotheses), especially in plentiful, nonthreatening environments.
2. In other cultures, relatively more individuals develop insecure attachments, because they are exposed to less sensitive and inappropriate caregiving by their attachment figures/caregivers, especially in less plentiful, more threatening environments.

Major Principles

We now discuss each principle and the key hypotheses associated with it, present representative research relevant to each principle/hypothesis, and identify a few important, unanswered questions relevant to each principle.

Principle A: Attachment Theory Is an Evolutionary, Biologically Based Theory

According to Bowlby (1969/1982, 1973, 1980, 1988), the attachment system evolved and is deeply ingrained in our nature because it solved one of the greatest adaptive challenges our ancestors faced—how to improve the chances of survival during childhood in ancestral environments. Inspired by Darwin (1859, 1872), Bowlby (1969/1982) believed that the “attachment system” was genetically wired into our species through directional selection. At its core, the attachment system is designed to detect and respond to potential threats when they arise. The system has three central features: (1) monitoring/appraising potentially threatening events, which activate (turn on) the attachment system, (2) monitoring/appraising the availability and responsiveness of another person who can provide protection/comfort in response to the threat, and (3) monitoring/appraising the likeli-

hood that seeking proximity to this person can (or will) be achieved (Bowlby, 1973; Mikulincer & Shaver, 2003).

Bowlby believed that all human infants—as well as young offspring in many other species—engage in behaviors that reflect the operation of the attachment system, most notably when they are either acutely or chronically ill, stressed, fatigued, or threatened. This is termed the *universality hypothesis*. Bowlby further claimed that the state of seeking and maintaining proximity with a person who can meet one’s basic safety and survival needs involves being attached to that person, and that people who meet attachment needs become “attachment figures.”

Bowlby also highlighted the important role that care and nurturance assume in the survival, growth, and thriving of all individuals, including in nonthreatening situations. He claimed that good caregivers tend to provide “a secure base from which a child or an adolescent can make sorties into the outside world and to which he [sic] can return knowing for sure that he will be welcomed when he gets there, nourished physically and emotionally, comforted if distressed, reassured if frightened” (1988, p. 11). This type of care and nurturance, which Bowlby believed was governed primarily by the parenting behavioral system in nonthreatening situations, allows individuals to develop many of the skills,

attributes, and abilities necessary for competent functioning in other life domains, such as learning new tasks, developing self-confidence, and establishing warm, communal relationships with other people.

Several gaps in our understanding of these issues remain. For example, we need to know more about how attachment relationships are formed across time, particularly among adults and their romantic partners. We also need to know more about how children and adults develop and manage relationships with multiple attachment figures, including the conditions under which they turn to and use specific attachment figures for specific needs or purposes (e.g., for comfort, reassurance, support, information, advice). Finally, regarding the universality hypothesis, we need to know more about the conditions under which attachment relationships may develop in early deviant environments.

Principle B: The Attachment System Coexists with Other Behavioral Systems

The attachment system is one of several biologically based behavioral systems, each of which affects and interacts with the others to impact what a person does in a specific situation. In children, for example, the other primary behavioral systems include the *exploration system* (which can activate when the attachment system is inactive, permitting the learning of new information and skills relevant to survival and social development), the *social system* (which also can activate when the attachment system is quiescent, allowing individuals to reap the benefits of forging personal ties with different people), and the *caregiving system* (which operates in tandem with the attachment system to provide care and protection, particularly when an offspring or partner's attachment system is activated; Cassidy, 2016). In adulthood, other biologically based behavioral systems become relevant, especially the *sexual/mating system*, which evolved to promote reproductive fitness (Birnbaum, 2016).

According to Bowlby (1969/1982, 1973, 1980), and as supported by considerable research with children (e.g., Marvin, Britner, & Russell, 2016) and adults (e.g., Mikulincer & Shaver, 2016; Simpson & Rholes, 2012), the attachment system dominates attention and

guides behavior (relative to the other behavioral systems) when children and adults feel threatened, distressed, fatigued, or fearful, especially in response to potential, impending, or actual loss or separation of their attachment figures. This is known as the *threat activation hypothesis*, which makes attachment theory unique compared to other theories of personality and social development. The primary evolved function of threat activation is to motivate "at-risk" individuals to seek closer physical and/or psychological proximity to their attachment figures. As threatening events and distress terminate or abate, the attachment system becomes deactivated and attachment-relevant behavior (e.g., seeking proximity) subsides, permitting other behavioral systems once again to become activated by relevant motives and environmental cues.

Our knowledge regarding how these behavioral systems operate in relation to one another is still limited. What we currently know is that the attachment system becomes activated and tends to suppress the operation of many other systems (e.g., exploration, mating/sexuality) when individuals feel threatened. The attachment system, however, most likely plays an important role in triggering and/or facilitating the operation of other systems, especially the caregiving system (in adult-child and adult-adult attachment relationships) and the mating/sexuality system (in adult-adult attachment relationships). In adults, for instance, attachment processes probably facilitate the emotional bonds necessary to keep parents together long enough to raise their children, which may have been necessary for survival in ancestral environments (Fletcher, Simpson, Campbell, & Overall, 2015; Zeifman & Hazan, 2016).

Principle C: The Attachment System and the Caregiving System Are Interrelated

This principle involves the special connection between the attachment and caregiving behavioral systems, which largely determines whether infants and adults form secure or insecure attachment patterns with their attachment figures. Although most children and adults become attached to their caregivers/attachment figures, not all individuals become securely attached (Bowlby, 1956). According to attach-

ment theory, the types of bonds that children and adults form depend on the type, quantity, and quality of caregiving they have received from prior caregivers/attachment figures.

Bowlby's (1944) observations of maladjusted youth led him to conjecture that disruptions in the early caregiver-child relationship often generate certain predispositions that affect a person's later life outcomes. Children, for example, can detect whether and the degree to which their caregivers are sensitive, responsive, and attentive to their needs, particularly when they are upset. According to the *sensitivity hypothesis*, attachment-relevant behavior develops primarily in response to the type and quality of early care received, with higher-quality and more consistent early care usually resulting in attachment security, and with lower-quality and/or more inconsistent care generating attachment insecurity.

The sensitivity hypothesis has been supported by meta-analytic evidence (e.g., De Wolff & van IJzendoorn, 1997) and holds true across several different cultures and social contexts, affirming Bowlby's original claims (see Messman, van IJzendoorn, & Sagi-Schwartz, 2016). Although the exact behaviors that constitute sensitive care vary somewhat from culture to culture, the function and outcome of these behaviors is the same cross-culturally. Sensitive care, however, does not always take the same form or have the same impact on all children within the same culture (Fearon & Belsky, 2016). Variability exists due to the specific needs, motives, and dispositions of each child, which may affect what the optimal form of caregiving may be.

Inspired by Bowlby, Mary Ainsworth (1967) conducted the first series of naturalistic behavioral observations by examining how different caregiving behaviors were associated with different attachment-related motivations. Based on these observations, she and colleagues developed the Strange Situation procedure to evaluate young children's patterns of attachment with their mothers (Ainsworth et al., 1978). The Strange Situation consists of two brief separations and reunions during which the caregiver and a stranger enter and leave the room, while the child's reactions to these events are observed and coded. The absence of an at-

tachment figure, coupled with the presence of a stranger, should be alarming to children in the age range (12–18 months) for which the Strange Situation was developed.

Four behavioral patterns are witnessed in the Strange Situation (Ainsworth et al., 1978). Secure (Type B) infants explore and are comfortable with the stranger when their caregiver is present, become upset when the caregiver leaves, and are rather easily and quickly calmed when the caregiver returns to the room. Anxious-avoidant (Type A) infants typically do not explore the room (regardless of the caregiver's or the stranger's presence or absence) and display minimal visible affective changes when their caregiver leaves or reenters the room. Anxious-ambivalent (Type C) infants are often distressed before separation from their caregiver, become even more upset when their caregiver leaves the room, and often fail to calm down when their caregiver returns. Disorganized (Type D) infants exhibit strange, inconsistent, and sometimes bizarre behaviors in the Strange Situation, which can include signs of fear, odd movements, freezing, or other unusual reactions when they are separated from or reunited with their caregiver (see Main & Hesse, 1990).

Each of these attachment patterns has distinct caregiving origins (Ainsworth et al., 1978). Secure attachment typically develops when children receive consistent, warm, and responsive care from their caregivers. Anxious-avoidant attachment usually develops when children receive rejecting and/or absent care from their caregivers. Anxious-ambivalent attachment often develops when children receive inconsistent or mixed care from their caregivers. And disorganized attachment develops when children are exposed to frightening, strange, or unusual parenting often associated with abuse or their caregiver's clinical disorders (Lyons-Ruth & Jacobvitz, 2016). These latter three forms of attachment represent types of attachment insecurity.

A number of unanswered questions still exist. For example, how are the caregiving and attachment systems interrelated? Some research suggests they may operate in a bidirectional fashion to one another (Fearon & Belsky, 2016), but further research is needed to determine the exact nature of this bidirectional association.

Additionally, under what circumstances might attachment insecurity be more functional or adaptive than attachment security? One possibility is that the behavioral tendencies that define insecurity might be more adaptive in harsh or unpredictable environments in which resources are either limited or highly variable, other people cannot be trusted, and watching out for one's best interests is necessary (Szepešvári & Simpson, 2019). Our knowledge of the unique ways in which avoidance, anxiety, and disorganization might be adaptive in specific environments and social situations is negligible. Furthermore, precisely how does security protect or buffer people when separations from their attachment figures occur, and what are the long-term effects on health, well-being, and social functioning? Although some researchers are beginning to address this important issue (e.g., Sbarra & Coan, 2017), our understanding remains limited.

Principle D: Attachment Relationships Serve Three Functions—Proximity Seeking, Safe Haven, and Secure Base

The need to feel safe and secure is one of the most fundamental human needs (Bowlby, 1969/1982). Indeed, both children and adults need to feel safe, with some amount of "felt security" (Sroufe & Waters, 1977) before they can engage in and benefit from other important life tasks such as exploring, playing, and affiliating with others. Individuals who are effective attachment figures typically foster these outcomes by providing and facilitating three essential functions, especially when their children or partners feel distressed: remaining open to proximity seeking, providing a safe and comforting haven from threats and stressors, and providing a secure base from which their partners can reengage with the world.

The first function, seeking proximity to one's attachment figure, promotes safety and protection, a tendency that most likely enhanced the survival of children and perhaps adults during evolutionary history (Bowlby, 1969/1982). Proximity seeking is achieved by establishing closer physical contact with one's attachment figure or via internalized perceptions of greater contact/closeness to him or her, both of which begin the process of increasing the sense of

felt security. According to attachment theorists (e.g., Bowlby, 1969/1982; Mikulincer & Shaver, 2003), proximity seeking is the primary default strategy of the attachment behavioral system, and most people—including adults—resist unnecessary or prolonged separations from their primary attachment figures (Fraley & Shaver, 1998).

In young children, proximity seeking manifests in attempts to gain closer physical proximity to one's primary caregiver(s). Children do this with signaling behaviors (e.g., distressed facial expressions), aversive behaviors (e.g., crying), approach behaviors (e.g., moving toward the caregiver), or contact maintenance behaviors (e.g., clinging to the caregiver). Most adults also seek closer contact with their attachment figures (typically their romantic partners), particularly when their attachment system is activated (Collins & Feeney, 2004). However, the way in which adults seek proximity differs from that of children, particularly when threat/stress is at lower levels. Adult proximity seeking typically involves direct forms of verbal communication in which the distressed adult's specific needs, concerns, or desires are expressed to their attachment figures (Feeney & Woodhouse, 2016).

Once proximity has been achieved, the safe haven function becomes relevant. Attachment figures who provide a safe haven help their distressed partners down-regulate to assuage their negative emotions and thoughts. Attachment figures who effectively enact the safe haven function support their partners by allowing them to return to and remain in the relationship in order to receive comfort, reassurance, and assistance until their distress attenuates (Bowlby, 1988; Collins & Feeney, 2000). They accomplish this by providing the specific type and amount of support their partners actually need, taking into account the current situation, their partners' goals, wishes, concerns, and the need to express their feelings, after which they adjust their caregiving behaviors accordingly (Bowlby, 1988). Less sensitive and less responsive attachment figures, on the other hand, neglect, fail to understand, or are either overinvolved or out of synchrony with their distressed partners' actual needs (Kunce & Shaver, 1994). The net result of effective safe haven behavior

is the further restoration of felt security (Feeney & Collins, 2014).

Unlike that for young children, an adult's safe haven behavior can involve mental representations of his or her supportive attachment figure. Studies in which threat is experimentally induced have revealed that these manipulations automatically trigger mental representations of romantic partners who serve the safe haven function. When this happens, adults report less negative affect, even though their romantic partners (attachment figures) are not physically present (e.g., Mikulincer, Gillath, & Shaver, 2002).

After distressed partners have been soothed, the third function—providing a secure base—helps calmed partners to reengage once again in other life tasks. A secure base promotes autonomy, growth, and competence, eventually resulting in better self-regulation, greater well-being, and positive psychosocial development (Feeney & Woodhouse, 2016). Attachment figures who effectively serve as a secure base for their partners remain available, do not interfere with their partners' explorations, and actively encourage such explorations (Bowlby, 1988; Feeney & Thrush, 2010). Those who are ineffective do not notice or disregard their partners' goals, needs, and feelings, intrude on their partners' explorations, discourage and impede them, and tend to be unsupportive or unhelpful.

In young children, secure base behaviors include looking back or "checking in" to ensure their caregiver's presence as they explore their surroundings. As children age, they start venturing farther from their attachment figures, particularly those who provide a solid, secure base. In adults, secure base behavior involves attachment figures providing support for partners' important needs, plans, and goals, and responding in a timely, responsive, and sensitive manner when partners embark on new or challenging life tasks (Waters & Cummings, 2000). In general, more effective proximity-seeking, safe haven, and secure base behaviors tend to be enacted by attachment figures and distressed partners (both children and adults) who are securely rather than insecurely attached (Feeney & Woodhouse, 2016).

At present, a few basic questions remain unanswered. For example, how are proximity-

seeking, safe haven, and secure base functions "transferred" from parents (or early attachment figures) to adult romantic partners? To what extent do the behaviors of one's parents or early attachment figures impact this process, and to what extent do the novel characteristics of adult attachment figures override these earlier experiences (see Zeifman & Hazan, 2016)? Moreover, how does the attachment security of the distressed person or his or her attachment figure facilitate better, more effective exploration and the accomplishment of other important life tasks in adulthood? These questions need to be answered.

Principle E: Attachment Figures, and the Type of Attachment to Them, Shape Internal Working Models

Bowlby (1969/1982, p. 81) introduced the concept of "internal working models" to describe a mental representational system that is dynamic, allowing individuals to conduct "small-scale experiments within the head" in order to understand and predict behavior, particularly that of their attachment figures. *Internal working models* are aggregate representations of a person's entire life history of attachment-relevant experiences (Sroufe, Egeland, Carlson, & Collins, 2005). They capture preverbal and early language experiences, along with conscious and unconscious attitudes, emotions, cognitions, beliefs, and expectations (Collins, Guichard, Ford, & Feeney, 2004). In essence, working models encapsulate an individual's attachment-related thoughts about, feelings toward, and experiences with their attachment figures.

No systematic theory of internal working models exists in Bowlby's writings (Bretherton & Munholland, 2016), but he posited several things that had to be true for working models to fulfill some basic functions in attachment relationships. Bowlby theorized the following functions, among others: Working models (1) store, manipulate, and update information to help individuals decide how to react and behave in specific situations (Bowlby, 1988); (2) facilitate appraisals of others, oneself, and the world more broadly (Bowlby, 1969/1982); (3) identify attachment figures and form expectations about their availability and responsiveness (Bowlby, 1988); (4) allow for conscious and unconscious

applications of stored information in attachment-related situations (Bowlby, 1969/1982); and (5) provide a means of internalization, such that the working model becomes part of one's self-concept and identity (Bowlby, 1988).

According to Bowlby (1969/1982; 1973), working models have two parts: (1) a model of the self and (2) a model of specific attachment figures and attachment figures in general. These have both evaluative and internal structural components. The models of self and specific attachment figure(s) or attachment figures in general can be positive or negative. Each of these models can also be either internally consistent or incoherent, and individuals may have more than one working model of the same person (Bowlby, 1980). When they exist, multiple models typically consist of a simple, rudimentary model developed in infancy or early childhood and a later model that is more fully articulated, more sophisticated, and often more accessible to conscious awareness. Bowlby believed that both working models were important because they guided behavior, thought, perceptions, and emotions. He conjectured that in some situations, earlier, more primitive models could be more influential than later ones (Bowlby, 1980).

A major question about working models is how internally consistent they tend to be. Models of the self and other (i.e., the attachment figure) can be incongruent, especially if the attachment figure's behavior is inconsistent or unpredictable. Models may also be incongruent if their basic components—what individuals experience, what they are told by attachment figures, and what they learn from other people—are inconsistent with one another. For example, Bowlby (1973) wrote that a child might be labeled a “bad child” by his or her mother based on behavior of which the mother disapproved. However, the child might also be told that the mother loves the child dearly, despite his or her badness. From this, the child might learn that he or she is bad, but not so bad as to be unlovable. The behavior of this “loving” mother, however, might actually be quite unloving, resulting in the storage of inconsistent information between the mother’s words and the child’s actual experiences with her. Bowlby also believed that many young children find it

difficult to dismiss or ignore what their attachment figures tell them. Thus, in cases like these, young children, because they have more limited cognitive abilities than adults, may find themselves with irreconcilable information, resulting in highly incongruent working models. Bowlby hypothesized that such children often develop uneasy, unstable compromises in an attempt to reconcile such conflicting information. Finally, working models can also be incoherent because attachment figures teach their children not to think independently. For example, parents may teach their children that they cannot view their parents’ actions objectively, but simply must accept what their parents say about themselves (Bowlby, 1973). Incongruent models make the world less predictable and less explainable, making decisions about how to behave within relationships more difficult, sometimes even contributing to clinical disorders (Liotti, 1992). For example, multiple images of attachment figures can make it difficult to decide how to behave in their presence. As another example, dissociation is associated with contradictions within the self system.

Working models underlie attachment patterns in children. As children develop into adolescents and adults, these attachment patterns are replaced by attachment orientations. There are two primary adult attachment orientations: anxiety and avoidance. The adult attachment literature has covered them extensively, particularly in conjunction with relationship conflict, caregiving and support, relationship satisfaction, emotion regulation, stress, and depression (e.g., Mikulincer & Shaver, 2016). A third attachment orientation, disorganized attachment, is less understood and is just beginning to be studied (Paetzold, Rholes, & Kohn, 2015). It is important to note that attachment orientations reflect habitual patterns of behavior, preferences, goals, fears, and so forth, that one brings to relationships. Although attachment orientations are a reflection of working models, they should not be confused with them, even though they are often discussed somewhat interchangeably in some of the attachment literature. An understanding of working models is essential to a broader understanding of the attachment system. The precise workings and structure of working models have not been examined directly. Fraley (2007), how-

ever, has begun to lay the groundwork for a theory of how working models typically operate. Using a connectionist approach, Fraley suggests that working models operate across different interpersonal and social contexts that also allow for within-person variability across time. This approach provides clues regarding how and why multiple representations of attachment figures exist and may shift from being relationship-specific to more general (global) in nature. This approach also explains why working models tend to be rather stable over time but can also change in response to changing environments (see Principle F below). One strength of this approach is that early experiences tend to have a “privileged status” in the working model memory system, even if they recur even rarely over time, which is in line with Bowlby’s (1980) initial assumptions.

Other strengths of this approach include notions that (1) mental representations are based on an individuals’ own learning systems; (2) no a priori notions are needed about how general representations are constructed from relationship-specific ones because general (global) models emerge from a set of repeated, specific experiences; (3) behaviors can be contingently inconsistent over time, depending on context, which indicates that working models are more than merely a set of “if–then” scripts (as has commonly been believed; Mikulincer & Shaver, 2016); and (4) the organization of working models is based on characteristics of the relationship partner rather than his or her relationship status. If, for example, a new relationship partner resembles an individual’s mother, working model organization may be based on the shared characteristics of mother and partner instead of the category “relationship partner” (Fraley, 2007).

Several important issues still need to be investigated, and the connectionist approach offers insights to address them. These include determining how working models differ from general schemas or sets of scripts, how new information is incorporated over time and how much weight is given to particular experiences, how working models tend to transform from early infancy and childhood into adulthood, and how close the information that organizes working models must be to actual attachment experiences in order to influence working models.

Principle F: The Attachment System Is Operative from “the Cradle to the Grave”

Bowlby (1979, p. 129) believed that attachment processes are relevant from “the cradle to the grave.” There are several things this phrase could mean. One is that early attachment experiences have enduring effects. Another is that proximity seeking and other attachment behaviors are just as relevant to older people as they are to infants, children, and younger adults because the attachment system continues to operate similarly throughout life. Yet another is that working models and attachment orientations, once formed, remain relatively constant across the lifespan. The issue of temporal stability is particularly relevant to attachment theory because the theory maintains that although change in working models and attachment orientations is possible, it is the exception rather than the rule (Bowlby, 1980).

According to the theory, attachment orientations and working models should be relatively constant and stable over time (*the stability hypothesis*). Consistent with this view, studies of adult romantic attachment reveal that attachment orientations show fairly high test–retest correlations (e.g., .60–.80 over varying lengths of time; Stern et al., 2018). Correlations by themselves, however, do not provide the best evidence for or against stability. There are two possible ways in which change in attachment orientations can occur. One possibility is known as the revisionist model, and the other is the prototype model. According to the *revisionist model*, environmental changes (e.g., the development of a new relationship or the demise of an old one) affect and sometimes change working models and attachment orientations, often gradually over time. In test–retest studies, the longer the period between tests, the more opportunity for environmental events to influence attachment orientations. Thus, there should be less similarity (i.e., a lower correlation) between testing sessions. The *prototype model*, in contrast, suggests there is an unchanging attachment prototype underlying attachment orientations that limits the amount of change that can occur. If so, test–retest correlations should remain at similar levels across time, no matter how long the intervals between testing. Current empirical evidence favors the prototype model

(Fraley, Vicary, Brumbaugh, & Roisman, 2011; Jones et al., 2018), which implies that, absent a change in the underlying prototype, changes in attachment orientations are likely to be superficial or temporary, and they will eventually revert to prototypical levels.

Although prototypes limit change, they do not eliminate it. Bowlby (1973) proposed that change in attachment orientations occurs slowly and rather arduously (*the change hypothesis*). He stated:

In general when new information clashes with established [working] models . . . an old model may be replaced by a new one. Nevertheless, much evidence suggests that we undertake such replacements only very reluctantly. . . . To dismantle a model which has played and is still playing a major part in our daily life and to replace it with a new one is a slow and arduous task. (Bowlby, 1973, pp. 230–231)

There are several reasons why replacement tends to be uncommon, slow, and difficult. One source of resistance to change is the tendency for new information to be accepted if it is consistent with existing perspectives and rejected if it is not (Lord, Ross, & Lepper, 1979). Another is the tendency to appraise new information in ways that make it seem consistent with old information, which also limits change. An additional relevant factor is that, with time, information processing becomes automated and less subject to conscious inspection, decreasing the likelihood that new information will be reflected upon and its inconsistency with old information will be noticed. Also relevant is Bowlby's (1980) notion that some attachment figures tell their children that they cannot view them (the parents) objectively, but must accept the parents as they present themselves (Bowlby, 1980, p. 56). When parents successfully do this, it is difficult for individuals to unlearn what they were taught and reflect on their attachment history and working models objectively.

Simpson, Rholes, Campbell, and Wilson (2003) tested Bowlby's idea that clashes between incoming information and information stored in working models may produce changes in working models. For example, when a highly avoidant person perceives that he or she is providing emotional support to the partner—a behavior that is incongruent with an avoidant attachment

orientation—does the inconsistency between support giving and the cardinal features of avoidance weaken the avoidant working model, resulting in lower levels of avoidance? Simpson and colleagues found that, consistent with Bowlby's hypothesis, clashes between new, incoming information and old information stored in working models predicted changes in attachment orientations across a chronically stressful life event (the transition to parenthood).

Several other researchers have tested whether interpersonal and psychotherapeutic experiences motivate change. Kirkpatrick and Davis (1994), for example, found that the experience of divorce increased attachment insecurity, and that entry into a new relationship was associated with the growth of security (i.e., decreased avoidance). In a longitudinal study, Fraley, Roisman, Booth-LaForce, Owen, and Holland (2013) found that receiving nurturing maternal care and having a close childhood friendship increased security. In another longitudinal study, Chopik, Moors, and Edelstein (2014) documented that having a nurturing mother is associated with greater security across time. Conceptualizing psychopathology as a vulnerability factor for instability in adult attachment orientations, Davila, Burge, and Hammen (1997) found that psychopathology is related to larger changes in attachment orientations.

While informative, this literature has limitations. First, most studies reveal that positive relationship events are associated with increases in security, and vice versa. However, they have not sufficiently addressed how, why, or when this occurs. Questions of mediation and moderation have not received the attention they deserve. Second, past work has not examined the full lifespan of the changes that have been observed. Are changes deep and permanent, or are they superficial, eventually returning to baseline values over time? The evidence supporting the prototype model suggests that they may often be superficial.

Principle G: Attachment Security Is an Inner Resource That Facilitates Resilience; Attachment Insecurity Is a Vulnerability Associated with Poorer Outcomes

According to Bowlby, attachment security in early life prepares people to cope better with

trauma by allowing them to be more resilient (*the competence hypothesis*; Bowlby, 1980; van IJzendoorn, 1990). Attachment insecurity, on the other hand, leads individuals to cope with the world's unpredictability by either "shrinking from it or by doing battle with it" (Bowlby, 1973, p. 208). Thus, Bowlby viewed attachment insecurity as a vulnerability or risk factor for poorer life outcomes, including depression (1980), anxiety disorders (1973), and agoraphobia (which he viewed as an extension of separation anxiety; Bowlby, 1973).

In recent years, resilience has come to be viewed through the "*broaden-and-build*" hypothesis (Fredrickson, 2001), based on the notion that positive emotions, which provide emotional stability in times of stress, allow for a broadening of internal resources (e.g., skills, flexibility in coping) and an increased ability to use external resources via strong social connections (Sroufe et al., 2005). Frederickson's (2001) upward spiral model of the broaden-and-build hypothesis for resilience is bidirectional, allowing for the development of inner resources that permit reappraisal of past experiences, which can generate even greater resilience over time. Sroufe (2016) has tied Frederickson's ideas to attachment security, based on the notion that secure people are better able to recuperate from stress, cope with adversity, regulate negative emotions, rely on the support of others, and use adversity as an opportunity for personal growth. Additionally, highly secure individuals have positive views of themselves and others, along with greater positivity, which helps them be more hopeful and optimistic (Berant, Mikulincer, & Florian, 2001).

A considerable amount of research has verified Bowlby's belief that attachment insecurity is associated with poorer life outcomes, including both internalizing and externalizing behaviors. Social and clinical psychologists have examined psychopathologies such as depression, social anxiety disorder, generalized anxiety disorder, posttraumatic stress disorder (PTSD), eating disorders, agoraphobia, borderline personality disorder, and dissociation, as well as general reactions to stress, to determine their linkages to attachment orientations. More recently, psychosis and obsessive-compulsive disorders also have been shown to be related to

attachment insecurity. Additionally, externalizing symptomatology, such as substance abuse and antisocial behaviors, have been linked to attachment insecurity (see Ein-Dor & Doron, 2016).

Most studies examining poor life outcomes and attachment insecurity are correlational and conducted on community samples. Conradi, Kamphuis, and de Jonge (2018) conducted one study that is noteworthy for its longitudinal design (7 years) and use of clinically diagnosed participants. They found that higher levels of attachment anxiety and avoidance were associated with higher severity of depression and lower perceptions of being symptom-free. Other studies reveal a positive association with attachment anxiety, but equivocal results for avoidance, perhaps due to the absence of important moderators. Similarly, anxiety disorders have been linked to attachment anxiety, but the connection for avoidance is less clear. Agoraphobia has been associated with anxiety in adulthood, as has borderline personality disorder in both community and clinical samples. Recent connections have also been established between attachment insecurity and coping with stress, dissociation, and schizophrenia (e.g., Fillo, Simpson, Rholes, & Kohn, 2015; Paetzold, Rholes, & Andrus, 2017).

Despite all this research, several issues still need to be explored. First, appropriate moderators of the connection between attachment orientations and poorer life outcomes are needed. This could help to resolve the equivocal findings for attachment avoidance. Second, understanding the mechanisms that link attachment insecurity to poorer life outcomes is important. For example, Kwon, Lee, and Kwon (2017) have shown that excessive reassurance seeking mediates the relation between anxiety and depression. Others (e.g., Shaver, Schachner, & Mikulincer, 2005) argue that excessive reassurance seeking is part of the anxiety construct itself. A distinct and viable mediating construct could be emotion dysregulation, which mediates the relation between attachment anxiety/avoidance and depression/generalized anxiety disorder (Marganska, Gallagher, & Miranda, 2013).

Finally, nearly all the data on resilience and vulnerability is correlational and cross-sectional. Longitudinal studies are needed to identify

causal, explanatory pathways connecting security to resilience or vulnerability to insecurity. These models should include the possibility of bidirectional relationships in line with the broaden-and-build hypothesis.

Principle H: Individuals Experience a Specific Sequence of Reactions When Separated from or When They Lose Their Attachment Figures

Across many, if not all, human cultures (Rosenblatt, 2008) and myriad species (Archer, 1999), young, vulnerable children (as well as most adults) experience a series of reactions after being separated from their caregivers/attachment figures (Bowlby, 1980). Immediately following separation, young children (and especially adults) become disoriented and experience “numbness,” which often is quickly followed by intense protest as individuals search for their missing caregiver/attachment figure. Bowlby conjectured that numbness alerts and directs an individual’s attention to the caregiver’s/attachment figure’s absence. Following this, a period of protest during the initial phases of caregiver absence is a good strategy to promote survival (Archer, 1999), especially for young offspring in species that have developmentally immature, highly dependent young. In many instances, intense protest draws caregivers back to their young children who, during evolutionary history, would have been susceptible to injury or predation if left unattended.

If persistent protest fails to retrieve the caregiver/attachment figure, most young children and many adults enter a state of despair, during which their activity diminishes and they fall silent. From an evolutionary standpoint, despondency is a good second strategy to promote survival, especially in young, vulnerable children, because excessive movement could result in accident or injury, and loud, prolonged protests might draw predators. If protest fails to bring back the caregiver, the next best survival strategy is to disengage from actions that might increase the risk of self-inflicted harm or predation.

Over time, most young children and many adults who do not reunite with their caregivers/attachment figures experience a final stage—detachment/reorganization. During this phase,

individuals gradually begin to resume normal activities without their caregiver/attachment figure, resume exploring the environment, and become more self-reliant. According to Bowlby (1980), the function of detachment/reorganization is to come to terms with the loss, which facilitates the forging of new affectual bonds with subsequent caregivers/attachment figures. From the standpoint of evolution, detachment/reorganization helps individuals to reformulate representations of themselves and their lost caregiver/attachment figure, which helps them establish new attachment bonds with partners who can provide the attention, protection, and resources needed for survival (in children) and reproduction (in adults). Bowlby believed that these reactions to separation not only evolved via natural selection primarily to promote the survival of young, vulnerable children (see also Cassidy, 2016), but they also characterize adults who experience prolonged or permanent separations from their romantic partners (Parkes, 2006).

Bowlby (1980) did not view these stages as occurring in a rigid or fixed sequence. People can and do move between different stages, or they may experience a mixture of two stages within short periods of time (e.g., vacillating between protest and despair), depending on their attachment orientations and the circumstances of their separation or loss. Bowlby’s key contribution was to identify the evolutionary functions and psychological experiences associated with each stage of the general grief/bereavement process (Fraley & Shaver, 2016).

It is also important to note that numbing (and the disorientation associated with it) is often more prolonged in adults than in young children. Protest and despair also tend to be expressed differently in children versus adults, and the process of detachment/reorganization is different due to the greater cognitive and inferential abilities of adults compared to young children.

Contrary to some claims, Bowlby (1980) believed that individuals retain attachment bonds with their former figures, even when they detach from them (Fraley & Shaver, 2016). During the detachment process, most people—especially older children and adults—reorganize their working models of their lost attachment figures

by integrating their former partner's memory and continued psychological presence into their own revised identity, plans, and life story (Bowlby, 1980; Fraley & Shaver, 2016). Detachment, therefore, does not involve completely severing psychological ties to departed or deceased attachment figures.

A growing body of research has revealed that anxiously attached adults are more likely to experience prolonged or chronic grief/mourning following the loss of their romantic partners, as indexed by greater depression, anxiety, and prolonged grief symptoms. Some highly avoidant adults are inclined to experience the absence of grief/mourning and significantly less emotional disruption, whereas other highly avoidant adults experience greater dysfunction and more chronic problems in the aftermath of loss. Secure adults, who tend to be more well regulated, exhibit more normal patterns of grief/mourning (i.e., strong emotional distress early in the process, followed by gradual recovery), and they adjust better across time (Fraley & Shaver, 2016).

When individuals fail to move through and "resolve" the stages of grief, they may experience pathological mourning. Ten to 15% of people have such severe grief reactions (Bonanno, 2004), but most are resilient following major interpersonal losses (Fraley & Shaver, 2016; Parkes, 2006). Some highly avoidant people may not experience the stages of grief in the way that other people do because they may not form strong attachment bonds with their romantic partners, which means that their typically subdued reactions may not be pathological.

In summary, this attachment principle is pivotal because it is not only a hallmark feature of the attachment behavioral system, but it also ushers in the formation of new attachment bonds, both completing and restarting a cycle in which the other attachment principles once again become relevant. Several important questions, however, still need to be addressed. For example, little is known about detachment/reorganization, including how this process works, how long it takes to complete, whether cultural differences affect its expression, and how "detached" or "reorganized" children and adults must be to start forming strong, enduring attachment bonds with new attachment figures.

Principle I: The Attachment System Is Universal, Yet Also Culturally Dependent

The attachment system, which ostensibly evolved and should be universal, is affected by cultural events, norms, rules, and practices that can result in culturally specific forms of adaptation and social development. To date, the majority of attachment research in developmental psychology has focused on attachment processes and patterns in young children, primarily in Western cultures. While there is a growing body of attachment research on individuals raised in various non-Western cultures (see Mesman et al., 2016), we are just beginning to learn about them.

Most cross-cultural attachment research has examined four central attachment hypotheses: the *universality hypothesis* (when given an opportunity, virtually all infants become attached to one or more caregivers), the *normality hypothesis* (most infants develop secure attachments, especially in stable, nonthreatening environments), the *sensitivity hypothesis* (attachment security is shaped by the quality of caregiving, particularly sensitivity and contingent responsiveness), and the *competence hypothesis* (secure attachment typically leads to more positive developmental outcomes).

Reviewing studies conducted in different cultures in Africa, East Asia, Latin America, and the Middle East, Mesman and colleagues (2016) conclude there is strong cross-cultural support for three of these hypotheses. Specifically, in virtually all of these cultures, almost all nonneurophysiologically impaired infants become attached to one or more caregivers, the majority of infants form secure attachments in nonthreatening environments, and attachment security is strongly tied to sensitive, responsive caregiving provided by attachment figures. There currently is less evidence bearing on the competence hypothesis because it has been tested less frequently. The available evidence, however, suggests there also may be a connection between early attachment security and more adaptive functioning later in life (e.g., Aviezer, Sagi, & van IJzendoorn, 2002; Gini, Oppenheim, & Sagi-Schwartz, 2007).

Additionally, there is a reasonable amount of variation both within and between cultures with respect to these outcomes. This is particularly

true of outcomes associated with the sensitivity hypothesis. For example, young children raised in Japan, Indonesia, Israel, and several African cultures are somewhat more likely to develop anxious attachment patterns than young children raised in most Western cultures, where rates of the avoidance pattern tend to be slightly higher (Grossmann, Grossmann, Spangler, Suess, & Unzner, 1985; van IJzendoorn & Sagi-Schwartz, 2008). These cultural differences may be partly attributable to different parenting goals, expectations, and practices enacted in these cultures. In many non-Western cultures, parents strive to instill a sense of interdependence with and connections to others, whereas parents in many Western cultures place greater emphasis on fostering independence and autonomy in their children (Rothbaum, Weisz, Pott, Miyake, & Morelli, 2000).

What is most striking, however, is how similar the base rates of different attachment patterns tend to be across diverse cultures that have different practices. One likely reason for this is that distinctive parenting behaviors may serve similar or identical functions across different cultures (Bornstein, Cote, Haynes, Suwalsky, & Bakeman, 2012). Moreover, the amount of sensitive, responsive caregiving tends to be fairly similar across most (but not all) cultures, despite the fact it is expressed somewhat differently (e.g., Kartner, Keller, & Yovsi, 2010). When deviations from common base rates in attachment patterns are found, they can usually be explained by the unique parenting practices enacted within a specific culture.

In cultures in which there tend to be fewer stressors and more resources, relatively more children should be securely attached because they are more inclined to receive sensitive, responsive caregiving from their caregivers (Belsky, Steinberg, & Draper, 1991). Conversely, in cultures in which there is greater stress and fewer resources, relatively more children should be insecurely attached because they are more likely to receive poorer caregiving. Indeed, cross-cultural research on socioeconomically disadvantaged groups confirms that insecure attachment patterns are significantly more common among such groups (Mesman et al., 2016). This is another instance of the potential “adaptive value” of insecure working models

and behavioral tendencies within harsh or unpredictable environments, in which trusting and depending on others who may be less trustworthy or undependable could result in poorer long-term outcomes, including well-being (Main, 1990; Simpson & Belsky, 2016).

Cultures also differ in the norms and roles ascribed to different caregivers. Multiple caregivers or *alloparents* (e.g., aunts, uncles, grandparents) are common in many Asian and African cultures, most of which grant specific roles and responsibilities to each caregiver (Mesman et al., 2016). Children in these cultures frequently form attachment relationships with different caregivers but typically have a primary attachment figure to whom they turn, especially when distressed.

Less is known about how culture impacts attachment process and orientations in adults. Some research has addressed whether living in a collectivistic versus individualistic culture affects how individuals tend to fare, based on their attachment orientation. Collectivistic cultures emphasize the well-being of the group and maintaining social harmony, which generates strong adherence to group norms and making sacrifices for the good of the group (Hofstede, 1984). Individualistic cultures place greater importance on the independence and autonomy of each person in the group, which results in greater freedom to make decisions based on one's personal goals and preferences. Thus, people who have an avoidant orientation in a collectivistic culture should find themselves in a difficult position because their personal orientation (to be independent) should be at odds with the norms of their culture (to be interdependent). In a study comparing people in three cultures, Friedman and colleagues (2010) found that people who are avoidantly attached to their romantic partners experienced greater conflict, perceived less support and investment from their partners, and had poorer relationship satisfaction if they lived in Hong Kong (a collectivistic culture) than in the United States (an individualistic culture). In Mexico, which is an autonomous-relatedness culture between Hong Kong and the United States, avoidance was more strongly associated with lower relationship satisfaction, less perceived partner support, and greater relationship conflict than in the United States.

Several pressing cross-cultural questions remain unanswered. For instance, how are basic attachment processes, such as the ways in which attachment bonds form, are maintained, and dissolve, expressed in different cultures? What kinds of interpersonal experiences produce stability or change in people's attachment orientations across the lifespan in different cultures? And how do important, culturally specific norms and practices shape or alter the normative attachment processes discussed in the chapter?

Conclusion

In this chapter, we have reviewed the major key principles that have defined attachment theory and guided prior research. While doing so, we have highlighted some of the most central hypotheses, postulates, and ideas associated with each key principle. Additionally, we have proposed several novel and potentially fruitful directions in which future work on attachment processes might head. Our hope is that coverage of these essential features of attachment theory will help to spawn the next generation of research applying one of psychology's grandest and most powerful lifespan approaches to personality and social development from the cradle to the grave.

NOTE

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