



Adult Attachment and Cognitive and Affective Reactions to Positive and Negative Events

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Abstract

We review theory and research concerning the relation between attachment style, measured in terms of the two dimensions of insecurity (attachment anxiety and avoidance) and emotions that arise in response to threats and dangers, relationship separations and losses, interpersonal offenses and transgressions, and positive personal and interpersonal events. The review indicates that attachment theory systematically organizes research findings associated with emotional appraisals, feelings, and expressions.

For quite some time, beginning with Watson's (1913) article 'Psychology as the Behaviorist Views It' and extending through Skinner's (1977) 'Why I Am Not a Cognitive Psychologist', psychology focused mainly on behavior, at the expense of cognition and emotion. Subsequently, the field experienced a well-documented 'cognitive revolution', but still without paying much attention to emotions. Nowadays, emotion is a 'hot' topic, as indicated by the American Psychological Association's decision to publish a new journal, *Emotion*, beginning in 2001.

There are many interesting studies of particular emotions, or particular kinds of emotions (e.g., positive emotions: Fredrickson, 2006; self-conscious emotions: Tracy, Robins, & Tangney, 2007) but still relatively few attempts to place a wide variety of emotions into a developmental or personality-oriented theoretical context. In the present article, we show how issues studied individually by emotion researchers can be organized conceptually by attachment theory (Bowlby, 1982; Mikulincer & Shaver, 2007a), a conceptual framework that characterizes and explains individual differences that emerge in the course of social and personality development. We begin with a brief overview of the theory's core concepts and then explain how they are related to emotions evoked by threats and dangers, by relationship separations and losses, by offenses and transgressions committed by relationship partners, and by positive events of both personal and interpersonal kinds. Throughout the article, we show how the core concepts and propositions

of attachment theory help to organize and make sense of a multitude of research findings, including some that, without the theory, would seem counterintuitive.

Attachment Theory: Core Concepts

Bowlby (1982) claimed that human beings are born with an innate psycho-biological system (the *attachment behavioral system*) that motivates them to seek proximity to significant others (*attachment figures*) in times of need. The term ‘attachment’ was meant to convey that humans tend to form emotional bonds and mental representations of interactions with the people on whom they rely for protection, comfort, and support. Bowlby (1973) also described major individual differences in the regulatory functioning of the attachment behavioral system (‘attachment system’, for short). Interactions with attachment figures who are available in times of need and sensitive and responsive to bids for proximity and support allow the attachment system to function optimally (in the same sense that proper nutrition and exercise allow the body to function optimally). Attachment-figure availability and responsiveness promote a relatively stable sense of attachment security and build confidence in support seeking as a distress-regulation strategy. When a person’s attachment figures are not reliably available and supportive, however, proximity seeking fails to relieve distress, attachment security is reduced, and strategies of affect regulation other than normal proximity seeking (*secondary attachment strategies*, conceptualized in terms of two dimensions: *anxiety* and *avoidance*) develop.

In studies of adolescents and adults, most tests of these ideas have focused on a person’s *attachment style* – the systematic pattern of relational expectations, emotions, and behaviors that results from internalization of a particular history of attachment experiences (Fraley & Shaver, 2000; Shaver & Mikulincer, 2002). Initially, research was based on Ainsworth, Blehar, Waters, and Wall’s (1978) three-category typology of attachment styles in infancy – secure, anxious, and avoidant – and on Hazan and Shaver’s (1987) conceptualization of similar adult styles in the romantic relationship domain. Subsequent studies (e.g., Bartholomew & Horowitz, 1991; Brennan, Clark, & Shaver, 1998) revealed, however, that attachment styles are more appropriately conceptualized as regions in a two-dimensional space.

The first dimension, attachment-related *anxiety*, reflects the degree to which a person worries that a partner will not be available in times of need. The second dimension, attachment-related *avoidance*, reflects the extent to which a person distrusts relationship partners’ goodwill and strives to maintain independence and emotional distance from them. People who score low on both dimensions are said to be secure or to have a secure attachment style. Throughout this article, we refer to people with secure, anxious, and avoidant attachment styles, or people who are relatively anxious or avoidant. Although the convenient categorical shorthand (secure, anxious, and

avoidant) can mistakenly foster typological thinking, we are always referring to fuzzy regions in a two-dimensional space, a space in which research participants are continuously rather than categorically distributed.

The two dimensions can be measured reliably and validly with self-report scales (e.g., Brennan et al., 1998), which are associated in theoretically predictable ways with various aspects of relationship quality and adjustment (see Mikulincer & Shaver, 2007a; Shaver & Clark, 1994; Shaver & Hazan, 1993, for reviews). Using self-report scales, it is possible to assess a person's attachment style or orientation in a particular relationship (within-relationship orientation) as well as his or her global attachment style across close relationships (without targeting a particular partner). Although most adult attachment studies, beginning with Hazan and Shaver (1987), have focused on attachment orientations toward romantic partners, there are also dozens of studies assessing global attachment style or attachment orientations toward other kinds of relationship partners (e.g., parents, friends, God).

Based on an extensive review of adult attachment studies, we (Mikulincer & Shaver, 2003, 2007a; Shaver & Mikulincer, 2002) proposed a three-phase model of attachment-system activation and dynamics. Following Bowlby (1982), we assumed that the monitoring of everyday experiences and occurrences results in activation of the attachment system when a potential or actual threat is perceived. 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?' increases or maintains attachment security and encourages the use of security-based strategies of affect regulation (Shaver & Mikulincer, 2002). These strategies are aimed at alleviating distress and maintaining comfortable, supportive intimate relationships, and they generally contribute positively to personal adjustment. They include optimistic beliefs about distress management, beliefs about others' trustworthiness and goodwill, and a sense of self-efficacy about dealing with threats (Shaver & Hazan, 1993). Security-based strategies also include acknowledging and expressing distress without becoming emotionally disorganized, relying comfortably and gratefully on others' support, and being able to solve most problems calmly and effectively (Mikulincer & Shaver, 2003). These tendencies are characteristic of people (called *secure* or *securely attached*) who score low on measures of attachment anxiety and avoidance.

Perceived unavailability of an attachment figure heightens insecurity, which compounds the distress that originally activated the attachment system and forces a decision about the value and viability of seeking proximity to a familiar person as a protective strategy. Appraising proximity seeking as urgently needed or essential for emotional stability – because of one's attachment history, temperamental anxiety proneness, or contextual cues – tends to instigate what Cassidy and Berlin (1994) called *hyperactivating strategies* – urgent, energetic, insistent attempts to attain proximity, support, and love. These strategies include begging for support, insisting on

support, attempting to coerce another person into providing support by clinging or engaging in other forms of coercive or controlling behavior, being overly dependent on relationship partners for stability and protection, and perceiving oneself as relatively helpless and incompetent at affect regulation (Mikulincer & Shaver, 2007a).

Hyperactivating strategies cause a person to remain perpetually vigilant regarding threat-related cues and cues of attachment figures' unavailability, the two kinds of cues that activate the attachment system (Bowlby, 1973). Once such cues become the focus of a person's attention, they more or less guarantee that the attachment system will be continuously active. Hyperactivation also intensifies negative emotional reactions to threats and heightens rumination on threat-related concerns (e.g., partner infidelity, one's own regrettable behavior or insufficient self-efficacy). As a result, distress is exacerbated and doubts about one's ability to achieve relief are heightened. These aspects of hyperactivation account for the psychological correlates of measured attachment anxiety (Mikulincer & Shaver, 2007a).

Appraising proximity seeking as unlikely to alleviate distress, or as likely to cause even more difficulty (e.g., worrisome dependence on others, unwanted entanglement with others), evokes defensive suppression of the attachment system and bolsters one's commitment to deal with threats alone. These secondary attachment strategies are called *deactivating* (Cassidy & Kobak, 1988) because their primary goal is to keep the attachment system shut down so it cannot arouse anxiety-provoking temptations to get deeply involved with, or dependent upon, attachment figures – or to open oneself to being disappointed or frustrated by a partner's failure to help appropriately. These strategies often encourage denial of attachment needs and avoidance of emotional involvement in interpersonal relationships. They also involve disattending to or suppressing threat- and attachment-related cues because attending to them might activate the attachment system. These tendencies are supplemented by a strong emphasis on independence and self-reliance, and by denying or overlooking one's own weaknesses and faults. These aspects of deactivation account for the correlates of measured avoidant attachment (Mikulincer & Shaver, 2007a).

According to our model, each attachment-related strategy has a regulatory goal, and many measurable cognitive, affective, and behavioral processes are tailored to serve that goal. These strategies are likely to influence a person's cognitive and affective reactions to positive and negative life events. In the following sections, we propose theoretical hypotheses and review relevant research to clarify attachment-related individual differences in cognitive and affective reactions to such events.

Attachment-Related Reactions to Threats and Dangers

As mentioned, threats and dangers automatically trigger the attachment system, and as such they tend to mobilize a person's habitual attachment-related

regulatory strategies (secure, hyperactivating, or deactivating). In particular, attachment security encourages constructive coping strategies and buffers the distress that negative events might otherwise cause, but hyperactivating and deactivating secondary attachment strategies encourage less constructive reactions to threats and dangers, unintentionally and paradoxically intensify distress, and put a person at risk for emotional disorders (e.g., chronic anxiety disorders).

There is considerable evidence that a person's attachment style affects his or her appraisal of threats and ability to cope (e.g., Berant, Mikulincer, & Florian, 2001a,b; Birnbaum, Orr, Mikulincer, & Florian, 1997; Cozzarelli, Sumer, & Major, 1998; Mikulincer & Florian, 1995, 1998; Moller, Fouladi, McCarthy, & Hatch, 2003). Attachment security is associated with distress-reducing appraisals (i.e., viewing challenging events in less threatening ways and appraising oneself as able to cope effectively). In contrast, attachment anxiety is associated with distress-intensifying appraisals (i.e., perceiving challenging events as highly threatening and appraising oneself as unable to cope effectively). And although avoidant individuals generally try to portray their coping abilities as adequate if not superior, there are indications that they are not really very confident that the outcome will be so favorable. In fact, research indicates that, when under significant pressure, their defensively favorable self-evaluations break down under strain, resulting in failures to function adaptively. This happens, for example, during intensive combat training (Mikulincer & Florian, 1995), divorce (Birnbaum et al., 1997), and giving birth to a child with a congenital heart defect (Berant et al., 2001a,b; Berant, Mikulincer, & Shaver, 2008). Berant et al. (2001b) found, in a prospective longitudinal study, that avoidant attachment predicted increasingly pessimistic appraisals of stressful events over a 1-year period, and Williams and Riskind (2004) found that both attachment anxiety and avoidance were associated with appraising threats as increasingly risky risk and progressively worsening, a pattern associated with anxiety disorders.

Several other studies have documented attachment-style differences in methods of coping with threats and dangers (e.g., Birnbaum et al., 1997; Lussier, Sabourin, & Turgeon, 1997; Mikulincer & Florian, 1998; Mikulincer, Florian, & Weller, 1993; Schmidt, Nachtigall, Wuetrich, & Strauss, 2002). Securely attached people tend to score high on support seeking and problem-focused coping, whereas anxiously attached people rely on ineffective emotion-focused strategies (e.g., rumination) that intensify rather than reduce distress. Avoidant people often rely on cognitive distancing, which involves repression, denial, and lack of effective problem solving (e.g., Feeney, 1995; Mikulincer & Orbach, 1995; Vetere & Myers, 2002). In an interesting and unusual study, Turan, Osar, Turan, Ilkova, and Damci (2003) found that highly avoidant insulin-dependent diabetics relied on cognitive distancing and passive resignation, which were associated with poor adherence to medical treatment.

Somewhat surprisingly, three studies found a significant association between avoidant attachment and emotion-focused coping, which is usually expected to correlate with attachment anxiety rather than avoidance. In two of these studies (Lussier et al., 1997; Shapiro & Levendosky, 1999), emotion-focused coping was observed in reaction to conflicts with close relationship partners. In the third study, Berant et al. (2001a) found that avoidant mothers of newborns tended to rely on cognitive distancing if their infant was born healthy or had only a mild congenital heart defect, but they resorted to emotion-focused coping if their child had a life-threatening congenital heart defect. It seems therefore that avoidant defenses are sometimes sufficient for dealing with minor stressors, but can fail when stress is severe or persistent.

Attachment-related differences in cognitive appraisals and methods of coping are reflected in people's self-reports of psychological distress, negative affectivity (anxiety, depression, anger), and perceived well-being during stressful events. Attachment security is associated with lower levels of distress and higher levels of psychological well-being, whereas both attachment anxiety and avoidance are associated with heightened distress (e.g., Berant et al., 2001a,b; Berant et al., 2008; Birnbaum et al., 1997; Mikulincer et al., 1993).

In many of the studies just described, objectively challenging or stressful events aroused strongly negative emotions only in insecurely attached people. For the secure ones, there was often not much difference in emotion between neutral and stressful conditions. Similar findings were obtained by researchers (e.g., Amir, Horesh, & Lin-Stein, 1999; Mikulincer et al., 1993) who studied the association between psychological distress and objective characteristics of stressors (e.g., physical distance from the areas in Israel hit by Iraqi Scud missiles, severity of infertility problems). Secure people often seem to remain relatively calm even under stressful conditions, indicating that felt security and the associated coping strategies are effective in buffering stress.

Avoidant people's reactivity to stress has also been noted in studies examining physiological reactions to stressors (e.g., Diamond, Hicks, & Otter-Henderson, 2006; Kim, 2006; Maunder et al., 2006). During exposure to various laboratory stressors (e.g., recalling a stressful situation, performing demanding mathematical tasks, watching a film clip depicting relationship distress), avoidant attachment was associated with physiological reactivity: increased skin conductance (Diamond et al., 2006), heightened diastolic blood pressure (Kim, 2006), and a reduction in heart-rate variability (Maunder et al., 2006). Interestingly, Maunder et al. (2006) found that attachment-anxious people's reactivity to stressors was evident in self-reported distress but not in heart-rate measures, again suggesting that anxious people (perhaps for unconscious rather than conscious reasons, not deceptively) sometimes exaggerate their distress. In Kim's (2006) study, anxious participants' physiological reactivity (heightened diastolic blood pressure) was observed

only when they also reported high levels of distress. This tendency contrasts with avoidant individuals' dissociation between subjective reports of lack of distress and heightened physiological reactivity.

Overall, the evidence supports the theoretical expectation that secure people's optimistic appraisals and reliance on constructive ways of coping mitigate distress and sustain mental health during periods of stress. The evidence also indicates, in accordance with attachment theory, that anxious and avoidant attachment often interferes with effective coping, amplifies distress, and increases the likelihood of problems in adjustment. For insecure people, the world is a dangerous place, full of threats and perils and devoid of a reliable safe haven and secure base. Moreover, insecure individuals (mainly those high in attachment anxiety) harbor doubts about their ability to cope with threats and dangers, making it necessary to remain vigilant to potential threats. These core beliefs can heighten fearful reactions to threats, including both worried rumination and evasion of problem solving – the clinically familiar fear and avoidance components of most anxiety disorders (American Psychiatric Association, 1994). In support of this view, several studies have yielded significant associations between attachment insecurities and anxiety-related symptoms in both non-clinical and clinically diagnosed populations (e.g., Cooper, Shaver, & Collins, 1998; Eng, Heimberg, Hart, Schneier, & Liebowitz, 2001; Hankin, Kassel, & Abela, 2005; Mickelson, Kessler, & Shaver, 1997; Williams & Riskind, 2004).

Attachment-Related Reactions to Separation and Loss

Attachment-related coping strategies are also evident in the ways people deal with separation from a close relationship partner or bereavement following a partner's death. These attachment-related negative events, which were among Bowlby's (1980) major scientific and clinical concerns, are potent triggers of negative emotions and attachment-related emotion-regulation strategies.

Reactions to separations and break-ups

In a survey of more than 5000 Internet respondents who described romantic relationship break-ups, Davis, Shaver, and Vernon (2003) found that avoidant individuals were less likely than non-avoidant ones to seek support, and were more likely to cope with the break-up alone while avoiding new romantic involvements. In contrast, anxious respondents reacted with angry protests, heightened sexual attraction to the former partner, intense preoccupation with the partner, a damaged sense of personal identity, and poorer performance at school or work. More anxious and avoidant individuals were also more likely than their secure counterparts to use alcohol or drugs as a means of coping with separation.

Several studies have found theoretically predicted attachment-related differences in the intensity and duration of distress following a relationship break-up (e.g., Davis et al., 2003; Feeney & Noller, 1992; Sbarra, 2006; Sbarra & Emery, 2005; Simpson, 1990), a divorce (e.g., Birnbaum et al., 1997), wartime separations from marital partners (e.g., Cafferty et al., 1994), and temporary separations from romantic partners (Feeney, 1998; Fraley & Shaver, 1998). In all of these studies, distress intensification was a common response of anxiously attached people. In contrast, attachment security was associated with faster emotional recovery and adjustment. For example, Sbarra (2006) collected daily emotion data for 4 weeks from young adults who had recently experienced a romantic relationship break-up and found that attachment security was associated with faster recovery from sadness and anger. Moreover, secure individuals were more likely to accept the loss, which facilitated recovery.

The findings concerning avoidant attachment depended on the nature of the separation. Avoidance was associated with greater distress following divorce and wartime separations but lower levels of distress and greater relief following temporary separations from, or permanent break-ups with, dating partners. It therefore seems that avoidant people, who can handle the distress of brief separations or the dissolution of casual bonds, are less successful in dealing with major separations requiring reorganization of relational routines, goals, and plans. This fits with evidence reviewed earlier that avoidant defenses collapse under pressure.

For avoidant individuals, the main method of dealing with separation is to suppress thoughts, memories, or images that might reactivate the pain of separation and the need for a close relationship partner. In a pair of experimental studies, Fraley and Shaver (1997) used Wegner's (1994) thought-suppression paradigm and found that avoidant people were effective at suppressing separation-related thoughts, as indicated by less frequent thoughts of loss following the suppression task and lower skin conductance during the task. In contrast, anxious people thought more often about the loss following suppression and had higher skin conductance during the task. A recent functional magnetic resonance imaging study (Gillath, Bunge, Shaver, Wendelken, & Mikulincer, 2005) replicated these findings while examining patterns of brain activation when people were thinking about break-ups or attempting to suppress such thoughts. The anxious participants showed higher activation in emotion-related brain regions and lower activation in frontal regions responsible for emotion regulation.

Mikulincer, Dolev, and Shaver (2004) replicated and extended Fraley and Shaver's (1997) findings while assessing, in a Stroop color-naming task, cognitive activation of previously suppressed thoughts about a painful separation. Avoidant individuals were able to suppress thoughts related to the break-up; for them, such thoughts were relatively inaccessible, and their own positive self-traits became even more accessible than usual,

which we interpret as an indication of self-inflating defenses. Their ability to maintain this defense was disrupted, however, when a cognitive load – remembering a seven-digit number – was added to the experimental task. Under a high cognitive load, avoidant individuals suddenly exhibited color-naming interference due to thoughts of separation and *negative* self-traits. That is, the suppressed material resurfaced in experience and behavior when a high cognitive demand was imposed, and this material included suppressed negative aspects of the self. We suspect that a similar resurfacing occurs when a high emotional demand is imposed, as in the studies mentioned earlier that dealt with the strain of combat training or caring for a child with a congenital heart defect.

Reactions to the death of a close relationship partner

Bowlby (1980) drew a distinction between normal grief and two atypical forms of mourning – chronic mourning and prolonged absence of conscious grieving. Moreover, he associated each of these atypical reactions with a different kind of insecure attachment. Anxiously attached people's tendency to intensify distress and ruminate about losses encourages chronic mourning, whereas avoidant people's tendency to suppress negative emotions encourages an absence of conscious grieving (Fraley & Shaver, 1999; Mikulincer & Shaver, 2008; Shaver & Fraley, 2008). In addition, anxious individuals' overdependence on relationship partners can lead to a larger than usual emotional investment in the deceased partner and the lost relationship. In contrast, avoidant individuals' lower commitment to partners and extreme self-reliance may make them less vulnerable to prolonged grieving: They are less likely to feel that something crucial has been lost, and their sense of identity and well-being are less likely to be jeopardized by the loss (Fraley & Shaver, 1999).

Attachment security allows a person to steer clear of both insecure forms of mourning (Mikulincer & Shaver, 2008). Secure individuals can recall and think about a lost partner without extreme difficulty and can discuss the loss coherently (Shaver & Tancredy, 2001). Moreover, their constructive coping strategies allow them to experience and express grief, anger, and distress without feeling overwhelmed by emotion and without total disruption of normal functioning (Parkes, 2001; Stroebe, Schut, & Stroebe, 2005). In addition, their positive models of self and others facilitate flexible, balanced alternations between continuing attachment and gradual reorganization of mental representations of the now-absent partner (Shaver & Tancredy, 2001). Secure individuals' positive models of a lost partner allow them to continue to think positively about the deceased, while their positive models of self allow them to feel positive about the care they provided for the dying partner, cope with the loss, and perhaps begin to form new relationships (Mikulincer & Shaver, 2008). Recent studies of bereavement (e.g., Bonanno, Moskowitz, Papa, &

Folkman 2005; Moskowitz, Folkman, & Acree, 2003; Ong, Bergeman, & Bisconti, 2004) reveal that bereaved individuals do experience positive as well as negative emotions about their loss and the events that preceded it, and having positive emotions is associated with more favorable bereavement outcomes (e.g., less likelihood of depression).

Few studies of bereavement have included attachment measures, but the few that did include them generally support the idea that secure attachment facilitates emotional adjustment to bereavement (Fraley & Bonanno, 2004; Van Doorn, Kasl, Bery, Jacobs, & Prigerson, 1998; Waskowic & Chartier, 2003; Wayment & Vierthaler, 2002). For example, Fraley and Bonanno (2004) found that people classified as securely attached four months after the loss of a spouse reported relatively low levels of bereavement-related anxiety, grief, depression, and post-traumatic distress 18 months after the loss. There is also evidence of anxiously attached people's intensification of grief reactions (Field & Sundin, 2001; Fraley & Bonanno, 2004; Wayment & Vierthaler, 2002). For example, Field and Sundin (2001) found that anxious attachment, assessed 10 months after the death of a spouse, predicted higher levels of psychological distress 14, 25, and 60 months after the loss.

With respect to avoidant attachment, studies have generally found no significant association between avoidance and measures of depression, grief, or distress (Field & Sundin, 2001; Fraley & Bonanno, 2004; Wayment & Vierthaler, 2002). However, Wayment and Vierthaler (2002) found that avoidance was associated with somatic symptoms, implying that avoidant defenses might block conscious access to anxiety and depression but without preventing the subtler and less conscious somatic reactions to loss (see findings reviewed earlier concerning avoidant people's heightened physiological reactivity to stress). Both Fraley and Bonanno (2004) and Parkes (2003) found that combinations of attachment anxiety and avoidance (the pattern that Bartholomew & Horowitz, 1991, called fearful avoidance) produced the highest levels of anxiety, depression, grief, trauma-related symptoms, and alcohol consumption.

There is also some evidence concerning individual differences in continuing symbolic attachment to a lost partner. Field and Sundin (2001) found that avoidant people reported more negative thoughts about their lost spouse 14 months after the death, perhaps reflecting a distancing or depreciative attitude toward the partner. In contrast, attachment anxiety was associated with more positive thoughts about the lost spouse, perhaps reflecting a continuing investment in an idealized and strongly missed attachment figure. Using the Continuing Bonds scale, Waskowic and Chartier (2003) found that secure individuals had an adaptive, flexible attitude toward their lost partners. Although they scored lower than insecure people on rumination about and preoccupation with the lost spouse, they nevertheless scored higher on positive reminiscences about and symbolic exchanges with him or her.

Attachment-Related Reactions to Interpersonal Offenses and Transgressions

Attachment-related strategies also influence a person's reactions to a relationship partner's negative, damaging, or hurtful behavior. A common response to such threats and injuries is anger, which can be viewed as a signal that something of value has been threatened, often in what is perceived to be an illegitimate, unfair, or immoral way, and that action needs to be taken to reduce or eliminate the threat, repair the damage, or prevent further damage (e.g., Izard & Kobak, 1991; Lazarus, 1991; Shaver, Schwartz, Kirson, & O'Connor, 1987). In the second volume of his *Attachment and Loss* trilogy, Bowlby (1973) argued that anger is the most common response to a partner's attachment-relevant negative behavior (e.g., a partner's indications of disinterest, unavailability, detachment, or rejection) because this behavior disrupts a person's sense of security, especially when it is shaky or weak to begin with.

A number of studies have examined how attachment-related strategies affect the arousal, subjective experience, and management of anger aroused by relationship transgressions. For example, Mikulincer (1998) found that, when confronted with a partner's negative behavior, more secure individuals retained optimistic expectations about the partner's subsequent behavior and made well-differentiated, reality-attuned appraisals of the partner's intentions. Only when there were clear contextual cues, provided by the experimenter, that a partner actually acted with hostile intent, did secure people attribute hostility to the partner and react with anger. Furthermore, secure participants' memories of their reactions to a partner's negative behavior were characterized by the constructive goal of repairing the relationship, engaging in adaptive problem solving, and experiencing positive affect following relationship repair.

Mikulincer (1998) also found that, although avoidant individuals did not report overly intense anger about a partner's negative behavior, they became physiologically aroused during discordant interactions. They also reported using distancing strategies to cope with anger-provoking events and tended to attribute hostility to a partner even when there were clear contextual indications (provided by the experimenter) of the partner's non-hostile intent. Anger and hostility have also been noted in other studies where avoidant attachment was assessed with self-report measures (e.g., Buunk, 1997; Mikulincer et al., 1993). Using the Adult Attachment Interview (Main, Kaplan, & Cassidy, 1985; Hesse, 1999), a clinically oriented narrative measure of attachment orientation, Kobak and Sceery (1988) found that avoidant attachment was related to greater dispositional hostility (as reported by friends). Moreover, Kobak, Cole, Ferenz-Gillies, Fleming, and Gamble (1993) reported that avoidant teens displayed more dysfunctional anger than secure teens toward their mothers and engaged in less cooperative dialogue during a joint problem-solving activity.

In a recent study of forgiveness in the context of close relationships, Mikulincer, Shaver, and Slav (2006) obtained further evidence regarding avoidant individuals' hostile reactions to partners' negative behavior. As compared with less avoidant individuals, people who scored high on avoidance were less likely to forgive a partner who had hurt them, as assessed by McCullough, Worthington, and Rachal's (1997) forgiveness scale. They were more likely to seek revenge or escape from the situation following a partner's transgression, as assessed by the Transgression-Related Interpersonal Motivations Inventory (McCullough et al., 1998). Moreover, when avoidant individuals were asked to recall an episode in which they forgave a relationship partner who had hurt them, their feelings and thoughts were colored by hostility, resentment, and lack of actual forgiveness. They reported more narcissistic wounds, perceptions of relationship deterioration, and lack of understanding of their partner's hurtful actions. Their disinclination to forgive was also noted in a daily diary study in which participants were asked to report daily reactions to their partner's negative behavior over a 21-day period (Mikulincer et al., 2006).

There is also evidence concerning maladaptive reactions of attachment-anxious individuals to interpersonal offenses and transgressions. Mikulincer (1998) found that attachment anxiety was associated with recollections of anger-provoking life experiences that triggered an uncontrollable surge of angry feelings, persistent rumination on those feelings, and sadness and despair following conflicts. Anxious individuals also held more negative expectations about others' responses during anger episodes and tended to make less differentiated, more negative appraisals of a relationship partner's intentions. They attributed hostility to their partner and reacted in kind, even when there were only ambiguous cues (in the experiment) concerning hostile intent (Mikulincer, 1998). Anxious individuals' problems with anger management have also been studied with physiological measures. Diamond and Hicks (2005) asked young men to recall a recent interpersonal offense and found that attachment anxiety was associated with lower vagal tone – an indication of poor recovery from the experience.

Observational studies of anger in actual social interactions also provide evidence of the dysfunctional nature of insecure people's anger. Simpson, Rholes, and Phillips (1996) examined anger reactions during conflicts in which dating partners were asked to identify an unresolved problem in their relationship and to discuss and try to resolve it. Attachment anxiety was associated with displays and reports of anger and hostility during the conversation. Another study of couple interactions focused on anxiously attached people's emotional reactions to a partner's insensitive behavior (Mikulincer, Florian, & Hirschberger, 2002). Newlywed couples completed a questionnaire each evening for 21 days, rating the extent to which their feelings toward their spouse were positive or negative and then indicating which behaviors (from a list provided by the researchers) their partner had exhibited that day. As compared with those scoring low on the attachment

anxiety dimension, people who scored high produced a stronger association, day by day, between partner's perceived negative behaviors and both anger and depression.

Shaver, Mikulincer, Lavy, and Cassidy (in press) found that anxious and avoidant individuals' hyperactivating and deactivating defenses were evident in the intensity and quality of the hurt feelings they experienced when recalling a partner's negative behavior. Avoidant attachment was associated with milder feelings of 'hurt' and rejection, less crying, and stronger defensive/hostile reactions to the offending partner. These findings fit with results we reviewed earlier indicating that avoidant people use deactivating strategies and attempt to dismiss or deny hurtful experiences, inhibit feelings and expressions of emotional pain, and react hostilely to hurtful partners. In contrast, attachment anxiety was associated with more intense feelings of rejection, more crying, and more negative emotions. These results are compatible with those from studies reviewed earlier showing that attachment-anxious individuals tend to rely on hyperactivating defenses – intensifying distress and exaggeratedly expressing negative feelings.

Experimentally priming thoughts of available and supportive attachment figures seems to buffer these reactions to a partner's hurtful behavior. Shaver et al. (in press) repeatedly and subliminally presented love- and security-related words (love, secure, affection), each one for only 22 milliseconds, and found that the correlations between the attachment-insecurity scales and aspects of hurt feelings were dramatically reduced (most of them nearly to zero). In other words, security priming reduced avoidant individuals' use of deactivating defenses and anxious individuals' hyperactivation of negative feelings and strategies. In other studies (e.g., Mikulincer & Shaver, 2001; Mikulincer, Shaver, Gillath, & Nitzberg, 2005), similar security-priming procedures, administered either subliminally or supraliminally, had similar effects, reducing defensive prejudice against outgroups and increasing compassion and altruism. These studies suggest that security-enhancing educational and clinical interventions might have numerous beneficial personal and social effects on insecure people (Mikulincer & Shaver, 2007b,c).

Attachment-Related Reactions to Positive Events

Although attachment-related coping strategies are initially developed (during childhood) to regulate fear and other forms of distress, they also influence a person's cognitive and affective responses to positive events, such as personal achievements (Elliot & Reis, 2003) and behavior on the part of a relationship partner that satisfies one's needs, improves one's condition, or improves the quality and stability of the relationship (Mikulincer et al., 2006). According to Schwarz and Bohner (1996), these positive experiences signal that 'all is well' and one can relax and enjoy

creative, intellectually challenging, exploratory activities in a free and playful manner. A partner's positive behavior also signals availability, responsiveness, support, and love; causes a person to feel protected, accepted, and valued; and contributes to the formation and continuation of secure attachment bonds (Bowlby, 1973; Shaver & Hazan, 1993). Considered in terms of emotions, these positive events are likely elicitors of joy, affection, and gratitude.

According to attachment theory, the links between positive personal and relational events and positive emotions such as joy, happiness, and gratitude – as with the different forms of anger we examined – depend on a person's attachment style (Mikulincer & Shaver, 2007a). One precondition for experiencing joy and happiness about personal achievements is a person's conviction that nothing bad will happen if he or she lets down defenses against potential threats and engages in relaxed or playful exploration. Moreover, a precondition for experiencing joy and gratitude in response to a partner's supportive behavior is appraising this behavior as truly positive (e.g., Weiner, 1985) and believing that it reflects the partner's truly good intentions (e.g., Lazarus & Lazarus, 1994). If, however, a person is chronically focused on threats, as happens with anxiously attached individuals, or tends to view a partner's favorable behavior as indicating the partner's own needs (which can be viewed as dangerous signs of increasing dependence or entanglement) or use of deception, as is likely when the perceiver is avoidant, the defensive reactions are likely to interfere with unadulterated joy, happiness, or gratitude. In such cases, a natural invitation to feel happy is not interpreted as a sign that 'all is well'.

Supporting these ideas, research has shown that more secure individuals score higher on self-report measures of joy, happiness, interest, love, and affection (see Mikulincer & Shaver, 2007a, for a review). For example, in two diary studies, each lasting a week, participants completed the Rochester Interaction Record after every social interaction lasting 10 minutes or longer. Both sets of investigators, Tidwell, Reis, and Shaver (1996) and Pietromonaco and Barrett (1997), found that anxious and avoidant participants experienced fewer positive emotions than secure participants. Moreover, Rom and Mikulincer (2003) found that both attachment anxiety and avoidance were associated with relatively low positive emotional tone during group interactions.

Attachment-style differences in the experience of positive emotions have also been noted in studies examining the encoding (i.e., display) of facial expressions of emotion. For example, Magai, Hunziker, Mesias, and Culver (2000) found that attachment security was associated with facial expressions of joy, and Spangler and Zimmermann (1999) found that avoidant participants (assessed with the Adult Attachment Interview) activated their 'smile' muscles less than non-avoidant participants while watching a film expected to evoke positive emotions. Several other studies, using various methods, have found that avoidant attachment is related to

less expression of positive emotions (e.g., Ducharme, Doyle, & Markiewicz, 2002; Searle & Meara, 1999; Tucker & Anders, 1999). Medway, Davis, Cafferty, and Chappell (1995) also observed attachment-style differences in reactions to what they expected to be positive relational experiences, such as reuniting with a spouse following a prolonged military deployment: Securely attached spouses reported more positive emotions upon reunion than did anxious or avoidant spouses.

Mikulincer et al. (2006) noticed attachment-style differences in gratitude following a partner's positive behavior. Compared to less avoidant people, those scoring high on avoidant attachment were less likely to feel grateful. Moreover, when avoidant people were asked to recall an episode in which they felt grateful to a relationship partner, they tended to remember mixed or negative experiences, involving more narcissistic threats and distrust, and less happiness and love. People scoring high on attachment anxiety tended to remember more mixed or ambivalent experiences of gratitude – ones in which they felt, on the one hand happy, loved, and more secure, but on the other hand more self-critical and inferior.

Mikulincer et al. (2006) also conducted a diary study in which newlywed couples reported their emotional reactions to a partner's positive behavior every day for 21 days. Daily feelings of gratitude were significantly related to the partner's behavior on that day: The more positive the partner's behavior, the more gratitude a participant reported experiencing. However, avoidant attachment moderated this association: People scoring high on avoidance experienced relatively low levels of gratitude even on days when they perceived the partner's behavior to be positive.

In three other studies, Mikulincer and Sheffi (2000) presented people with descriptions of positive or neutral events and then assessed attachment-style differences in cognitive exploration – breadth of mental categorization and ability to solve problems creatively. Beneficial effects of positive events on creative problem solving and category breadth were observed only among people who were relatively secure. They reacted to positive events by applying broader, more liberal criteria when categorizing semantic stimuli and by performing better on a creative problem-solving task. Among relatively avoidant individuals there was no significant difference in task performance between those exposed to positive events and those exposed to neutral events. Interestingly, among individuals high on attachment anxiety, reactions to positive events were more like secure people's reactions to *negative* events. That is, anxious individuals reacted to positive events with impaired creativity and a narrowing of semantic categories.

Avoidant individuals seem not to view affect or emotions, whether positive or negative, as relevant to information processing (Pereg & Mikulincer, 2004). Theoretically, dismissal of negative affect reduces the likelihood of attachment-system activation, which avoidant individuals do not want to experience. Dismissal of positive affect may prevent a lowering

of defenses with which avoidant individuals do not feel comfortable, either because operating in an open, uncertain, potentially creative way would be anxiety provoking, or because letting down one's guard may allow other people to get more involved or too close emotionally. After prolonged use, this defensive strategy of deflecting attention away from all emotions (with the possible exception of anger and resentment) may produce a general disregard for emotional experience whether positive or negative.

The findings for attachment anxiety reveal the extent of the bias toward experiencing negative thoughts and emotions that is a natural part of hyperactivating attachment strategies. For attachment-anxious individuals, apparently, the spread of activation across memory networks that include negative cognitions and emotions can begin even with a positive event. Such people may initially experience positive affect but then become reminded of the down side of previous experiences that began positively and ended painfully. Once attuned to the negative memories and possibilities, the anxious mind suffers from a spread of negative associations that interferes with creative and flexible cognitive processing. Even in an experimental situation intended to induce positive affect, hyperactivating strategies may prevent people from feeling safe and from thinking creatively.

Conclusions

This wide-ranging review of studies on attachment styles and emotions reveals systematic and theoretically predictable associations between the major patterns of attachment and emotional experiences and expression. Relatively secure, or securely attached, individuals are less likely than their insecure peers to perceive threats and challenges as overwhelmingly dangerous. They are more resilient in the face of separations and losses and are less likely to get angry, seek revenge for slights, or attribute hostile intentions to their relationship partners. They are less likely to turn positive experiences into negative ones by doubting the value or validity of their positive experiences and relationship outcomes.

Relatively anxious, or anxiously attached, individuals are more likely than other people to perceive threats, challenges, and slights as anticipated and yet devastating. They are more likely to experience traumatic, prolonged grief following separations and losses and are likely to become angry and feel slighted, even when their partner's behavior is not hostilely or hurtfully motivated. They are likely to turn positive events into negative ones or to see the downside of potentially elevating experiences.

Relatively avoidant, or avoidantly attached, individuals are less likely to react emotionally in either a positive or a negative way, with the possible exception of vengeful anger. They may seem resilient in the face separations and losses but are likely to harbor negative thoughts and feelings than can become quite damaging, personally and interpersonally, if their defenses

are strained and collapse. Their anger is more likely than the anger of less avoidant individuals to be destructive rather than constructively relationship transforming.

The literature on attachment styles and emotion indicates that emotions are not separate states evoked in a generally predictable way by particular kinds of situations. Instead, they are parts of cognitive and affective networks that emerge during social development. They begin as reactions to relational events, but as they become crystallized into personality patterns, they feed back on relationships and either enhance or damage them in various ways. In order to change destructive forms of emotionality or emotional suppression, a person – probably with astute professional help – has to alter well-established, deeply engrained perceptions, appraisals, defenses, and behavioral strategies. Although this is not likely to be an easy or rapid process, it is likely to be more successful if enhancement of attachment security is a primary focus (Bowlby, 1988; Wallin, 2007).

Short Biographies

Phillip R. Shaver received his PhD in social psychology from the University of Michigan in 1970 and has served on the faculties of Columbia University, New York University, University of Denver, State University of New York at Buffalo, and University of California, Davis. He is the author of numerous books, articles, and anthology chapters dealing with attachment theory, adult attachment, emotions, sexuality, and emotion knowledge. He has served as Chair of the Department of Psychology at the University of California, Davis, and as President of the International Association of Relationship Research, from which he received a Distinguished Career Award. He is on the editorial boards of several journals, including the *Journal of Personality and Social Psychology* and *Attachment and Human Development*.

Mario Mikulincer received his PhD in experimental psychology from Bar-Ilan University in Israel and is currently Dean of the New School of Psychology at the Interdisciplinary Center Herzliya in Israel. He is the author of numerous books, articles, and anthology chapters dealing with attachment theory, adult attachment, emotions, learned helplessness, terror management, stress, trauma, and coping. He has served as Chair of the Department of Psychology at Bar-Ilan University and has received the EMET Prize for contributions to psychology. He is an Associate Editor of *Journal of Personality and Social Psychology* and *Personal Relationships*.

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