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Attachment, Caregiving, and Sex within Romantic Relationships
A Behavioral Systems Perspective

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What is love? Countless answers have been offered by philosophers, theologians, creative writers, and—in recent times—psychiatrists and psychologists. In the late 1980s, Shaver and his coauthors (Hazan & Shaver, 1987; Shaver & Hazan, 1988; Shaver, Hazan, & Bradshaw, 1988) suggested extending Bowlby's (1969/1982, 1973, 1979, 1980) attachment theory, which was designed to characterize human infants' love for and attachment to their caregivers, to create a framework for studying romantic love and adult couple relationships. The core assumption was that romantic relationships—or pair bonds, as evolutionary psychologists call them—involve a combination of three innate behavioral systems described by Bowlby (1969/1982): attachment, caregiving, and sex. Each of these behavioral systems has its own evolutionary functions, and although the systems affect each other in various ways, they are conceptualized as distinct. Viewed from this theoretical perspective, love is a dynamic state involving both partners' needs and capacities for attachment, caregiving, and sex. The profound joy and affection, self-protective anxiety, numbing boredom, corrosive anger, lustful passion, uncontrollable jealousy, and intense sorrow

experienced in romantic relationships are reflections of the central importance of these behavioral systems in a person's emotional life.

BEHAVIORAL SYSTEMS DEFINED

In explaining the motivational bases of human behavior and personality development, Bowlby (1969/1982) borrowed from ethology the concept of *behavioral system*, a species-universal neural program that organizes an individual's behavior in ways that increase the likelihood of survival and reproductive success in the face of environmental demands. Each such system governs the choice, activation, and termination of behavioral sequences so as to produce a predictable and functional change in the person–environment relationship. Each behavioral system involves a set of contextual activating triggers; a set of interchangeable, functionally equivalent behaviors that constitute the *primary strategy* of the system for attaining its particular goal state; and a specific set goal (a state of the person–environment relationship that terminates the system's activation). Because each behavioral system was evolutionarily "designed" to increase the likelihood of survival and adaptation to environmental demands, its optimal functioning has important implications for social adjustment, mental health, and quality of life.

Bowlby (1969/1982) also assumed that behavioral systems include "ontogenetically learned" components that reflect a person's particular history of behavioral-system activation in particular kinds of contexts. Although behavioral systems are innate neural structures, which presumably operate mainly at a subcortical level and in a mechanistic manner, their ability to achieve the desired set goal depends on the extent to which the individual can correct and adjust the primary strategy of the system in response to contextual affordances and demands. Therefore, Bowlby (1969/1982) assumed that, to make goal attainment more likely, each behavioral system also includes cognitive-behavioral mechanisms, such as monitoring and appraising the effectiveness of behaviors enacted in a particular context, which allow flexible, goal-corrected adjustment of the primary strategy whenever necessary to put it back on the track of goal attainment. Borrowing from more recent feedback-control theories (e.g., Carver & Scheier, 1981, 1990), we can say that Bowlby's view of behavioral system functioning involves self-regulatory feedback loops that shape the course of the system's primary strategy and help a person decide whether to persist in or disengage from this strategy after discovering that it is unsuccessful in a given context.

Over time, after operating repeatedly in similar environments, a person's behavioral systems become molded by social encounters so that the neural/behavioral capacities fit better with important relationship partners and other relational constraints. According to Bowlby (1973), the residues of such experiences are stored as mental representations of person–environment transactions (*working models of self and others*), which organize memories

of behavioral system functioning and guide future attempts to attain the system's set goal. These representations, which operate partly unconsciously but also partly at the level of conscious thoughts and intentions, become part of a behavioral system's programming and are sources of both individual differences and within-person continuity in the system's functioning.

In the realm of romantic relationships, Shaver and his coauthors (Hazan & Shaver, 1987; Shaver & Hazan, 1988; Shaver et al., 1988) argued that optimal functioning of the attachment, caregiving, and sexual systems facilitates the formation and maintenance of stable and mutually satisfactory affectional bonds, whereas malfunctioning of these systems creates relational tensions, conflicts, dissatisfaction, and instability and often leads to relationship breakup. Shaver and Hazan (1988) also proposed that a person's working models explain individual variations in relational goals, beliefs, emotions, and behaviors. Beyond this individual-difference perspective, Shaver et al. (1988) suggested that relational, interactional factors also contribute to the functioning of the various behavioral systems (e.g., signals of a partner's waning interest) and that the dynamic interplay of different behavioral systems within a relationship can be important for understanding relational processes and outcomes.

Because Hazan and Shaver's (1987) germinal study on romantic attachment focused mainly on the conceptualization and assessment of individual differences in attachment, researchers subsequently conducted many studies focused on these individual differences without paying much attention to either the underlying dynamics of the attachment behavioral system itself or to the other behavioral systems—sex and caregiving—involved in romantic love. More recently this imbalance has begun to be corrected, and more studies have employed a combination of self-report measures of adult attachment orientations with powerful laboratory techniques borrowed from cognitive psychology (e.g., semantic priming) in order to study the underlying dynamics of the attachment system (e.g., Baldwin, Fehr, Keedian, Seidel, & Thomson, 1993; Fraley & Shaver, 1997; Mikulincer, 1998). Moreover, several studies have been conducted that examine relations between the attachment and caregiving systems and between the attachment and sexual systems (e.g., Collins & Feeney, 2000; Kunce & Shaver, 1994; Schachner & Shaver, 2004). In the following sections, I present a very brief overview of what we have learned so far and what we can learn from this book about the interplay of the attachment, caregiving, and sexual systems within romantic relationships.

ATTACHMENT PROCESSES
IN COUPLE RELATIONSHIPS

According to Bowlby (1969/1982), the presumed biological function of the attachment 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 (who are called *attachment figures* in the theory). 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 are unable to defend themselves from predators and other dangers. Bowlby (1969/1982, 1980, 1988) assumed that although the attachment system is most frequently activated during infancy, it continues to function throughout life, as indicated by adults' needs for proximity and support and their prolonged emotional reactions to the loss of attachment figures.

During infancy, primary caregivers (usually one or both parents, but also grandparents, older siblings, day-care workers, and so on) are likely to serve attachment functions. In adulthood, romantic partners become the most important attachment figures, such that proximity maintenance to these partners in times of need becomes a crucial source of support, comfort, and reassurance (e.g., Fraley & Davis, 1997; Hazan & Zeifman, 1999). However, not every romantic partner becomes a major attachment figure. In fact, the transformation of a romantic partner into an attachment figure is a gradual process that depends on the extent to which the person functions as (1) a target for proximity seeking; (2) a source of protection, comfort, support, and relief in times of need (*safe haven*); and (3) a *secure base*, encouraging the individual to pursue his or her goals in a safe relational context (e.g., Ainsworth, 1991; Hazan & Shaver, 1994; Hazan & Zeifman, 1999). These three functions are mainly found in long-lasting, highly committed romantic relationships.

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 external or internalized attachment figure. When the set goal of security is attained, proximity bids are terminated, and the individual calmly returns to other, nonattachment activities.

In infants, attachment-system activation includes nonverbal expressions of neediness and desire for proximity, such as crying and pleading, as well as active 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 does not necessarily entail actual proximity-seeking behaviors. Instead, felt security can be attained by the activation of soothing, comforting mental repre-

sentations of relationship partners who regularly provide care and protection or even self-representations associated with these partners (Mikulincer & Shaver, 2004). These cognitive representations help people deal successfully with threats and allow them to continue pursuing nonattachment goals without having to interrupt these activities to engage in actual proximity bids.

Bowlby (1979) viewed the smooth functioning of the attachment system as necessary for the formation of satisfactory close relationships. Every interaction in which a relationship partner is helpful in alleviating distress and restoring felt security reaffirms the adaptive advantage of closeness and strengthens affectional bonds with a particular partner. In this way, people gradually consolidate a relationship-specific sense of attachment security (the belief that a particular romantic partner will be available and supportive in times of need). Although this sense can be biased by a person's generic working models of attachment relationships, it can also be affected by a partner's actual supportive behaviors and become a potent regulator of relational cognitions and behaviors and a major contributor to relationship quality. From an emotion-regulation perspective, the attachment system acts as a dynamic, homeostatic mechanism that can contribute to or interfere with emotional equanimity. Within a relational context, the smooth functioning of this system is crucial for deescalating relational tensions and conflicts, maintaining a positive affective tone, and encouraging relationship stability.

Attachment theorists and researchers (e.g., Cassidy & Kobak, 1988; Main, 1990; Mikulincer & Shaver, 2003) have extensively documented the negative consequences of attachment-system dysfunctions that can occur during interactions in which bids for proximity or support or the mental activation of internalized attachment figures fail to provide a sense of protection and security. In such cases, the distress that activated the system is compounded by serious doubts and fears about the feasibility of attaining a sense of security: "Is the world a safe place or not? Can I trust my relationship partner in times of need or not? Do I have the resources necessary to bring my partner close to me?" These worries about self and relationship partners can keep the attachment system in a continually activated state, cause a person's mind to be preoccupied with threats and the need for protection, and drastically interfere with the functioning of other behavioral systems.

Negative attachment interactions indicate that the primary attachment strategy, proximity and support seeking, 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; Shaver & Mikulincer, 2002) have emphasized two such secondary strategies: *hyperactivation* and *deactivation* of the attachment system. Hyper-

activating strategies (which Bowlby, 1969/1982, called *protest*) are "fight" responses to the frustration of attachment needs; they involve strong activation of the attachment system aimed at demanding or coercing 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. This goal can be achieved by maintaining the attachment system in a chronically activated state until an attachment figure is perceived to be adequately available and responsive. Such hyperactivation involves exaggeration of appraisals of danger and of signs of attachment-figure unavailability; intensification of demands for attention, affection, and assistance; clinging and controlling actions toward a relationship partner; and overdependence on the partner as a source of protection (Shaver & Mikulincer, 2002). From an outside observer's perspective, it is easy to see why this strategy interferes with good communication, emotional tranquility, and mature personal development.

In contrast, deactivating strategies include inhibition of proximity seeking and cultivation of what Bowlby (1980) called "compulsive self-reliance" and "detachment." The primary goal of these strategies is to keep the attachment system turned off or down-regulated to avoid the frustration and distress of attachment-figure unavailability (Shaver & Mikulincer, 2002). These strategies require denial of attachment needs; avoidance of intimacy and dependence in relationships; and maximization of cognitive, emotional, and physical distance from others. They also involve the dismissal of threat- and attachment-related cues and suppression of threat- and attachment-related thoughts and emotions that might cause unwanted activation of the attachment system (Shaver & Mikulincer, 2002).

Attachment theory in general, and Hazan and Shaver's (1987) application of the theory to the realm of romantic love in particular, have been unusual in stimulating a huge body of empirical research that examines whether and how individual differences in attachment-system functioning affect the quality of romantic relationships (see J. Feeney, 1999; Shaver & Hazan, 1993; and Shaver & Mikulincer, in press, for extensive reviews). Initially, Hazan and Shaver (1987) created a simple three-category (secure, anxious, avoidant) measure of what has come to be called "attachment style"—the habitual pattern of relational expectations, emotions, and behaviors that results from a particular history of attachment experiences. However, subsequent studies (e.g., Bartholomew & Horowitz, 1991; Brennan, Clark, & Shaver, 1998) indicated that attachment styles are more appropriately conceptualized as regions in a continuous two-dimensional space. The first dimension, attachment *avoidance*, reflects the extent to which a person distrusts relationship partners' goodwill, deactivates the attachment system, and strives to maintain behavioral independence and emotional distance from partners. The second dimension, attachment *anxiety*, reflects the degree to which a person worries that a partner will not be available in times

of need and engages in hyperactivating strategies. People who score low on both dimensions are said to be secure or securely attached. The two dimensions can be measured with reliable and valid self-report scales, such as the Experience in Close Relationships scale (ECR; Brennan et al., 1998).

Attachment research in personality and social psychology has been successful in generating a large body of theory-consistent findings showing that attachment insecurities defined in terms of the anxiety and avoidance dimensions are associated with low levels of relationship stability, satisfaction, and adjustment in both dating and married couples (see Mikulincer, Florian, Cowan, & Cowan, 2002; Shaver & Mikulincer, in press, for extensive reviews). 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 attachment orientations predicted concurrent changes in both partners' reports of marital satisfaction. Studies have also linked attachment insecurities with less relationship intimacy, affection, trust, and commitment (e.g., Collins & Read, 1990; Shaver & Brennan, 1992; Simpson, 1990), as well as with relationship-destructive patterns of emotional reactions to partner behaviors and maladaptive strategies of conflict resolution (e.g., Rholes, Simpson, & Orina, 1999; Scharfe & Bartholomew, 1995). There is also extensive evidence showing that attachment-related anxiety and avoidance are both associated with negative expectations about a partner's behavior (e.g., Baldwin et al., 1993; Mikulincer & Arad, 1999) and relationship-damaging explanations of a partner's negative behaviors (e.g., Collins, 1996; Mikulincer, 1998).

Recent adult attachment studies have also found that availability, responsiveness, and supportiveness of a romantic partner in times of need—which are the crucial contextual factors that facilitate optimal functioning of the attachment system—have important beneficial relational outcomes and attenuate the harmful effects of chronic attachment insecurities (e.g., Feeney, 2002; Rholes, Simpson, Campbell, & Grich, 2001). Research has also revealed that a relationship-specific sense of attachment security is a potent regulator of interpersonal cognitions and behaviors within a particular relationship. For example, Kobak and Hazan (1991) found that partners with a relatively strong relationship-specific sense of security were less rejecting and more supportive during a problem-solving interaction. More important, Cozzarelli, Hoekstra, and Bylsma (2000) and Cowan and Cowan (2002) found that reports of secure attachment within a specific romantic relationship were more powerful predictors of satisfaction with that relationship than reports of global attachment security.

Part II of this book deals with the implications of variations in attachment-system functioning for the dynamics of romantic love. The chapters in this section present up-to-date theoretical ideas and empirical evidence concerning attachment processes and their implications for explaining normative aspects of couple relationships, as well as more maladaptive aspects (e.g.,

abusive dynamics, jealousy). Cindy Hazan, Nurit Gur-Yaish, and Mary Campa present recent findings on the behavioral, cognitive, and affectional "markers" of attachment at different stages of romantic relationship development. Chris Fraley and Claudia Brumbaugh propose a comparative-phylogenetic explanation of the functions of the attachment behavioral system in romantic relationships. Kim Bartholomew and Colleen Allison review evidence from a recent study of attachment dynamics observed in couples characterized by male violence. Finally, Ken Levy, Kristen Kelly, and Ejay Jack present new findings on the associations between attachment anxiety and avoidance and variations in the experience of romantic jealousy due to a partner's emotional or sexual infidelity.

INTERPLAY BETWEEN THE CAREGIVING AND ATTACHMENT SYSTEMS

In an early article expounding what they unabashedly called a "biased overview of the study of love," Shaver and Hazan (1988) explained that the caregiving behavioral system is also extremely important to the dynamics of romantic love. According to Bowlby (1969/1982), the caregiving system was crafted by evolution to provide protection and support to others who were either chronically dependent or temporarily in need. Although this system presumably evolved because it increased the inclusive fitness of individuals by making it more likely that children and other family members with whom an individual shared genes would survive and reproduce (Hamilton, 1964), its functioning in any present case is often truly altruistically aimed at alleviating distress and benefiting others who are suffering or needy (Gillath, Shaver, & Mikulincer, 2005).

"Caregiving" refers to a broad array of behaviors that complement another person's attachment behaviors or signals of need. The set goal of such behaviors is reduction of others' suffering (which Bowlby, 1969/1982, called providing a "safe haven") or fostering their growth and development (which Bowlby, 1969/1982, viewed as providing a "secure base" for exploration). The key mechanism for achieving these goals is the adoption of what Batson (1991) called an empathic attitude toward others' suffering—taking the perspective of the distressed person in order to sensitively and effectively help him or her reduce distress. The caregiving system is focused on another's welfare and therefore directs attention to the other's distress rather than to one's own emotional state. In its prototypical form, in the parent–child relationship, the set goal of the *child's attachment system* (proximity that fosters protection, reduces distress, increases safety, and establishes a secure base) is also the aim of the *parent's caregiving system*. Extending this conceptualization to the realm of romantic relationships, one partner's caregiving system is automatically activated by the other partner's

attachment behaviors or signals of need, and its aim is to alter the needy partner's condition until signs of increased safety, well-being, and security are evident.

The smooth functioning of the caregiving system in romantic relationships has important implications for relationship satisfaction and stability. Evidence is rapidly accumulating that relational episodes in which an individual sensitively attends and empathically responds to a romantic partner's attachment behaviors and signals of need lead to positive emotional reactions in both the needy person (feelings of being loved and esteemed, feelings of gratitude, feelings of attachment security) and the caregiver (feelings of competence and generativity), as well as heightened relationship satisfaction (e.g., Collins & Feeney, 2000; Feeney, 2004; Feeney & Collins, 2003). In contrast, dysfunctions of the caregiving system—failure to respond empathically to a partner's needs and help the partner effectively to alleviate distress—is a major source of relational tensions and conflicts and can produce a host of relationship-damaging worries, negative attitudes, and destructive behaviors. Specifically, such dysfunctions can increase the needy person's relationship-specific attachment insecurities and heighten the caregiver's doubts about his or her interpersonal skills and love for the partner or, alternatively, can encourage distancing from the partner whenever he or she displays signs of vulnerability or distress.

Dysfunctions of the caregiving system can also trigger either hyperactivation or deactivation of this system. In the case of caregiving, hyperactivating strategies are intrusive, effortful, sometimes awkward attempts to convince oneself and one's partner that one can be an effective caregiver. These goals can be achieved by exaggerating appraisals of others' signals of need, adopting a hypervigilant attitude toward others' distress, and focusing on others' needs to the neglect of one's own. Unfortunately, this hyperactivation of the system is accompanied by heightened personal distress, doubts about one's efficacy as a caregiver, and controlling behavior aimed at coercing others to accept one's caregiving bids, which in turn result in rejection by the partner, increased relational distress, and acceleration of dysfunctional "caregiving" responses. On the other hand, deactivating strategies result in inhibition of empathy, compassion, and effective caregiving combined with increased interpersonal distance precisely when a partner seeks proximity. More specifically, a deactivated caregiving system results in less sensitivity and responsiveness to others' needs, dismissal or downplaying of others' distress, suppression of thoughts related to others' needs and vulnerability, and inhibition of sympathy and compassion.

Although no research instrument has been explicitly constructed to assess hyperactivation and deactivation of the caregiving system, an item analysis of the existing self-report measures of caregiving responses reveals that they tap various aspects of these dysfunctions. For example, Davis's (1983) Interpersonal Reactivity Index includes an Empathic Concern sub-

scale that taps variations (mostly on the low end) of the deactivating dimension (e.g., "I often have tender, concerned feelings for people less fortunate than me") and a Personal Distress subscale that taps the self-focused aspects of the hyperactivating dimension (e.g., "Being in a tense emotional situation scares me"). Kunce and Shaver's (1994) measure of caregiving within romantic relationships includes items gauging distance from a suffering partner and lack of sensitivity to signals of need (e.g., "I sometimes push my partner away even though s/he seems to need me," "I sometimes miss the subtle signs that show how my partner is feeling"), as well as items tapping anxious, compulsive caregiving (e.g., "I tend to get overinvolved in my partner's problems and difficulties"). Items related to hyperactivation of the caregiving system can also be found in Helgeson's (1993) Unmitigated Communion Scale (e.g., "I worry about how other people get along without me when I am not there") and Jack and Dill's (1992) Silencing of Self Scale (e.g., "Caring means putting the other person's needs in front of my own"). However, the field still lacks a reliable and valid measure that, like the ECR scale in the attachment domain, is explicitly designed to assess global caregiving orientations along the deactivation and hyperactivation dimensions.

Following Bowlby's (1969/1982) reasoning about the interplay of the various behavioral systems, Shaver and Hazan (1988) proposed hypotheses about how attachment orientations might bias the functioning of the caregiving system. According to Bowlby (1969/1982), because of a person's urgent need to protect him- or herself from imminent threats, activation of the attachment system inhibits activation of other behavioral systems and interferes with nonattachment activities, including caregiving. Under conditions of threat, adults generally turn to others for support rather than thinking first about providing support to others. Only when they feel reasonably secure can people easily direct attention to others' needs and provide sensitive support. Possessing greater attachment security allows people to provide more effective care for others, because the sense of security is related to optimistic beliefs about distress management and feelings of self-efficacy when coping with distress.

Reasoning along these lines, Shaver and Hazan (1988) hypothesized that securely attached people would comfortably and effectively provide care to a needy partner, whereas insecure people would have difficulty providing sensitive, responsive care within romantic relationships. Furthermore, although both anxious and avoidant people are conceptualized as insecure, Shaver and Hazan (1988) hypothesized that they would exhibit different problems in caregiving. Specifically, avoidant people, who chronically attempt to distance themselves from partners, as well as from emotional signals of neediness and suffering, should be less able or willing to provide care and therefore should exhibit less compassion toward a needy partner. Anxious people, who seek to maximize closeness to a rela-

tionship partner, suffer from chronic frustration of their need for security and tend to be easily distressed in a self-focused way; they should react to others' suffering with personal distress, resulting in insensitive, intrusive, and ineffective care. In other words, whereas deactivation of the attachment system (avoidance) facilitates deactivation of the caregiving system, hyperactivation of the attachment system (anxiety) is associated with hyperactivation of the caregiving system.

In an initial test of these hypotheses, Kunce and Shaver (1994) examined caregiving orientations within romantic relationships and found that secure adults were indeed more sensitive to their partner's needs, reported more cooperative caregiving, and described themselves as more likely to provide emotional support than insecure individuals; and their romantic partners agreed with this assessment. Moreover, whereas avoidant people attempted to maintain distance from a needy partner, anxious people reported high levels of overinvolvement with their partner's problems and a pattern of compulsive, intrusive caregiving. These findings have been replicated using other self-report scales (e.g., Carnelley, Pietromonaco, & Jaffe, 1996; Feeney, 1996; Feeney & Hohaus, 2001).

The link between attachment security and sensitive caregiving has been further documented in observational studies by Feeney and Collins (2001), Simpson, Rholes, and Nelligan (1992), and Simpson, Rholes, Orina, and Grich (2002), who videotaped dating couples while one partner waited to endure a stressful task. Overall, as compared with insecure participants, those high in attachment security spontaneously offered more comfort to their distressed dating partner. Moreover, participants who were relatively secure and whose dating partners sought more support provided more support, whereas secure participants whose partners sought less support provided less. In contrast, more avoidant participants provided less support regardless of how much support their partner actually sought. In a related study, Collins and Feeney (2000) videotaped dating couples while one member disclosed a personal problem to his or her partner; they found that higher attachment anxiety was associated with provision of less instrumental support and more negative caregiving responses toward the distressed partner.

Part III of this book concerns the dynamic interplay of attachment and caregiving within romantic relationships. Nancy Collins and her coauthors deal with normative processes and individual differences in caregiving effectiveness and explain attachment-style differences in willingness and ability to provide responsive care to partners in times of need. Jeff Simpson, Lorne Campbell, and Yanna Weisberg present data from a recent diary study examining associations between attachment anxiety, perceptions of relationship-based conflict and support, and assessments of relationship quality. Mario Mikulincer, Phillip Shaver, and Keren Slav extend the boundaries of the attachment–caregiving connection and review recent evidence on the re-

lations between attachment orientations, the prosocial virtues of gratitude and forgiveness, and the quality of romantic relationships.

ATTACHMENT, SEX, AND LOVE

The dynamics of romantic love cannot be understood without taking into account the activation and functioning of the sexual behavioral system (Berscheid, 1984; Shaver & Hazan, 1988). From an evolutionary perspective, the major function of the sexual system is to pass one's genes to the next generation by having sexual intercourse with an opposite-sex partner. However, sexual intercourse and impregnation are effortful, goal-oriented activities that demand coordination of two partners' motives and responses. Accordingly, in the course of human evolution, selection pressures have produced subordinate functional behaviors and psychological mechanisms that solve particular adaptive problems associated with reproduction and reproductive success (Buss & Kenrick, 1998). These behaviors and mechanisms are the primary strategies of the sexual behavioral system.

The set goal of this system is to impregnate an opposite-sex partner in order to pass one's genes to the next generation. The key mechanisms for achieving this set goal are to approach a potential fertile partner, persuade him or her to have sex, and engage in genital intercourse. That is, the primary strategies of the sexual system consist of bringing fertile partners together to have sex by heightening sensitivity to signals of fertility in opposite-sex partners, increasing one's attractiveness as a potential sexual partner, and using effective persuasive techniques to seduce a potential partner. From this perspective, sexual attraction is a motivating force that drives individuals to look for either short-term or long-term mating opportunities with a potential sexual partner (Buss, 1999; Fisher, Aron, Mashek, Li, & Brown, 2002). Because sexual attraction and attachment are discrete and functionally independent emotion-motivation systems (e.g., Diamond, 2003; Fisher et al., 2002), sexual relations often occur without affectional bonds, and affectional bonding between adults is not always accompanied by sexual desire. Still, the formation of a romantic relationship is frequently initiated by infatuation (Hazan & Zeifman, 1994), as well as sexual attraction (e.g., Berscheid, 1984; Sprecher & Regan, 1998). That is, successful human mating is likely to begin with sexual desire and attraction, and the feelings associated with attraction are powerful components of romantic love.

Beyond its tremendous importance in the initial stages of romantic love, the sexual system plays an important role in the consolidation and maintenance of satisfactory, long-lasting romantic relationships. There is growing empirical evidence that sexual interactions in which both partners gratify their sexual needs foster many positive emotional reactions (love, excitement, vitality, gratitude, and relaxation) and contribute to relationship

satisfaction and stability (see Sprecher & Cate, 2004, for an extensive review). In contrast, dysfunctions of the sexual system are major sources of relational conflict that can raise doubts about being loved and loving a partner, heighten worries and concerns about one's relationship, increase one's interest in alternative sexual partners, and ultimately erode the affectional bond and destroy the relationship (e.g., Hassebrauck & Fehr, 2002; Sprecher & Cate, 2004).

Dysfunctions of the sexual behavioral system, like dysfunctions of the other systems, can be conceptualized in terms of hyperactivating and deactivating strategies. Hyperactivating strategies involve effortful, mentally pre-occupying, sometimes intrusive, and even coercive attempts to persuade a partner to have sex. In the process, a person can overemphasize the importance of sexual activities within a relationship, exaggerate appraisals of a partner's sexual needs, and adopt a hypervigilance toward a partner's signals of sexual arousal, attraction, and rejection. This chronic sexual-system activation is accompanied by heightened anxieties and worries about one's sexual attractiveness, the extent to which one is able to gratify one's partner, and the partner's responses to one's sexual appeals. These anxieties and worries may provoke intrusive or aggressive responses aimed at coercing the partner to have sex, which in turn can lead to rejection and an exacerbation of sexual system dysfunction.

In contrast, deactivating strategies are characterized either by inhibition of sexual desire and an erotophobic or avoidant attitude toward sex or by a superficial approach to sex that divorces it from other considerations, such as kindness or intimacy. Deactivating sexual strategies can involve dismissal of sexual needs, distancing from or disparaging a partner when he or she expresses interest in sex, suppression of sex-related thoughts and fantasies, repression of sex-related memories, and inhibition of sexual arousal and orgasmic joy. They can also, paradoxically, promote sexual promiscuity driven by narcissism or self-advertisement without an intense sexual drive or even much enjoyment of sex per se (Schachner & Shaver, 2004).

As in the caregiving domain, no research instrument has been explicitly designed to assess hyperactivation and deactivation of the sexual behavioral system. However, we can gain important insights from more general scales designed to assess sexual attitudes and behaviors. For example, the erotophobia–erotophilia scale (Fisher, Byrne, White, & Kelley, 1988) assesses the tendency to respond to sexual stimuli in approach or avoidance terms, and this comes close to attachment theorists' understanding of the deactivation dimension (e.g., "I feel no pleasure during sexual fantasies"). The Revised Mosher Guilt Inventory (Mosher, 1988), the Sex Anxiety Inventory (Janda & O'Grady, 1980), and the Experience of Heterosexual Intercourse scale (Birnbaum & Laser-Brandt, 2002) assess some of the worry aspects of sexual-system hyperactivation (e.g., "Bothersome thoughts disturb my concentration during sexual intercourse").

In their attempt to interleave or integrate the attachment, caregiving, and sexual systems as aspects of romantic love, Shaver and Hazan (1988) offered explicit hypotheses concerning the relations between attachment and sex. Securely attached people were hypothesized to strive for mutual intimacy and pleasure during sexual activities, to enjoy sex, and to be attentive and responsive to partners' sexual needs. These are all signs of the smooth functioning of the sexual system. In contrast, anxiously attached people, who are focused on seeking protection and security, were expected to have trouble attending without desperation to their partner's sexual needs and preferences. They were expected to find it difficult to attain the relatively calm and secure state of mind that is helpful in fostering mutual sexual satisfaction (Shaver & Hazan, 1988). Avoidant attachment was also expected to interfere with or distort the sexual system. Whereas attachment avoidance favors emotional distance, mutual exploration of sexual pleasures with a lover risks movement toward psychological intimacy and vulnerability. This heightened closeness might cause avoidant people to feel especially uncomfortable during sexual intercourse.

Evidence is now emerging that shows that attachment processes shape sexual motives, experiences, and behaviors. For example, Tracy, Shaver, Albino, and Cooper (2003) found that securely attached adolescents engaged in sex primarily to show love for their partners and that they experienced fewer negative emotions and more positive and passionate emotions during sexual activity than their insecurely attached peers. Similarly, in adulthood, securely attached individuals have a more positive sexual self-schema (Cyranowski & Andersen, 1998), get pleasure from expressing affection and sexual interest through touch (Brennan, Wu, & Loev, 1998), and enjoy exploring sexuality freely within the context of affectionate long-term relationships (Hazan & Zeifman, 1994).

There is also evidence that adolescents who score high on attachment avoidance report relatively low sexual drive, are less likely to have and enjoy sex, and are motivated by self-enhancement and public reputation rather than by concern for their partners. They say they have sex, for example, so that they can say they have lost their virginity (Tracy et al., 2003) or brag about it to peers (Schachner & Shaver, 2004). Avoidant adults dismiss sex-related motives such as promoting emotional closeness or giving pleasure to a partner and instead seem to engage in sex so as to manipulate or control their partners, protect themselves from partners' negative affect, or achieve other nonromantic goals, such as reducing stress or increasing their prestige among peers (Davis, Shaver, & Vernon, 2004; Schachner & Shaver, 2004). Anxiously attached adolescents have been found to engage in sex primarily to avoid abandonment and hold onto a partner through sexual acquiescence, even when particular sexual acts are otherwise unwanted (Tracy et al., 2003). In adulthood, attachment-anxious individuals tend to use sex as a means for achieving emotional intimacy and reassurance, elicit-

ing a partner's caregiving behaviors, and defusing a partner's anger (Davis et al., 2004; Schachner & Shaver, 2004). However, unfulfilled relational expectations and worries about partner's affection often lead to anxious individuals' sexual dissatisfaction (Brennan et al., 1998).

Part IV of this book deals with connections between attachment and sex. Lynne Cooper and her colleagues discuss a longitudinal study of the developmental trajectories of attachment orientation, sexual attitudes and behaviors, and relational processes from adolescence to young adulthood. Lisa Diamond presents a new conceptualization of the distinction between attachment and sexuality within the realm of *same-sex* romantic relationships and elaborates on the contribution of attachment theory to understanding the nature and development of various kinds of sexual attraction. Deborah Davis reviews recent findings from Internet surveys investigating the associations between attachment orientations and sexual motives, preferences, and behaviors, as well as experimental studies examining the effects of attachment-security primes on sexual responses. Omri Gillath and Dory Schachner describe recent studies of sex-related goals and strategies.

ATTACHMENT THEORY AND OTHER PERSPECTIVES ON ROMANTIC LOVE

Bowlby's (1969/1982) behavioral systems theory and Shaver and Hazan's (1988) approach to romantic love evolved from the confluence of diverse conceptual frameworks, such as evolutionary psychology, psychoanalysis, interdependence theory, research on social cognition, and humanistic psychology. Bowlby's (1969/1982) notion of behavioral systems was borrowed from his day's evolutionary psychology. His ideas about the transformation of attachment experiences into working models of self and others, the defensive nature of insecure working models, and the crucial role that working models play in maintaining stability of attachment orientations fit with the basic principles of modern psychoanalysis (e.g., Westen, 1998). Bowlby's (1973) idea that a relationship partner's responses to one's own attachment behaviors can change the operating parameters of the attachment system fits with interdependence theories of social behavior (e.g., Holmes & Cameron, 2005). The role Bowlby (1973) assigned to working models in explaining a person's relational expectations, emotions, and social behaviors fits with contemporary social cognition research (e.g., Baldwin, 2005). Moreover, the view that attachment security is an important human strength or resource that fosters mental health meshes with humanistic and "positive" psychological approaches that emphasize human strengths, virtues, and optimal development (e.g., Rogers, 1961; Seligman, 2002).

This does not mean that Bowlby's (1969/1982) theory can simply be equated with the other conceptual frameworks. For example, whereas con-

temporary 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 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 who has his or her own patterns of behavioral-system functioning (Mikulincer & Shaver, 2003).

Unlike contemporary interdependence theories, Bowlby's (1969/1982) theory is not exclusively relational. Working models of self and others do not exclusively reflect the ways in which a person and his or her partner actually behave in a given interaction. Rather, they can be biased by defensive processes related to hyperactivating or deactivating attachment strategies (Bowlby, 1980). Furthermore, behavioral-system activation in adulthood can occur intrapsychically without any overt expression in interpersonal behavior and without demanding the intervention of an actual relationship partner (Mikulincer & Shaver, 2004). In other words, the seemingly perpetual tension between personality and social psychological approaches to social behavior and relationships is bridged in attachment theory, but it is always in danger of reasserting itself when researchers with one or the other perspective undertake attachment or relationship research. Moreover, working models of self and others cannot be simply equated with other kinds of social cognitions (Shaver, Collins, & Clark, 1996), even though it is natural for social cognition researchers to view them similarly. Attachment working models evolve not only from simple memories of actual experiences but also from dynamic processes of goal pursuit, emotion regulation, and psychological defense involved with wishes for proximity and security and fears of separation and helplessness.

There is also an important difference between Bowlby's (1969/1982) theory and humanistic or positive psychology: Whereas the positive, humanistic approaches focus mainly on growth-oriented, promotion-focused aspects of development and personality, Bowlby (1969/1982) emphasized both the prevention and the promotion aspects of human behavior. This dual focus is well illustrated in the functions of "safe haven" and "secure base" that qualify relationship partners as attachment figures. These figures need to protect a person from threats and calm his or her fears and conflicts. At the same time, they need to provide a "secure base" from which the person can explore the environment and engage in promotion-oriented activities. Bowlby (1969/1982) emphasized both the "dark" and the "bright" sides of human experience, which psychological researchers seem to have trouble capturing in a single theoretical framework. Bowlby showed how behavioral systems can deal with fears, frustrations, conflicts, and defenses while also fostering happiness, love, and growth.

Bowlby's rich conceptual framework is located at the intersection of

psychoanalytic, relational, social cognition, and positive psychological ap-
proaches. The theory is unique in integrating different, perhaps even contra-
dictory, views of human nature and maintaining a dialectical tension be-
tween opposites of four kinds: (1) the shaping and constraining influences
of past experiences versus the influence of current contexts and experiences;
(2) the intrapsychic nature of behavioral systems and working models ver-
sus the relational, interdependent nature of feelings, experiences, and social
behaviors; (3) the goal-oriented, promotive, expansive, self-regulatory function
of behavioral systems versus their defensive, protective, distress-regulating
functions; and (4) the centrality of basic fears, conflicts, and prevention-
focused motivational mechanisms, as well as promotion-focused motives
and the capacity for growth and self-actualization.

Part V of this book deals with the interface between Bowlby's (1969/
1982) behavioral systems theory and Shaver and Hazan's (1988) approach
to romantic relationships on one hand and other conceptual perspectives of
romantic love on the other hand. Arthur and Elaine Aron explore potential
links between their self-expansion model of romantic love and attachment
theory, with a special note on the Jungian "shadow" side of adult develop-
ment. Harry Reis highlights the concept of "perceived partner responsive-
ness" and shows how it helps to integrate attachment theory and contempo-
rary theories of intimacy. Ellen Berscheid discusses the nature of romantic
love, attachment, caregiving, and sex across the seasons of a human life.
Finally, Phil Shaver provides an integrative overview of the conceptual terri-
tory, with its current mysteries, controversies, and opportunities for further
research and theory development.

CONCLUDING REMARKS

This book makes clear that Bowlby's behavioral system perspective and its
use by romantic attachment researchers have been very fruitful over the past
20 years. I hope the ideas and findings presented in this book will stimulate
other scholars to apply a behavioral system perspective to the study of love
and that future research will be directed at the normative and individual-
difference aspects of other behavioral systems discussed or hinted at by
Bowlby, such as exploration, affiliation, and aggression/dominance. For
each such system there are likely to be primary, functional behavioral strate-
gies, as well as both hyperactivating and deactivating strategies that are
often dysfunctional and damaging to both individuals and their social rela-
tionships. The attachment system was a good place for Bowlby to start,
given his interest in infant and child development and the long-term effects
of parental loss or "deprivation." The research discussed in this book has
grown out of a heavy emphasis on attachment. What the field needs ulti-
mately, however, is a more complete behavioral systems theory of personal-

ity and relationships, and this will require new research instruments, ideas, and creative studies. As always, when science works well, it is a pleasure both to see what has been accomplished in the study of love and what remains to be explored.

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