Mental Representations of Attachment Security:

Theoretical Foundation for a Positive Social Psychology

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Running Head: ATTACHMENT SECURITY AND POSITIVE PSYCHOLOGY

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Social psychology, like its sister discipline clinical psychology, has devoted much more attention to the problematic than to the admirable qualities of the "social animal." Whether this is because science is supported by national governments in order to solve social problems or because human perception naturally tilts investigators, like everyone else, toward urgent threats that arouse negative rather than positive affect, we cannot say. A brief look at the cumulative record of social psychology confirms, however, that our predecessors were more concerned with racism, aggression, violence, destructive obedience, mindless conformity, failure to assist others, egotistical self-enhancement, and biased social cognition than with sympathy, tolerance, kindness, support, healthy autonomy, and accurate self- and social perception. From time to time, an alternative, more optimistic, more hopeful, actualization-oriented approach to psychology emerges – for example, the "humanistic psychology" movement of the 1950s and 60s or today's "positive psychology" movement (Aspinwall & Staudinger, 2003; Seligman, 2002). But this reaching toward positivity seems frivolous or elitist to many people in the field, and after a while positivity tends to give way again to a focus on human misery and misbehavior.

Along with the emphasis on threats, deficits, defenses, and distortions goes social psychology's persistent preference for non-developmental theories. Somewhat oddly for a *social* discipline, social psychology tends to study individuals who resemble Rousseau's vision of the pre-socialized "savage": Arriving seemingly from nowhere, as solitary adults, they enter into brief laboratory scenarios where they interact with various stimuli or simulated minimal social situations. Little attention is given to adults' personalities and previous social experiences. One would never guess from reading social psychology texts that people are born into and generally remain connected to nuclear and extended families, live in distinctive neighborhoods and cultures, get married and have families of their own, and continue to develop across the lifespan. Social psychologists sometimes behave as if focusing on these aspects of the social animal would violate an important taboo and suddenly transport them out of social psychology, into an uncomfortably alien intellectual realm such as developmental or personality psychology, family sociology, or anthropology.

In the present chapter we consider the possibility that social psychology has unwittingly focused most of its attention on the defensive processes that characterize relatively insecure, rather than securely attached, people – people with a history of inadequate support from attachment figures rather than those who have been well treated. If so, it is likely that a more balanced consideration of the behavior, motivational tendencies, and cognitive propensities of secure and insecure people will help to create a social psychology that is compatible with the vision inherent in the humanistic psychology of the past (e.g., Rogers, 1961) and the present-day positive psychology movement, while placing these movements on a deeper theoretical foundation. In particular, we think recent research on human attachments and their cognitive representations provides a strong and generative foundation for a positive, health- and growth-oriented social psychology. In explaining this foundation, we use Rogers' (1961) now somewhat neglected theory as a touchstone, as seems to be happening in other areas of social psychology where a deeper conception of self-esteem and well-being is being sought (e.g., Kernis, 2003).

Attachment Theory: Basic Concepts

In his exposition of attachment theory, Bowlby (1982/1969, 1973, 1980) placed great emphasis on mental representations of attachment security (expectations that key people will be available and supportive in times of need) as supports for constructively coping with life's problems, maintaining emotional equanimity and stability, and forming mature, intimate, and mutually beneficial relationships. In the following pages we focus on these mental representations and examine what is known about their effects on social motives, cognitions, and behaviors. We propose that chronic (dispositional) as well as contextual activation of representations of attachment security reduces the need for what Higgins (1998) called a "prevention focus" (a focus on threats and potential injuries) and therefore attenuates defensive motives that might otherwise distort social perception and cognition and lead to interpersonal and intergroup conflict. Although these defensive motives are viewed by most social psychologists as normative features of human functioning, we review a growing body of evidence indicating that they are mainly characteristic of insecurely attached people. We also summarize extensive

evidence for the claim that attachment security, which can be experimentally enhanced, acts as a growth-enhancing agent, fostering pro-social motives and cognitions, promoting personal development and improved relationships, and leading to the formation of what Rogers (1961) called a "fully functioning person."

Bowlby (1982/1969) proposed that human infants are born with a repertoire of behaviors (*attachment behaviors*) designed by evolution to assure proximity to supportive others (*attachment figures*) as a means of protection from physical and psychological threats and promotion of affect regulation and healthy exploration. These proximity-seeking behaviors are organized into an *attachment behavioral system*, which evolved biologically because it increased the likelihood of survival and reproduction among primates born with immature capacities for locomotion, feeding, and self-defense. Although the attachment system is most important early in life, Bowlby (1988) claimed it is active over the entire life span and is manifest in thoughts and behaviors related to proximity seeking in times of need.

Bowlby (1973) also described important individual differences in attachment-system functioning. In his view, these individual differences are derived from reactions of significant others to attachment-system activation and from internalization of these reactions in the form of *attachment working models* (i.e., mental representations) of self and others. Interactions with attachment figures who are available and responsive in times of need facilitate the optimal functioning of the attachment system, promote a sense of connectedness and security, and cause people to rely more confidently on support seeking as a distress-regulation strategy. When a person's attachment figures are not reliably available and supportive, however, a sense of security is not attained, and strategies of affect regulation other than proximity seeking (*secondary attachment strategies*, characterized by *avoidance* and *anxiety*) are developed.

In studies of adolescents and adults, tests of these theoretical ideas have generally focused on a person's *attachment style* – a systematic pattern of relational expectations, emotions, and behaviors conceptualized as residues of particular kinds of attachment history (Fraley & Shaver, 2000). 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 Hazan
and Shaver's (1987) conceptualization of similar adult styles in the domain of romantic
relationships. 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, typically called attachment *avoidance*,
reflects the extent to which a person distrusts relationship partners' goodwill and strives to
maintain behavioral independence and emotional distance from partners. The second dimension,
typically called attachment *anxiety*, reflects the degree to which a person worries that a partner
will not be available in times of need. People who score low on these two dimensions are said to
be secure or have a secure attachment style. The two dimensions can be measured with reliable
and valid self-report scales (e.g., Brennan et al., 1998) and are associated in theoretically
predictable ways with relationship quality and affect-regulation strategies (see Mikulincer &
Shaver, 2003; Shaver & Clark, 1994; Shaver & Hazan, 1993, for reviews). Throughout this
chapter 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 will always be referring to
fuzzy regions in a two-dimensional space, a space in which research participants are continuously
rather than categorically distributed.

Attachment styles are formed initially during early interactions with primary caregivers
(as thoroughly documented in an anthology edited by Cassidy and Shaver, 1999), but Bowlby
(1988) contended that impactful interactions with significant others throughout life have the
effect of updating a person's attachment working models. Moreover, although attachment style is
often conceptualized as a global orientation toward close relationships, there are theoretical and
empirical reasons for believing that working models are part of a hierarchical cognitive network
that includes a complex, heterogeneous array of episodic, relationship-specific, and generalized
attachment representations (Mikulincer & Shaver, 2003). In fact, research indicates that (a)
people possess multiple attachment schemas, and both congruent and incongruent attachment-

related mental representations may coexist in the network (e.g., Baldwin et al., 1996; Pierce & Lydon, 1998), and (b) actual or imagined encounters with supportive or non-supportive others can activate congruent attachment orientations (e.g., Mikulincer, Gillath, et al., 2001), even if they are incongruent with a person's global attachment style.

Based on an extensive review of adult attachment studies, we (Mikulincer & Shaver, 2003; Shaver & Mikulincer, 2002) proposed a model of the functioning and dynamics of the attachment system in adulthood. Following Bowlby's (1982/1969) analysis, we assume that the monitoring of experiences and events, whether generated internally or through interactions with the environment, results in activation of the attachment system when a potential or actual threat is encountered. This activation is manifest in efforts to seek and/or maintain actual or symbolic proximity to external or internalized attachment figures. Once the attachment system is activated, a person, in effect, asks whether or not an attachment figure is sufficiently available and responsive. An affirmative answer results in the appropriate functioning of the attachment system, characterized by reinforced mental representations of attachment security and consolidation of security-based strategies of affect regulation (Shaver & Mikulincer, 2002). These strategies are aimed at alleviating distress, fostering supportive intimate relationships, and increasing both perceived and actual personal and social adjustment.

Perceptions of attachment figures as unavailable or insensitive results in attachment insecurity, which compounds the distress already aroused by the appraised threat. This state of insecurity forces a decision about the viability of proximity seeking as a protective strategy. When proximity seeking is appraised as viable or essential – because of attachment history, self-concept, temperament, or contextual cues – people adopt *hyperactivating attachment strategies*, which include intense appeals to attachment figures and continued reliance on them as a source of comfort. Hyperactivation of the attachment system involves increased vigilance to threat-related cues and a reduction in the threshold for detecting cues of attachment figures' unavailability – the two kinds of cues that activate the attachment system (Bowlby, 1973). As a result, even minimal threat-related cues are easily detected, the attachment system is chronically activated,

psychological pain related to the unavailability of attachment figures is exacerbated, and doubts about one's ability to achieve relief and attain a sense of security are heightened. These concomitants of attachment-system hyperactivation account for many of the psychological correlates of attachment anxiety (see Mikulincer & Shaver, 2003, for an extensive review).

Appraising proximity seeking as unlikely to alleviate distress results in the adoption of *attachment-deactivating strategies*, manifested in distancing oneself from stimuli and events that activate the attachment system and making attempts to handle distress alone. These strategies involve dismissal of threat- and attachment-related cues, suppression of threat- and attachment-related thoughts and emotions, and repression of threat- and attachment-related memories. These tendencies are further reinforced by adoption of a self-reliant attitude that decreases dependence on others and discourages acknowledgment of personal faults or weaknesses. These aspects of deactivation account for the psychological manifestations of avoidant attachment (again, see Mikulincer & Shaver, 2003, for a review).

Our model provides a guide for delineating the cognitive, affective, and relational behaviors associated with attachment-system functioning in adulthood. The module that monitors attachment-figure availability and promotes a sense of attachment security is related to optimal functioning of the attachment system and helps explain the key benefits of interacting with security-enhancing attachment figures: healthy personality development, favorable psychological functioning, and good social and personal adjustment. The module that monitors the viability of proximity seeking and determines the adoption of hyperactivating or deactivating strategies is related to the specific defensive measures used by insecurely attached people to regulate distress and manage doubts about their self-worth and others' good intentions, as well as the specific emotional and relational problems that result from anxious and avoidant forms of attachment. In the next section, we focus on the attachment-figure-availability component of our model, the resulting representations of attachment security, and the positive effects they have on a person's social motives, cognitions, and behaviors.

Mental Representations of Attachment Security

In our model, appraisal of attachment-figure availability automatically activates mental representations of attachment security. These representations include both declarative and procedural knowledge organized around a relational prototype or script (Waters, Rodrigues, & Ridgeway, 1998). This script includes something like the following if-then propositions: If I encounter an obstacle and/or become distressed, I can approach a significant other for help; he or she is likely to be available and supportive; I will experience relief and comfort as a result of proximity to this person; I can then return to other activities. Once activated, this script serves as a guide for adaptively regulating ones' own cognitive and affective processes.

Representations of attachment security include three core sets of declarative beliefs, which play a central role in maintaining emotional stability and personal adjustment. The first set of beliefs concerns the appraisal of life problems as manageable, which helps a person maintain an optimistic and hopeful stance regarding distress management. These beliefs are a result of positive interactions with sensitive and available attachment figures, during which individuals learn that distress is manageable, external obstacles can be overcome, and the course and outcome of most threatening events are at least partially controllable. Adult attachment studies provide extensive support for a connection between mental representations of attachment security and hopeful, optimistic beliefs. Specifically, secure individuals, as identified by self-report measures, are consistently found to appraise a wide variety of stressful events in less threatening terms than insecure people, either anxious or avoidant, and to hold more optimistic expectations about their ability to cope with sources of distress (e.g., Berant, Mikulincer, & Florian, 2001, Mikulincer & Florian, 1995; Radecki-Bush, Farrell, & Bush, 1993).

The second kind of declarative knowledge included in representations of attachment security is positive beliefs about others' intentions and traits. Again, these positive representations are a result of interactions with available attachment figures, during which individuals learn about the sensitivity, responsiveness, and goodwill of their primary relationship partners. Numerous studies have shown that individuals who score low on attachment anxiety

and avoidance (i.e., securely attached persons) possess a relatively positive view of human nature (e.g., Collins & Read, 1990; Hazan & Shaver, 1987), describe relationship partners using positive trait terms (e.g., Feeney & Noller, 1991; Levy, Blatt, & Shaver, 1998), perceive partners as supportive (e.g., Davis, Morris, & Kraus, 1998; Ognibene & Collins, 1998), and feel trusting toward partners (e.g., Collins & Read, 1990; Hazan & Shaver, 1987; Simpson, 1990). In addition, securely attached people have positive expectations concerning their partners' behavior (e.g., Baldwin et al., 1993; Baldwin et al., 1996; Mikulincer & Arad, 1999) and tend to explain a partner's negative behavior in relatively positive terms (e.g., Collins, 1996; Mikulincer, 1998a).

The third kind of declarative knowledge included in security-maintaining representations is beliefs about one's own worth, competence, and mastery. During interactions with sensitive, available attachment figures, individuals learn to view themselves as active, strong, and competent, because they can effectively mobilize a partner's support and overcome threats that activate attachment behavior. Moreover, they can easily perceive themselves as valuable, lovable, and special – thanks to being valued, loved, and regarded as special by a caring attachment figure. Research has consistently shown that such positive self-representations are characteristic of securely attached persons. Compared to anxiously attached persons, secure people report higher self-esteem (e.g., Bartholomew & Horowitz, 1991; Mickelson, Kessler, & Shaver, 1997), view themselves as competent and efficacious (e.g., Brennan & Morris, 1997; Cooper, Shaver, & Collins, 1998), describe themselves in positive terms, and exhibit small discrepancies between actual-self representations and self-standards (Mikulincer, 1995).

Representations of attachment security also involve procedural knowledge concerned with affect regulation and coping effectively with stress. This knowledge facilitates the use of what Epstein and Meier (1989) called constructive ways of coping – active attempts to manage problematic situations and restore emotional equanimity by seeking support and solving problems in ways that do not generate negative side effects. This knowledge stems from interactions with security-providing attachment figures, interactions in which secure individuals learn that their

own actions can often reduce distress and solve important problems, and that turning to others when threatened is an effective way to bolster coping capacity.

Adult attachment studies provide extensive support for an association between attachment security and support seeking. Several investigators have reported a positive association between self-reports of secure attachment and the self-reported tendency to seek support in times of need (e.g., Larose, Bernier, Soucy, & Duchesne, 1999; Ognibene & Collins, 1998). Similar findings have emerged from studies examining self-reported reactions to a specific stressor (e.g., Berant et al., 2001; Radecki-Bush et al., 1993). The same positive association has been observed in studies examining actual support-seeking behavior in stressful naturalistic and laboratory situations (e.g., Fraley & Shaver, 1998; Simpson, Rholes, & Nelligan, 1992). For example, Simpson et al. (1992) told participants they would be exposed to a frightening procedure; the investigators then unobtrusively observed and coded participants' actual behavior while they were interacting with their romantic partner. Secure participants, as compared with insecure ones, exhibited little hesitation in seeking proximity to, and comfort and reassurance from, their partner.

The association between secure attachment and constructive, problem-focused coping has also been documented. For example, self-reports of attachment security have been associated with reliance on problem-focused coping strategies in studies involving a wide variety of stressors (e.g., Lussier, Sabourin, & Turgeon, 1997; Mikulincer & Florian, 1998). Moreover, people who classify themselves as securely attached tend to deal with interpersonal conflicts in close relationships by compromising and creatively integrating their own and their partner's positions (e.g., Carnelley, Pietromonaco, & Jaffe, 1994) as well as by openly discussing the problem and resolving the conflict (e.g., Simpson, Rholes, & Phillips, 1996).

Like other cognitive-affective schemas (Baldwin, 1992), representations of attachment security are closely related to affective nodes in a person's semantic memory network. Specifically, these representations have strong links with positive affect, because anticipated positive affect is an integral part of the prototypical relational script (i.e., proximity maintenance results in relief). In support of this view, research has shown that secure attachment is positively

associated with self-report measures of joy and happiness (e.g., Magai, Hunziker, Mesias, & Culver, 2000; Simpson, 1990). Our own recent studies have also shown that various priming techniques (e.g., subliminal presentation of security-related words, visualization of the faces of available attachment figures) designed to heighten the accessibility of representations of attachment security result in the elicitation of positive emotions during an experimental session (Mikulincer, Gillath, et al., 2001; Mikulincer & Shaver, 2001). In addition, these priming techniques infuse even formerly neutral stimuli with positive affect without participants being aware of the underlying process. Mikulincer, Hirschberger, et al. (2001) reported that the subliminal presentation of security-related pictures or the names of people who were nominated by participants as security-enhancing attachment figures (as compared with subliminal presentation of neutral stimuli) led to higher liking ratings of unknown Chinese ideographs.

On the whole, research consistently indicates that both chronic and contextual (including manipulated) activation of mental representations of attachment security consolidates positive mental representations of others, a stable sense of self-efficacy and self-esteem, and reliance on constructive ways of coping, which in turn facilitates emotional strength and stability even in times of stress (see Mikulincer & Florian, 1998; Mikulincer & Shaver, 2003, for reviews). In our view, people with security-supporting mental representations of attachment experiences tend to feel generally safe and protected without having to activate defensive strategies. They can interact with others in a confident and open manner without being driven by defensive social motives and strategies aimed at protecting a fragile or false self-concept. Moreover, they can devote mental resources that otherwise would be employed in preventive, defensive maneuvers to more growth-oriented, promotion-focused activities that contribute to the broadening of their perspectives and capacities and facilitate the development of autonomy, self-actualization, and a fully functioning personality. In the following sections, we review evidence concerning the positive changes that chronic or contextual activation of representations of attachment security produce in social motives and cognitions.

Evidence that Attachment Security Reduces the Need for Defensive Motives and Cognitions

In this section, we review evidence that the chronic or contextual activation of representations of attachment security reduces a prevention orientation – a motivational stance involving a search for emotional safety and security and the avoidance of negative, painful outcomes (Higgins, 1998) – and attenuates defensive motivations aimed at protecting a person's self, identity, or knowledge structures. We organize this section according to the specific defensive tendencies examined thus far by adult attachment researchers – need for self-enhancement, needs for consensus and uniqueness, intergroup biases, defense of knowledge structures, and defense of cultural worldviews in the face of death reminders. We begin our discussion of each of these defensive tendencies with a brief theory-derived account supporting the attenuating effects of attachment security, after which we review key findings.

The Need for Self-Enhancement

Self-enhancement – the tendency to distort self-appraisals so as to maintain the most favorable self-view – is considered by social psychologists to be one of the basic motivations that guide the regulation of cognitive and affective processes (e.g., Fiske & Taylor, 1991). Research has consistently shown that this motivation leads people to exaggerate positive appraisals of their abilities and traits, dismiss and easily forget negative information about the self, seek positive feedback about the self, attribute positive outcomes to the self and negative outcomes to external forces (self-serving attributions), and positively bias appraisals and expectations of control and success (see Fiske & Taylor, 1991, and Taylor & Brown, 1988, for reviews). These positive distortions of the self-image are viewed as adaptive means of maintaining emotional stability and mental health (e.g., Taylor & Brown, 1988). It has also been suggested, however, that they have negative side effects, including self-deception, egocentrism, and even violence (e.g., Bushman & Baumeister, 1998).

In contrast to the view that such self-enhancement strategies are necessary for healthy functioning, we maintain that chronic or contextual activation of representations of attachment security allows a person to function adaptively without these distorting practices. As reviewed

earlier, representations of security involve feelings of being loved and accepted by others and possessing special and valuable qualities within oneself. These feelings constitute part of an authentic sense of self-worth (Kernis, 2003) or what Rogers (1961) called the "real self" – positive self-perceptions derived from the positive regard others have actually exhibited over the course of a person's development. In other words, securely attached people can find comfort, reassurance, and strength in authentic, solidly grounded feelings of self-worth while confronting threats. Because they are able to feel good about themselves even under threatening circumstances, there is less need for defensive inflation of self-esteem or rejection of negative feedback about the self.

In our view, interactions with available, caring, and loving attachment figures in times of need constitute the most important form of personal protection and the primary source of an authentic, stable sense of self-worth. Accordingly, we view the activation of representations of attachment security as a default inner resource that supercedes self-enhancement needs and renders self-enhancement maneuvers less necessary. We also view reliance on defensive self-enhancement as an indication that a person has been forced by social experiences to transact with the environment without adequate representations of attachment security and has had to struggle for a sense of self-worth, despite experiencing serious doubts about being lovable and possessing good inner qualities. If this view is correct, social psychologists have focused on, and theoretically enshrined as universal, motivational tendencies characteristic primarily of insecurely attached people, and perhaps especially of the avoidant ones who deactivate their attachment system and compulsively seek self-reliance. This focus has obstructed the field's view of more secure, and generally more normative, adaptive mechanisms.

Adult attachment research already provides strong support for these still unconventional ideas. For example, Mikulincer (1995) measured the accessibility of positive and negative self-relevant traits in a Stroop task and examined the level of integration among people's different self-aspects. He found that people who classified themselves as securely attached had ready access to both positive and negative self-attributes and possessed a highly integrated self-

organization. Only the participants who classified themselves as avoidant had a defensive self-organization, which included poor access to negative self-attributes and low integration among these attributes and other self-aspects.

In another series of four studies, Mikulincer (1998b) found that defensive self-inflation was most characteristic of avoidant individuals, especially under threatening conditions, and that secure individuals made relatively stable and unbiased self-appraisals even when confronted with self-relevant threats. Participants in these studies were exposed to various kinds of threatening or neutral situations, and appraisals of self were measured with self-report scales and other subtler cognitive techniques, such as reaction times for trait recognition. Participants who classified themselves as securely attached showed no notable difference in their self-appraisal between neutral and threatening conditions. In contrast, avoidant participants made more explicit and implicit positive self-appraisals following threatening, as compared with neutral, situations.

Mikulincer (1998b) also noted that introducing contextual factors that inhibit defensive self-enhancement tendencies (a "bogus pipeline" device that measures "true feelings about things" or the presence of a friend who knew the participants) had no effect on secure persons' self-appraisals. However, these factors inhibited avoidant participants' endorsement of a more positive self-view following threatening conditions. This pattern of findings implies that secure people's positive self-appraisals are rooted in a solid sense of self-worth, whereas avoidant people's positive self-appraisals are attempts to compensate for feelings of rejection, abandonment, or unlovability.

Similar findings have been obtained in recent studies examining attachment-style differences in self-serving attributions (e.g., Kogot, 2002; Man & Hamid, 1998). As compared with their securely attached counterparts, avoidant individuals attributed positive outcomes to more internal, stable, global, and controllable causes, and negative outcomes to more external, unstable, specific, and uncontrollable causes. Kogot (2002) also found that avoidant students who failed an actual academic examination attributed the failure to less internal causes and were more

likely to dismiss the diagnosticity of the failure and to blame others for it, compared with secure students who failed the same exam.

Attachment-style differences have also been found in reactions to self-relevant feedback from a romantic partner (Brennan & Bossom, 1998). Securely attached people sought their partner's feedback and showed favorable and accepting reactions to it. That is, they were relatively open to their partner's feedback and tended to use it to adjust their self-appraisals and create a more accurate self-conception. Again, only avoidant people reacted defensively, being averse to partner feedback, preferring partners who did not know them and reacting to feedback dismissingly or indifferently.

Two recent studies provide interesting evidence regarding the effects on self-enhancement tendencies of contextually activated representations of attachment security (Arndt, Schimel, Greenberg, & Pyszczynski, 2002; Schimel, Arndt, Pyszczynski, & Greenberg, 2001). In these studies, participants were primed with representations of security-enhancing attachment figures (thinking about an accepting and loving other) or with other mental representations, and their use of specific self-enhancement strategies was assessed. Schimel et al. (2001) focused on a defensive bias in social comparison – searching for more social comparison information when it suggested that others scored worse than oneself than when it suggested that others outperformed oneself (Pyszczynski, Greenberg, & LaPrelle, 1985). Arndt et al. (2002) focused on defensive self-handicapping – emphasizing factors that can impair one's performance so as to avert the damage to self-esteem that can result from attributing negative outcomes to lack of ability (Berglas & Jones, 1978). In both studies, momentary strengthening of representations of attachment security weakened the tendencies to search for self-enhancing social comparison information and make self-handicapping attributions. Arndt and Schimel (2003) concluded that activation of representations of security-enhancing attachment figures "promotes a more secure feeling of self-esteem that is less vulnerable and thus less in need of psychological maneuvers to sustain it" (p. 29).

Adult attachment studies also suggest ways in which securely attached people can maintain a stable sense of self-worth without pursuing defensive self-enhancement strategies. For example, Mikulincer (1998b) found that securely attached people recalled more self-attributes, both positive and negative, in threatening than in neutral situations. This finding suggests a self-affirmation process in which the secure person's self-representations serve as an inner anchor for dealing with threats. Instead of distorting and inflating their self-conception, secure individuals seem to affirm a stable self-view by keeping active in memory more self-attributes, both positive and negative.

We (Mikulincer & Shaver, in press) recently proposed that some components or subroutines of the self that originate in interactions with available attachment figures (*security-based self-representations*) underlie the maintenance of self-worth and emotional equanimity in times of stress. Specifically, we focused on (a) representations of the self derived from how a person sees and evaluates himself or herself during interactions with an available attachment figure (*self-in-relation-with-a-security-enhancing-attachment-figure*), and (b) representations of the self derived from identification with features and traits of a caring, supportive attachment figure (*self-caregiving representations*). We hypothesized that these representations would become accessible during encounters with threats, have a soothing, comforting effect on the person, and render the pursuit of defensive self-enhancement strategies unnecessary.

To test these expectations, we conducted two separate two-session studies. In the first session, we asked participants to generate traits that described a security-enhancing attachment figure and their self-in-relation-with-this-figure. In the second session, we exposed participants to either a threatening or a neutral condition, noted the accessibility of various categories of traits within their self-descriptions, and then assessed their current emotional and cognitive state. As predicted, securely attached participants reacted to the threat condition with heightened accessibility of security-based self-representations – they rated traits that they originally used to describe a security-enhancing attachment figure or the self-in-relation-with-this-figure as more descriptive of their current self following threatening than following neutral conditions. This

heightened accessibility of security-based self-representations was not observed among insecurely attached persons. More important, security-based self-representations had a soothing effect: The higher the accessibility of these self-representations, the more positive was a participant's emotional state following a threat and the less frequent were task-related worries and other interfering thoughts. Thus, it appears that securely attached individuals can mobilize caring qualities within themselves – qualities modeled on those of their attachment figures – as well as representations of being loved and valued, and these representations can provide real comfort, allowing a person to feel worthy and unperturbed without engaging in defensive forms of self-enhancement.

The Needs for Consensus and Uniqueness

Beyond self-enhancement, social psychologists have long recognized two additional motives that affect the way people perceive social reality. On one hand, due to the subjective, interpretational nature of the knowledge they gather about themselves and the world (Kruglanski, 1989), people may feel insecure about the appropriateness of their social behavior and the correctness of their feelings and beliefs. As a result, they tend to seek consensual validation – evidence that their beliefs and behaviors are shared with others and that their knowledge is supported by relevant groups and institutions (e.g., Festinger, 1954). On the other hand, people also wish to distinguish themselves from others, stand out, emphasize the uniqueness of their beliefs and behaviors, and assert their individuality (e.g., Snyder & Fromkin, 1980).

These two motives distort social perception in two ways, creating both false consensus and false uniqueness. Whereas the need for consensual validation leads people to overestimate the extent to which their beliefs and behaviors are typical of those held by others (Marks & Miller, 1987), the need to stand out leads people to underestimate self-other similarity in traits, opinions, and behaviors (Snyder & Fromkin, 1980). The false consensus bias provides a sense of security regarding the correctness of one's behaviors and beliefs and creates an illusory sense of belonging to a larger collective (Fiske & Taylor, 1991). The false uniqueness bias increases

distinctiveness, and when it involves a more positive perception of the self than of others, it can also serve the goal of self-enhancement (Tesser, 1988).

Given our understanding of the role of representations of attachment security, we would expect the activation of these representations to attenuate false consensus and false uniqueness biases and allow people to maintain more accurate interpretations of social reality. With regard to false consensus, given that security representations establish a sense of connectedness, belonging, protection, and support from others (Lifton, 1979), securely attached people should not urgently need to amplify their symbolic connections with others by imagining false self-other similarity. In addition, attachment-figure availability makes people less anxious about holding erroneous beliefs or engaging in inappropriate behaviors. Experiencing, or having experienced, attachment figures as loving and approving allows secure people to be less afraid of criticism or rejection when they make cognitive or behavioral mistakes or reveal personal weaknesses. With regard to false uniqueness, representations of attachment security involve confidence in having something unique and special within oneself, which renders unnecessary any defensive effort to portray oneself as unique. In fact, secure people feel unique and distinct and can assert their individuality even when they are closely involved with a relationship partner (Feeney, 1999).

When people lack the emotional security provided by attachment-figure availability, they are likely to attempt to compensate by defensively biasing social perception to bolster a false sense of consensus or uniqueness. In the case of avoidant individuals, who wish to deactivate the attachment system, maintain distance from others, and view themselves more positively than they view others, efforts are likely to be directed toward increasing distinctiveness, uniqueness, and devaluation of others. In contrast, in the case of anxiously attached people, who hyperactivate the attachment system and want desperately to be loved and accepted by others, compensatory efforts are likely to be directed toward increasing the sense of connectedness and belongingness, which can be accomplished in part by creating a false sense of consensus.

Studies from our laboratories provide initial support for these ideas. In a series of six studies, Mikulincer, Orbach, and Iavnieli (1998) found that securely attached people were more

accurate in assessing self-other similarity than were insecurely attached people. Specifically, anxious individuals were more likely than their secure counterparts to perceive others as similar to themselves and to show a false consensus bias in both trait and opinion descriptions. In contrast, avoidant individuals were more likely than secure individuals to perceive others as dissimilar to them and to exhibit a false distinctiveness bias. Mikulincer et al. (1998) also found that anxious individuals reacted to threats by generating a self-description that was more similar to a partner's description and by recalling more partner traits that matched their own. In contrast, avoidant individuals reacted to the same threats by generating a self-description that was less similar to a partner's description and by forgetting more traits that they and their partner shared. Notably, secure individuals' self-descriptions and recall of partners' traits were not affected by threats, revealing once again that they can handle threats without distorting reality.

Following up these experiments, Mikulincer and Horesh (1999) found that secure people's representations of others were relatively unbiased by the projective mechanisms that underlie false consensus and false uniqueness effects. That is, people with a secure attachment style were less prone than their insecure counterparts to project onto others features that defined themselves or that they denied having. Avoidant participants defensively projected their own unwanted traits onto others, which increased self-other differentiation and, by comparison, enhanced their sense of self-worth. Anxiously attached participants projected their own traits onto others, which increased their sense of self-other similarity, compatibility, and closeness. Whereas avoidant individuals perceived in others the traits of their own unwanted selves, anxious individuals perceived duplicates of their own actual traits.

Intergroup Biases

Social psychologists have extensively documented another defensive bias in social perception – the tendency to perceive one's own social group (in-group) as better than others (e.g., Allport, 1954; Devine, 1995). This tendency has been documented in studies of in-group favoritism, derogation of members of other groups (out-group members), and prejudice toward people who are different from oneself. According to social identity theory (Tajfel & Turner,

1986), intergroup bias serves a self-protective function, maintenance of self-esteem (We, including I, are better than them). Unfortunately, this method of maintaining self-esteem depends on emphasizing real or imagined ways in which the in-group and out-groups differ, especially ways in which the in-group can be perceived as better (Tajfel & Turner, 1986).

This tendency seems likely to be especially characteristic of insecure people. A person who can maintain a sense of value by virtue of possessing salient representations of attachment security should have less need to fear and disparage out-group members. In his account of human behavioral systems, Bowlby (1982/1969) stated that activation of the attachment system is closely related to innate fear of strangers and that attachment-figure availability mitigates this innate reaction and fosters a more tolerant attitude toward unfamiliarity and novelty. In addition, as reviewed earlier, securely attached people tend to maintain high, stable self-esteem (what Kernis, 2003, calls "optimal" or "authentic" self-esteem) without relying on defensive derogation of other people.

In a recent series of five studies, we (Mikulincer & Shaver, 2001) provided preliminary evidence for the attenuating effects of attachment security on intergroup bias. Correlational findings indicated that the higher a person's sense of chronic attachment security, the weaker his or her hostile responses to a variety of out-groups (as defined by secular Israeli Jewish students): Israeli Arabs, Ultra-orthodox Jews, Russian immigrants, and homosexuals. Experimental findings indicated that various priming techniques – subliminal presentation of security-related words such as love and proximity, evocation via guided imagery of the components of the attachment-security script, and visualization of the faces of security-enhancing attachment figures – heightened the sense of attachment security and eliminated negative responses to out-groups. These effects were mediated by threat appraisal and were found even when participants were led to believe they had failed on a cognitive task or their national group had been insulted by an out-group member. That is, experimentally augmented attachment security reduced the sense of threat created by encounters with out-group members and thus rendered unnecessary any efforts to derogate or distance oneself from them.

These findings should not be interpreted, however, as implying that attachment security inhibits in-group identification or encourages an individualistic ideology. This interpretation would contradict Bowlby's (1988) portrayal of attachment security as promoting a sense of togetherness as well as Smith, Murphy, and Coats' (1999) documentation of a positive association between secure attachment and identification with social groups. Brewer (1999) recently broke the assumed connection between in-group love and out-group hatred, showing that attachment to one's in-group does not require hostility toward out-groups. In our studies, attachment security reduced out-group hostility without diminishing in-group favorability.

*The Defense of One's Knowledge Structure*s

Social psychologists have extensively studied what they believe to be a human tendency to protect and defend existing knowledge structures even if they are incorrect or misleading and contribute to faulty decisions and actions (e.g., Fiske & Taylor, 1991; Kruglanski, 1989). This defensive tendency is related to self-esteem maintenance and motivated by a need to deny that one holds erroneous beliefs or has done something stupid or wrong. This self-defensive motivation causes what Kruglanski (1989) called "epistemic freezing" and is manifested in cognitive closure and rigidity, preference for secure, stable knowledge, and rejection of information that heightens ambiguity and challenges the validity of one's existing beliefs.

To us, this seems likely to be another overgeneralization that applies more accurately to insecure than to secure people. Theoretically, attachment security should foster openness to new information and accommodation of one's knowledge structures when evidence indicates that accommodation is called for. Being confident in their ability to deal with distress, securely attached people should be able to incorporate new evidence at the price of experiencing a temporary state of confusion or ambiguity. Such cognitive unclarity should not threaten the solid foundation of their general sense of competence, lovability, and control. They should generally realize that this state, like other challenging experiences, is reversible and that they have the necessary skills to reorganize parts of their knowledge structures without succumbing to total

disorganization or disintegration. Moreover, they should be comforted by the thought that others will love and accept them even if they revise some of their opinions, decisions, or actions.

In contrast, lack of attachment security results in fragile views of self and world that make incorporation of new evidence threatening and potentially disorganizing. Because insecurely attached people lack a sense of mastery in dealing with distress, they may interpret confusion and ambiguity as highly threatening, causing them to block the in-flow of new and challenging information. They may mistake knowledge stability for increased security, even if faulty knowledge leads to poor decisions and regrettable actions.

Research provides good evidence that attachment security attenuates the need for rigid cognitive structures. For example, Mikulincer (1997, Study 3) found that secure people scored lower than insecure people on self-report measures of cognitive closure, intolerance of ambiguity, and dogmatic thinking. In another study, Mikulincer (1997, Study 4) focused on the *primacy effect* – the tendency to make judgments on the basis of early information and to ignore later data – and found that both anxious and avoidant individuals were more likely than secure individuals to rate a target person based on the first information received. In a third study, Mikulincer (1997, Study 5) examined stereotype-based judgments, i.e., the tendency to judge a member of a group based on a generalized notion about the group rather than on exploration of new information about the member. Anxious and avoidant individuals tended to evaluate the quality of an essay based on the supposed ethnicity of the writer: The more positive the stereotype of the writer's ethnic group, the higher the grade assigned to the essay. In contrast, secure individuals were relatively unaffected by ethnic stereotypes.

Based on these findings, Mikulincer and Arad (1999) examined attachment-style differences in the revision of knowledge about a relationship partner following behavior on the part of the partner that seemed inconsistent with this knowledge. Compared to insecure persons, secure individuals were more likely to revise their baseline perception of the partner after being exposed to expectation-incongruent information about the partner's behavior. Moreover, the contextual activation of attachment-security representations (visualizing a supportive other)

increased cognitive openness and led even chronically anxious and avoidant people to revise their

conception of a partner based on new information (Mikulincer & Arad, 1999).

Defending Cultural Beliefs in the Face of Death

Another broad theory of social cognition and behavior – terror management theory

(Greenberg, Pyszczynski, & Solomon, 1997) – claims that the needs for self-esteem, consensus,

uniqueness, and knowledge stability as well as intergroup biases are consequences of death

anxiety. Human beings' knowledge that they are destined to die, coexisting with strong wishes to

perceive themselves as special, important, and immortal, makes it necessary for them to engage

in self-promotion, defend their cultural worldview, and deny their animality. Extensive research

has shown that experimentally induced death reminders heighten death-thought accessibility and

lead to more positive reactions to ideas and people that validate cultural worldviews, more

negative reactions to moral transgressors, more hostile and derogatory responses to out-group

members, a heightened sense of social consensus regarding one's own beliefs, more stereotypic

thinking, and more intense self-esteem strivings (see Greenberg et al., 1997, for a review).

Although worldview validation has been assumed to be a normative defensive response to

universal existential threats (Greenberg et al., 1997), studies from our laboratory suggest that this

response is more characteristic of insecurely than of securely attached individuals. For example,

Mikulincer and Florian (2000) found that experimentally induced death reminders lead to more

severe judgments and punishments of moral transgressors only among insecurely attached

people, either anxious or avoidant. Securely attached people did not recommend harsher

punishments for transgressors following a mortality salience induction. In a subsequent study,

Caspi-Berkowitz (2003) examined the effects of mortality salience on willingness to endanger

one's life in order to defend important cultural values, and observed that only insecurely attached

people reported higher willingness to die for a cause. Securely attached people were not affected

by death reminders and were generally averse to endanger life to protect cultural values.

Interestingly, our studies have also revealed how securely attached people react to death

reminders. Mikulincer and Florian (2000) reported that secure people reacted to mortality

salience with an increased sense of symbolic immortality – a transformational, constructive strategy that, while not solving the unsolvable problem of death, leads a person to invest in his or her children's care and to engage in creative, growth-oriented activities whose products will live on after death. Secure people have also been found to react to mortality salience with heightened attachment needs – a more intense desire for intimacy in close relationships (Mikulincer & Florian, 2000) and greater willingness to engage in social interactions (Taubman Ben-Ari, Findler, & Mikulincer, 2002). Caspi-Berkowitz (2003) also found that secure people reacted to death reminders by strengthening their desire to care for others. In her study, participants were presented with hypothetical scenarios in which a relationship partner (e.g., spouse) was in danger of death, and the participants were asked about their willingness to endanger their own life to save the life of the partner. Securely attached persons reacted to death reminders with heightened willingness to sacrifice themselves. Insecurely attached persons were generally averse to this kind of sacrifice and reacted to death reminders with even lesser willingness to save others' lives.

These findings imply that, even when faced with their biological finitude, securely attached people maintain a secure psychological foundation. They seem to adhere to the attachment-security script even when coping with the threat of death (seeking proximity to others), heighten their sense of connectedness and togetherness, and symbolically transform the threat into an opportunity to contribute to others and grow personally. It therefore seems to us that being part of a loving, accepting, valued world – having strong emotional and caring bonds with others – is a primary source of self-transcendence (being part of a larger entity that transcends one's own biological self), which promotes a sense of symbolic immortality and overrides needs for worldview validation and self-promotion. Defensive, distorting reactions to mortality seem to result from recurrent failures of attachment figures to accomplish their protective, supportive, anxiety-buffering task. As a result of such failures, many people lack a sense of continuity and connection to the world, and are unable to rely on a solid psychological foundation that sustains vitality even in the face of mortality concerns. As a result, insecure people cling to particular cultural worldviews and derogate alternative views in a desperate

attempt to enhance their impoverished selves and achieve some sense of value and meaning that can overpower their fear of death and insignificance.

A Two-Level Model of Psychological Defenses

The findings reviewed in the preceding section are at odds with social psychological models that equate defensiveness with mental health and lack of defensiveness with psychopathology. In fact, attachment security has been related to both mental health and lack of defensiveness, supporting studies by Shedler, Mayman, and Manis (1993), John and Robins (1994), and others who have challenged the view that authentic self-esteem requires self-enhancing biases and "positive illusions" (Taylor & Brown, 1988). Our findings fit a two-level model of psychological defenses, a model rooted in attachment theory. At the primary level, attachment-figure availability and the resulting sense of attachment security are natural building blocks of a secure, solid, and stable psychological foundation. At this level, representations of attachment security act as resilience resources that maintain emotional equanimity and effective psychological functioning without requiring other defensive maneuvers. A second level of defenses is required when a person fails to form secure attachments and is unable to construct a secure, solid, stable foundation that allows undistorted coping with threats. For an insecurely attached person, many everyday experiences threaten the sense of safety and one's tenuous hold on life, self, identity, and knowledge of the world. At this level, a prevention motivational orientation and the use of biased, distorting defenses can sometimes compensate for the absence of attachment security, create a façade of self-esteem and efficacy, and contribute some degree of adjustment. At this level, defensiveness may actually contribute to mental health, whereas lack of defensiveness, or a breakdown of defenses, may increase the likelihood of serious psychopathology.

As we have shown, however, this seemingly positive contribution of defensiveness is achieved at the cost of cognitive rigidity, distorted perception of social reality, and an increase in interpersonal and intergroup conflict. These negative side effects are not entailed by the use of defenses at the first, more basic level. At this primary level, attachment security promotes mental

health while allowing for accurate social perception; a compassionate, loving attitude toward others, even those who are different from oneself; and cognitive openness and flexibility. As a result, the protective action of attachment security does not collide with natural processes of growth and self-actualization. Rather, attachment security enables and accelerates these processes and contributes to development of a fully functioning personality. In the next section, we review evidence concerning these growth-enhancing benefits of attachment security.

Evidence that Attachment Security Promotes Growth

and Development of a Fully Functioning Personality

In this section, we explore the possibility that attachment security facilitates a person's advancement toward positive personal and social states, self-expansion (Aron & Aron, 1997), and the actualization of his or her natural talents. In our model (Mikulincer & Shaver, 2003), attachment-figure availability initiates what we, following Fredrickson (2003), called a "broaden and build" cycle of attachment security, which, beyond building a person's resilience, also broadens his or her perspectives and capacities. According to Bowlby (1982/1969), the unavailability of attachment figures inhibits the activation of other behavioral systems, because a person without an attachment figure's protection and support tends to be so focused on attachment needs and feelings of distress that he or she lacks the attention and resources necessary to engage in non-attachment-related activities. Only when an attachment figure is available and a sense of attachment security is restored can a person devote full attention and energy to other behavioral systems. Moreover, being confident that support is available when needed, securely attached people can take risks and engage in autonomy-promoting activities. This is what causes us to believe that attachment security is essential for the development of what Rogers (1961) called a fully functioning personality. To make this theoretical connection clear, we will use Rogers' (1961) definitional features of the fully functioning person to organize our review of the evidence concerning the importance of attachment security for achieving full functionality.

One definitional quality of the fully functioning person is *openness to experience* – the capacity to listen to one's feelings, to experience what is going on within oneself, and to reflect on one's own thoughts and feelings. Openness to experience also involves richness of information about the self and the ability to accept both positive and negative emotions and cognitions. In Rogers' (1961) words, a fully functioning person "is more open to his feelings of fear and discouragement and pain. He is also more open to his feelings of courage and tenderness, and awe. He is free to live his feelings subjectively, as they exist in him, and also free to be aware of these feelings" (p. 188).

Attachment security provides a foundation for openness to experience. According to Cassidy (1994), interactions with available, sensitive, and responsive attachment figures provide a context in which a child can openly and flexibly experience, organize, and express emotions and understand their functions and benefits. In these interactions, one learns that emotional signals evoke appropriate responses from attachment figures and that open and direct communication of distress results in effective caregiver interventions. As a result, secure people learn to feel comfortable exploring and learning about emotions; they view emotions and emotional expressions as useful contributors to growth and adjustment. Also contributing to secure people's openness to experience is their self-reflective capacity – their ability to think about and understand mental states (Fonagy, Steele, Steele, Moran, & Higgit, 1991). According to Fonagy et al. (1991), positive interactions with attachment figures result in an increased capacity to understand emotions. Fonagy et al. (1991) conceptualized the security-enhancing attachment figure as able "…to reflect on the infant's mental experience and re-present it to the infant translated into the language of actions the infant can understand. The baby is, thus, provided with the illusion that the process of reflection of psychological processes was performed within its own mental boundaries" (p. 207).

Evidence is accumulating for a positive association between attachment security and the acknowledgment and display of emotions. With regard to the acknowledgement of emotions, Mikulincer and Orbach (1995) reported that, as compared with avoidant participants, those who

classified themselves as securely attached were more willing and able to access painful memories and re-experience the accompanying negative affect. With regard to the display of emotions, studies using either self-report or behavioral measures of self-disclosure have shown that securely attached people are more likely to appropriately disclose personal feelings to significant others and express their emotions more openly than insecure participants (e.g., Collins & Read, 1990; Feeney, 1999; Mikulincer & Naschon, 1991).

Attachment studies have also shown that both chronic and contextual activation of representations of attachment security facilitate exploration and acceptance of one's feelings. In an in-session analysis of brief psychotherapy, Mallinckrodt, Porter, and Kivlighan (2003) found that clients who developed secure attachments to their therapists engaged in greater depth of exploration during the early phases of therapy. In several studies, self-reports of secure attachment have been associated with higher scores on self-acceptance scales (e.g., Bartholomew & Horowitz, 1991; Shaver et al., 1996). Recently, Mikulincer and Rom (2003) primed participants with representations of either a security-enhancing attachment figure (thinking about a supportive other) or a relationship partner who did not accomplish attachment functions, and found that attachment-security priming led to heightened self-acceptance even among chronically insecure persons.

Another core quality of the fully functioning person, according to Rogers (1961), is *existential living* – enjoying the flow of current experiences and living fully at every moment. This quality involves spontaneity, cognitive flexibility, and an ability to adaptively change one's beliefs about self and world according to incoming information. It "means that one becomes a participant in and an observer of the ongoing process of organismic experience, rather than being in control of it" (Rogers, 1961, p. 188).

As reviewed in the previous section, attachment security facilitates cognitive openness and adaptive revision of knowledge structures in response to new evidence. That is, for secure people, there is no need for rigid cognitive structures or for imposing such structures on one's current experiences. This heightened flexibility has been documented in the ways secure people

cope with stress (Berant et al., 2001; Miller, 1996). For example, Berant et al. (2001) found that securely attached women who gave birth to a child with a mild or severe congenital heart defect (CHD) showed higher levels of well-being and a more positive appraisal of motherhood than insecurely attached mothers. However, whereas secure mothers of infants with *mild* CHD dealt with the problematic situation by relying on problem-solving strategies, secure mothers of infants with a *severe* CHD relied on cognitive distancing strategies. That is, secure mothers seemed to maintain their well-being and adjust to their motherhood tasks by flexibly employing different coping strategies according to the severity of the external demands. As a result, they could rely on distancing coping whenever the suppression of painful thoughts about the infant's severe CHD was the most adaptive way to mobilize internal and external resources for taking caring of a vulnerable baby. Insecure mothers did not exhibit the same degree of coping flexibility.

Research also provides initial evidence for the contribution of attachment security to two other aspects of existential living – savoring one's good moments and capitalizing on the experience of positive affect. With regard to the capacity to fully enjoy one's transactions with the environment, two week-long diary studies, focused on feelings experienced during daily social interactions, revealed that secure participants experienced more positive emotions than insecure participants (Pietromonaco & Barrett, 1997; Tidwell, Reis, & Shaver, 1996). Secure individuals' relatively more positive emotional tone has also been noted in studies of sexual activities (e.g., Tracy, Shaver, Albino, & Cooper, 2003), friendship (Mikulincer & Selinger, 2001), marital interactions (see Feeney, 1999, for a review), and group interactions (Rom & Mikulincer, 2003). Several studies have also found that secure attachment is associated with higher scores on scales assessing expression of positive emotions and lower scores on scales assessing control over positive emotions – the tendency to bottle up positive emotions and conceal them from a relationship partner (see Feeney, 1999, for a review).

With regard to capitalizing on current positive experiences, Mikulincer and Sheffi (2001) found that attachment security allows people to take advantage of the enhanced cognitive functioning made possible by positive affect. In three separate studies, participants were exposed

to positive or neutral affect inductions, following which their breadth of mental categorization and ability to solve problems creatively were assessed. The beneficial effects of the positive affect induction on cognitive functioning were observed only among people who scored relatively low on attachment anxiety and avoidance. These secure individuals reacted to positive affect by adopting more liberal and inclusive criteria when categorizing semantic stimuli and by performing better on a creative problem-solving task. In contrast, avoidant participants were not affected by positive affect inductions, and anxiously attached participants actually reacted to positive affect with *impaired* creativity and a narrowing of mental categories. We interpret these results as indicating that secure people's openness to emotional experience allows them to treat positive affect as a relevant input for cognitive processing (a signal that "all is going well"), which allows them to "loosen" their cognitive strategies and explore unusual associations. Avoidant people seem to ignore affective signals of safety, and anxious people somehow turn them into signs of trouble rather than safety. Secure people's enhanced creativity may help them find new and unusual ways to deal with events, enjoy tasks, and maintain a positive mood.

Two other characteristics of the fully functioning person are *organismic trusting* – the ability to trust one's feelings, thoughts, and sensations, and to make decisions based on what one feels is right rather than being driven by uncontrollable external forces – and *experiential freedom,* the feeling that one is free to choose among alternative courses of actions and take responsibility for one's choices. According to Rogers (1961), these qualities indicate that a fully functioning person has a strong sense of authenticity, personal responsibility, and self-determination. Accordingly, he or she can find personal meaning, coherence, and value in his or her actions and believe that what happens depends on oneself.

Although adult attachment studies have not systematically examined the contribution of attachment security to organismic trusting and experiential freedom, there is some evidence linking the activation of attachment security to a person's sense of personal meaning, coherence, and self-determination. Mikulincer and Rom (2003) conducted two studies in which they primed participants who had previously completed an attachment-style scale with representations of

either a security-enhancing attachment figure (thinking about a supportive other) or a relationship partner who did not accomplish attachment functions, and then assessed self-reports of personal meaning and sense of coherence, defined as the tendency to perceive the world as understandable and life as "making sense" (Antonovsky, 1987). Lower scores on attachment anxiety and avoidance (secure attachment) were associated with higher levels of personal meaning and coherence. Moreover, as compared to the neutral-priming control condition, attachment-security priming led to a heightened sense of meaning and coherence even among chronically insecure participants.

Studies examining the extent to which a person's goals and plans are internally, autonomously regulated also point to the importance of social interactions with supportive others (see Ryan & Deci, 2000, for a review). For example, Ryan, Stiller, and Lynch (1994) found that children who felt securely attached to parents and teachers displayed heightened internal, autonomous regulation of school-related behaviors. Furthermore, some studies have established a link between attachment security and intrinsic motivation – the inherent tendency to extend and exercise one's capacities, and to enjoy exploration and learning (Elliot & Reis, 2003; Ryan & Deci, 2000). For example, Hazan and Shaver (1990) reported that securely attached people were more likely than insecure ones to perceive work as an opportunity for learning, and Elliot and Reis (2003) found that self-reports of attachment security were associated with stronger endorsement of mastery goals in academic settings (goals focused on learning and expansion of one's capacities). Interestingly, Mikulincer and Rom (2003) assessed the endorsement of these goals following the priming of representations of either a security-enhancing attachment figure (thinking about a supportive other) or a relationship partner who did not serve attachment functions. Findings revealed that the security-priming condition led to heightened endorsement of mastery goals at the beginning of an academic course.

The final characteristic of a fully functioning person, according to Rogers (1961), is *creativity* – the ability to produce new and effective thoughts, actions, and objects, and willingness to contribute to the growth and actualization of others. This characteristic involves

real participation in the world, a sense of generativity, and the endorsement of prosocial values and goals that orient a person toward maintenance and enhancement of others' welfare and protection and improvement of physical and social surroundings.

With regard to generativity, self-reports of attachment security are associated with better functioning in conflictual interpersonal interactions (e.g., Simpson et al., 1996), more creative problem solving (Mikulincer & Sheffi, 2000), better maintenance of task performance following an uncontrollable failure (Mikulincer & Florian, 1998), and better instrumental and socioemotional functioning during group interactions (Rom & Mikulincer, 2003). The sense of attachment security is also positively associated with adaptive interpersonal functioning and the ability to maintain satisfactory, stable close relationships (see Feeney, 1999, for a review).

Adult attachment studies have also demonstrated that attachment security promotes genuine, altruistic concern for others' welfare. Secure mothers, for example, are more caring and supportive in interactions with their children (e.g., Crowell & Feldman, 1991; Rholes, Simpson, & Blakely, 1995). Secure people are more sensitive than their insecure counterparts to romantic partners' needs and behave more supportively toward their partner during distressing interactions (e.g., Collins & Feeney, 2000; Kunce & Shaver, 1994). In a series of five experiments, Mikulincer, Gillath, et al. (2001) found that scoring low on attachment anxiety and avoidance (i.e., being securely attached) was associated with more empathic, compassionate responses to others' needs. Moreover, the contextual activation of attachment-security representations increased reports of altruistic empathy. In three other studies, Mikulincer, Gillath, et al. (in press) reported that self-reports of attachment security and contextual activation of attachment-security representations were associated with stronger endorsement of values of universalism (concern for the welfare of all people) and benevolence (concern for the welfare of close persons). Recent studies in our laboratories also reveal that self-reports of attachment security are related to volunteerism, altruistic helping, and other-regarding virtues such as gratitude and forgiveness (Shaver & Mikulincer, 2003).

Concluding Comments

In recent years, under the banner of "positive psychology," there has been a resurgence of interest in such issues as personal authenticity, self-actualization, virtuous and compassionate behavior, and optimal self-esteem and self-development (e.g., Aspinwall & Staudinger, 2003; Kernis, 2003; Seligman, 2002). To date, while interesting, this turn toward positive psychology has seemed to us to lack a coherent theoretical foundation. A variety of investigators are exploring important phenomena, such as authentic self-esteem, optimism, compassion, gratitude, and forgiveness, but without much grounding in a general understanding of the human mind and its roots in close interpersonal relationships. We may be biased by tunnel vision and over-commitment to a theory we have found useful for generating novel research findings, Bowlby's (1982/1969) attachment theory, but so far the theory has certainly proved to be a rich source of hypotheses and insights. We have attempted to show here, by reviewing findings related to differences between more and less secure people, that the human portrait painted by the rest of social psychology – of frightened, selfish, biased, defensive information processors – is more appropriate for insecure than for secure people. This is perhaps a natural outcome of focusing on human problems and foibles instead of human potentials and strengths.

With respect to many of the social and psychological phenomena we have examined, similar findings have been obtained by studying either (a) correlates of dispositional attachment security, which has been demonstrated by a large body of research (see Cassidy & Shaver, 1999, for reviews) to be at least largely a product of attachment history (i.e., accumulated experiences with previous attachment figures), or (b) contextually primed representations of attachment security. In most of the studies establishing parallels between dispositional and contextual activation of security, experimental enhancement of security works as well for insecure as for secure people, suggesting that the attachment system itself is similar in all people. It therefore seems possible that chronic application of security-enhancing influences could move an insecure person toward security, with important consequences for mental health and prosocial behavior. This is presumably what therapists like Rogers (1961) and Bowlby (1988) were attempting to do,

and what they described in compatible but somewhat different theoretical languages. (What Rogers called "unconditional positive regard," supplied by parents or a therapist, Bowlby called available, sensitive, responsive caregiving and provision of a safe haven and secure base.)

The integration we seek between what is valid in bias- and distortion-oriented social psychology (as it applies to insecure individuals) and what is valid in contemporary research on growth- and virtue-oriented social processes would be facilitated by further consideration of chronic and contextual activation of *insecurity*-related self- and social representations. For ethical and therapeutic reasons, our work has focused primarily on the induction and consequences of enhanced security, but it would be useful either to conduct similar studies involving the temporary strengthening of insecure representations or, at least, to reconceptualize many of the landmark studies of mainstream social psychology in those terms – i.e., as explorations of the biasing effects of chronic or temporary insecurity.

If we think about the ways in which people are recruited to violent terrorist movements (as described, for example, by Stern, 2003) – a necessarily important topic given today's social climate – it seems likely that such recruitment targets people who are chronically insecure because of previous abuse, trauma, or humiliation, and that their behavior is progressively brought into line with the aims of terrorist groups or religious cults by alternately heightening their sense of insecurity and then reducing it through group solidarity exercises, praise from cult leaders, and applause for feats of violence against threatening enemies. Thus, it is important not to forget or ignore the important insights of 'negative' social psychology while making room for a greater emphasis on positive possibilities. After all, if we try to look at social reality objectively, it is marked by conflicts, atrocities, and examples of defensive narcissism as well as moving examples of human compassion, altruism, and personal strength. We need a coherent theoretical framework for conceptualizing the full range of human potential, from negative to positive.

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