CHAPTER 28

Attachment Theory and Research
Core Concepts, Basic Principles, Conceptual Bridges

PHILLIP R. SHAVER
MARIO MIKULINCER

A person coming to the literature of social psychology from ordinary life, in any society, or from the humanities—an expert on modern fiction, for example—would expect to hear a great deal about life in families, beginning with the total dependency of young children on their adult caregivers; the construction and maintenance across the lifespan of a self or identity in the context of relationships with family members and friends; sexual attraction, sexual behavior, mating, marriage, and parenting; and people's reliance on each other for protection, emotional support, and comfort in the face of life's inevitable disappointments, stresses, illnesses, conflicts, and losses. Although these topics do receive attention in contemporary social-psychological journals and textbooks, until fairly recently they were considered tangential to a field focused on social perception, attitudes, attitude change, and social behavior in task-oriented groups of various kinds.

There are multiple ways one could think about reasons for this intellectual history, but certainly one of them is that modern social psychology came of age during and after World War II, when propaganda and persuasion, group dynamics, and interethnic prejudices and conflicts were all very salient. Moreover, during those years the field was primarily a masculine enterprise, many of whose leaders had served in the armed forces and/or been captivated intellectually and emotionally by its ghastly examples of hatred, prejudice, and human cruelty. Less salient at that time were the many aspects of life that seemed more feminine and, at least to social psychologists, to fall within the disciplinary provinces of developmental, clinical, or personality psychology.

What then was hidden in shadows has steadily moved into the limelight as an increasing number of women have entered the field, family relationships (including abusive ones) and divorce have emerged as societal concerns, health and social contributions to health have become increasingly important, and research methods pioneered in more traditional social-psychological topic areas have proven useful in tackling subject matter that once seemed to defy empirical analysis (e.g., intimacy, trust, love, and grief). Also relevant to this chapter is the fact that social psychology has increasingly taken notice of evolutionary biology (e.g., Simpson & Kenrick, 1997). Earlier in its history (when social relations departments and interdisciplinary programs in social psychology were common), the field seemed more naturally linked with sociology and cultural anthropology, fields in which people's motives and attitudes were viewed as emerging from social and cultural roots without much basis in pan-human biological substrates.

Within the contemporary field of social psychology, attachment theory (Bowlby, 1969/1982) has proven to be a congenial and productive meeting place for researchers interested in close relationships, the development of self and personality in the context of such relationships, and the evolutionary background of core human needs and motives that find expression in relationships. From the beginning, attachment theory was interdisciplinary, crossing boundaries and borrowing concepts from ethology; evolutionary biology; cognitive, developmental, and clinical psychology; and psychoanalysis. The theory's creator, John Bowlby, was a British psychiatrist and psychoanalyst interested in normal and abnormal personality

development and its implications for social problems such as crime and delinquency, in addition to such clinical phenomena as anxiety disorders, disordered grieving following divorce or the death of a loved one, and depression. Bowlby's theory is now one of the leading intellectual frameworks in developmental, personality, and social psychology, partly because of methodological contributions made by Mary Ainsworth. Based on her empirical tests of the theory in observational and laboratory studies of infant–parent relationships, we and other social psychologists have been able to extend the theory to topics of interest to contemporary social psychologists: social schemas, affect regulation, romantic love, marital functioning, and even (going back to our World War II predecessors) group dynamics, prejudice, and intergroup relations.

In this chapter we explain attachment theory in its classic and contemporary forms, placing special emphasis on core concepts, basic principles, and conceptual comparisons and bridges with other theoretical frameworks. Although our primary goal is to explain the theory's core concepts and principles, we of course provide empirical evidence throughout. It is the theory's already proven ability to generate creative and revealing research that makes it worth considering.

CORE CONCEPTS IN ATTACHMENT THEORY AND RESEARCH

In his classic trilogy, *Attachment and Loss*—one of the most cited book series in contemporary psychology—Bowlby (1969/1982, 1973, 1980) asked and answered the following question: Why does "maternal deprivation" (loss of a primary caregiver, such as one's mother, during childhood) have such a potent effect on subsequent personality development (as documented in scores of studies, summarized in Cassidy & Shaver, 1999). By considering a vast array of sources ranging from clinical psychoanalysis to primate ethology and cognitive and cognitive-developmental psychology, Bowlby came to the conclusion that a person's fundamental sense of safety, social acceptance, and well-being rests on the quality of his or her social relationships with "attachment figures." Moreover, when a child has no reliable, trustworthy, secure relationship with one or more such figures, social and affective development is distorted in ways that can eventuate in emotional disorders ranging from anxiety and depression to antisocial personality and other personality disorders. In conceptualizing the importance of attachment relationships to personality development, Bowlby had already moved beyond related but subsequent notions in the literature of social psychology, such as Baumeister and Leary's (1995) claim that human beings have a fundamental "need to belong."

In explaining the motivational bases of personality development, Bowlby (1969/1982) borrowed from ethology the concept of *behavioral system*, a species-universal, biologically evolved neural program that organizes behavior in ways that increase the chances of survival and reproduction despite environmental dangers and demands. Theoretically, the attachment behaviors observed when a person encounters threats and stressors—for example, distress signals, proximity seeking, clinging to a caregiver, and relaxing once proximity and support are provided—are due to a hardwired "attachment behavioral system," just as a caregiver's reactions to a relationship partner's (especially a dependent child's) distress signals and attachment behaviors are due to an innate "caregiving behavioral system." By dividing motivational systems into functional categories such as attachment, caregiving, exploration, affiliation, and sex, Bowlby was able to conceptualize links among, and functional and dysfunctional properties of, these systems in a wide variety of life situations across the lifespan. In the following sections we outline these and other concepts of attachment theory, which have guided research for more than 30 years and contributed to a deep understanding of cognitive, emotional, and self-regulatory processes in close relationships.

The Attachment Behavioral System

According to Bowlby (1969/1982), the *attachment behavioral system* is part of a network of phylogenetically evolved behavioral systems, such as exploration, affiliation, caregiving, and sex, which govern the choice, activation, and termination of behavioral sequences designed to attain particular set goals—states of the person–environment relationship that have adaptive advantages for individual survival and reproduction of genes. These behavioral sequences are "activated" by certain stimuli or kinds of situations that make a particular set goal salient (e.g., loud noises signaling danger, sudden darkness, the presence of a predator) and "deactivated" or "terminated" by other stimuli or situations that signal attainment of the desired goal state.

In Bowlby's (1969/1982) view, behavioral systems also include "ontogenetically learned" components reflecting the particular history of behavioral system activation by a particular person in specific kinds of contexts. Although behavioral systems presumably operate mainly at a subcortical level and in a reflexive, mechanistic manner, their ability to achieve set goals depends on a person's actual transactions with the external world. Therefore, to make goal attainment more likely, behavioral systems include cognitive-behavioral mechanisms, such as monitoring and appraising the effectiveness of behaviors emitted in a particular context, which allow flexible, goal-corrected adjustment of the system's "programming" when necessary to put an individual back on the track of goal attainment. Over time, after operating repeatedly in certain environments, a person's behavioral systems become molded by social encounters, "programming" the neural/behavioral capacities so that they fit with important relationship partners (e.g., parents) and yield effective action in that relational environment. Through this process, a person learns to adjust his or her behavioral systems to fit contextual demands and form reliable expectations about possible access routes and barriers to goal attainment. These expectations, which operate partly at a more conscious and intentional level, become

part of a behavioral system's programming and are sources of both individual differences and within-person continuity in the system's operation.

The presumed biological function of the attachment behavioral system is to protect a person (especially during infancy and early childhood) from danger by assuring that he or she maintains proximity to caring and supportive others (attachment figures). In Bowlby's (1969/1982) view, the need to seek out and maintain proximity to attachment figures (what he called "stronger and wiser" caregivers) evolved in relation to the prolonged helplessness and complete dependence of human infants who cannot defend themselves from predators and other dangers. According to Bowlby's evolutionary reasoning, infants who maintained proximity to a supportive caregiver were more likely to survive and eventually to reproduce, causing genes that fostered proximity seeking and other attachment behavior in times of danger to be selected and passed on to subsequent generations. Bowlby (1969/1982, 1988) assumed that although the effects of attachment-system activation are most easily observed during infancy, and the attachment system may operate somewhat differently at different age periods, it continues to function throughout life, as indicated by adults' needs for proximity, support, comfort, and security (Hazan & Zeifman, 1999).

During infancy, primary caregivers (usually one or both parents, but also grandparents, older siblings, daycare workers) are likely to serve attachment functions. Research has shown that, when tired or ill, infants tend to seek proximity to a primary caregiver (e.g., Ainsworth, 1973) and be notably reassured and soothed in that person's presence (e.g., Heinicke & Westheimer, 1966). In adulthood, a wider variety of relationship partners can serve as attachment figures, including familiar coworkers, friends, and romantic partners. They form what Bowlby (1969/1982) called a person's hierarchy of attachment figures. There may also be context-specific attachment figures, who are real or potential sources of comfort and support in specific milieus, such as teachers and supervisors in academic settings or therapists in therapeutic settings. Moreover, groups, institutions, and symbolic personages (e.g., God) can become targets of proximity seeking. There is evidence that many young children have imaginary friends (e.g., Gleason, 2002); that some married adults who suffer the death of a spouse continue to experience the spouse's presence and seek his or her assistance and support in times of need (e.g., Klass, Silverman, & Nickman, 1996); and that many adults believe they can and do obtain protection and comfort from gods, angels, and saints (e.g., Fraley & Shaver, 1999; Kirkpatrick, 1999). In addition, there are components of the self that result from internalization of and identification with attachment figures' traits (we call these self-caregiving representations; Mikulincer & Shaver, 2004), and they can serve successfully as symbolic sources of support and comfort.

It is important to understand that the concept of "attachment figure" has a specific meaning in attachment theory. Attachment-related interactions with these people are not viewed as being simply the same as other forms of social interaction. According to attachment theory (e.g., Ainsworth, 1991; Hazan & Shaver, 1994; Hazan & Zeifman, 1994), an attachment figure should accomplish three functions. First, he or she should be a target for proximity seeking. People tend to seek and enjoy proximity to their attachment figures in times of need and to actively resist separation from them. Second, an attachment figure should be, or provide, a safe haven in times of need (i.e., reliably provide protection, comfort, support, and relief). Third, an attachment figure should be, or should function as, a secure base, allowing a child or adult relationship partner to pursue nonattachment goals in a safe environment. Based on this narrow definition of attachment figures, we view an interaction as attachment relevant when it occurs with a familiar other, or the mental representation of a familiar other, in a stressful context, with the expectation of receiving protection, comfort, or support. This protection and support in the realm of attachment allows a person to function better in nonattachment domains such as exploration, creative thinking, empathic and prosocial behavior toward others, and sexual mating.

In studies of adults, researchers are able to identify a research participant's attachment figures by using a standard measure, the WHOTO questionnaire, developed by Hazan and Zeifman (1994) and Fraley and Davis (1997). The measure asks a respondent to name the particular people on whom he or she relies for various forms of protection, guidance, and support and then to describe the role of each such person in the respondent's life (e.g., mother, father, sibling, romantic partner, and friend). We (Mikulincer, Gillath, & Shaver, 2002) conducted several experiments in which we subliminally primed participants with threat words (e.g., failure and separation) and then determined indirectly (using reaction times in a lexical decision or Stroop task) which names became more available for mental processing when a person felt threatened. It turned out that the names of attachment figures (identified with the WHOTO questionnaire) became more available in response to a threatening word, something that did not happen with the names of other close relationship partners not mentioned in the WHOTO. This and other evidence indicates that attachment figures are not just any relationship partners; rather, they are special individuals to whom a person turns when he or she needs protection and support.

Bowlby (1969/1982) also specified the set goal of the attachment system and described the typical cycle of attachment-system activation and deactivation. The goal of the system is a sense of protection or security (called by Sroufe & Waters, 1977, felt security), which normally terminates the system's activation. This goal is made particularly salient by encounters with actual or symbolic threats and by appraising an attachment figure as not sufficiently near, interested, or responsive. In such cases, the attachment system is activated and the individual is driven to seek and reestablish actual or symbolic proximity to an attachment figure (a process Bowlby called the "primary strategy" of the attachment system). These bids for proximity persist until protection and security are attained. When the set goal of security is attained, the at-

tachment system is deactivated and the individual calmly and coherently returns to nonattachment activities.

In infants, attachment-system activation includes nonverbal expressions of neediness and desire for proximity, such as crying, calling, and pleading, as well as locomotor behaviors aimed at reestablishing and maintaining proximity, such as moving toward the caregiver and clinging (Ainsworth, Blehar, Waters, & Wall, 1978). In adulthood, the primary attachment strategy is not necessarily to engage in actual proximity-seeking behavior. Instead, it may be sufficient to activate soothing, comforting mental representations of relationship partners who regularly provide care and protection or even self-representations associated with these partners (Mikulincer & Shaver, 2004). These cognitive representations can create a sense of safety and security, help a person deal successfully with threats, and allow the person to continue pursuing nonattachment goals without having to interrupt these activities to engage in actual proximity bids.

In support of these ideas, recent studies (Mikulincer, Gillath, et al., 2001; Mikulincer, Gillath, et al., 2003; Mikulincer, Hirschberger, Nachmias, & Gillath, 2001; Mikulincer & Shaver, 2001) show that a variety of experimental techniques designed to activate mental representations of internalized attachment figures (e.g., subliminal presentation of the names of people nominated as attachment figures in the WHOTO; guided imagery concerning the availability of these attachment figures; and visualization of the faces of these figures) improve participants' self-reported mood during an experimental session and unconsciously endow formerly neutral stimuli with positive affect. Specifically, activation of mental representations of attachment figures led to higher liking for unfamiliar Chinese ideographs even under threatening conditions and eliminated the detrimental effects that threats otherwise had on liking. Similar experimental interventions eliminated outgroup negativity, even when participants thought an outgroup member had insulted or challenged their ingroup. Thus, activation of mental representations of security-providing attachment figures seems to have a calming, soothing effect, which reduces threats and has positive effects on assessments of human and inanimate stimuli.

Bowlby (1969/1982), along with Harlow (1959), rejected classical psychoanalytic and Pavlovian behavioral frameworks that portrayed social attachment as a secondary effect of feeding (viewed in terms of drive reduction). In line with "object relations" approaches to psychoanalysis, Bowlby viewed human beings as naturally relationship seeking, naturally oriented to what Harlow called "contact comfort" (in his well-known studies of infant monkeys' attachments to and reliance on real and cloth-surrogate mothers), and as naturally inclined to seek proximity to familiar, comforting figures in times of need. That is, Bowlby viewed proximity–contact and maintenance over time of affectionate, trusting, and supportive interpersonal relationships as innately sought-after goal states and rejection, separation, and the loss of such relationships as aversive antigoal states. Moreover, he viewed successful bids for proximity and the attainment of felt security as necessary for the formation of satisfying interpersonal relationships. Every attachment interaction that alleviates distress and enhances felt security reaffirms the adaptive advantage of closeness and strengthens affectional bonds with a particular relationship partner.

From an emotion-regulation perspective, smooth operation of the attachment system can be viewed as a dynamic, homeostatic process aimed at restoring emotional equanimity. In fact, emotional arousal (e.g., fear, anxiety, and anger) is associated with attachment-system activation; distress alleviation results in attachment-system deactivation; and basic emotions (e.g., love, joy, fear, anger, and sadness) frequently occur during attachment-related interactions. For this reason, the attachment system plays an important role in arousing, regulating, and deescalating emotional states, shaping—over time—a person's affective tone and maintaining emotional equanimity.

Bowlby (1973) and Ainsworth (1991) were especially interested in the reciprocal associations between the attachment system and the exploration and affiliation systems, because they viewed attachment insecurity as a hindrance to the full development of skills associated with the other systems. A child or adult who feels threatened and inadequately protected or supported has a difficult time directing attention and other psychological resources to free play, curious investigation of objects and environments, and the social skills necessary for satisfying affiliative relationships with peers. Considered more generally and extended over a longer period of development, this same interference process is thought to disrupt the normal development of self-efficacy, self-esteem, coping (affect-regulation) skills, and positive, trusting social orientation. Just as being harassed or distracted at school interferes with normal cognitive development, being forced by one's social environment to focus only on threats and insecurity distorts and interferes with social development and results in a person with measurably diminished capacities.

Individual Differences in Attachment-System Functioning

Attachment-Figure Availability, the Sense of Security, and Secondary Strategies

Although nearly all children are born with a normal attachment system, which motivates them to pursue proximity and security in times of need, proximity maintenance and security attainment also depend on the responses of particular relationship partners to one's bids for proximity and safety. According to Bowlby (1973, 1988), the quality of attachment-system functioning depends on the availability of a relationship partner in times of need; the partner's sensitivity and responsiveness to one's bids for closeness, comfort, and support; and the attachment figure's ability and willingness to alleviate distress and provide a secure base from which to activate other behavioral systems. These variations in the nature of the caregiver's, or attachment figure's, responses are thought to be the major sources of individual

differences in attachment-system functioning, because of their impact on operating parameters of the system. (There may also be genetically based temperamental causes of individual differences in infant attachment behavior, but if so they have yet to be convincingly demonstrated empirically; see, for example, O'Connor & Croft, 2001.)

When a relationship partner is available, sensitive, and responsive to an individual's proximity-seeking efforts in times of need, the individual is likely to feel an inner sense of attachment security—a sense that the world is a generally safe place, that attachment figures are helpful when called on, and that it is possible to explore the environment curiously and confidently and to engage rewardingly with other people. This sense is an inner signal that the attachment system is functioning well and that proximity seeking is an effective emotion-regulatory strategy. Moreover, the individual acquires important procedural knowledge about distress management, which becomes organized around a relational script (Waters, Rodrigues, & Ridgeway, 1998). This *secure-base script* includes something like the following if–then propositions: "If I encounter an obstacle and/or become distressed, I can approach a significant other for help; he or she is likely to be available and supportive; I will experience relief and comfort as a result of proximity to this person; I can then return to other activities." This script is a cognitive reflection of the phylogenetically "hardwired" program at the heart of the attachment system; as such, it requires little in the way of changes in the system's operating parameters.

However, when a primary attachment figure proves not to be physically or emotionally available in times of need, not responsive to a person's proximity bids, or poor at alleviating distress or providing a secure base, attachment-system functioning is disrupted and the set goal is not attained. In such cases, the individual does not experience comfort, relief, or felt security. Rather, the distress that initially activated the system is compounded by serious doubts about the feasibility of attaining a sense of security: "Is the world a safe place or not? Can I trust others in times of need? Do I have the resources necessary to manage my own negative emotions?" These worries about self and others, and the resulting sense of vulnerability, can maintain the attachment system in a continually activated state, keep a person's mind preoccupied with threats and the need for protection, and interfere drastically with the functioning of other behavioral systems.

Negative interactions with an inadequately available and responsive attachment figure also signal that the primary attachment strategy is failing to accomplish its set goal. As a result, the operating parameters of the attachment system have to be adjusted and certain *secondary attachment strategies* are likely to be adopted. Attachment theorists (e.g., Cassidy & Kobak, 1988; Main, 1990) have emphasized two such secondary strategies: *hyperactivation* and *deactivation* of the attachment system. Viewed in terms of the famous fight–flight distinction (Cannon, 1939), hyperactivating strategies are "fight" responses to the frustration of attachment needs (Bowlby called it "protest"). This response comes about in relationships in which the attachment figure is sometimes responsive but only unreliably so, placing the attached person on a partial reinforcement schedule that seems to reward persistence of energetic, strident, noisy proximity-seeking attempts, because they sometimes appear to succeed. In such cases, the individual does not easily give up on proximity seeking and in fact intensifies it to coerce the attachment figure's love and support. The main goal of these strategies is to get an attachment figure, viewed as unreliable or insufficiently available and responsive, to pay attention and provide protection or support. The way to try to attain this goal is to maintain the attachment system in a chronically activated state until an attachment figure is perceived to be adequately available and responsive. This involves exaggerating appraisals of danger and signs of attachment-figure unavailability and intensifying one's demands for attention, affection, and assistance.

Deactivating strategies are a "flight" reaction to an attachment figure's unavailability, which seem to develop in relationships with figures who disapprove of and punish closeness and expressions of need or vulnerability. In such relationships, an individual learns to expect better outcomes if signs of need and vulnerability are hidden or suppressed, proximity-seeking efforts are weakened or blocked, the attachment system is deactivated despite a sense of security not being achieved, and the person attempts to deal with threats and dangers alone (what Bowlby, 1969/1982, called *compulsive self-reliance.*) The primary goal of deactivating strategies is to keep the attachment system turned off or downregulated to avoid frustration and distress caused by attachment-figure unavailability. This deactivation requires denying attachment needs, steering clear of closeness and interdependence in relationships, and distancing oneself from threats that can cause unwanted activation of the attachment system.

Attachment Working Models

According to Bowlby (1969/1982), variations in caregiver responses to an attached individual's bids for proximity and protection not only alter the operation of the attachment system in a particular interaction or short-term series of interactions but also gradually produce more enduring and pervasive changes in attachment-system functioning. According to Bowlby (1973), these long-term effects are explicable in terms of the storage of significant interactions with an attachment figure in an associative memory network. This stored knowledge allows a person to predict future interactions with the relationship partner and adjust proximity-seeking attempts without having to rethink each one. The repeated recording in memory of attachment-related interactions results in increasingly stable mental representations of self, partner, and the relationship. Bowlby called these mental representations *working models* and viewed them as the basis of stable individual differences in attachment-system functioning. The concept is interesting from a social-psychological standpoint, because it is similar to such concepts as "script" and "social schema." As with those

concepts, which originally seemed coolly cognitive because they were inspired by digital computer programs and cybernetic devices, Bowlby viewed them as cognitive-affective structures that include affective memories and contribute importantly to expectations and appraisals that evoke emotion (Shaver, Collins, & Clark, 1996).

Bowlby (1969/1982) thought that interactions with attachment figures were stored in at least two kinds of working models: representations of attachment figures' responses (*working models of others*) and representations of the self's lovability and competence (*working models of self*). Bowlby argued that "if an individual is to draw up a plan to achieve a set-goal not only does he have to have some sort of working model of his environment, but he must have also some working knowledge of his own behavioral skills and potentialities" (p. 112). Thus the attachment system, once it has been used repeatedly in a given relational setting, includes representations of the availability, responsiveness, and sensitivity of a relationship partner as well as representations of the self's own capabilities for mobilizing the partner's support and one's feelings of being loved and valued by the partner. These representations organize a person's memories of attachment interactions and guide future proximity-seeking efforts.

Because working models, at least initially, are based on the internalization of specific interactions with a particular attachment figure, a person can hold multiple working models that differ in the outcome of the interaction (success or failure to attain security) and the strategy used to deal with insecurity in that interaction (hyperactivating, deactivating). Like other mental representations, these working models form excitatory and inhibitory associations with one other (e.g., experiencing or thinking about an episode of security attainment activates memories of congruent episodes of successful proximity maintenance and renders memories of hyperactivation and deactivation less accessible), and these associations favor the formation of more abstract and generalized representations of attachment-system functioning with a specific partner. Thus, models with a specific attachment figure (relationship-specific models) are created, and through excitatory and inhibitory links with models representing interactions with other attachment figures, even more generic working models are formed to summarize different relationships. The end result of this process can be conceptualized as a hierarchical associative memory network that includes episodic memories, relationship-specific models, and generic models of security attainment, hyperactivation, and deactivation. As a result, with respect to a particular relationship and across different relationships, most people can sometimes think about interpersonal interactions in secure terms and at other times think about them in hyperactivating or deactivating terms.

In a recent study, Overall, Fletcher, and Friesen (2003) obtained preliminary evidence concerning the hierarchical nature of the cognitive network of attachment working models. They asked participants to complete attachment measures for three specific relationships within each of three domains—family, friendship, and romantic—and then examined the structural organization of these relationship descriptions. Confirmatory factor analyses revealed that a hierarchical arrangement of specific and global working models best fit the data, indicating that models for specific relationships (e.g., with particular family members) are nested within relationship-domain representations (e.g., family members), which in turn are nested within more global models.

The neural network of attachment-related models has all the usual properties of any cognitive network (e.g., differentiation, integration, and coherence between the various models) (Collins & Read, 1994). In addition, each working model within the network differs in cognitive accessibility (the ease with which it is activated and used to guide the functioning of the attachment system in a given attachment interaction). As with other mental representations, the strength or accessibility of each model is determined by the amount of experience on which it is based, the number of times it has been applied in the past, and the density of its connections with other working models (e.g., Baldwin, 1992; Collins & Read, 1994; Shaver et al., 1996). At a relationship-specific level, the model representing the typical interaction with an attachment figure has the highest accessibility in subsequent interactions with that person. At a generic level, the model that represents interactions with major attachment figures (e.g., parents and romantic partners) typically becomes the most chronically accessible attachment-related representation and has the strongest effect on attachment-system functioning across relationships and over time.

Consolidation of a chronically accessible working model is the most important psychological process accounting for the enduring, long-term effects on personality functioning of attachment interactions during infancy, childhood, and adolescence (Bowlby, 1973; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). Given a fairly consistent pattern of interactions with primary caregivers during infancy and childhood, the most representative or prototypical working models of these interactions become part of a person's implicit procedural knowledge, tend to operate automatically and unconsciously, and are resistant to change. Thus, what began as representations of specific interactions with a primary caregiver during childhood become core personality characteristics, tend to be applied in new situations and relationships, and shape attachment-system functioning in adulthood.

Although activation of a particular working model depends on the history of attachment interactions, attachment theory also emphasizes the importance of contextual factors that contribute to this activation (e.g., Collins & Read, 1994; Shaver et al., 1996). Recent studies have shown that contextual cues concerning a partner's availability as well as imagined encounters with supportive or nonsupportive others can activate congruent working models, even if they are incongruent with a person's chronically accessible working model (e.g., Mikulincer, Gillath, et al., 2001; Mikulincer & Shaver, 2001). In fact, this chronically accessible model coexists with less typical

working models in the memory network, and these models can be activated by contextual factors in a given situation or social interaction.

An Integrative Model of Attachment-System Functioning in Adulthood

In an attempt to integrate previous control-system representations of the attachment behavioral system (e.g., Bowlby, 1969/1982; Fraley & Shaver, 2000; Shaver & Hazan, 1993) and the immense accumulating empirical evidence on the functioning of this system in adulthood, we (Mikulincer & Shaver, 2003; Shaver & Mikulincer,

2002) proposed a three-phase model of attachment-system activation and dynamics in adulthood. The model (see Figure 28.1) includes three major components. The first component concerns the monitoring and appraisal of threatening events and is responsible for activation of the attachment system. The second component involves the monitoring and appraisal of the availability and responsiveness of attachment figures and is responsible for variations in the sense of attachment security. According to our model, once the attachment system is activated, an affirmative answer to the question, "Is an attachment figure available and likely to be responsive to my needs?" results in a sense of security, fosters the application of the
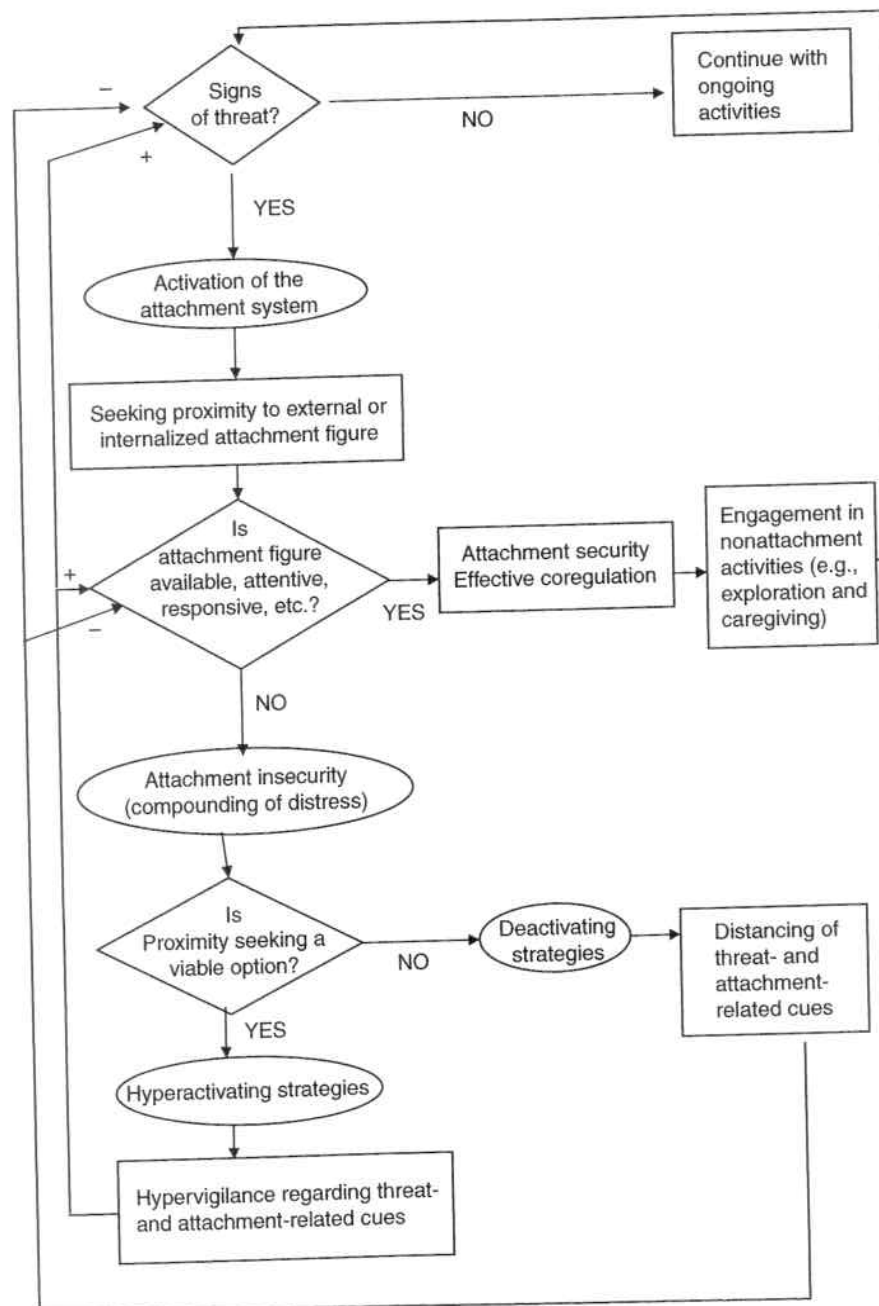

FIGURE 28.1. Shaver and Mikulincer's (2002) integrative model of the activation and dynamics of the attachment system in adulthood.

secure base script, and facilitates engagement in nonattachment activities. The third component concerns monitoring and appraisal of the viability of proximity seeking as a means of coping with attachment insecurity and is responsible for variations in the use of hyperactivating or deactivating strategies. Whereas the appraisal of proximity seeking as likely to be successful, assuming sufficient effort is expended, favors the reliance on hyperactivating strategies, appraising proximity seeking as unlikely to alleviate distress and perhaps even likely to exacerbate it favors the adoption of deactivating strategies. The model also includes hypothetical excitatory and inhibitory "neural circuits" (shown as arrows on the lefthand side of the diagram), resulting from the recurrent use of hyperactivating or deactivating strategies, which affect the monitoring of threats and attachment figures' availability.

The model is sensitive to both context and personality. On the one hand, each component of the model can be affected by specific contextual factors (e.g., actual threats and information about attachment-figure availability or proximity-seeking viability), which initiate a bottom-up process in a person's working models, activating congruent attachment representations, and producing immediate changes in attachment-system functioning. On the other hand, each component of the model is affected by chronically accessible working models, which bias the appraisals of threats, attachment-figure availability, and proximity-seeking viability. These biases are part of a top-down process by which the attachment system functions in accordance with a person's chronic attachment working models. Overall, the model acknowledges the importance of both the context in which the attachment system is activated on a particular occasion and person-specific variations resulting from attachment history and chronically accessible working models.

Conceptualization and Measurement of Attachment Style

According to attachment theory (Bowlby, 1988; Fraley & Shaver, 2000; Shaver & Hazan, 1993), a particular history of attachment experiences and the resulting consolidation of chronically accessible working models lead to the formation of relatively stable individual differences in attachment-system functioning. These stable and generalized individual differences can be empirically examined by measuring a construct called *attachment style*—a person's habitual pattern of expectations, needs, emotions, and behavior in interpersonal interactions and close relationships (Hazan & Shaver, 1987). Depending on how it is measured, attachment style characterizes the functioning of a person's attachment system in a particular relationship (relationship-specific style) or across relationships (global attachment style).

The concept of attachment style, although not given that name, was first proposed by Ainsworth (1967) to describe infants' patterns of responses to separations from and reunions with their mother in the laboratory "Strange Situation" assessment procedure. Using this procedure, infants were originally classified into one of three style categories: secure, avoidant, or anxious. Main and Solomon (1990) later added a fourth category, "disorganized/disoriented," characterized by odd, awkward behavior and unusual fluctuations between anxiety and avoidance.

Infants classified as secure seem to hold chronically accessible working models of security attainment, and their pattern of responses to separation and reunion reflects a stable sense of attachment security. Specifically, they react to separation from their mother with overt expressions of distress but then recover quickly and continue to explore the environment with interest. When reunited with mother, they greet her with joy and affection, respond positively to being held, and initiate contact with her (Ainsworth et al., 1978). Avoidant infants seem to hold chronically accessible working models of unsuccessful proximity-seeking attempts organized around attachment-system deactivation. This organization is manifested in their responses to separation and reunion episodes, where they show little distress when separated from mother and avoid her upon reunion (Ainsworth et al., 1978). Anxious infants also seem to hold chronically accessible working models of frustrated proximity-seeking attempts, but these models seem to be organized around attachment-system hyperactivation. This organization is manifested in the expression of protest and distress during separation episodes and conflictual, angry responses toward mother at reunion (Ainsworth et al., 1978).

In the 1980s, researchers from different psychological fields (developmental, clinical, personality, and social) constructed new measures of attachment style in order to extend attachment research into adolescence and adulthood. Based on a developmental and clinical approach, Main and her colleagues (George, Kaplan, & Main, 1985; Main, Kaplan, & Cassidy, 1985; see Hesse, 1999, for a review) devised the Adult Attachment Interview (AAI) to study adolescents and adults' mental representations of attachment to their parents during childhood. In the AAI, interviewees answer open-ended questions about their childhood relationships with parents and are classified into three categories paralleling Ainsworth's infant typology: "secure" (or free and autonomous with respect to attachment), "dismissing" (of attachment), or "preoccupied" (with attachment). Using the AAI coding system (George et al., 1985), a person is classified as secure if he or she describes parents as available and responsive and his or her memories of relationships with parents are presented in a clear, convincing, and coherent manner. Dismissing persons play down the importance of attachment relationships and tend to recall few concrete episodes of emotional interactions with their parents. Preoccupied individuals are entangled in worries and angry feelings about parents, are hypersensitive to attachment experiences, and can easily retrieve negative memories, but they have trouble discussing them coherently without anger or anxiety. Despite the richness of AAI narratives, which are particularly useful in clinical settings, the interview is costly to administer and score, and it deals exclusively with memories of child–parent relationships.

Working from a personality and social psychological perspective and attempting to apply Bowlby's ideas to the study of romantic relationships, Hazan and Shaver (1987) developed a self-report measure of adult attachment style suitable for use in experiments and surveys. In its original form, the measure consisted of three brief descriptions of feelings and behaviors in close relationships that were intended to embody adult romantic analogues of the three infant attachment styles identified by Ainsworth and colleagues (1978). Participants were asked to read the descriptions and then place themselves into one of the three attachment categories according to their predominant feelings and behavior in romantic relationships. The three descriptions were:

- *Secure*: I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don't worry about being abandoned or about someone getting too close to me.
- *Avoidant*: I am somewhat uncomfortable being close to others; I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close and often, others want me to be more intimate than I feel comfortable being.
- *Anxious*: I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't want to stay with me. I want to get very close to my partner and this sometimes scares people away.

Hazan and Shaver's seminal study was followed by hundreds of others that used the simple forced-choice self-report measure to examine the interpersonal and intrapersonal correlates of adult attachment style (see reviews by Shaver & Hazan, 1993; Shaver & Mikulincer, 2002). Over time, attachment researchers made methodological and conceptual improvements to the original self-report measure. These improvements included the use of Likert scales for rating the extent to which each of the three descriptions captured one's experiences in romantic relationships (e.g., Levy & Davis, 1988); decomposition of the descriptions into separate items that could be included in multi-item scales (e.g., Collins & Read, 1990; Feeney & Noller, 1990; Simpson, 1990); splitting the avoidant category into "dismissing" and "fearful" subtypes, thus moving from a 3- to a 4-category classification scheme (Bartholomew & Horowitz, 1991); and rewording the instructions and items to examine global attachment style in close relationships generally (not only in romantic relationships) and relationship-specific styles (e.g., Baldwin, Keelan, Fehr, Enns, & Koh Rangarajoo, 1996; LaGuardia, Ryan, Couchman, & Deci, 2000; Mikulincer, Florian, & Tolmacz, 1990).

Today, adult attachment researchers in the fields of personality and social psychology (e.g., Brennan, Clark, & Shaver, 1998) largely agree that attachment styles are best conceptualized as regions in a two-dimensional (anxiety-by-avoidance) space, partly because two dimensions are consistently obtained in factor analyses of attachment measures and partly because Fraley and Waller (1998) demonstrated that dimensional representations of attachment style are more accurate than categorical representations. Interestingly, the two-dimensional space is very similar to the one defined by two discriminant functions in Ainsworth and colleagues' (1978) early summary of research on infant–mother attachment (Fig. 10, p. 102).

The first dimension, attachment-related *avoidance*, is concerned with discomfort with closeness and dependence on relationship partners, preference for emotional distance and self-reliance, and the use of deactivating strategies to deal with insecurity and distress. The second dimension, attachment-related *anxiety*, is concerned with a strong desire for closeness and protection, intense worries about partner availability and one's own value to the partner, and the use of hyperactivating strategies for dealing with insecurity and distress. People who score low on both dimensions are said to be secure or to have a secure attachment style. This region of low anxiety and low avoidance is defined by a chronic sense of attachment security, trust in partners and expectations of partner availability and responsiveness, comfort with closeness and interdependence, and coping with threats and stressors in constructive ways. Throughout the remainder of this chapter we refer to people with secure, anxious, or avoidant attachment styles, or people who are relatively secure, anxious, or avoidant. Although our categorical shorthand can misleadingly foster typological thinking, we will always be referring to fuzzy regions in a two-dimensional space in which people are continuously distributed.

The two attachment-style dimensions can be measured with the 36-item Experiences in Close Relationships (ECR) scale (Brennan et al., 1998), which is reliable in both the internal-consistency and test–retest senses and has high construct, predictive, and discriminant validity (Crowell, Fraley, & Shaver, 1999). Eighteen items tap the avoidance dimension (e.g., "I try to avoid getting too close to my partner" and "I prefer not to show a partner how I feel deep down"), and the remaining 18 items tap the anxiety dimension (e.g., "I need a lot of reassurance that I am loved by my partner" and "I resent it when my partner spends time away from me"). The two scales were conceptualized as independent and have been found to be empirically uncorrelated in most studies.

Hundreds of studies using self-report measures of adult attachment style, some based on three categories, some on four categories, and some on two dimensions, have found theoretically coherent attachment-style variations in relationship quality, mental health, social adjustment, ways of coping, emotion regulation, self-esteem, interpersonal behavior, and social cognitions (see Mikulincer & Shaver, 2003; Shaver & Clark, 1994; Shaver & Hazan, 1993, for reviews). Moreover, recent studies have shown that, despite substantial differences in focus (parent–child vs. adult–adult relationships) and method (brief self-reports vs. extensive interview transcripts), self-report measures of adult attachment style are related to AAI coding scales (Bartholomew & Shaver, 1998; Shaver, Belsky, & Brennan, 2000). These findings

imply that scores on the two kinds of measures are related to each other in sensible ways, and that both are reflections of underlying attachment working models and strategies.

BASIC PRINCIPLES OF ATTACHMENT THEORY

In the previous section, we outlined the operating characteristics of the attachment system, explained some of the context-sensitive and partner-specific variations in the system's functioning, and showed how these variations are studied with interview and self-report measures of adult attachment style. We now consider in more detail some of the personal, dyadic, and broader social consequences of variations in attachment-system functioning. Specifically, we focus on three basic issues related to the core principles of attachment theory: (1) the involvement of the attachment system in emotion regulation; (2) the positive implications of attachment-figure availability and the resulting sense of attachment security for social judgments, self-image, personality development, mental health, and relationship quality; and (3) the defensive biasing of cognition, motivation, and behavior by secondary attachment strategies, either deactivating or hyperactivating, and potential emotional and adjustment problems resulting from these biases.

The Emotion-Regulatory Function of Attachment-System Activation: Seeking Proximity and Support

One basic principle of attachment theory is that encounters with threats and dangers automatically activate the attachment system and increase the salience and urgency of the goal of attaining felt security by gaining proximity to and comfort from an attachment figure. This goal can be viewed either in terms of actually attaining safety or security (i.e., being protected and eliminating or reducing environmental threats) or attaining a more desirable emotional state—felt security rather than fear, anxiety, or anger. According to Bowlby (1969/1982), proximity and support seeking are fundamental elements of a person's repertoire of self-regulation skills. Without the relief and reassurance provided by attachment figures, it is difficult for a person, especially a young child, to acquire and develop other potential social and coping capacities.

In our model of attachment-system functioning in adulthood (Mikulincer & Shaver, 2003; Shaver & Mikulincer, 2002), we describe a two-stage process by which the attachment system can perform its regulatory function when a person is threatened or distressed. In the first stage, threat appraisal results in preconscious activation of the attachment system and automatic heightening of the accessibility of security-providing cognitions in a person's associative memory network (e.g., representations of supportive attachment figures; episodic memories of comforting interactions with these figures; self-representations associated with these figures; and

thoughts related to love and support). These preconsciously activated nodes become ready for use in information processing and, based on recent findings from social cognition research (e.g., Wegner & Smart, 1997), affect a person's state of mind and behavioral intentions even before the person experiences any sign of them in his or her stream of consciousness. In the second stage, this preconscious activation can give rise to conscious thoughts about seeking proximity to security-providing figures as well as conscious behavioral intentions and actual proximity- and support-seeking behavior.

In adulthood, as mentioned earlier, preconscious activation of the attachment system does not necessarily lead to actual proximity-seeking behavior, because activation of mental representations of caring and protecting partners can create a sense of safety and security that soothes the person, allowing him or her to continue to deploy attention in desired directions, carry on with chosen activities, and so on. In such cases, the adult attachment system can accomplish its regulatory function intrapsychically without awareness. There are situations, however, such as physical and psychological traumas, illnesses, or losses, in which symbolic proximity to internalized figures is not sufficient to provide adequate comfort and relief, and in such situations attachment-system activation leads to proximity-seeking behavior. There are also periods of development, such as old age, in which people's resources may be taxed to the point where it becomes necessary to seek actual support from others (Shaver & Mikulincer, 2004).

The self-regulatory processes attendant upon attachment-system activation do not depend only on demands imposed by a specific threat encountered; they can also be biased by excitatory and inhibitory processes related to chronic reliance on hyperactivating or deactivating strategies. For example, these chronic secondary strategies can bias subjective appraisal of threats, with hyperactivating strategies leading to exaggerated threat appraisal and deactivating strategies leading to dismissal of threats and suppression of threat-related thoughts. Second, insecure strategies and working models can affect which attachment-related nodes are automatically activated by threat appraisals, increasing the accessibility of negative attachment-related /thoughts (e.g., worries about attachment-figure unavailability and thoughts about separation and rejection). Third, hyperactivating and deactivating strategies can affect actual engagement in proximity and support seeking, with avoidant people preferring self-reliance and perceiving support seeking as a risky or potentially humiliating strategy and anxious people exaggerating overt expressions of helplessness as a means of eliciting others' compassion and care (Shaver & Mikulincer, 2002).

Preconscious Activation

In recent studies, we examined preconscious activation of the attachment system (Mikulincer, Birnbaum, Woddis, & Nachmias, 2000; Mikulincer, Gillath, &

Shaver, 2002) and found that subliminal priming with a threat-related word (e.g., illness, failure, and separation), as compared with a neutral word (e.g., hat), heightened the cognitive accessibility of attachment-related mental representations. This heightened activation was indicated by faster lexical decision times for proximity-related words (e.g., love and closeness) and names of people designated in the WHOTO as security-providing attachment figures (e.g., the name of a parent, spouse, or close friend). Interestingly, these effects were circumscribed to attachment-related representations and were not found for attachment-unrelated words or the names of people, including very familiar ones, other than attachment figures.

We also documented attachment-style variations in preconscious activation of the attachment system. For example, we found that anxious, hyperactivating strategies lead to attachment-system activation even in neutral contexts and color this activation with worries about separation and rejection. Specifically, people who score relatively high on attachment anxiety (measured by the ECR) exhibit heightened accessibility of attachment-related themes and attachment figures' names following subliminal priming with either threatening or nonthreatening words, and they also exhibit heightened access to words associated with separation and rejection. This pattern of attachment-system activation serves the function of hyperactivating strategies, which is to hold threat-related thoughts in working memory, thereby maintaining chronic activation of the system.

Second, avoidant (deactivating) strategies involve suppressing attachment-related worries and inhibiting attachment-system activation during encounters with attachment-related threats. For people who score relatively high on the avoidance scale of the ECR, worries about rejection and separation are relatively inaccessible. However, these worries *do* become accessible to avoidant individuals in response to threat primes when a "cognitive load" is added to a lexical decision task. Social cognition research has demonstrated that the addition of a "cognitive load" results in increased accessibility of to-be-suppressed material (e.g., Wegner, Erber, & Zanakos, 1993). Thus, our results support the theoretical notion that avoidant people actively suppress attachment-related worries and concerns but have trouble continuing to do so when a cognitive load is added. In addition, when we used the word "separation" as a threat prime, avoidant individuals exhibited decreased access to the names of their attachment figures. It thus seems that avoidant people's attachment system is preconsciously inhibited following thoughts of separation, which may have something to do with prior experiences in which expressions of emotion led to attachment figures' threats to leave.

Our studies have also revealed the functional and adaptive nature of attachment-system activation among more securely attached individuals (those with low scores on the attachment avoidance and anxiety dimensions). For them, heightened accessibility of attachment-related representations has occurred only in response to priming with threat words, and the activation is circumscribed to attachment themes with positive affective connotations. That is, secure people's encounters with threats heighten access to positive thoughts about love, support, and comfort, which, in turn, lead to anticipated relief and comfort (Mikulincer & Shaver, 2003).

The functional and adaptive nature of attachment-system activation in secure individuals was also observed in a recent study focusing on the accessibility of what we call security-based self-representations (Mikulincer & Shaver, 2004)—components or subroutines of the self that originate in interactions with supportive attachment figures. Based on social cognition research dealing with the relational basis of self-representations (e.g., Andersen & Chen, 2002; Baldwin, 1992), we argued that securely attached people, through repeated interactions with responsive attachment figures, form two kinds of self-representations: (1) those derived from how a person sees and evaluates him- or herself during interactions with these figures (*self-in-relation-with-a-security-enhancing-attachment-figure*) and (2) those derived from identification with features and traits of these attachment figure (*self-caregiving representations*). In addition, we proposed that secure people, who react to threats with heightened accessibility of representations of security-enhancing attachment figures (Mikulincer, Gillath, & Shaver, 2002), tend to experience a parallel heightened access to security-based self-representations. These self-representations, which have been formed in connection with threats that were alleviated by attachment figures, are mentally associated with attachment-figure representations and the positive feelings that arise from interactions with these figures. As a result, security-based self-representations can be automatically activated in new situations appraised as threatening and have a self-soothing effect.

To test these ideas, we conducted two two-session studies. In the first session of each study, we asked participants to generate traits that described either a security-enhancing attachment figure (study 2) or their self-in-relation-with-this-figure (study 1). In the second session, we exposed participants to either a threatening or a neutral condition, noted the accessibility of various categories of traits within their self-descriptions, and assessed their emotional state. As predicted, securely attached people reacted to the threat condition with heightened accessibility of security-based self-representations. They rated traits that they had previously used to describe a security-enhancing attachment figure or themselves in relation to this figure as more descriptive of their current self in threatening as compared with emotionally neutral conditions. This heightened accessibility of security-based self-representations was not observed among insecurely attached persons. Moreover, security-based self-representations had a soothing effect: The higher the accessibility of these self-representations, the more positive was a participant's emotional state following a threat. Thus, it appears that securely attached individuals can mobilize caring qualities within themselves as well as representations of being loved and valued in times of need that provide real comfort and allow a person to feel unperturbed.

Seeking Proximity and Support

There is extensive evidence, emanating from different theoretical traditions, that encounters with threats activate proximity and support seeking (e.g., Lazarus & Folkman, 1984; Schachter, 1959). For example, a recent series of "terror management" studies (i.e., studies of ways in which people regulate their fear of death) have shown that the threat generated by death awareness leads people to seek proximity as a means of buffering death concerns (see Mikulincer, Florian, & Hirschberger, 2003). These studies also show that proximity seeking can override other defensive maneuvers, such as endorsing one's own cultural beliefs while derogating deviants and outgroup members or engaging in other efforts to bolster one's self-esteem. Interestingly, and surprisingly in terms of terror management theory, people exposed to death reminders are willing to have their cultural worldview challenged or their self-esteem threatened in order to maintain proximity to relationship partners (e.g., Hirschberger, Florian, & Mikulincer, 2003; Wisman & Koole, 2003).

Research has also documented effects of dispositional attachment style on the use of proximity and support seeking as self-regulatory devices. For example, death concerns have been found to heighten proximity seeking mainly among securely but not among insecurely attached people (Mikulincer & Florian, 2000; Taubman Ben-Ari, Findler, & Mikulincer, 2002). These results fit with Fraley and Shaver's (1998) findings about proximity seeking in response to an impending separation from a romantic partner. They unobtrusively coded behaviors of separating couples in an airport and found that higher scores on attachment avoidance were associated with less frequent contact seeking and more frequent avoidance behavior (turning away, looking elsewhere, watching TV) as separation loomed.

In adult attachment research, there is extensive evidence that the sense of attachment security favors the seeking of support from both informal sources, such as parents, friends, and romantic partners, and formal sources, such as physicians, teachers, and counselors (e.g., Larose, Bernier, Soucy, & Duchesne, 1999; Larose, Boivin, & Doyle, 2001). Moreover, many studies have shown that higher levels of attachment insecurity, mainly along the avoidance dimension, are associated with less reliance on support seeking as a way of coping with stressful events (e.g., Alexander, Feeney, Hohaus, & Noller, 2001; Birnbaum, Orr, Mikulincer, & Florian, 1997; Feeney, 1998; Mikulincer & Florian, 1995, 1998; Mikulincer, Florian, & Weller, 1993).

These attachment-style differences have also been noted in observational studies of actual support-seeking behaviors. For example, Simpson, Rholes, and Nelligan (1992) invited heterosexual dating couples to the laboratory, told the woman in each couple that she was about to experience an anxiety-provoking laboratory procedure, and then asked them to wait with their partner for 5 minutes while the experimenter prepared the apparatus. During this "waiting period," participants' behavior was unobtrusively videotaped, and raters later coded the ex-

tent to which each participant sought the partner's support. As expected, higher scores on the avoidance dimension were associated with less support seeking from the partner mainly when women reported relatively high levels of distress (i.e., where pretheoretical intuitions would lead an observer to expect greater support seeking). Avoidant women often attempted to distract themselves by reading magazines instead of asking for support. In a more recent study, Collins and Feeney (2000) asked people to talk with their dating partner about a personal problem. This interaction was videotaped and raters coded the extent to which participants used direct and indirect ways of seeking support (e.g., directly asking for help and conveying a need for help through expressions of distress). Whereas attachment avoidance was associated with less frequent support-seeking behavior, attachment anxiety was associated with indirect methods of seeking support.

Overall, research indicates that threats activate attachment-related representations and heighten the tendency to seek proximity and support, but the studies also reveal attachment-style differences in the use of proximity seeking as a self-regulatory device: Whereas attachment security heightens reliance on proximity seeking, attachment insecurities interfere with fruitful proximity and support seeking. Anxious individuals evince chronic preconscious activation of attachment-related representations, but the associated concomitant preconscious activation of worries about rejection and abandonment seem to disorganize or unbalance the overt expression of support seeking. Avoidant individuals exhibit a dissociated self-regulatory stance: They react to threats with preconscious activation of the attachment system, but this activation does not reach awareness and is not translated into proximity-seeking behavior. This dissociated stance reflects deactivating strategies, which suppress the ever-present need for love and block access to attachment-related representations (Fraley, Davis, & Shaver, 1998).

Secure Attachment as an Inner Resource: The "Broaden and Build" Cycle of Attachment Security

Another principle of attachment theory is that attachment security has positive effects on self-image, coping, adjustment, interpersonal functioning, and personal growth. According to Bowlby (1988), interactions with available and loving attachment figures are natural building blocks of a solid psychological foundation, and the sense of attachment security that results from these interactions makes people more resilient in the face of adversities and hardships. In our model of attachment-system functioning (Mikulincer & Shaver, 2003), repeated episodes of attachment-figure availability create what we, following Fredrickson (2001), call a broaden-and-build cycle of attachment security, which provides inner resources for maintaining emotional equanimity in times of stress, fosters formation of satisfying close relationships, broadens one's repertoire of skills and perspectives, and contributes to natural processes of growth and self-actualization. In the fol-

lowing sections we present theoretical ideas and review empirical evidence concerning these salutogenic effects of attachment security.

Self-Representations

One "build" component of the broaden-and-build cycle of attachment security is the formation of authentic, solidly grounded feelings of self-worth, competence, and mastery that allow people to find comfort and reassurance in their own attributes and qualities while confronting threats and stressors. As mentioned earlier, Bowlby (1973) argued that children construct a model of themselves while interacting with attachment figures in times of need. During episodes of attachment-figure availability, children can easily perceive themselves as valuable, lovable, and special, thanks to being valued, loved, and regarded as special by a caring attachment figure. Moreover, they learn to view themselves as active, strong, and competent because they can effectively mobilize a partner's support and restore emotional equanimity. In this way, interactions with available and responsive others and the resulting sense of attachment security become primary sources of feelings of self-worth and mastery and natural building blocks of what Rogers (1961) called the "real self"—positive self-perceptions derived from others' positive regard during the course of a person's development.

Research consistently shows that attachment security is strongly associated with positive self-representations. As compared with anxiously attached persons, secure persons report higher self-esteem (e.g., Bartholomew & Horowitz, 1991; Mickelson, Kessler, & Shaver, 1997), view themselves as more competent and efficacious (e.g., Cooper, Shaver, & Collins, 1998), and possess more optimistic expectations about their ability to cope with stressful events (e.g., Berant, Mikulincer, & Florian, 2001; Cozarelli, Sumer, & Major; 1998). For example, Cozarelli et al. (1998) found that securely attached women undergoing an abortion reported higher levels of self-efficacy for coping with the abortion beforehand and higher self-esteem several months afterward.

Attachment security is also associated with having a coherent, balanced, and well-organized model of self. In a series of four studies, Mikulincer (1995) found that, although participants who endorsed a secure attachment style tended to recall more positive than negative self-relevant traits, they had ready cognitive access to both positive and negative self-attributes in a Stroop task. In addition, they revealed a highly differentiated and integrated self-organization in trait-sorting tasks and had relatively small discrepancies between actual-self representations and self-standards (ideal-self and ought-self representations). That is, attachment security not only encourages positive self-appraisals but also seems to allow people to tolerate weak points of the self and integrate them within a coherent and overall positive self-structure. Hence, securely attached people are able to feel good about themselves and maintain a stable sense of self-esteem even when they become aware of personal faults or imperfections.

Emotion Regulation and Mental Health

Another "build" component of the broaden-and-build cycle of attachment security is a set of constructive ways of coping, by which people can effectively handle problematic situations and manage distress without creating negative side effects. According to attachment theory, interactions with available attachment figures and the resulting sense of attachment security provide actual and symbolic contexts in which to learn constructive coping strategies (Mikulincer & Shaver, 2003). Beyond strengthening a person's confidence in the effectiveness of support seeking, episodes of attachment-figure availability and support facilitate the adoption of other constructive regulatory strategies embodied in the "secure base script" (Waters et al., 1998): acknowledgment and display of distress, positive reappraisal of the distress-eliciting situation, and engagement in instrumental problem solving.

Interactions with emotionally accessible and responsive others provide the context in which a child comes to openly and flexibly organize and express emotions and understand their functional assets (Cassidy, 1994; Mikulincer & Shaver, 2003). During these interactions, expression of negative affect is responded to sensitively by the attachment figure and reliably leads to distress-alleviating interventions by this caring person. The child thus learns that emotional states can be tolerated and transformed, that acknowledgment and display of emotions are functional steps toward restoring emotional equanimity, and that one can feel comfortable exploring, acknowledging, and expressing one's own emotions (Cassidy, 1994).

In adult attachment research, there is extensive evidence that self-reports of attachment security are associated with higher scores on self-report and behavioral measures of emotional expressiveness (e.g., Feeney, 1995, 1999; Searle & Meara, 1999) and self-disclosure (e.g., Bradford, Feeney, & Campbell, 2002; Keelan, Dion, & Dion, 1998; Mikulincer & Nachshon, 1991). For example, Mikulincer and Nachson (1991) content-analyzed participants' face-to-face verbal disclosure of personal information to another person in a laboratory situation and found that secure participants disclosed more intimate and emotion-laden information than did avoidant participants. Moreover, using a biographical memory task in which participants were asked to recall specific, early memories of positive and negative emotions, Mikulincer and Orbach (1995) found that participants who classified themselves as securely attached had ready mental access to painful memories of anger, sadness, and anxiety and were able to reexperience some of the accompanying negative affect. However, they still had better access to positive memories of happiness and did not experience an automatic spread of associations to memories of other negative emotional experiences. This allows secure people to maintain a positive cognitive context and a well-differentiated emotion-memory architecture, which in turn allows them to process negative memories without becoming overwhelmed by negativity, as often happens in the laboratory and real life for anxious individuals.

According to attachment theory (Bowlby, 1988; Mikulincer & Shaver, 2003), interactions with available and supportive attachment figures promote and reaffirm optimistic and hopeful appraisals of person–environment transactions. During positive interactions with good attachment figures, children gradually become convinced that distress is manageable, external obstacles can be overcome, and restoration of emotional equanimity is only a matter of time. As a result, secure people can make self-soothing reappraisals of aversive events that help them resolve distressing episodes with less strain than experienced by less secure people. That is, they can use what Lazarus and Folkman (1984) called "reappraisal strategies" and Rothbaum, Weisz, and Snyder (1982) called "secondary control"—construal of aversive events as controllable, temporary, and context-specific and construal of the self as capable of managing problematic situations (see Ochsner & Gross, 2004, for documented benefits of reappraisal strategies).

The association between self-reports of attachment security and positive, optimistic appraisals of stressful events has been well documented in social psychological studies (e.g., Berant et al., 2001; Birnbaum et al., 1997; Mikulincer & Florian, 1995, 1998). For example, Berant and colleagues (2001) found that securely attached mothers of infants who were diagnosed with congenital heart defects reported more positive appraisals of motherhood-related tasks, both immediately after the diagnosis and 1 year later, than anxious or avoidant mothers. Moreover, self-reports of attachment security were associated with less use of threat/loss frames in thinking about relationships (e.g., Boon & Griffin, 1996) and the appraisal of romantic interactions, daily social interactions, and small-group interactions in more positive terms (e.g., Pietromonaco & Feldman Barrett, 1997; Rom & Mikulincer, 2003; Tidwell, Reis, & Shaver, 1996).

Experiences of attachment-figure availability also offer opportunities to learn that one's own instrumental actions are often able to reduce distress. For example, a child learns that his or her bids for proximity alter a partner's behavior and result in the restoration of emotional equanimity. As a result, security-providing interactions strengthen a person's reliance on active, instrumental approaches to problem solving. This heightened reliance is further facilitated by another core feature of episodes of attachment-figure availability: Experiencing attachment figures as loving and approving allows secure people to revise erroneous beliefs without excessive fear of criticism or rejection, thus facilitating cognitive changes that are often necessary when designing an effective plan for solving a problem. That is, secure people's confidence that support is available in case of confusion, uncertainty, or disorganization allows them to open their cognitive structures to new information and flexibly adjust their plans for dealing realistically with problematic situations.

In support of this view, secure people have been found to rely on problem-focused strategies while coping with stressful events (e.g., Lussier, Sabourin, & Turgeon, 1997; Mikulincer & Florian, 1998) and to deal with interpersonal conflicts by compromising and integrating their own and their partner's positions (e.g., Carnelley,

Pietromonaco, & Jaffe, 1994; Levy & Davis, 1988) as well as openly discussing the problem and resolving the conflict (e.g., Scharfe & Bartholomew, 1995; Simpson, Rholes, & Phillips, 1996). This constructive approach to emotion regulation was illustrated by Mikulincer (1998b), who found that secure participants' recollections of personal experiences of anger were characterized by adaptive problem-solving actions aimed at repairing the relationship with the instigator of anger.

Attachment security promotes what Lazarus (1991) called a "short circuit of threat," sidestepping the interfering and dysfunctional aspects of emotions while retaining their functional, adaptive qualities. Efficient management of distress results in more and longer periods of positive mood, thereby rendering mood disorders, maladjustment, and psychopathology less likely. Indeed, several studies have documented positive associations between secure attachment and measures of well-being (e.g., Berant et al., 2001; Birnbaum et al., 1997) and negative associations between security and symptoms of depression, anxiety, and hostility (e.g., Cooper et al., 1998; Mickelson et al., 1997; Roberts, Gotlib, & Kassel, 1996), and between security and eating disorders, substance abuse, and conduct disorders (Brennan & Shaver, 1995; Cooper et al., 1998; Mickelson et al., 1997). Recent studies indicate that both dispositional measures of attachment security and contextual manipulations of the sense of attachment security are associated with lower levels of posttraumatic symptoms (e.g., intrusion of traumatic thoughts) among people who were exposed to the traumas of war or terrorism (Mikulincer, Shaver, & Horesh, 2006).

Relationship Quality

The "build" components of the broaden-and-build cycle of attachment security are also manifested in interpersonal behaviors and close relationships. Episodes of attachment-figure availability promote and reaffirm positive beliefs about others' sensitivity, responsiveness, and goodwill. The secure child learns that he or she can count on others' good intentions and depend on others as providers of comfort and relief. These experiences ensure a person that proximity maintenance is rewarding and that interdependent relationships are important for regulating emotions and satisfying needs. As a result, secure people find it relatively easy to trust others, experience and express gratitude, and feel affection toward relationship partners; they also find it easier to tolerate and accept ambiguous or even negative partner behaviors. Accordingly, they feel comfortable with intimacy and interdependence, emphasize the benefits of being together, and organize their interactions around the perceived benefits of intimate, mutually supportive relationships. Thus, attachment security enhances the motivation to be involved in stable couple relationships and contributes to the quality of those relationships.

There is now good evidence that secure people maintain more stable romantic relationships and report higher levels of relationship satisfaction and adjustment (see Mikulincer, Florian, Cowan, & Cowan, 2002, for an

extensive review). This pattern has been repeatedly documented in studies of both dating and married couples and cannot be explained by other personality factors, such as the "big five" personality traits or self-esteem (Mikulincer, Florian, et al., 2002). For example, Davila, Karney, and Bradbury (1999) collected data every 6 months for 3 years from newlywed couples and found that changes in husbands' and wives' reports of secure attachment predicted concurrent changes in both partners' reports of marital satisfaction. Studies have also linked attachment security with greater intimacy (e.g., Feeney & Noller, 1990; Hazan & Shaver, 1987) and stronger commitment (e.g., Shaver & Brennan, 1992; Simpson, 1990).

There are many studies examining associations between attachment security and positive perceptions of romantic partners. As compared to insecure individuals, securely attached people have more positive views of their romantic partners (e.g., Collins & Read, 1990; Feeney & Noller, 1991), perceive their partners as more supportive (e.g., Collins & Read, 1990; Ognibene & Collins, 1998), and feel more trusting and affectionate toward their partners (e.g., Collins & Read, 1990; Mikulincer, 1998c; Simpson, 1990). Attachment security is also associated with positive expectations concerning partner behaviors (e.g., Baldwin, Fehr, Keedian, & Seidel, 1993; Baldwin et al., 1996; Mikulincer & Arad, 1999). For example, Baldwin and colleagues (1993) examined the cognitive accessibility of expectations concerning partner's behaviors in a lexical decision task and found that secure people had poorer access to negative partner behaviors (e.g., partner being hurtful) than did anxious and avoidant people. Attachment security is also associated with more positive explanations of a relationship partner's behavior (e.g., Collins, 1996; Mikulincer, 1998b, 1998c). Collins (1996) asked participants to explain hypothetical negative behaviors of a romantic partner and found that more secure individuals were more likely to attribute partner's negative behaviors to unintentional, unstable, and highly specific causes and less likely to provide explanations that had negative implications for relationship stability.

Broadening of Skills and Perspectives

As mentioned earlier, Bowlby (1969/1982) conceptualized a dynamic interplay between the attachment system and other behavioral systems (e.g., exploration, caregiving, affiliation, and sex). We view this dynamic interplay as the basis for the "broaden" aspect of the broaden-and-build cycle of attachment security, which contributes to the expansion of nonattachment skills, the opening of cognitive structures to novel perspectives, and the actualization of a person's natural talents. We endorse and have pursued Bowlby's idea that insecurity interferes with the activation and unfettered operation of other behavioral systems. Only when an attachment figure is available and a sense of attachment security is restored can a temporarily insecure person devote full attention to nonattachment activities. Moreover, being confident that support is available when needed, securely attached people can take necessary risks and accept important challenges in an effort to expand their skills and perspectives and actualize their potentials.

This implies that attachment security should enhance curiosity and encourage relaxed exploration of new, unusual information and phenomena and favor the formation of open and flexible cognitive structures despite the uncertainty and confusion that a broadening of knowledge might entail. Indeed, several studies have shown that attachment security is associated with greater trait curiosity (Mikulincer, 1997), more willingness to explore new environments (Green & Campbell, 2000), stronger endorsement of mastery-approach goals in achievement settings (Elliot & Reis, 2003), heightening of creativity following induction of positive affect (Mikulincer & Sheffi, 2000), greater cognitive openness and tolerance for ambiguity (Mikulincer, 1997), and less dogmatic thinking (Mikulincer, 1997).

Attachment security is also associated with the incorporation of novel and even inconsistent information into existing cognitive structures (e.g., Green-Hennessy & Reis, 1999; Mikulincer, 1997; Mikulincer & Arad, 1999). For example, Mikulincer (1997) assessed the tendency to make judgments on the basis of early information and to ignore later data. He found that securely attached individuals were less likely than anxious or avoidant individuals to rate a target person based on the first information received. Interestingly, Green and Campbell (2000) found that contextual priming of attachment security heightened people's willingness to explore novel stimuli, and Mikulincer and Arad (1999) reported that asking participants to visualize a supportive other increased cognitive openness and led even chronically anxious or avoidant people to revise their beliefs based on new information.

These effects of attachment security on cognitive openness have also been documented in a recent series of studies on attitudes toward outgroup members (Mikulincer & Shaver, 2001). In these studies we showed that the greater a person's chronic sense of attachment security, the weaker his or her hostile responses to a variety of outgroup members. In addition, priming techniques that momentarily heightened the sense of attachment security eliminated hostile responses to outgroup members. That is, the sense of attachment security promotes tolerant and accepting attitudes toward people who do not belong to one's own group.

Theoretically, the "broadening" effect of attachment security should promote optimal functioning of the caregiving system, which should show itself in a person's proneness and willingness to provide support and care to others who are chronically dependent or temporarily in need. In line with this prediction, studies have shown that attachment security is associated with higher scores on self-report scales tapping responsiveness to a relationship partner's needs (e.g., Feeney, 1996; Kunce & Shaver, 1994) and more supportive actual behaviors toward a distressed partner (e.g., Fraley & Shaver, 1998; Simpson et al., 1992). In a recent study, Westmaas and Silver (2001) found that attachment-related avoidance was associated with negative attitudes toward a person who had been diagnosed with cancer, and attachment anxiety was associ-

ated with high levels of distress during an interaction with the ill person. In addition, Mikulincer, Gillath, and colleagues (2001) found that both dispositional and situationally augmented attachment security were associated with heightened empathy and compassion for a suffering individual.

There is also evidence that attachment security promotes prosocial values. Mikulincer, Gillath, and colleagues (2003) reported that chronic and contextually augmented attachment security was associated with stronger endorsement of personal values reflecting concern for other people's welfare. Recently, Gillath and colleagues (2004) found that avoidant attachment was negatively associated with engagement in various altruistic activities such as caring for the elderly and donating blood. Although attachment anxiety was not related to overall involvement in such volunteer activities, it was associated with more self-enhancing or self-soothing motives for volunteering (e.g., to feel better about oneself and to enjoy a sense of belonging). Overall, these studies indicate that attachment security provides a solid foundation for compassion and altruistic caregiving, whereas attachment insecurities interfere with prosocial feelings and behaviors.

The Defensive Nature of Secondary Attachment Strategies

A third principle of attachment theory is that defensive biases associated with secondary (insecure) attachment strategies distort and damage emotion regulation, negatively color mental representations of self and others, and contribute to psychological and social problems. According to attachment theory (Main, 1990; Mikulincer & Shaver, 2003; Shaver & Mikulincer, 2002), secondary attachment strategies (hyperactivation and deactivation) include psychological defenses against the frustration and pain caused by attachment-figure unavailability. Although they are attempts at adaptation carried out under adverse environmental circumstances, they end up being maladaptive when used in later relationship situations where security would be more productive. Each of the secondary strategies is aimed originally at achieving a workable relationship with an inconsistently available or consistently distant or unavailable attachment figure. To sustain these strategies, a person has to build otherwise distorted or constraining working models and affect-regulation mechanisms that are likely to interfere with subsequent development and attempts to create rewarding close relationships. In the following pages, we review theoretical proposals and empirical evidence regarding the various defensive biases imposed by secondary attachment strategies and their potentially pathogenic effects on adjustment and mental health.

Emotion Regulation

Secondary attachment strategies defensively bias emotion regulation and alter, obstruct, or suppress the experience and expression of emotions (Cassidy & Kobak, 1988; Mikulincer & Shaver, 2003). The deactivating strategies used by avoidant individuals are intended to dodge or suppress every emotional state associated with threat-related thoughts (e.g., fear, sadness, and shame), because these thoughts can activate unwanted attachment-related needs, memories, and behaviors. Moreover, avoidant people often view negative emotions and expressions of weakness or vulnerability as incompatible with their desire for and maintenance of self-reliance. This causes them to inhibit natural emotional reactions to relationship threats, such as rejection, separation, and loss; and to try to keep these feelings out of consciousness.

Unlike relatively secure people, those who are avoidant cannot engage readily in optimal problem solving because this often requires opening knowledge structures to new information, admitting frustration and possible defeat, dealing with uncertainty and confusion, and running freely through one's memories without attempting to block attachment-system activation (Mikulincer, 1997). Avoidant people have difficulty reappraising emotion-eliciting events because, during frustrating interactions with unavailable, unresponsive, or disapproving attachment figures, they have been forced to doubt the general goodness of the world and good intentions of other people. They have trouble looking on the bright side of troubling events, transforming threats into challenges, and anticipating other's support if they allow themselves to become demoralized.

Deactivating strategies may also block direct confrontation with undesirable emotional states. Avoidant people often prefer to dissociate their emotions from their thoughts and actions, using what Lazarus and Folkman (1984) called *distancing coping*. This requires suppression of emotion-eliciting thoughts, repression of painful memories, diversion of attention from emotion-related material, and inhibition of verbal and nonverbal expressions of emotion.

Bowlby (1980) characterized avoidant individuals' deactivation of emotions in terms of defensive exclusion and segregated mental systems. Bowlby (1988) suggested that the excluded information is stored in mental representations that are blocked from consciousness, not integrated into the stream of consciousness and the conscious determination of behavior, and inaccessible to new information or constructive reappraisal. Defensive exclusion lowers the accessibility of threat- and attachment-related cognitions and creates difficulties in encoding material that is congruent with them. When encoded, this information tends to be processed in a shallow way, because it has no strong excitatory associations with other accessible cognitions.

Unlike secure and avoidant people, who perceive threat-related emotions as goal-incongruent states that should either be managed effectively or suppressed, anxiously attached people perceive these emotions as congruent with their goal of attachment-system hyperactivation. In the process of emotion regulation, anxious hyperactivating strategies are manifested in effortful attempts to generate and intensify emotional states. These states include every emotion that plays a role in activating the attachment system—threats, dangers, and negative interactions with attachment figures. They also include

emotions that emphasize a person's wounds and incompetence, such as sadness, anxiety, shame, and guilt, because these make it natural to insist on attachment figures' attention and care (Cassidy, 1994).

How do anxious people accomplish their goal of intensifying their emotions? One method is to overemphasize the potentially threatening aspects of even benign events, another is to transform challenges into threats, and another is to ruminate on pessimistic beliefs about one's inability to manage distress (Mikulincer & Florian, 1998). Another method is what Lazarus and Folkman (1984) called *emotion-focused coping*—shifting attention to internal indications of distress, thereby making them seem more urgent and destabilizing. This maneuver includes hypervigilance to the physiological aspects of emotional states, heightened recall of threat-related experiences, rumination on real and potential threats, exacerbation of negative feelings, and exaggerated displays of distress (Shaver & Mikulincer, 2002). Another hyperactivating strategy is to engage in wild, counterphobic behavior that makes danger more real or to adopt ineffective courses of action that are likely to be self-defeating and result in failure. All these strategies create a self-amplifying cycle of distress, which is maintained cognitively by ruminative thoughts and feelings even after a threat objectively ends.

Interestingly, although hyperactivating and deactivating strategies lead to opposite patterns of emotional expression (intensification versus suppression), both result in dysfunctional emotional experiences. Avoidant people lose out on the adaptive aspects of emotional experiences because they have poor access to their emotions; anxious people lose out because their attention is devoted to the threatening and interfering aspects of emotions more than their functional aspects. These tendencies, once the province of psychoanalytical clinicians, have now been extensively documented in empirical studies of attachment style and ways of coping with stressful events (see Fuendeling, 1998; Mikulincer & Florian, 1998; Shaver & Mikulincer, 2002, for reviews). In these studies, higher avoidance scores are associated with higher scores on measures of coping by distancing, and attachment anxiety is associated with higher scores on measures of emotion-focused coping. For example, Mikulincer and Orbach (1995) reported that avoidant attachment was associated with a repressive coping style, Feeney (1995) reported that avoidance was related to behavioral blunting (seeking distractions when dealing with stress), and Mikulincer and Florian (1998) found that people who classified themselves as anxiously attached tended to report more frequent task-related, ruminative worries after failing cognitive tasks than were reported by their secure and avoidant counterparts.

Attachment strategies are also manifested in the ways people cope with attachment-related threats (see Mikulincer & Shaver, 2003; Shaver & Mikulincer, 2002, for reviews). For example, Mayseless, Danieli, and Sharabany (1996) and Scharf (2001) found that whereas anxiously attached people reacted to imagined separations in the projective Separation Anxiety Test with strong emotional responses (distress intensification, self-blame), avoidant people refrained from dealing with the threat of separation. In a related pair of studies, Fraley and Shaver (1997) examined the role of secondary attachment strategies in the suppression of separation-related thoughts. Participants wrote continuously about whatever thoughts and feelings they were experiencing while being asked to suppress thoughts about their romantic partner leaving them for someone else. Attachment anxiety was associated with poorer ability to suppress separation-related thoughts—more frequent thoughts of breakup following the suppression task and higher skin conductance during the task. In contrast, more avoidant individuals were better able than less avoidant individuals not only to stop thinking about separation but also to reduce the intensity of their autonomic responses to these painful thoughts. Fraley, Garner, and Shaver (2000) showed that these avoidant defenses act in a *preemptive* manner by holding attachment-related material out of awareness right from the initial encoding of the information.

In a series of studies examining the experience and management of death anxiety (e.g., Mikulincer & Florian, 2000; Mikulincer et al., 1990), anxious individuals were found to intensify death concerns and keep death-related thoughts active in memory. Specifically, attachment anxiety was associated with heightened fear of death at both conscious and unconscious levels, as well as heightened accessibility of death-related thoughts even when no death reminder was present. In contrast, avoidant individuals tended to suppress death concerns and dissociate their conscious claims from their unconscious (but measurable) anxiety. Although avoidance was related to low levels of self-reported fear of death, it was also related to heightened death anxiety in projective Thematic Apperception Test (TAT) stories.

Avoidant people's dissociative tendencies were also documented by Mikulincer (1998a), who found that avoidant individuals, as compared with secure ones, reacted to anger-eliciting episodes with lower levels of self-reported anger and higher levels of physiological arousal (heart rate). Two other studies examined access to emotions during the AAI, finding that avoidant people expressed fewer negative feelings during the interview but displayed higher levels of physiological arousal (heightened electrodermal activity; Dozier & Kobak, 1992) and a high rate of facial expressions of anger, sadness, and negative surprise (Zimmerman, 1999) while speaking about their relationships with parents.

The biases associated with anxious and avoidant approaches to emotion regulation were also documented in Mikulincer and Orbach's (1995) study of emotional memories. Anxious individuals quickly accessed negative emotional memories and then had difficulty controlling the spread of activation from one negative emotional memory to another (a process associated with being classified as anxious, or preoccupied, in the AAI; Hesse, 1999). These findings fit with the theoretical portrayal of anxious people as having an undifferentiated, chaotic emotional architecture, which makes emergence from negative emotional spirals difficult. In contrast, Mikulincer and Orbach found that avoidant individuals

had poor access to negative emotional memories, and those that were recalled were rather shallow (a pattern also characteristic of dismissingly avoidant individuals in the AAI).

Defensive Distortions of Mental Representations of Self and Others

According to attachment theory, secondary attachment strategies defensively bias insecure persons' working models of self (e.g., Bowlby, 1988; Main, 1990; Mikulincer & Shaver, 2003). Whereas hyperactivating strategies negatively bias anxious people's sense of self-esteem, deactivating strategies favor defensive processes of self-enhancement and self-inflation. On the one hand, the excitatory pathways (in Figure 28.1) running from hyperactivating strategies to the monitoring of threat-related cues causes attention to be directed to self-relevant sources of distress (e.g., thoughts about personal weaknesses), thereby fostering chronic doubts about self-worth. This low self-esteem can be exacerbated by self-defeating self-presentational tendencies, which involve emphasizing helplessness and vulnerability as a way of eliciting other people's compassion and support. On the other hand, the inhibitory circuits associated with deactivating strategies (in Figure 28.1) divert attention from self-relevant sources of distress and therefore inhibit consideration of negative self-aspects and contribute to the maintenance of high self-esteem. This defensive inflation of self-esteem is further reinforced by adopting a self-reliant attitude, which requires exaggeration of strengths and self-worth, and by strategic attempts to convince others that one does not need their support.

In a direct examination of these defensive biases, Mikulincer (1998a) exposed people to various kinds of threatening and neutral situations and assessed self-appraisals following the manipulations. Participants with an avoidant attachment style made more explicit and implicit positive self-appraisals following threatening, as compared with neutral, situations. In contrast, anxiously attached participants reacted to threat with self-devaluation, making more explicit and implicit negative self-appraisals following threatening than neutral conditions. Mikulincer also noted that introducing contextual factors that inhibited defensive tendencies (a "bogus pipeline" device that measures "true feelings about things" or the presence of a friend who knew the participants) inhibited avoidant participants' self-inflation response to threats as well as anxious participants' self-devaluation response. That is, insecure people's self-appraisals seemed truly to be strategic defensive maneuvers aimed at convincing other people of the strength of the avoidant self or the neediness of the anxious self.

Secondary attachment strategies are also likely to bias person perception. In the case of avoidant individuals, who want to maintain distance from others and view themselves as strong and perfect, their deactivating strategies are likely to be directed toward increasing distinctiveness, uniqueness, and devaluation of others. In contrast, in the case of anxiously attached people, who want

to be loved and accepted, their hyperactivating strategies are likely to be directed toward increasing the sense of connectedness and belongingness and creating a false sense of consensus. Indeed, Mikulincer, Orbach, and Iavnieli (1998) found that whereas anxious individuals were more likely than their secure counterparts to perceive others as similar to themselves, and to exhibit a false consensus bias in both trait and opinion descriptions, avoidant individuals were more likely than secure individuals to perceive others as dissimilar to them and to exhibit a false distinctiveness bias. Importantly, Mikulincer and colleagues also found that anxious individuals reacted to threats by generating a self-description that was more similar to their partner's self-description, thereby increasing the justification for solidarity. Avoidant individuals, in contrast, reacted to the same threats by generating self-descriptions that were less similar to their partner's self-description and by forgetting more traits that they and their partner shared.

In a subsequent study, Mikulincer and Horesh (1999) found that avoidant people defensively projected their own unwanted traits onto others, which increased self–other differentiation and, by comparison, enhanced their own sense of self-worth. In contrast, anxiously attached participants projected their own traits onto others, which increased their sense of self–other similarity, compatibility, and closeness. Importantly, these two seemingly different mechanisms resulted in a negative appraisal of others. In the case of avoidant persons, the negative appraisal was derived from the projection onto others of negative self-relevant traits. In the case of anxious individuals, it was derived from a tendency to perceive others the way they perceive themselves—as relatively weak, helpless, unworthy, and unlovable.

Problems in Mental Health and Adjustment

Attachment theorists view secondary attachment strategies as risk factors that reduce resilience in times of stress and contribute to emotional problems and poor adjustment (Bowlby, 1988; Mikulincer & Shaver, 2003). Hyperactivating strategies lead to distress intensification and a chaotic emotional architecture that impairs anxious people's ability to regulate negative emotions. As a result, the anxious person experiences an endless and uncontrollable flow of negative thoughts and emotions, which in turn can lead to cognitive disorganization and, in certain cases, culminate in psychopathology. Although avoidant, deactivating strategies contribute to defensive maintenance of a façade of security and calmness, they block access to emotions and hence can impair a person's ability to confront and cope with life's adversities. This impairment is particularly likely to be manifested during prolonged, highly demanding stressful experiences that require active confrontation of a problem and mobilization of external sources of support. In addition, although deactivating strategies involve suppressing the conscious experience and display of distress, the distress can still be indirectly manifested in somatic symptoms, sleep problems, and other health problems. Moreover, negative attitudes toward close relationships and rela-

tionship partners can channel unresolved distress into feelings of hostility, loneliness, and estrangement from others.

With regard to hyperactivating strategies, a large number of studies have shown that attachment anxiety is inversely associated with well-being and positively associated with global distress, depression, anxiety, eating disorders, substance abuse, conduct disorders, and severe personality disorders (see Lopez & Brennan, 2000; Mikulincer & Florian, 2001; Mikulincer & Shaver, 2003, for extensive reviews). These associations have been found in different age groups, ranging from adolescents to elderly adults, community samples, psychiatric inpatients and outpatients, and individuals experiencing acute stressful events (e.g., abortion) or more chronic stressful conditions (e.g., chronic pain).

For avoidance, the findings are more complex. On the one hand, a host of studies yielded no significant associations between avoidant attachment and self-report measures of well-being and global distress (see Mikulincer & Florian, 2001; Mikulincer & Shaver, 2003, for reviews). On the other hand, several studies indicate that avoidant attachment is associated with particular patterns of emotional and behavioral problems that may result from the underlying action of deactivating strategies. Specifically, significant associations have been found between avoidance and a pattern of depression characterized by perfectionism, self-punishment, and self-criticism (e.g., Zuroff & Fitzpatrick, 1995), heightened reports of somatic complaints (e.g., Mikulincer et al., 1993), a hostile view of other people (e.g., Mikulincer, 1998b), substance abuse and conduct disorders (e.g., Brennan & Shaver, 1995; Cooper et al., 1998; Mickelson et al., 1997), and schizoid and avoidant personality disorders (e.g., Brennan & Shaver, 1998).

In addition, whereas no consistent association has been found in community samples between avoidant attachment and global distress, studies that focus on highly demanding and distressing events reveal that avoidant attachment is related to higher levels of reported distress. For example, Berant and colleagues (2001) assessed mothers' reactions to the birth of an infant with a congenital heart defect and found that avoidance, as assessed at the time of the initial diagnosis of the infant's disorder, was the most potent predictor of maternal distress a year later. Moreover, Mikulincer, Horesh, Eilati, and Kotler (1999) found that avoidance was positively associated with global distress among Israeli Jewish settlers whose lives were in danger because of residing in disputed territory controlled by the Palestinian Authority.

It seems that deactivating strategies may contribute to mental health under fairly normal circumstances characterized by only mild encounters with stressors. Under highly demanding conditions, however, these strategies seem to collapse, and in such cases avoidant individuals may exhibit high levels of distress and emotional problems. This conclusion is supported by two of our recent laboratory studies (Mikulincer, Dolev, & Shaver, 2004), which showed that the addition of a demanding cognitive task, which had previously been shown to interfere with

mental suppression (e.g., Wegner et al., 1993), impaired avoidant individuals' ability to block the activation of attachment-related worries. Under low cognitive-load conditions, avoidant individuals were able to suppress thoughts related to the painful breakup of a romantic relationship and did not exhibit activation of negative self-traits after being asked to think about this painful episode. However, when a cognitive load was imposed (a secondary but demanding cognitive task), avoidant individuals exhibited a strong rebound of previously suppressed thoughts about the painful separation and heightened activation of negative self-traits. In other words, under high-load conditions, avoidant participants resembled their anxiously attached counterparts, exhibiting high accessibility of separation-related thoughts and an automatic spread of activation from these attachment-related thoughts to negative self-representations.

Adult attachment studies also provide insights into the psychological mechanisms that may account for the association between insecure attachment patterns and measures of emotional and adjustment problems. For example, Roberts and colleagues (1996) found that negative concepts of the self, others, and the future mediated both cross-sectional and prospective associations between attachment anxiety and depression. In addition, the core procedural components of hyperactivating and deactivating strategies play an important mediating role. Whereas the association between attachment anxiety and negative affectivity is explained by heightened reliance on emotion-focused coping and mental rumination on threat-related thoughts (e.g., Birnbaum et al., 1997; Cozzarelli et al., 1998), the association between avoidance and negative affectivity is mediated by heightened reliance on distancing coping, high levels of emotional control, and reluctance to engage in support seeking (e.g., Birnbaum et al., 1997; Cozzarelli et al., 1998).

BUILDING CONCEPTUAL BRIDGES BETWEEN ATTACHMENT THEORY AND OTHER THEORETICAL FRAMEWORKS

In the remaining sections, we point to similarities and differences between attachment theory and four other broad psychological approaches to understanding the human mind: psychoanalysis; relational interdependence theories; social cognition theories; and humanistic and "positive psychology" perspectives on personal development. In so doing, we hope to deepen the reader's understanding of the implications of attachment theory and build conceptual bridges to other theoretical approaches.

Psychodynamic Foundations of Attachment Theory

The links between attachment theory and psychoanalysis were evident in Bowlby's early writings (e.g., Bowlby, 1956). He was trained as a child psychiatrist and psychoanalyst, and like other psychoanalytic thinkers, he assumed that the explanation of adult behavior lay

somewhere in childhood, especially in early social relationships. Although he was dissatisfied with the conventional psychoanalysis of his time, especially the ideas of Anna Freud and Melanie Klein, he still believed that the quality of a child's emotional ties with mother had tremendous effects on normal and abnormal patterns of personal, interpersonal, and social functioning across the life span. Furthermore, Bowlby constructed attachment theory around themes that defined most of the psychoanalytic theories of his time: satisfaction and frustration of basic inner wishes (for security and protection), inner conflicts associated with barriers to wish fulfillment, psychological defenses aimed at avoidance or suppression of negative emotions associated with inner conflicts, and emotional problems related to the overuse of defenses.

These conceptual commonalities become more evident when analyzing the basic postulates that define contemporary psychodynamic approaches (Westen, 1998). In his impressive review of contemporary psychoanalysis, Westen (1998) asserted that all contemporary psychodynamic theorists agree with five core postulates. First, a large portion of mental life is unconscious. Second, cognitive and affective processes operate in parallel so that people can have conflicting motives, thoughts, and feelings toward the same situation or person, and psychological defenses are often used to deal with these conflicts. Third, childhood experiences play a crucial role in the formation of adult personality. Fourth, mental representations of the self and others are major components of personality; they often explain a person's behavior in interpersonal and social settings, and account for or contribute to psychological disorders. Fifth, healthy personality development is a journey from social dependence to mature autonomy.

Attachment theorists and researchers adhere to all five postulates. According to attachment theory, many components of the attachment behavioral system can operate unconsciously (Mikulincer & Shaver, 2003). As reviewed earlier, recent studies have shown that activation of the attachment system can occur at an unconscious level and can shape a person's processing of information and behavior before he or she reflects on any of it in the stream of consciousness (e.g., Mikulincer, Gillath, & Shaver, 2002). In addition, deactivating strategies seem to operate at an unconscious level. Avoidant people often seem not to be consciously aware of suppressing or denying attachment needs and attachment-related thoughts and memories (Cassidy & Kobak, 1988). Furthermore, according to Bowlby (1988) and some of our own research, these suppressed needs, memories, and thoughts continue to remain active in unconscious, segregated mental systems and at times resurface in experience and action when deactivating strategies prove insufficiently strong given other cognitive or emotional demands on mental resources.

In attachment theory, the concepts of inner conflict and psychological defense are central to the characterization of the goals and operation of secondary attachment strategies. Specifically, these strategies seem to reflect the underlying presence of distress-eliciting, conflicting tendencies toward the self and relationship partners and are organized around specific defensive maneuvers against these attachment-related sources of distress (Mikulincer & Shaver, 2003). Hyperactivating strategies reflect a compromise between conflicting, ambivalent tendencies toward attachment figures—anger and hostility toward unavailable attachment figures together with an intense need for proximity to and love from these frustrating figures (Cassidy & Kobak, 1988). Deactivating strategies are organized around conflicting tendencies at different levels of awareness, with lack of negative emotions and a detached attitude evident at the conscious level while high levels of unresolved attachment-related distress exist at an unconscious level (Shaver & Mikulincer, 2002).

Three additional features of attachment theory fit with the remaining postulates of contemporary psychodynamic theories. According to Bowlby (1973), childhood experiences with primary caregivers have important effects on attachment-system functioning in adulthood, and as stated earlier, mental representations of the self and others (attachment working models) explain how mental residues of these early experiences become building blocks of a person's cognitions and behaviors in adulthood and have a shaping influence on emotion regulation, interpersonal relations, and mental health. Furthermore, in attachment theory, the consolidation of dispositional attachment security, a sign of healthy personality development and functioning, provides a foundation for increased exploration, self-regulation, and a flexible balance between self-reliance and reliance on others, which facilitates a move toward maturity and relative autonomy combined with an ability to rely comfortably on others when necessary (Mikulincer & Shaver, 2004). This developmental progression stands in marked contrast with the overly dependent, infantile position of the anxious person and the rigidly self-reliant attitude of the avoidant person.

This does not mean, however, that attachment theory can be simply equated with psychoanalysis. In fact, attachment theory offers a unique perspective on the developmental trajectory of working models and the role played by contextual factors in shaping cognitions and behaviors in adulthood. While contemporary psychoanalysis still views mental representations of self and others in adulthood as mental residues of childhood experiences, Bowlby (1988) believed that the developmental trajectory of working models is not linear or simple and that these mental representations in adulthood are not exclusively based on early experiences. Rather, they can be updated throughout life and can be affected by a broad array of contextual factors, such as current interactions with a relationship partner, the partner's attachment style and dynamics, and a person's current life situation, which can moderate or even override the effects of mental residues of past experiences. Research supports this complex version of the developmental trajectory of working models, with longitudinal studies showing only a moderate level of stability in attachment orientations

from infancy to adolescence and indicating that life events (e.g., parental death) can substantially alter a person's working models (see Fraley, 2002, for a review and meta-analysis of these studies). In this respect, attachment theory, especially as fleshed out by social psychologists, owes a great deal to other conceptual and methodological paradigms in social psychology.

The changing nature of attachment styles and underlying mental representations and affect-regulation strategies is also evident in our model of attachment-system functioning (Mikulincer & Shaver, 2003), in which bottom-up processes initiated by the presence of contextual cues about attachment-figure availability or proximity-seeking viability can alter the functioning of the system. As discussed earlier, attachment theory and research suggest that a particular individual can possess multiple, even conflicting, working models of self and relationship partners beyond the working models that evolved from childhood experiences with parents, and these different models can be contextually activated in experimental settings and have varying effects on cognitions and behaviors (e.g., Baldwin et al., 1996; Collins & Read, 1994; Shaver et al., 1996). Indeed, recent studies have shown that positive effects of contextual priming of security-enhancing representations are also found even among chronically insecure people (e.g., Mikulincer, Gillath, et al., 2001; Mikulincer & Shaver, 2001). Thus, attachment theory does not assert that a person's current attachment orientation must mirror or match his or her attachment orientations with parents during childhood. Rather, the current orientation is a complex amalgam of historical and contemporary contextual factors, which enable the "reworking" of mental representations of self and attachment figures across the lifespan.

There is more to learn about how these changes occur and what psychological mechanisms are involved. Two recent studies provide initial information about the mechanisms, while highlighting the crucial role played by the subjective appraisal of person–environment transactions (Davila & Cobb, 2004; Simpson, Rholes, Campbell, & Wilson, 2003). Simpson and colleagues (2003) examined changes in attachment orientations during the transition to parenthood and found that prenatal appraisals of support and anger explained the way attachment orientations changed across this transition. Specifically, women who perceived less spousal support and more spousal anger during pregnancy became more anxiously attached across the transition, whereas husbands who perceived themselves as providing more spousal support during pregnancy became less avoidant across the transition to parenthood. Davila and Cobb (2004) conducted an 8-week daily diary study, during which participants reported on daily life events and daily levels of attachment security, and found that negative fluctuations in attachment security were explained by the extent to which people appraised the events as involving interpersonal loss. The findings from these two studies indicate that life events can change attachment orientations if people construe the events as disconfirming their chronically accessible working models.

The Relational Basis of Attachment Theory

The preceding discussion of updating working models highlights the importance of the relational context in which the attachment system is activated. Although attachment-system functioning is a reflection of intrapsychic processes related to a person's wishes, fears, and defenses, it can be expressed in behavior (proximity seeking to a relationship partner) and is sensitive to the relational context in general and to the relationship partner's particular responses (availability, responsiveness) on a specific occasion (Shaver & Hazan, 1993). In fact, attachment-system functioning involves real or imagined interpersonal interactions with actual or internalized attachment figures and can be altered by these figures' responses to one's proximity bids. In this respect, attachment theory has a lot in common with interdependence theories of close relationships (e.g., Thibault & Kelley, 1959; Van Lange, De Cremer, Van Dijk, & Van Vugt, Chapter 23, this volume), which focus on the interpersonal interaction as the unit of analysis and emphasize the powerful influence that one person's responses can exert on a partner's cognitions and behaviors. In attachment theory, this interdependence is evident when the attachment system becomes activated and the responses of an attachment figure can affect the operation of the attachment system.

Attachment theory acknowledges the important effects of the relational context on a person's attachment orientation and on relational cognitions and behaviors in a particular interaction (Shaver & Hazan, 1993). In our model (Mikulincer & Shaver, 2003), the three modules of attachment-system functioning can be affected by a partner's behaviors: The partner can be a source of threat and therefore trigger attachment-system activation (e.g., by threatening abandonment or violence) and can affect the appraisal of attachment-figure availability as well as the viability of proximity seeking as a means of achieving security. Moreover, a person's relational cognitions and behaviors depend not only on the functioning of his or her attachment system but also on the partner's attachment behaviors. Indeed, several studies have shown that both partners' attachment orientations contribute uniquely to the prediction of both partners' relationship satisfaction (e.g., Brennan & Shaver, 1995; Collins & Read, 1990). In addition, other studies, using observational techniques, diary keeping, and narrative accounts, have revealed that a person's attachment anxiety and avoidance have differential effects on relational emotions, cognitions, and behaviors depending on the partner's attachment scores (e.g., Collins & Feeney, 2000; Feeney, 2002; Simpson et al., 1992).

It is important to recall, however, that attachment theory is not exclusively relational. As discussed earlier, the theory includes the important idea that the internalization of interactions with attachment figures can be biased by defensive processes related to secondary attachment strategies (e.g., gaining proximity to an insufficiently available attachment figure by hyperactivating the attachment system or avoiding punishment or perpetual frustration by deactivating the system). Because of such bi-

ases, working models of the self and others do not exclusively reflect the ways the person and the partner actually behave in a given interaction. Rather, they are blended reflections of what actually happens in a social encounter as well as subjective biases resulting from attachment working models and strategies.

These defensive biases can also be noted in the subjective appraisal of a partner's responses to one's proximity bids. Whereas anxious people's hyperactivating strategies slant perception in the direction of noticing or imagining insufficient interest, availability, and responsiveness on the part of a partner, avoidant individuals' deactivating strategies increase the likelihood that genuine and clear-cut signals of attachment-figure availability are missed (Mikulincer & Shaver, 2003). These biases reflect a top-down process by which the most chronically activated working models moderate or override the potential influence of a relationship partner's actions, thereby constraining the nature of the interdependent interaction.

Furthermore, attachment-system activation in adulthood can occur intrapsychically without any overt expression in interpersonal behavior and without demanding the intervention of an actual relationship partner. In such cases, a person can search for comfort and security in his or her own mental representations without seeking proximity to or support from an actual relationship. In our recent analysis of security-based self-representations (Mikulincer & Shaver, 2004), we argued that these mental representations can be applied even in situations that are not explicitly social–relational. We showed empirically that secure people are likely to have internalized both self-soothing processes and some of their attachment figures' personal qualities, which they then use when encountering the frustration of failing repeatedly at a laboratory task, even though dealing with feelings of task failure is not particularly social or relational. This is just one example of ways in which attachment-related experiences may affect a person's cognitions and behaviors outside relational contexts. Another example is the case of the avoidant person, in which the dynamics associated with attachment needs, concerns, worries, and pain tend to occur at an intrapsychic, even unconscious, level without necessarily being expressed in interpersonal behavior.

Attachment theory has both intraindividual and interpersonal aspects; it is a prime example of "person by situation" approaches to human behavior. The person in this case is represented by the "hardwired" programming of the attachment behavioral system, the attachment working models of self and others, the procedural knowledge implicit in attachment strategies, and the associative neural networks connecting these strategies to the appraisal of person–environment transactions. The situation consists of the relationship partner's responses and other relevant contextual cues that can affect appraisal of social transactions and alter the functioning of the attachment system. The complexities in this equation stem from the fact that major parts of the "person" component were originally based on variations in the availability and responsiveness of primary caregivers in threatening situations, and major parts of the "situation" component are shaped by the person's attachment style, which may affect both the appraisal of the situation and the partner's own expressions of love, intimacy, or care. Dropping either the person or the situation component of the explanatory story results in the transformation of attachment theory into either an interdependence theory or a psychoanalytic theory.

Social Cognition Approaches and Attachment Theory

The role assigned by attachment theorists to working models of self and others in guiding attachment-system functioning is similar to the role played by schemas in the field of social cognition (e.g., Baldwin, 1992; Fiske & Taylor, 1991). Both attachment theory and social-cognitions theories emphasize the extent to which people subjectively construe person–environment transactions, store representations of typical transactions (working models in attachment theory terms; schemas, prototypes, or scripts in social-cognition language), and use these representations for understanding new transactions and organizing future action plans. In both theoretical approaches, these mental representations guide and coordinate emotion regulation, self-image, person perception, and cognitions, goals, feelings, and behavior in interpersonal settings. Furthermore, attachment theory conceptualizes working models in the same way social-cognition theorists conceptualize mental representations: They are stored in an associative memory network, maintain excitatory and inhibitory connections with other representations, and have a particular level of accessibility determined by past experiences and other factors, and this accessibility can be heightened in a given situation by relevant contextual cues (e.g., Baldwin, 1992; Collins & Read, 1994; Shaver et al., 1996).

The commonalities between attachment theory and social-cognition theories become even more evident in the analysis of the topics and methods appearing in recent adult attachment studies. As explained earlier, attachment researchers have invested a great deal of energy in assessing attachment-style variations in cognitive structures that had previously been conceptualized and examined in social-cognition research, such as person perception (e.g., Zhang & Hazan, 2002), the accessibility and organization of self-representations (e.g., Mikulincer, 1995), the accessibility of expectations about others' behavior (e.g., Baldwin et al., 1993), the accessibility of memories of social interactions (e.g., Miller & Noirot, 1999), and the way people interpret relationship partners' behavior (e.g., Collins, 1996). Moreover, adult attachment research tends to rely more and more on techniques and methods borrowed from social-cognition research, such as implicit memory tasks, semantic priming techniques, and measuring reaction times in lexical decision and Stroop color-naming tasks (e.g., Baldwin et al., 1993; Mikulincer, Gillath, et al., 2001; Mikulincer, Gillath, & Shaver, 2002).

Despite these commonalities, however, it would be a mistake to equate attachment working models with the

cognitive structures usually studied in social-cognition research. In their thoughtful review of the nature, content, structure, and functions of attachment working models, Shaver and colleagues (1996) enumerated four differences between these constructs: As compared to other mental representations, (1) working models also tend to deal with a person's wishes, fears, conflicts, and psychological defenses, and they can be affected by these psychodynamic processes; (2) working models seem to have a larger and more powerful affective component than most social schemas and tend to be shaped more by emotion-regulation processes; (3) working models tend to be construed in more relational terms and to organize representations of the self, others, and social interactions in a highly interdependent fashion; and (4) working models are broader, richer, and more complex structures, and can include tandem or opposite representations of the same person–environment transaction at episodic, semantic, and procedural levels of encoding. Overall, attachment working models cannot be equated with most other social cognitions, because they evolve not only from simple memories of actual experiences but from dynamic processes of goal pursuit, emotion regulation, and psychological defenses involved with wishes for proximity and security and fears of separation and helplessness. As a result, they can distort a person's perceptions of social reality, even though many are based on actual social interactions.

These differences call attention to the dialectical tension between the goal-oriented and emotion-regulation functions that working models accomplish. On the one hand, due to the goal-oriented and goal-corrected nature of the attachment system, working models have to be what Bowlby (1973, p. 235) called "tolerably accurate reflections" of what actually happened in attachment relationships; otherwise, people would not be able to plan effective goal-oriented behavior and attain important relational goals. In this respect, working models resemble other cognitive representations that store factual knowledge and semantic and procedural information about reality constraints and demands. On the another hand, due to the emotion-regulation function of working models, they sometimes have to distort declarative and procedural knowledge in order to manage attachment-related fears, worries, and insecurities and protect a person from the distress and pain of attachment-figure unavailability. This dialectical tension between the goal-oriented and emotion-regulation functions of working models seems to be unique to attachment theory and differentiates it from most theories of social cognition.

Positive Psychology and Attachment Theory

The broaden-and-build cycle of attachment security calls attention to the optimistic, hopeful, constructive, and actualization-oriented tone of attachment theory, which makes it different from most other psychodynamic, relational, and social-cognition theories. As already noted, people who possess a stable sense of attachment security generally feel safe and worthy, hold an optimistic and hopeful outlook of life, rely on constructive ways of coping and regulating distress, and interact with others in a confident and open manner. Moreover, they can devote mental resources that otherwise would be employed in defensive maneuvers to growth-oriented activities that contribute to the broadening of their perspectives and capacities and the actualization of their natural talents. This health- and growth-oriented theme in attachment theory has much in common with the "humanistic psychology" movement of the 1950s and 1960s (e.g., Maslow, 1968; Rogers, 1961) and today's "positive psychology" movement (Aspinwall & Staudinger, 2003; Seligman, 2002). Both movements are attempts to counterbalance psychology's traditional focus on conflicts, fears, egoistic defenses, destructive tendencies, and psychopathology by directing attention to human strengths, potentials, and virtues that contribute to self-actualization and the development of what Rogers (1961) called a *fully functioning person*.

According to attachment theory, the sense of security is a basic human strength (Mikulincer & Shaver, 2005). It facilitates the development of other personality characteristics that fall under the rubric of "positive" psychological traits, such as resilience, optimism, hope, positive affectivity, curiosity and exploration, healthy autonomy, a capacity for love and forgiveness, feelings of interconnectedness and belongingness, tolerance, and kindness (see Lopez & Brennan, 2000; Mikulincer & Shaver, 2003, 2005; Shaver & Mikulincer, 2002). Moreover, one can easily recognize major similarities between the way the broaden-and-build cycle of attachment security evolves from repeated episodes of attachment-figure availability and ideas discussed by humanistic psychologists about the parenting style that facilitates a child's self-actualization. For example, the notion of having an available, caring, and loving attachment figure resonates with Maslow's (1968) concept of B-perception—nonjudgmental, forgiving, loving acceptance of another human being, and with Rogers's (1961) view of optimal parenting in terms of "unconditional positive regard." The common idea that recurs across the various theoretical frameworks is that experiences of being loved, accepted, and supported by others constitute the most important form of personal protection and provide a solid psychological foundation for confronting adversity and maintaining equanimity and effective functioning in times of stress without interrupting natural processes of growth and self-actualization.

Recently, we (Mikulincer & Shaver, 2005) reviewed extensive evidence showing that chronic or contextual activation of the sense of attachment security attenuates the defensive motives that social psychologists tend to view as universal, such as the need for self-enhancement, needs for consensus and uniqueness, intergroup biases, defense of knowledge structures, and defense of cultural worldviews. Adult attachment studies have consistently shown that a sense of attachment security acts as a default inner resource superseding defensive needs and rendering defensive maneuvers less necessary. In fact, as explained earlier, these defensive maneuvers and the re-

sulting biases in the appraisals of self, others, and social reality tend to be more characteristic of insecurely attached people. Mikulincer and Shaver (2005) noted that that these defensive needs and maneuvers seem to indicate that a person has been forced by social experiences to transact with the environment without adequate mental representations of attachment security and has had to struggle for a sense of self-worth, despite experiencing serious doubts about being lovable and possessing good inner qualities.

Despite these commonalities, there is an important difference between attachment theory and humanistic or positive psychology. Whereas the positive, humanistic approaches focus mainly on growth-oriented, promotion-focused aspects of development and personality, attachment theory emphasizes both the prevention and the promotion aspects of the attachment system. This dual focus is well illustrated in the two basic functions of "safe haven" and "secure base" served by available, responsive, caring, and loving attachment figures. These figures need to protect a person from threats and dangers; prevent the experience of negative, painful outcomes; and calm the person's fears and conflicts. At the same time, they need to provide a "secure base" from which the individual can take risks, explore the environment, and engage in promotion-oriented activities. Failure to provide either a "safe haven" or a "secure base" results in attachment-related worries and doubts as well as the development of psychological defenses that sometimes compensate for the lack of a sense of security, but at the cost of cognitive distortion, rigidity, narrowness, alienation, and an increase in interpersonal and intergroup conflict. Unlike positive psychology, attachment theory emphasizes both the "dark" and the "bright" sides of human nature and experience and explains how the attachment system deals with fears, anger, conflicts, and defenses, as well as the equally natural capacities for happiness, love, growth, and self-actualization. We believe that it makes sense to explore positive psychology within a framework that also illuminates negative psychology, because they are two natural sides of the same human coin.

CONCLUSIONS

In this chapter, we have emphasized three fundamental, interrelated principles of attachment theory that are crucial for studying and understanding the social mind. *Principle 1* concerns the adaptive, self-regulatory functions of proximity and support seeking: When a person encounters threats and dangers, whether stemming from environmental demands or internal rumination, the attachment system is activated and urgent goals become salient—to gain proximity to, and protection and comfort from, attachment figures. Beyond childhood, a person is also likely to rely on internal images of being supported by attachment figures and feelings of being comforted and supported. *Principle 2* concerns the temporally extended beneficial effects of interactions with available and responsive relationship partners and the resulting

sense of attachment security. The sense of security (or, in cases in which insufficient support is provided, the corresponding sense of insecurity) affects a person's resilience in the face of adversities and hardships, coping strategies and effectiveness, self-image, personal and social adjustment, behavior in social relationships, and personal growth. Many mental and social processes studied by personality and social psychologists working outside the attachment paradigm are affected and moderated by attachment style. *Principle 3* concerns the predictable defensive biases that arise and become established in the mind when failure of the primary attachment strategy, which is to maintain proximity to a security-providing attachment figure, results in hyperactivation or deactivation of the attachment system. According to attachment theory, these two strategies are attempts at adaptation to an inconsistently available or consistently distant or unavailable attachment figure, but once established as salient coping strategies they distort and interfere with emotion regulation, destructively color mental representations of self and others, and contribute to psychological and social problems. Because of the centrality of these principles to any understanding of the human mind, especially its social or relational aspects, the ideas and findings generated by attachment researchers tie together many of the basic concepts and findings of personality, social, developmental, and clinical psychology—whether "positive" or "negative."

Attachment theory acknowledges and integrates different, even seemingly contradictory views of human nature and maintains dialectical tension between opposites of four kinds: (1) the constraining influence of past experiences versus the forces for change in current experiences; (2) the intrapsychic nature of the attachment system, working models, and attachment strategies versus the relational, interdependent nature of attachment-related feelings, experiences, and behaviors; (3) the goal-oriented, self-regulatory function of the attachment system versus its distress-regulation, self-protective function; and (4) the importance of fears, conflicts, and prevention-focused mechanisms versus the importance of promotion-focused mechanisms and the capacity for growth and self-actualization. Given this complexity, when tied to an impressive array of research techniques and paradigms, including those borrowed from contemporary social-cognition research, attachment theory provides a unique and highly generative framework for conceptualizing and empirically exploring the full range of human constructive as well as destructive potentials. It has a remarkable 30-year record of suggesting creative, probing empirical studies that can be integrated into an expanding yet coherent scientific story. The theory shows every indication of being able to benefit from new methods, such as neuroimaging. Future theorizing and research within the attachment tradition promise to result in a comprehensive understanding of social and emotional processes, their development and incorporation into conscious and unconscious mental structures, and their amenability to education and clinical intervention.

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